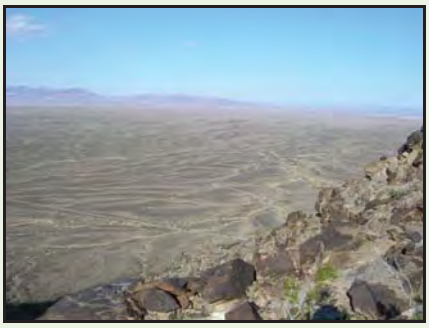
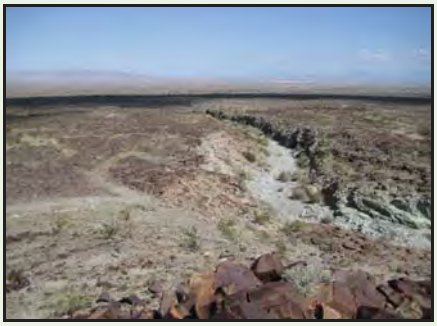
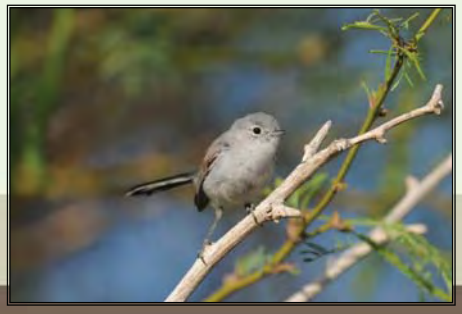
APPENDIX F

Biological Resources Technical Report

BLYTHE SOLAR POWER PROJECT

BIOLOGICAL TECHNICAL REPORT
RIVERSIDE COUNTY, CALIFORNIA



Prepared for:
Solar Millennium, LLC
1625 Shattuck Avenue
Berkeley, California

and

Chevron Energy Solutions
A Division of Chevron U.S.A. Inc.
345 California St., 18th Floor
San Francisco, California 94104

Prepared by:

EDAW AECOM
1420 Kettner Boulevard, Suite 500
San Diego, California 92101
Phone: (619) 233-1454
Fax: (619) 233-0952

EDAW | AECOM

August 2009

SOLAR MILLENNIUM
BLYTHE SOLAR POWER PROJECT
BIOLOGICAL RESOURCES TECHNICAL REPORT
RIVERSIDE COUNTY, CALIFORNIA

Prepared for:

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1625 Shattuck Avenue
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Prepared by:

EDAW AECOM, Inc.
1420 Kettner Boulevard, Suite 500
San Diego, California 92101
Phone: (619) 233-1454
Fax: (619) 233-0952

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EXECUTIVE SUMMARY

EDAW AECOM (EDAW) performed biological resources studies for Solar Millennium, LLC and Chevron Energy Solutions, who are the Applicants for the proposed Blythe Solar Power Project (Project or BSPP). The Project is proposed on public lands managed by the Bureau of Land Management (BLM) in Riverside County, California, and the Applicants have submitted an application to BLM for a Right of Way (ROW) grant. The BSPP will be a 500-megawatt (MW) solar thermal electric generating facility using parabolic trough technology. The Biological Resources Study Area (BRSA) covers the approximately 7,030 acres that would be disturbed by Project construction and operation plus a 1-mile buffer zone around the disturbance area for a total of approximately 18,998 acres.

This Biological Resources Technical Report (BRTR) was prepared to support an Application for Certification submitted to the California Energy Commission (CEC), which must license all thermal power plants more than 50 MW in California. Because the Project is proposed on Federal land, compliance with the National Environmental Policy Act (NEPA) also is required. CEC and BLM are conducting a joint review of the BSPP through a combined CEQA/NEPA document, and, thus, this BRTR also supports BLM's NEPA compliance. Finally, this BRTR will also support Project permitting from State and Federal biological resources agencies (e.g., U.S. Fish and Wildlife Service [USFWS] and the California Department of Fish and Game [CDFG]).

A major focus of the biological investigation was potential impacts on 28 special status species that were identified as having the potential to occur on or near the BRSA. The BRSA encompasses the proposed disturbance area (area inside and outside the facility fence line that will be disturbed by the Project), solar facility footprint (area inside the facility fence line including solar fields, office and maintenance buildings, lay down area, drainage channels, bioremediation area, leach fields, a corridor for the transmission line, and roads), and buffer. These species are listed below:

<u>Federal or State Listed (ESA or CESA)</u>

- Coachella Valley milkvetch (*Astragalus lentiginosus* var. *coachellae*) – ESA endangered, CNPS List 1B.2, BLM Sensitive, NECO
- Desert tortoise (*Gopherus agassizii*, DT) – ESA and CESA threatened, Northern and Eastern Colorado Desert Coordinated Management Plan (NECO)
- Gila woodpecker (*Melanerpes uropygialis)* – CESA endangered, NECO

- Gilded flicker (*Colaptes chrysoides)* – CESA endangered
- Swainson's hawk (*Buteo swainsoni)* – CESA threatened – however, migratory only on site (i.e., nonresident and nonbreeding)

<u>CDFG Species of Special Concern (SSC), California Code of Regulations, BLM Sensitive, NECO, or CNPS List 1A, 1B, or 2</u>

- Angel trumpets (*Acleisanthes longiflora*) – CNPS List 2.3, NECO
- Harwood's milkvetch (*Astragalus insularis* var. *harwoodii*) – CNPS List 2.2, NECO
- Fairyduster (*Calliandra eriophylla*) – CNPS List 2.3, NECO
- Alkali mariposa lily (*Calochortus striatus*) – CNPS List 1B.2, BLM Sensitive
- Crucifixion thorn (*Castela emoryi*) – CNPS List 2.3, NECO
- Las Animas colubrine (*Colubrina californica*) – CNPS List 2.3, NECO
- Glandular ditaxis (*Ditaxis claryana*) – CNPS List 2.2, NECO
- California satintail (*Imperata brevifolia*) – CNPS List 2.1
- Orocopia sage (*Salvia greatae*) – CNPS List 1B.3, NECO
- Desert spikemoss (*Selaginella eremophila*) – CNPS List 2.2
- Coves' cassia (*Senna covesii*) – CNPS List 2.2, NECO
- Dwarf germander (*Teucrium cubense* ssp. *depressum*) – CNPS List 2.2
- Jackass-clover (*Wislizenia refracta* ssp. *refracta*) – CNPS List 2.2, NECO
- Orcutt's woody-aster (*Xylorhiza orcuttii*) – CNPS List 1B, BLM Sensitive
- Ferruginous hawk (*Buteo regalis*) – CDFG Watch List (WL), BLM Sensitive, NECO – however, wintering only on site
- Western burrowing owl (*Athene cunicularia hypugaea*; WBO) – CDFG SSC, BLM Sensitive, NECO
- Crissal thrasher (*Toxostoma crissale)* – CDFG SSC, NECO
- Loggerhead shrike (*Lanius ludovicianus*) – CDFG SSC
- Yellow warbler (*Dendroica petechia sonorana*) - CDFG SSC, NECO – however, only migratory on site
- American badger (*Taxidea taxus*) – CDFG SSC
- Desert kit fox (*Vulpes macrotis arsipus*) – State Protected Fur-bearing Mammal (PFM,per. California Code of Regulations)
- Nelson's bighorn sheep (*Ovis canadensis nelsoni*) – BLM Sensitive, NECO
- Pallid bat (*Antrozous pallidus)* – CDFG SSC, BLM Sensitive, NECO

During spring 2009, surveys were conducted in the BRSA to map vegetation communities and waters of the State and to determine the presence or absence of special status plant and wildlife

species. These surveys were conducted in accordance with applicable regulations and in accordance with established survey protocols for various special status species. The field work focused on rare plant surveys, delineation of jurisdictional areas, protocol surveys for desert tortoise (DT) and western burrowing owl (WBO), avian point count surveys, and a general wildlife inventory.

Five vegetation communities and other cover types were identified within the BRSA: desert dry wash woodland, Sonoran creosote bush scrub, unvegetated ephemeral dry wash, agricultural fields, and developed areas (Table 1 and Figure 5). The majority of the BRSA is composed of Sonoran cresote bush scrub. Plants indicative of desert dry wash woodlands follow the drainages that flow southeast toward the Colorado River. Agricultural areas occur at the eastern side of the BRSA. The fallow fields within the BRSA are being reclaimed by Sonoran creosote bush scrub. Two of the five vegetation communities are considered sensitive: desert dry wash woodland and unvegetated ephemeral dry wash. Desert dry wash woodland and unvegetated ephemeral dry wash are sensitive because they are also State waters under the jurisdiction of CDFG. In addition, desert dry wash woodland is a special community type per CDFG (e.g., high priority for inventory in the California Natural Diversity Database [CNDDB]).

Jurisdictional waters delineations indicate that there are unlikely to be waters on the site considered jurisdictional by the U.S. Army Corps of Engineers (USACE). The USACE has not yet made this official determination, although the process is underway to obtain USACE concurrence. However, the washes are considered State jurisdictional waters subject to CDFG jurisdiction. There are approximately 128.8 acres of State jurisdictional waters within the disturbance area. The Project's impact on approximately 128.8 acres of state jurisdictional waters would be mitigated to less than significant through onsite or offsite mitigation.

Two rare plant species, Los Animas columbrine and Harwood's milkvetch, were detected within the BRSA. Las Animas colubrine, a California Native Plant Society (CNPS) List 2.3 and Northern and Eastern Colorado Desert Coordinated Management Plan (NECO) special status species, was found in the BSPP disturbance area, as well as the survey buffer. Specimens were found in the western portion of the BRSA: 57 plants were found within the disturbance area and 117 plants were found within the buffer. Harwood's milkvetch, a CNPS List 2.2 and NECO special status species, was found in the disturbance area but not the buffer. The only Federal listed plant species with potential to occur in the BRSA, the Coachella Valley milkvetch, was not observed during surveys. There were several types of cacti recorded in the BRSA: teddybear cholla (*Opuntia bigelovii*), silver cholla (*Opuntia echinocarpa*), pencil cholla (*Opuntia ramosissima*), and common fishhook cactus (*Mammilaria tetrancistra*). The Project's impact on

non-listed special status plant species will be mitigated to less than significant through implementation of avoidance, minimization, and mitigation measures.

Three adult DTs, a Federal and State listed threatened species, were encountered during surveys of the BRSA. One observation was made within the southwestern corner of the disturbance area. The other two observations were made within the buffer, one approximately 4,000 feet to the southwest of the disturbance area, the other observation approximately 600 feet to the west of the disturbance area. There were 52 DT burrows recorded within the disturbance area. Of these 52, 4 were active (Class 1) and 18 were definitely DT (Class 1, 2 and 3). There were 118 pallets recorded within the disturbance area. Of these 118, 3 were active and 16 were definitely DT pallets. A total of 38 DT scat were within the disturbance area and 20 observations were relatively fresh scat (Class 1, 2 and 3) DT carcasses (relatively intact) and bone fragments were observed within the BRSA. A total of 24 DT remains were classified as carcasses and 280 were classified as bone fragments (60 of these were mineralized) in the disturbance area. Other DT sign noted were potential DT drinking depressions (one noted within the BRSA).

USFWS guidelines cannot be applied to calculate DT density at BSPP due to the low number of DT found in the BRSA. The USFWS model requires a minimum of 20 individual DT to be observed during surveys (USFWS 2009a). The fact that only three DT were observed in the BRSA and the USFWS model is not applicable indicates that DTs are present at a low density in the BRSA. DT densities have shown declining trends at the Chuckwalla Bench (approximately 30 - 40 miles southwest of Blythe) (Tracy et al. 2004, Berry1997). For comparison adult DT densities at the Chuckwalla Bench in 1992 were estimated between 22 and 49 individuals per square kilometer (Berry 1997). Blythe covers approximately 28 square kilometers. The Project's impact on low quality DT habitat will be mitigated to less than significant through implementation of avoidance, minimization, and mitigation measures.

Two WBO, a CDFG Species of Special Concern, were detected within the BRSA. One individual was observed in the western-central area of the disturbance area. Another individual was observed by the survey team near the western edge of the buffer. WBO sign was observed in association with 90 burrows during WBO surveys. Many of the suitable burrows appeared to have sign that was severely degraded and left in previous seasons, implying that the 90 burrows with sign represent multiple years of WBO use. A low density of WBO in the BRSA is consistent with the general abundance of WBO in the surrounding region. Six additional special status species were observed within the BRSA during spring 2009: loggerhead shrike (*Lanius ludovicianus*); yellow warbler (*Dendroica petechia sonorana*), however, migratory only on site; ferruginous hawk (*Buteo regalis*), however, wintering only on site; American badger (*Taxidea*

taxus); Nelson's bighorn sheep (*Ovis canadensis nelson*); and desert kit fox (*Vulpes macrotis arsipus*). The Project's impact on non-listed special status wildlife species will be mitigated to less than significant through implementation of avoidance, minimization, and mitigation measures.

No USFWS designated critical habitat for any plant or wildlife species occurs in the BRSA.

In addition to the CEC license and BLM ROW grant, authorization will be required from CDFG for impacts to jurisdictional waters of the State. The proposed Project will also comply with relevant portions of the California Fish and Game Code (CFGC) and will consult with CDFG on potential effects to CESA listed species (e.g., DT). The Project did not identify Federal waters under the jurisdiction of the USACE within the disturbance area. Therefore, it is not anticipated that the Project will require a Clean Water Act Section 404 permit. Confirmation by the USACE of the absence of jurisdictional waters of the U.S. within the facility footprint will be based on the Jurisdictional Determination (JD) process with the USACE/U.S. Environmental Protection Agency. Jurisdictional waters of the State (e.g., desert washes and desert dry wash woodland) under the regulatory administration of CDFG were identified within the disturbance area, and a CFGC Section 1600 et seq. Lake and Streambed Alteration Agreement application will need to be prepared. Consultation with USFWS will be necessary under Section 7 of the ESA for impacts to DT, a Federal listed species, and will involve preparation of a Biological Assessment. USFWS will then issue a Biological Opinion for the proposed Project. Consultation with CDFG will also be necessary under the California Endangered Species Act for impacts to DT because it is a State listed species. If CDFG agrees with the conditions of the Biological Opinion, it may issue a concurrence letter; otherwise, a separate Incidental Take Permit under Section 2081 of the CFGC will be needed.

This report addresses permanent, temporary, direct, and indirect impacts to biological resources in the BRSA. The proposed Project is not expected to result in direct or indirect, permanent or temporary impacts to sensitive vegetation communities due to lack of such communities in the BRSA. Development of the proposed Project would directly affect two dry desert washes that traverse the BRSA; however, these impacts would be minimized to the greatest extent possible by re-routing the channels and restoring the native vegetation to the rerouted channel on the southern and eastern edge of the BRSA. Based on analyses conducted to date, impacts on biological resources would be significant, but through implementation of avoidance, minimization, and mitigation measures, would be reduced to below a level of significance for most species. Significant impacts to wildlife movement for DT could not be mitigated to below a level of significance.

Each of the cumulative projects will be required to mitigate their own biological impacts. However, the stress on species whose habitats are shrinking due to development activities will continue. Further, the numerous large project sites will cumulatively affect wildlife dispersal.

Note that because of uncertainties in the location of the BSPP electrical transmission system, the Project's transmission line route has not been finalized (Figure 2). For this reason, this BRTR does not include evaluation of the existing biological resources or potential Project impacts of a transmission line route. When a final transmission route is selected, the required biological resources studies and surveys will be performed and submitted to the regulatory agencies and other stakeholders. This work will be performed and the information provided during the post-AFC submittal portions of the combined CEC/BLM BSPP review process.

In addition, several portions of the disturbance area, totaling approximately 180 acres, are no longer a part of the proposed Project and have been removed from the disturbance area. For example, an approximately 6.2-mile-long linear feature was surveyed that was subsequently removed from the disturbance area. Spring 2009 surveys were completed for the existing disturbance area (excluding the transmission line) as well as the 180 acres that are no longer a part of the current disturbance area. The detailed results for the 180 acres are not included in this BRTR, but are reported in the attached technical reports.

CHAPTER 1
INTRODUCTION

EDAW AECOM (EDAW) performed biological resources studies for Solar Millennium, LLC and Chevron Energy Solutions, who are the Applicants for the proposed Blythe Solar Power Project (Project or BSPP). The Project is proposed on public lands managed by the Bureau of Land Management (BLM) in Riverside County, California and the Applicants have submitted an application to BLM for a Right of Way (ROW) grant. The BSSP will be a 1,000-megawatt (MW) solar thermal electric generating facility using parabolic trough technology. The Biological Resources Study Area (BRSA) covers the approximately 7,027 acres inside and outside the facility fence line that would be disturbed by Project construction and operation (disturbance area) plus a 1-mile buffer around the disturbance area for a total of approximately 18,998 acres. The facility footprint (area within the fence line only) would be approximately 5,952 acres.

This Biological Resources Technical Report (BRTR) was prepared to support an Application for Certification submitted to the California Energy Commission (CEC), which must license all thermal power plants more than 50 MW in California. Because the Project is proposed on Federal land, compliance with the National Environmental Policy Act (NEPA) also is required. CEC and BLM are conducting a joint review of the BSPP through a combined CEQA/NEPA document, and thus this BRTR also supports BLM's NEPA compliance. Finally, this BRTR will also support Project permitting from State and Federal biological resources agencies (e.g., US Fish and Wildlife Service [USFWS] and the California Department of Fish and Game [CDFG]).

1.1 PROJECT LOCATION

The BSPP is located west of the City Blythe, to the north of the Interstate 10 (I-10) corridor in Riverside County, California (Figure 1). The BSPP is proposed on a contiguous area consisting of approximately 7,030 acres of land administered by BLM. The proposed BSPP site is primarily undeveloped open space.

1.2 SITE AND PROJECT DESCRIPTION

1.2.1 <u>Site Description</u>

The Blythe Solar Power Project (BSPP) site is nearly completely vacant and undeveloped and is entirely owned by BLM; there is a 160-acre private parcel within the facility footprint boundaries that currently is not planned for use by the project. There are no existing structures that would

need to be demolished. The site is mostly flat, with elevation ranging on USGS topographical maps from a high of about 670 feet above sea level at the southwestern limits of the site to a low of about 420 feet above sea level near the southeastern site boundary.

During WWII, the site was part of the General George S. Patton Desert Training Center, officially the California-Arizona Maneuver Area (DTC-CAMA), a simulated theater of operations. The site area was heavily used by tanks and other military vehicles. Nearby Blythe Airport was used as a CAMA training field. The 46th Bomb Group, and later the 34th Bomb Group, occupied nearby Blythe Airport, then known as Bishop Army Field, and flew training missions in a variety of military aircraft, including bombers.

1.2.2 Project Description

Solar Millennium LLC and Chevron Energy Solutions ((the Applicants) are proposing to construct a commercial solar thermal electric power generating project, herein referred to as the Blythe Solar Power Project (BSPP or Project). The BSPP would be located in the southern California inland desert, approximately 1 mile northwest of the Blythe Airport, in Riverside County, California. The Project would be located on a 9,405-acre right-of-way (ROW) owned by the Federal government and leased by the Applicant from BLM. The total area that would be disturbed by project construction and operation (referred to as the disturbance area) would occupy approximately 7,030 acres of the ROW, as shown in Figure 2. Figure 3 illustrates the facility design layout. The BSPP facilities would occupy approximately 5,952 acres (referred to as the facility footprint) within the disturbance area.

The Project would use solar parabolic trough technology to generate electricity. With this technology, arrays of parabolic mirrors collect heat energy from the sun and refocus the radiation on a receiver tube located at the focal point of the parabola. A heat transfer fluid (HTF) is heated to high temperature (750 degrees Fahrenheit [°F]) as it circulates through the receiver tubes. The heated HTF is then piped through a series of heat exchangers where it releases its stored heat to generate high-pressure steam. The steam is then fed to a traditional steam turbine generator where electricity is produced.

The Project would have a nominal output of 1,000 MW, produced by four adjacent, identical, and independent 250-MW units, referred to Unit 1 through Unit 4. Unit 1 would occupy the northeast portion of the facility footprint; Unit 2 the northwest portion; Unit 3 the southwest portion; and Unit 4 southeast portion. The units would be developed in phases. The first two phases, Unit 1 and Unit 2, would together provide a nominal 500 MW of electrical power and

Map Location

1 inch = 40 miles

0 40 80 Miles

Blythe Solar Power Project
Biological Technical Report

Figure 1
Regional Map

Source: ESRI; AECOM 2009

Solar Millennium

AECOM

Date: August 2009

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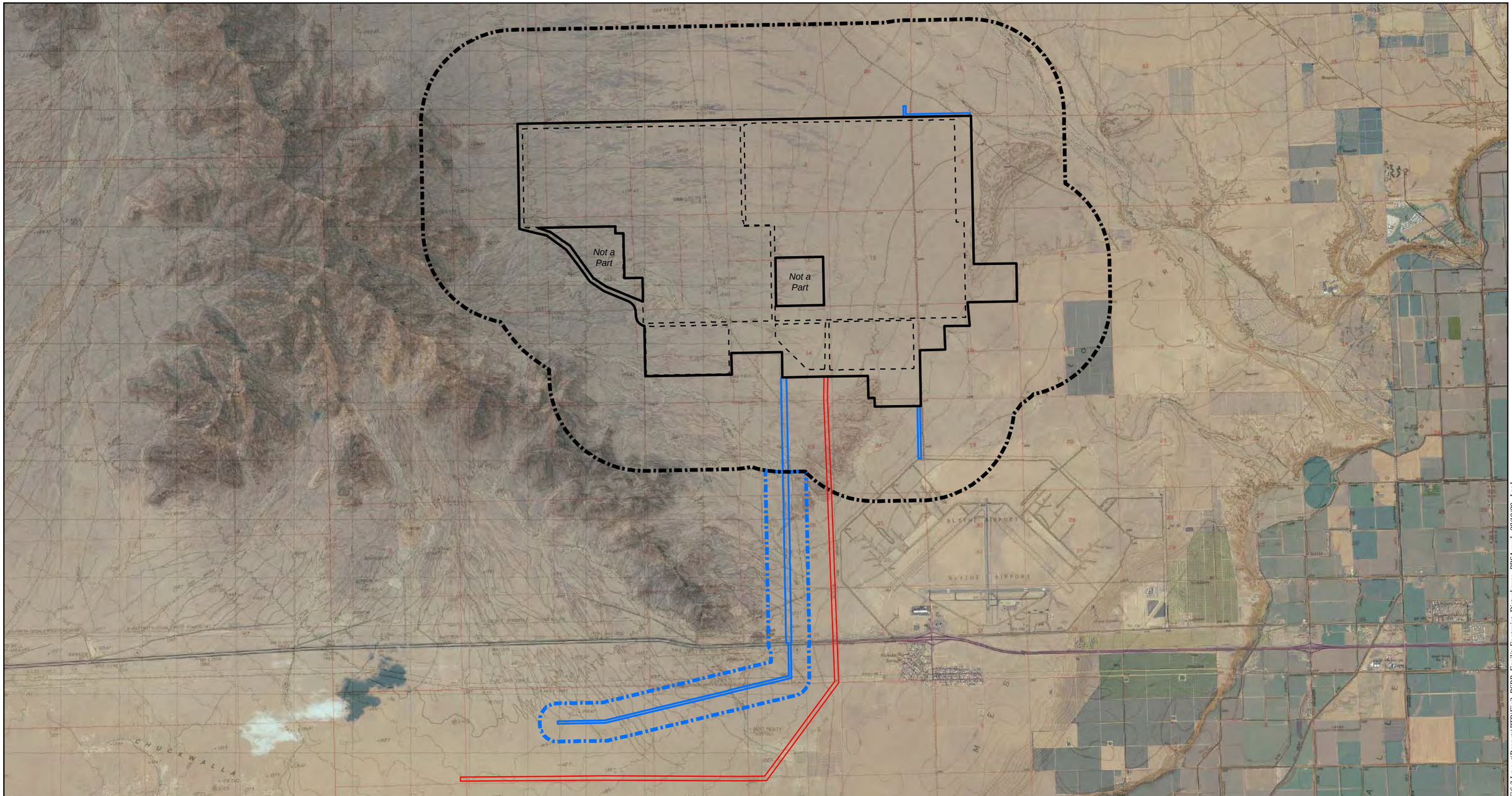

Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Biological Resource Survey Area (BRSA)
- Buffer Survey Area (Surveyed No Longer a Part)
- Disturbance Area (Surveyed - No Longer a Part)

Source: NAIP 2005; AECOM 2009

N W E S

1 in = 1 miles

0 1 2 Miles

Blythe Solar Power Project
Biological Technical Report

Figure 2
Facility Footprint, Disturbance Area, and Biological Resources Survey

Solar Millennium

AECOM

Date: August 2009

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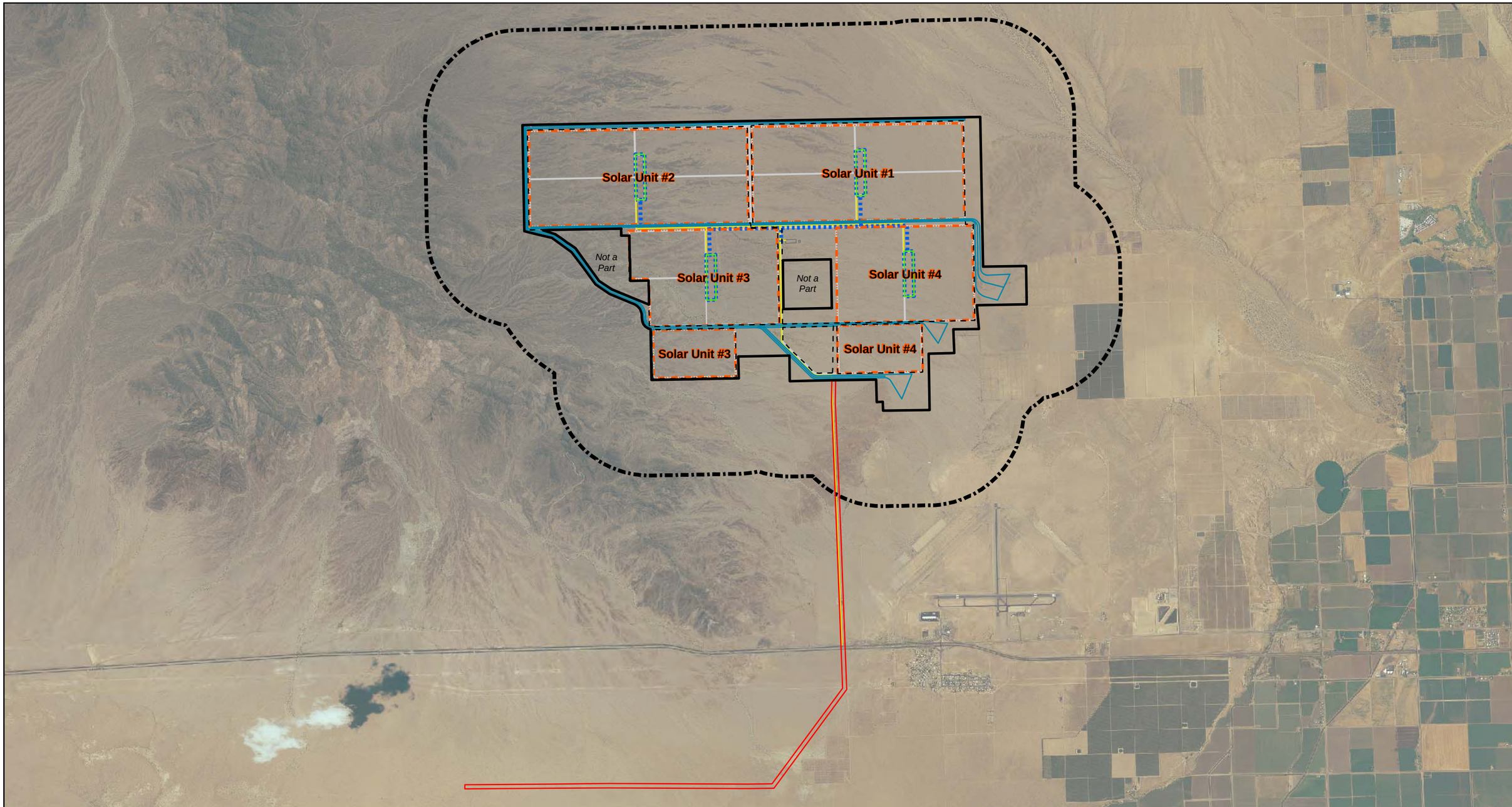

Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Biological Resource Survey Area (BRSA)

Facilities Layout

- Solar Unit
- Location of Power Block
- Road
- Water Line
- Gas Line
- Building
- Rerouted Drainage

Source: NAIP 2005; ESRI; AECOM 2009; EDAW 2009

N W E S

1 in = 1 miles

0 1 2 Miles

Blythe Solar Power Project
Biological Technical Report

Figure 3
Facility Layout

Solar Millennium

AECOM

Date: August 2009

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would each occupy approximately 1,595 acres of land. The third and fourth phases, Unit 3 and Unit 4, would also provide a nominal 500 MW of electrical power and would occupy approximately 1,600 and 1,200 acres of land, respectively.

The reason for the differences in acreages among four "identical" facilities is the fact that there are shared support facilities among the four power generating units, and different support facilities would be located within different units. All four units would share a main office building, a main maintenance facility and laydown area, a 200-vehicle parking lot, onsite access roads, and two land treatment units (LTU) for bioremediation or land farming HTF-contaminated soil. Unit 1 and Unit 2 would share water treatment systems and water storage tanks for dust control, and Unit 3 and Unit 4 would share an identical set of water treatment and storage facilities. A central internal switchyard to serve all four power units would be located just outside the southwest boundary of the solar field of Unit 4. Each power block would have its own HTF pumping and freeze protection system, solar steam generator, steam turbine generator, an air-cooled condenser (ACC) for cooling, transmission lines and related electrical system, and auxiliary equipment (e.g., water treatment system, emergency generators).

Access to the BSPP would be via an existing public road heading north from the frontage road along I-10that would be improved. Only a small portion of the overall facility footprint would be paved, primarily the site access road, the service roads to the power blocks, and portions of the power blocks. The remaining portions of the power blocks would be gravel surfaced. In total, the area of each power block area would be approximately 18.4 acres, with approximately 6 acres of paved area. The solar field would remain unpaved and without a gravel surface to prevent rock damage from mirror wash vehicle traffic.. The Project solar fields and support facilities perimeter would be secured with chain link metal-fabric security fencing, 8 feet tall, with 1-foot barbed wire or razor wire on top. Controlled access gates would be located at the site entrance.

Project construction is scheduled to begin in late 2010 on the first unit and continue for a total of 69 months. Project construction would require an average of about 600 employees, peaking at approximately 1,000 workers. in Month 16 of construction. . Commercial operation of the first completed Unit 1 would begin in mid 2013, with subsequent units coming online in 6- to 12-month intervals.

The BSPP would generate electric power solely via solar energy. Natural gas would be used to fire an auxiliary boiler in each unit in the morning to support start-up operations sand for HTF freeze protection. A new 4-inch diameter, 9.9-mile long natural gas pipeline would be

constructed by Southern California Gas (SCG) to connect the Project to an existing SCG pipeline south of I-10. Approximately 2 miles of the pipeline would be outside the facility boundary. The line would be buried with a minimum 3 feet of cover, depending on location.

Thermal power plants require cooling, which historically has involved large quantities of cooling water. The BSPP would use ACCs in a process commonly referred to as "dry cooling," which would dramatically reduce the amount of water needed by the facility. Water would be used for solar mirror washing, feedwater makeup, , ancillary equipment heat rejection, dust suppression, firewater supply, and onsite domestic use. Total consumption for facility is estimated at approximately 600 acre-feet per year (AFY), supplied by onsite groundwater wells.. Sanitary wastewater would be collected for treatment in septic tanks and disposed of via leach fields.

Note that because of uncertainties in the location of BSPP electrical transmission system, the Project's transmission line route has not been finalized (Figure 2). For this reasons, this BRTR does not include evaluation of the existing biological resources or potential Project impacts of a transmission line. When a final transmission route is selected, the required biological resources studies and surveys will be performed and submitted to the regulatory agencies and other stakeholders. This work will be performed and the information provided during the post-AFC submittal portions of the combined CEC/BLM BSPP review process.

In addition, several portions of the disturbance area, totaling approximately 180 acres, are no longer a part of the proposed Project and were removed from the disturbance area. For example, an approximately 6.2-mile-long linear feature was surveyed that was subsequently removed from the disturbance area. Spring 2009 surveys were completed for the existing disturbance area (excluding the transmission line) as well as the 180 acres that are no longer a part of the current disturbance area. The detailed results for the 180 acres are not included in this BRTR, but are reported in the attached technical reports.

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CHAPTER 2
METHODOLOGY

This section describes the methodologies, protocols, and limitations for the various plant and wildlife surveys conducted for the BSPP during spring 2009.

2.1 DATABASE RESEARCH

For the purposes of this report, species are considered to have special status if they meet at least one of the following criteria:

- Covered under the Federal or California Endangered Species Act (ESA and CESA, respectively) (CDFG 2009);
- California Department of Fish and Game (CDFG) Species of Special Concern (SSC) (CDFG 2009);
- CDFG fully protected species (CDFG 2009);
- BLM sensitive species (BLM Sensitive) (BLM 2009);
- Covered as a State protected furbearing mammal (PFM) (California Code of Regulations [14 CCR Section 460]);
- Listed by the CNPS as List 1A (presumed extinct in California), 1B (rare, threatened, and endangered in California and elsewhere), or 2 (rare, threatened, or endangered in California, but more common elsewhere). CNPS List 1A, 1B, and 2 species are considered special status plant species if they fall within any of these categories as defined in the Native Plant Protection Act (NPPA), California Fish and Game Code (CFGC) Section 1901 or the CESA, CFGC Sections 2050 through 2098 (CESA).

Prior to beginning field surveys, EDAW biologists consulted the California Department of Fish and Game (CDFG) California Natural Diversity Database (CNDDB) (RareFind Version 3.1.0; CDFG 2009) California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2009), and the Natural Resources Conservation Service Web Soil Survey (USDA 2009). These resources, along with the Special Animals list (CDFG 2009) and range maps, were consulted to determine historic occurrence of special status plant and wildlife species and other natural resources within the BRSA (Figure 4). Additionally, the USFWS provided a letter on March 19, 2009, detailing special status species that it requires to be considered. The DT was the only species specifically mentioned in this letter.

The Northern and Eastern Colorado Desert Coordinated Management Plan (NECO) (BLM 2002) was consulted for maps of lands designated for Wildlife Management Areas, documentation of sensitive vegetation communities, and documentation of sensitive species, such as Coachella Valley milkvetch and DT. Several plant and wildlife special status species with potential for occurrence on site are included in the NECO.

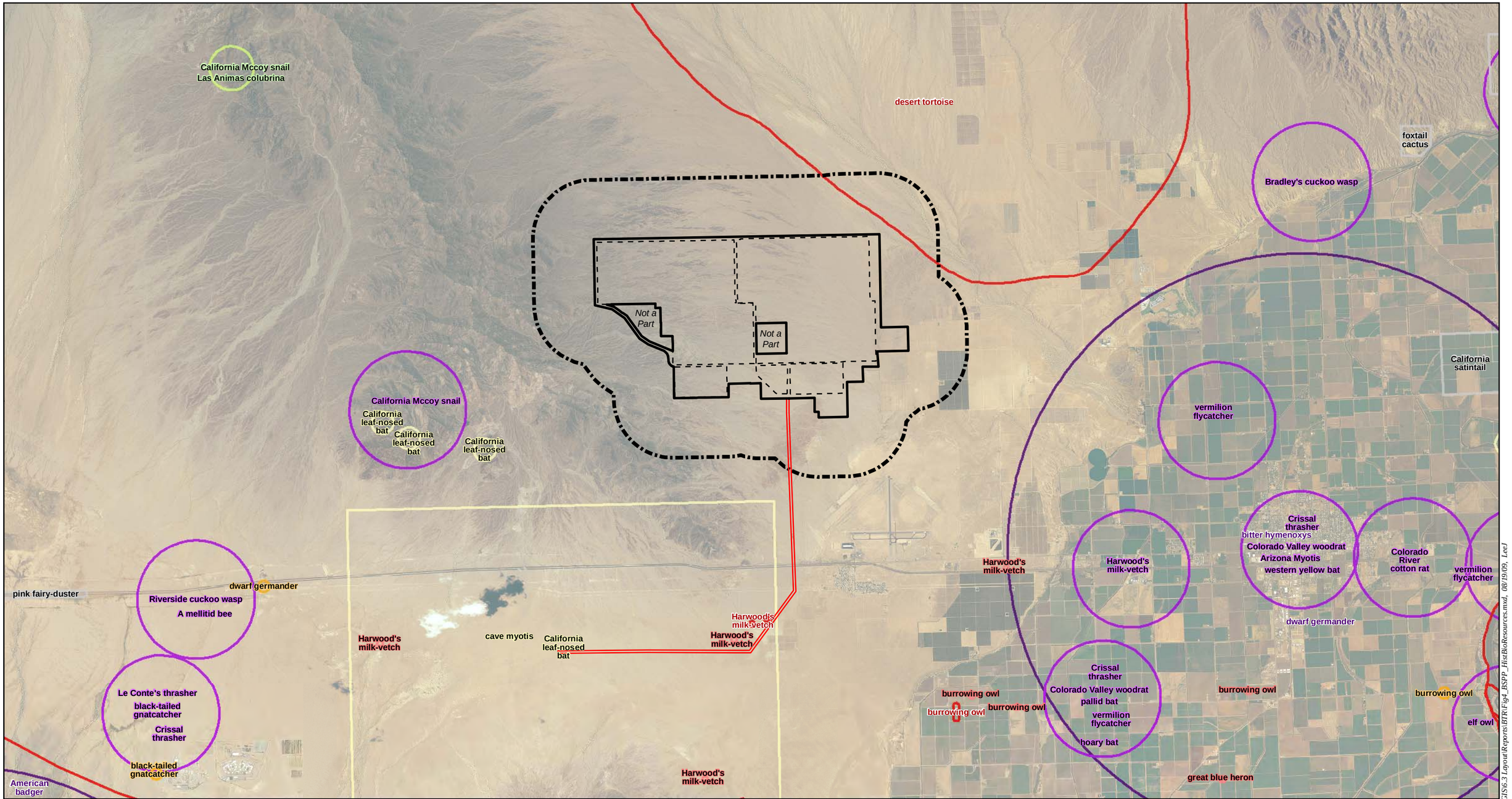
Habitat conditions for special status species were evaluated with respect to conditions in the BRSA, and surveys were initiated to determine presence/absence of species with the potential to occur on or near the BRSA. The following 28 special status species were identified as having the potential to occur on or near the BRSA, and are discussed in detail below.

Federal or State Listed (ESA or CESA)

- Coachella Valley milkvetch (*Astragalus lentiginosus* var. *coachellae*) – ESA endangered, CNPS List 1B.2, BLM Sensitive, NECO
- Desert tortoise (*Gopherus agassizii*) – ESA and CESA threatened, NECO
- Gila woodpecker (*Melanerpes uropygialis)* – CESA endangered, NECO
- Gilded flicker (*Colaptes chrysoides)* – CESA endangered
- Swainson's hawk (*Buteo swainsoni)* – CESA threatened – however, migratory only on site

CDFG Species of Special Concern, California Code of Regulations, BLM Sensitive, NECO, or CNPS List 1A, 1B, or 2

- Angel trumpets (*Acleisanthes longiflora*) – CNPS List 2.3, NECO
- Harwood's milkvetch (*Astragalus insularis* var. *harwoodii*) – CNPS List 2.2, NECO
- Fairyduster (*Calliandra eriophylla*) – CNPS List 2.3, NECO
- Alkali mariposa lily (*Calochortus striatus*) – CNPS List 1B.2, BLM Sensitive
- Crucifixion thorn (*Castela emoryi*) – CNPS List 2.3, NECO
- Las Animas colubrine (*Colubrina californica*) – CNPS List 2.3, NECO
- Glandular ditaxis (*Ditaxis claryana*) – CNPS List 2.2, NECO
- California satintail (*Imperata brevifolia*) – CNPS List 2.1
- Orocopia sage (*Salvia greatae*) – CNPS List 1B.3, NECO
- Desert spikemoss (*Selaginella eremophila*) – CNPS List 2.2
- Coves' cassia (*Senna covesii*) – CNPS List 2.2, NECO
- Dwarf germander (*Teucrium cubense* ssp. *depressum*) – CNPS List 2.2
- Jackass-clover (*Wislizenia refracta* ssp. *refracta*) – CNPS List 2.2, NECO
- Orcutt's woody-aster (*Xylorhiza orcuttii*) – CNPS List 1B, BLM Sensitive



Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Biological Resource Survey Area (BRSA)

Source: NAIP 2005; AECOM 2009; EDAW 2009; DFG 2009

CNDDB Species Inventory

Accuracy

- Specific Bounded Area
- Specific Bounded Area with 1/20-mile radius
- Feature with 1/10-mile radius
- Feature with 1/5-mile radius
- Feature with 2/5-mile radius
- Feature with 3/5-mile radius
- Feature with 4/5-mile radius
- Feature with 1-mile radius
- Feature with 5-mile radius
- Non-specific Area

N W E S

1 inch = 8,333 feet

0 8,333 16,666 Feet

Blythe Solar Power Project
Biological Technical Report

Figure 4
Biological Resources
Regional Database

Solar Millennium

AECOM

Date: August 2009

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- Ferruginous hawk (*Buteo regalis*) – CDFG Watch List (WL), BLM Sensitive, NECO – however, wintering only on site
- Western burrowing owl (*Athene cunicularia hypugaea*) – CDFG SSC, BLM Sensitive, NECO
- Crissal thrasher (*Toxostoma crissale)* – CDFG SSC, NECO
- Loggerhead shrike (*Lanius ludovicianus*) – CDFG SSC
- Yellow warbler (*Dendroica petechia sonorana*) - CDFG SSC, NECO – however, only migratory on site
- American badger (*Taxidea taxus*) – CDFG SSC
- Desert kit fox (*Vulpes macrotis arsipus*) – State Protected Fur-bearing Mammal (PFM, per. Calif. Code of Regulations)
- Nelson's bighorn sheep (*Ovis canadensis nelsoni*) – BLM Sensitive, NECO
- Pallid bat (*Antrozous pallidus)* – CDFG SSC, BLM Sensitive, NECO

2.2 SURVEY PROTOCOLS

Comprehensive biological resource surveys designed to meet all applicable USFWS, BLM, CDFG, and CEC requirements were initiated in spring 2009.

Surveys for biological resources were conducted inside and outside the facility fence line that will be disturbed by the Project (disturbance area) and the 1-mile buffer around the disturbance area (buffer), as required by the CEC. The entire 12,510-acre survey area, consisting of the disturbance area plus the buffer, is referred to as the Biological Resources Survey Area (BRSA), and is shown in Figure 5. The surveys of the project transmission line route that will occur when the route is finalized will include the transmission ROW plus 500-foot buffers on either side of the ROW. As noted above, surveys for the transmission line route will be conducted during the post-AFC CEC/BLM review process.

Following completion of spring 2009 surveys, several portions of the disturbance area, totaling approximately 180 acres, are no longer a part of the proposed Project and have been removed from the disturbance area. Spring 2009 surveys were completed for the existing disturbance area (excluding the transmission line) as well as the 180 acres that are no longer a part of the current disturbance area. The detailed results for the 180 acres are not included in this BRTR, but are reported in the attached technical reports.

Qualifications of field biologists involved in surveys for the proposed Project are presented in Attachment A.

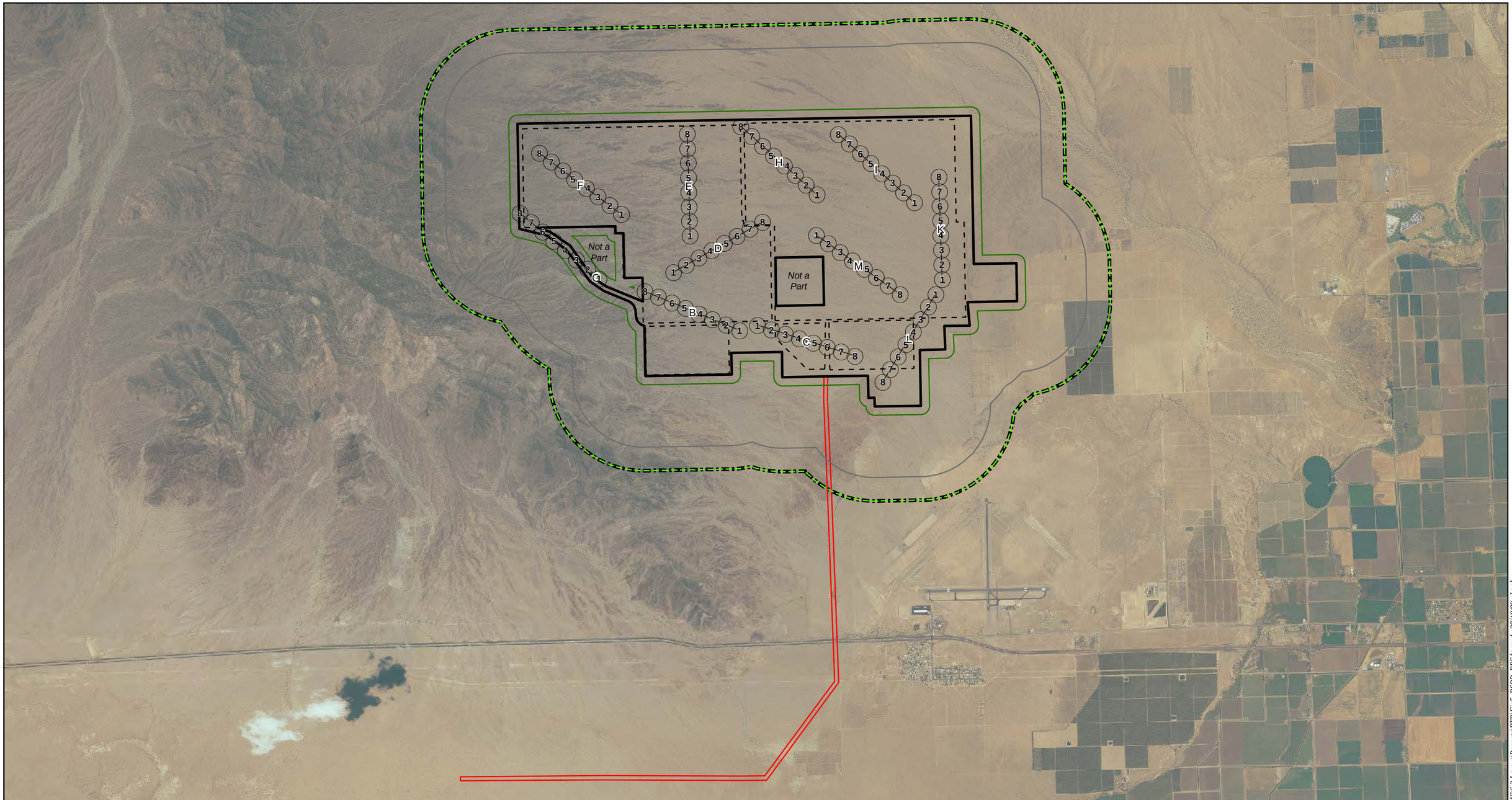
2.2.1 California Energy Commission Survey Guidelines

Biological survey methodologies for the proposed Project were formulated in conformance with the CEC's *Draft Recommended Biological Resources Field Survey Guidelines for Large Solar Projects*, dated May 8, 2007 (hereafter referred to as CEC Draft Solar Guidelines). The CEC Draft Solar Guidelines recommend that biological surveys be conducted according to established protocols within and around the proposed disturbance area, and additional surveys be conducted as necessary to ultimately cover a 1-mile buffer around the disturbance area to evaluate suitable habitat and record occurrence and sign of special status species in this area. The CEC Draft Solar Guidelines were also intended to evaluate potential wildlife habitat and movement in the proposed Project vicinity that may be disrupted as a result of Project implementation.

The CEC Draft Solar Guidelines reference "established protocols," which, in the case of species listed as threatened or endangered by the Federal or State government, are guidelines promulgated by USFWS or CDFG, respectively. In an effort to gain consensus regarding the survey methodologies to be employed, the Project team initiated discussions with CEC, BLM, USFWS, , and CDFG (hereafter collectively referred to as "the agencies"). A document entitled *Proposed Survey Protocols for the Solar Millennium Parabolic Trough Projects 2009* (Proposed Survey Protocols) was prepared by EDAW as discussed with relevant staff from the above-mentioned agencies via a conference call held on February 11, 2009. The protocols were modified slightly based on input received during this call. The revised version of the *Proposed Survey Protocols* was transmitted to the appropriate staff from the above agencies on February 20, 2009.

The agencies reviewed the Proposed Survey Protocols collectively. It was determined that a unified agency response would be compiled and forwarded by CDFG. Agency input was received in the form on an email from Kim Nicol of CDFG dated March 10, 2009 (Attachment K). The clarifications and elaborations requested by the agencies were incorporated.

The final version of the Proposed Survey Protocols is a compilation of the actual agency-required survey methodologies mentioned above, with certain modifications arising from the March 10, 2009, comments. Modifications to the standard USFWS DT survey protocol were made based on the need to incorporate CEC requirements as well as to make adjustments to standard survey protocols based on input received from individual agencies. Adjustments included the elimination of Zone of Influence (ZOI) transects from DT surveys. These were eliminated after discussions with USFWS, as it was concluded that the usual rationale for these ZOI transects, i.e., the potential for a Federal action to affect off site individuals of an



Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Biological Resource Survey Area (BRSA)

Desert Tortoise and CEC Buffer Transects

- 1-mile Transect[1]
- 0.75-mile Transect[1]

Burrowing Owl Survey Buffer

- CBOC 492-foot

Transect Identifier

- —X— Transect Identifier
- (#) Point Count Location Identifier and Buffer (Radius 328 feet)

[1] Note:
The 1-mile and ¾-mile CEC Buffer Transects on the southern side are greater than these distances from the disturbance area due to changes in project design.

Source: NAIP 2005; AECOM 2009

N
W E
S

1 in = 1 miles

0 1 2 Miles

Blythe Solar Power Project
Biological Technical Report

Figure 5
Biological Resource Survey Areas

Solar Millennium

AECOM

Date: August 2009

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endangered species and therefore necessitate consultation under Section 7 of the Federal Endangered Species Act, was a moot point as consultation was already determined to be necessary. CEC buffer requirements would result in substantial off site survey activity in any case.

Figure 5 illustrates the various survey areas defined by the agency survey protocols used for the proposed Project, including those from CEC, USFWS, Burrowing Owl Consortium, and BLM.

2.2.2 Vegetation Communities

Vegetation mapping was conducted within the BRSA between February 11 and April 21, 2009, using the following methodology by Project biologists Kristen Asmus, Joseph Betzler, Richard Dwerlkotte, Shirley Innecken, Fred Sproul, Lance Woolley, Carolyn Martus, and Caesara Wendin.

Vegetation communities were classified based on Holland (1986). Sawyer and Keeler-Wolf (1995) and CDFG (2003) classifications were used to provide additional detail when needed, such as denoting special vegetation communities that are either known or believed to be of high priority for inventory in CNDDB due to significance or rarity. Field biologists use 200-foot scale ortho-topo maps for both vegetation mapping and rare plant points or polygons. If rare plants were documented during vegetation mapping, these sites were revisited during additional rare plant surveys to accurately delineate species populations using Global Positioning System (GPS) equipment.

The minimum mapping unit was 0.01 acre for riparian areas and 1.0 acre for all other cover types within the disturbance area. Within the buffer, the minimum mapping unit for all land cover types, including riparian, was 1.0 acre. Vegetation mapping within the disturbance area was conducted concurrently with rare plant surveys by walking transects ranging from 10 to 100 feet apart. The buffer was surveyed by pedestrian transect within native habitat, but developed and agricultural vegetation were surveyed by a combination of walking transects and selecting key vantage points from existing dirt access roads.

Dominant plant species for the various riparian and upland vegetation communities were recorded according to the 50/20 dominance rule. According to this rule, dominant plant species are defined as those that, when ranked in order of abundance, collectively make up 50 percent relative cover. Each dominant species individually makes up at least 20 percent relative cover, or is needed to surpass the 50 percent relative cover threshold. Once the dominant plant species

were identified according to this method, they were grouped according to relative cover: species below 20 percent, species ranging from 20 to 50 percent cover, and species exceeding 50 percent cover.

An observation number was recorded on the map and keyed to the field notes for representative locations. A description of the vegetation community was written in field notes and included disturbance, special soils, potential jurisdictional waters, and habitat suitability for sensitive species.

Invasive species on List A of Cal-IPC (California Invasive Plant Council) were noted when occurring in high concentrations (10 square meters) and nearly monotypic stands. Species considered primarily include tamarisk (*Tamarix* spp.).

In the 1-mile buffer of the BRSA, vegetation mapping was conducted from strategic vantage points whenever direct access was not feasible.

Survey Limitations

Due to constraints on access and CEC guidelines that surveys in buffers do not need to be as thorough as within the disturbance area, vegetation mapping within the buffer was conducted from strategic vantage points whenever direct access was not feasible.

2.2.3 State Waters Streambed Delineation

Project ecologists Jason Phillips, Lindsay Teunis, Jessica Wilson, and Joshua Zinn conducted field assessments and surveys for 10 days (40 person-days) from March 18 through March 27, 2009, to formally delineate all jurisdictional "waters of the State" (jurisdictional waters) occurring within the disturbance area.[1,2] This section is based on information provided in the Jurisdictional Delineation Report included as Attachment B (EDAW 2009b).

[1] Through field surveys, topographical and hydrological investigation and analysis, EDAW determined that the facility footprint does not support jurisdictional waters of the U.S. A formal determination and documentation for the absence of Federal waters under USACE jurisdiction is currently being pursued through the USACE Jurisdictional Determination process..

[2] The jurisdictional delineation focused on the area within the disturbance area. Therefore there are no jurisdictional waters data for areas outside the disturbance are (i.e. the buffer).

Prior to conducting the field delineation, Project ecologists reviewed and identified areas with topographical configurations and vegetative signatures occurring within the disturbance area that may suggest the potential or presence of jurisdictional waters. This information was evaluated by consulting the following available sources:

- 7.5 U.S. Geological Survey (USGS) McCoy Wash (1972) McCoy Peak (1972), Ripley (1972), and Roosevelt Mine (1973) topographic quadrangles
- 2005 Aerial Maps of the BRSA (USDA National Agriculture Imagery Program)
- The National Wetlands Inventory (NWI) Interactive Wetlands Mapper (USFWS 2009b)
- The Information Center for the Environment (ICE) (U.C. Davis 2009)
- The National List of Hydric Soils (NRCS 2009a)
- The Natural Resource Conservation Service Web Soil Survey (NRCS 2009b)
- The California Watershed Network (CWN 2009)
- The California Watershed Portal (CalEPA 2009)
- The Digital Watershed (USEPA 2009)
- The National Weather Service Climate Office (NOAA 2009a)
- The National Weather Service data (NOAA 2009b)

Field delineation at the site involved two field teams, each comprised of two ecologists. Each team recorded the presence (including extents, types, and boundaries) of jurisdictional waters with two Trimble XH sub-foot accuracy GPS units. At the close of each field day, all acquired field data were submitted via the internet to EDAW San Diego's Geographic Information Systems (GIS) specialists for post-field processing using Trimble GPS Analyst (Version 2.1) GIS software. Post-field analysis to code, define, designate, and edit all acquired GPS field data representing jurisdictional waters occurring within the disturbance area was conducted in tandem with an EDAW GIS specialist and the ecologists who performed the field work.

The field delineation use the Holland Code Classification System for vegetation communities (Holland 1986) for identifying xeric riparian vegetation community associated with all washes occurring within the disturbance area. Only wash-dependant plant species were mapped (see below). Where vegetation contains a mixture of upland and wash-dependent indicator plant species from two or more Holland vegetation communities, the indicator species that appears with the greatest vegetation coverage (absolute dominance based on percent cover) was used to

identify the vegetation community. The xeric riparian vegetation community occurring within the disturbance area was identified as desert dry wash woodland (Holland Code 62200). The minimum mapping unit (MMU) for xeric riparian vegetation use for the field delineation was 0.01 acre.

For wetlands and other aquatic habitats occurring in California, CDFG relies on the USFWS wetland definition and classification system, which is based on Classification of Wetland and Deepwater Habitats of the United States (Cowardin et al. 1979). Therefore, jurisdictional wetland delineations within the disturbance area were conducted based on the one-parameter[3] method outlined in CDFG/USFWS guidance documents and classification manual(s) to define presence and State jurisdictional extent. The Cowardin method requires diligence to avoid false positive conclusions (e.g., concluding that an area with no transitional relation to the aquatic system is a wetland based on presence of vegetation equally likely to be found in wetland or nonwetland circumstances).[4]

Under Section 1600 et seq. of the CFGC, CDFG regulates activities that would alter the flow, bed, channel, or bank of streams and lakes. The limits of CDFG jurisdiction are defined in CFGC Section 1600 et seq. as the "bed, channel or bank of any river, stream or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit."[5] However, in practice, CDFG usually extends its jurisdictional limit and regulatory administration to the top of a stream, the bank of a lake, or outer edge of the riparian vegetation, whichever is wider. Therefore, boundaries for jurisdictional waters of the State were determined (and recorded) by the presence of shelving and/or scour resulting in an established bank, bed, and channel of an ephemeral wash feature and its associated xeric riparian lateral extent (where applicable).

Based on the CFGC Section 1600 et seq. definition and CDFG regulatory practice, field diagnostic features were used to determine and delineate the presence of two types of

[3] For Federal jurisdictional waters, a determination for the presence of wetland is based on the presence of three parameters occurring simultaneously at the area of investigation and study. These three wetland parameters are 1) hydrophytic vegetation, 2) hydric soils, and 3) wetland hydrology. Therefore, for State-defined wetlands, only one of these three wetland criteria is required to be present for the State to consider an aquatic feature a wetland. However, a State-defined wetland may not necessarily be a *jurisdictional water* under regulatory administration by CDFG, Regional Water Quality Control Board (RWQCB), or other State resource agency.

[4] Although aquatic features can be delineated and defined as wetlands under the Cowardin Classification System; they are not necessarily *jurisdictional* waters of the U.S. or State.

[5] The California Code of Regulations (Title 14 CCR 1.72) defines a stream as: "*…a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation*."

jurisdictional waters, which collectively and individually represent the jurisdictional extent, occurring within the disturbance area:

1. Desert dry wash woodland
2. Unvegetated ephemeral dry wash

Desert Dry Wash Woodland

The jurisdictional limits of desert dry wash woodland was considered, recorded and mapped for areas within all washes and wash features where the association of wash-dependant vegetation was present and/or where Sonoran creosote bush scrub (Holland Code 33100) was not established at more than 5 percent absolute cover. The jurisdictional linear and lateral extent of desert dry wash woodland, occurring within the disturbance area, is collectively composed of three xeric riparian features:

1. Wash-dependent vegetation
2. Riparian interfluves
3. Vegetated ephemeral dry washes

<u>Wash-Dependent Vegetation</u>

Wash-dependent vegetation was considered for all washes (primary and secondary) occurring within desert dry wash woodland and the disturbance area. Subsampling of wash-dependent vegetation occurred within portions (reaches) of selected washes. The MMU used for the wash-dependent vegetation subsampling was 0.01 acre. The wash-dependent vegetation occurring within the desert dry wash woodland is composed of nine plant species:

a. catclaw (*Acacia greggii*)
b. desert starvine (*Brandegea bigelovii*)
c. desert lavender (*Hyptis emoryi*)
d. ironwood (*Olneya tesota*)
e. blue palo verde (*Parkinsonia florida*)
f. big galleta grass (*Pleuraphis rigida*)
g. smoke tree (*Psorothamnus spinosus*)
h. honey mesquite (*Prosopis glandulosa*)
i. spiny senna (*Senna armata*)

Using GPS units, field data points and polygons were taken for all nine wash-dependent plant species occurring within the 19 designated subsampling areas. Note that two subsampling areas are now excluded from the disturbance areas; however, they were retained to maintain a more robust and conservative analysis. Their canopy diameters (individuals and mixed/monotypic stands) were recorded for absolute cover. For the 19 subsample areas, a weighted arithmetic mean of percent cover for wash-dependent vegetation was calculated by dividing the total acres of the subsample area by the acres of mapped wash-dependent vegetation. An overall mean of the 19 subsample areas was then calculated. This percent cover was extrapolated to estimate total cover of wash-dependent vegetation occurring within the desert dry wash woodland within the disturbance area.

Vegetated Ephemeral Dry Washes

Vegetated ephemeral dry washes are desert washes that present an established bed, bank, and channel that support wash-dependent vegetation (see methodology for delineating unvegetated ephemeral dry wash, below).

Riparian Interfluves

Riparian interfluves are islands or terraces populated by wash-dependent vegetation or an intermix of wash-dependent vegetation and Sonoran creosote bush scrub, and which are encompassed by vegetated and/or unvegetated ephemeral dry wash (see below) and desert dry wash woodland (the xeric riparian extent). Riparian interfluves are considered a jurisdictional water (as a component of desert dry wash woodland).

Unvegetated Ephemeral Dry Wash

Unvegetated ephemeral dry washes make up the other component of jurisdictional waters within the disturbance area. They are defined by shelving and/or scour resulting in an established bed, bank, and channel. In areas where evidence of distinct shelving and/or scour were absent, but some indication of past surface waterflow could be observed, it was ascertained that these features were either swales (that support low volume and duration surface flow and/or were low lying undefined relatively linear features in the landscape that are unvegetated or primarily populated exclusively by Sonoran creosote bush scrub) or eroded relictual washes (that support sheetflow) during rain events. Unvegetated ephemeral dry wash primarily does not support wash-dependent vegetation; there are sporadic occurrences of individual trees; however, based on the minimum mapping unit of 0.01, these areas are unvegetated.

Jurisdictional lateral extents of the washes were determined by the farthest extents of the respective established channel bed and banks (including shelving and scouring) of each subchannel. The delineation of unvegetated ephemeral washes collectively includes all respective subchannels of each larger wash into linear ephemeral wash features for jurisdictional waters (see below). Jurisdictional linear extents of the washes were determined by the farthest extents of the established channel bed and banks (including shelving and scouring). When the established channel bed and banks began to transition into less distinct features, such as features that only support sheet flow, and/or features that began to blend into the landscape and/or reflect the features of a swale or relictual channel, jurisdictional linear extent(s) ceased.

All washes occurring within the disturbance area are generally linear. However, the washes are collectively made up of multiple subchannels, of varying sizes that exhibit sinuosity and interface, resulting in anastomosed (multi-thread channels which are braided)morphology. By virtue of the anastomosed morphology occurring within the washes, there are interfluves that have been formed by these multiple subchannels. Within the unvegetated ephemeral dry washes, there are interfluves of Sonoran creosote bush scrub habitat between the subchannels of the dry washes. These interfluves are upland features encompassed by unvegetated ephemeral dry wash and are not considered jurisdictional.

Channels that appear to remain visible on a recent aerial map of the disturbance area (2005) were not considered or include beyond what was delineated. However, these areas and features were ground-truthed during spring 2009 to confirm that all evidence of bed, banks, scour, and shelving have abated.

Survey Limitations

The State waters streambed delineation focused on the disturbance area. Therefore, there are no State waters data for the buffer.

2.2.4 Rare Plant Surveys

Rare plant surveys were conducted within the BRSA between February 11 and April 21, 2009, using the following methodology by Project biologists Kristen Asmus, Joseph Betzler, Richard Dwerlkotte, Shirley Innecken, Fred Sproul, Lance Woolley, Carolyn Martus, and Caesara Wendin.

A list of potentially occurring sensitive plant species was compiled based on the following: information on species with known populations within/near the BRSA (CDFG 2009), results from previous survey efforts in the vicinity of the proposed Project (CH2M Hill 2008), a letter request sent to USFWS, CDFG, and BLM for Federal listed, State listed, and BLM sensitive species occurring within the BRSA, and the presence of suitable habitats for sensitive species. At the direction of BLM, cottontop cactus (*Echinocactus polycephalus*), hedgehog cactus (*Echinocereus* sp.), and any varieties of California barrel cactus (*Ferocactus cylindraceus*) were recorded and mapped when encountered (LaPre 2009).

The portions of the disturbance area with potential to support rare plants were surveyed by pedestrian transects, with biologists walking parallel transects ranging from 10 to 100 feet apart based on distribution of the resource and topography. The buffer was surveyed by pedestrian transect within native habitat, but developed and agricultural vegetation were surveyed by a combination of walking transects and selecting key vantage points from existing dirt access roads.

Rare plant surveys followed survey guidelines from the following resources: 1) Guidelines for Conducting and Reporting Botanical Inventories for Federal Listed, Proposed, and Candidate Plants (USFWS 2000); 2) Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (CDFG 1996); 3) CNPS Botanical Survey Guidelines (CNPS 2001); and 4) Survey Protocols for Survey and Manage Strategy 2: Vascular Plants (Whiteaker et. al. 1998).

The surveys included all accessible locations within the BRSA where suitable habitats for sensitive plant species were present. Suitable habitats were determined based on geography, slope aspect, soil substrate, vegetation community, associated plant species, and familiarity with each species based on reference populations and historical surveys conducted in the region. Survey dates were selected based on the most phenologically appropriate time for each plant species, when reproductive structures (i.e., flowers and fruits) and distinctive leafy parts were present and easily identifiable. Several rounds of focused surveys were required to accommodate the distinct phenologies of different rare plant species.

Surveys were scheduled to coincide with optimum flowering times in spring 2009 for all of the special status species potentially occurring on site. When appropriate, known locations of rare plants were visited to verify that the status of these species during the 2009 growing season (e.g., germinating, flowering, seeding, etc.). Areas were visited more than once as necessary to detect sensitive plants. In addition, the ideal survey window for 2009 was closely associated with the

rainfall pattern, including rainfall totals and the timing of precipitation. Vegetation communities known or suspected to support sensitive plant populations were walked in a meandering fashion. If a sensitive plant population was located, the population was assessed and the number of individuals was counted. All sensitive plant locations identified were recorded onto an aerial photograph field map and digitized into GIS. Additionally, all plant species observed during the rare plant surveys are included in the floral inventory (Attachment C).

Survey Limitations

Rainfall patterns and totals can be a limiting factor in detecting rare plant species in desert environments. Rainfall totals between November 2008 and February 2009 at Blythe Airport, California, 2 miles to the southeast, were 0.24 inch, 0.65 inch, 0.02 inch, and 0.43 inch, respectively (California Climate Data Archive 2009). Historic mean totals for rainfall during the same period are 0.20 inch, 0.40 inch, 0.47 inch, and 0.43 inch, respectively (California Climate Data Archive 2009). During this time period that most relates to the growing season, January 2009 was the only month that was not at or above the mean rainfall totals. Late season rain fall in March and April, which historically totals 0.36 inch and 0.16 inch on average, was less in 2009. The exact rainfall totals were not published at the time of report writing, as there were data errors (California Climate Data Archive 2009). The below average rainfall in January 2009 and lack of late season rain events may have depressed germination of annual plant species, but based on conditions observed by field staff and conditions at known reference populations, sensitive plant species (annual and perennial) were detectable in spring 2009 when the surveys were conducted. In addition, it was observed that some plant species bloomed earlier this year and for shorter duration than would be expected if late season (March and April) rainfall occurred. For example, Las Animas colubrine, a CNPS List 2.3 and a NECO species, found at the Project typically blooms in June and July, but was observed blooming in April within the BRSA.

The plant communities within the BRSA have been disrupted by agricultural activities and past military use over the past 50 years. Artificial berms were created around the perimeter of the cultivated areas and have interrupted the natural flow of water to the east. These past and current activities within and near the BRSA could prevent the detection of rare plants that historically occurred in the area.

2.2.5 General Wildlife Surveys and Habitat Assessment

General wildlife surveys were conducted concurrently with protocol wildlife surveys and vegetation mapping to document all wildlife species observed and to assess the suitability of the

site to support special status wildlife species. General wildlife surveys were initiated in March 2009. Wildlife sign and sightings were recorded and special status species were mapped using GPS units.

2.2.6 Avian Point Count Surveys

Point count surveys were conducted to characterize avian use of the BRSA during the spring breeding season. These surveys were requested by BLM (LaPre 2009) and are based on the methodology outlined in the *Handbook of Field Methods for Monitoring Landbirds* (Ralph et al. 1993) and based on guidance from BLM (LaPre 2009). Point counts were conducted for 4 consecutive weeks between April 12 and May 8, 2009. Point count stations were proportionally located across the site in the various vegetation communities present based on dominance of the community onsite and to ensure that all habitat features (e.g., low-lying wash, ridgetop, area adjacent to development) were sampled. A total of 88 point count stations were established along 11 transect lines. Each transect line comprised eight 328-foot (100-meter) radius point count stations, each placed 820 feet (250 meters) apart (Figure 5). This design allows for a 164-foot (50-meter) zone between each point count, a distance deemed sufficient to avoid duplicate counts of individual birds in most circumstances. A total of 76 point count stations were located in Sonoran creosote bush scrub and 12 were located in Sonoran creosote bush scrub and desert dry wash woodland.

Each of the 88 point count stations was visited four times over the 4-week period. Each point count lasted 10 minutes and was visited once per week. The daily point count period was from approximately 15 to 30 minutes before sunrise until approximately 3 hours after sunrise, when bird activity is typically highest and individuals are most easily detected. The order in which point count stations along a transect line were visited was reversed each week so that all stations were visited both earlier and later in the morning survey window.

All birds detected within the 328-foot (100-meter) radius of each point count station, including those flying birds whose flight path intersected the point count circle, were recorded on datasheets. At each station, the 10-minute time interval, temperature, wind, cloud cover, and visibility were recorded on datasheets. For each species, the number of individuals detected, their age and sex, if known, the direction and approximate distance of the bird from the observer, its activity, and its habitat were recorded on datasheets. Additionally, special status species detected were mapped using GPS units. Notes on other birds detected beyond the 328-foot (100-meter) radius were also made. While these additional observations are discussed, they were not included in the quantitative analyses of avian use of the site.

Survey Limitations

Depending on their design, point counts can be effectively used to sample large, conspicuous birds such as raptors or small, relatively inconspicuous species like passerines (songbirds) and near passerines (doves, hummingbirds, woodpeckers, etc.). Since raptors are relatively scarce in the open desert, and the Project is most likely to have a greater effect on the more abundant smaller species, point count stations with a smaller sampling radius were used. The assumption is that the detection rate of most passerines diminishes rapidly beyond 328 feet (100 meters); therefore, the point counts in this study were designed with the purpose of determining resident breeding species use and recording incidental observations of other avian use of the site, including migrating species and foraging raptors.

Strong wind and temperature extremes can have a profound effect on point count results. Weather conditions during surveys were ideal for detecting bird species activity. Relatively light winds prevailed throughout the period, and on only two days at the end of the survey period did temperatures approach 90°F. Detection rate during these days was similar to that on other, cooler days.

2.2.7 Special Status Wildlife Surveys

Focused protocol surveys were conducted in spring 2009 for the DT and WBO and are described below. Incidental sightings for all other special status species were recorded during protocol surveys.

Desert Tortoise

The survey followed the guidelines published in the USFWS *Field Survey Protocol for any Non-Federal Action That May Occur within the Range of the Desert Tortoise* (USFWS 1992), with the following exception: no surveys of the five ZOI transects that are typically required outside of and parallel to the disturbance area at 100, 300, 600, 1,200, and 2,400 feet were conducted. This modification to the DT survey protocol was agreed upon prior to survey initiation by USFWS, CDFG, BLM, and CEC, per an email communication dated March 10, 2009, from Kim Nicol (refer to Section 2.2.1). To comply with the recommendations of the CEC Draft Guidelines, transects outside of and parallel to the disturbance area were surveyed for DT at 3,960-foot (3/4-mile) and 5,280-foot (1-mile) intervals from and parallel to the edge of the disturbance area (see Section 2.2). These transects are more broadly focused than the DT protocol transects and are not a formal part of the DT survey. However they provide information on DT presence and habitat suitability, as well as other biological resources in the area

surrounding the BRSA. Project biologists Arthur Davenport, Shelly Dayman, Charles German, Katie Hall, Gregg Lukasek, and Milo Rivera conducted wildlife species habitat assessments on February 15 and 16, 2009. Presence/absence surveys for DT were completed between March 11 and June 4, 2009. Project biologists included Scott Cameron, Arthur Davenport, Shelly Dayman, Kim Duncan, Elias Elias, Andrew Forde, Michael Gallagher, Charles German, Katie Hall, James Huelsman, James Jennings, Ed LaRue, Gregg Lukasek, James Luttrell, Milo Rivera, Ellen Schafhauser, Patricia Seamount, Nicole Stephens, Brent Vickers, and Rob Wolfson.

The entire BRSA (100 percent coverage) was surveyed according to protocol by spacing transects 32.8 feet (10 meters) apart along a north-to-south orientation. The survey was conducted by slowly and systematically walking linear transects while surveyors visually searched for DT and sign. Particular emphasis was placed on searching around the bases of shrubs and along the banks of shallow washes. All types of sign were recorded using GPS. Surveys were conducted throughout the day, including surveys focusing on dawn and dusk hours on days when temperatures were above 95°F. Live DT were measured at middle carapace length (estimated) and evaluated for health. Photographs of DT observations were taken when possible (i.e., animal not deep in burrow). Photographs of large carcasses and/or unusual sign were also taken. Burrows, scat, and shell remains were classed using the Information Index for Desert Tortoise Sign: Burrows and Dens, Scats and Shell Remains as in the USFWS *Field Survey Protocol for any Non-Federal Action That May Occur within the Range of the Desert Tortoise* (USFWS 1992) (Attachment D). Generally, under this classification system, sign coded by the observer as Class 1, 2, or 3 has been identified as DT sign with greater confidence than sign coded as Class 4 or 5, which has potential to be DT sign. Burrows were classed based on whether or not they were active (with recent DT sign); whether or not they were definitely or possibly DT; and if the burrows were in good or deteriorated condition. Scats were classified based on whether or not the scat was wet; had obvious odor or was odorless; was glazed or with no glaze; was dark brown, light brown or bleached; and if the scats were loose or tightly packed. Shell remains were classed based on whether or not they were fresh/putrid; were still a normal color, with scutes adhering to bone; if scutes were peeling off the bone; if the shell bones were falling part, with growth rings on scutes peeling; or if the shells were disarticulated and scattered (bone fragments). If bone fragments were observed, notes were taken as to whether or not the bones had begun to mineralize. Burrows, scats, and shell remains were classed based on these variables as outlined in the Information Index. The height and width of burrow openings were measured and burrow depth was recorded. In addition, evidence of recent use of burrows was recorded and scat was measured.

Survey Limitations

Rainfall patterns in this area are typically bimodal, with a peak in the summer monsoon season (July through September) and a second peak, typically longer and with more variation that occurs in the winter/spring months (November through March). At the Blythe Airport weather station, the total precipitation for the previous year's rainfall was 1.85 inches compared to the historical average of 3.56 inches (NOAA 2008, 2009c, 2009d, Western Regional Climate Center 2008). In the year preceding the survey, the precipitation during the monsoon season was less than would be expected based on the historical average. Similarly, the rainfall observed in January and the spring months (March to May) was also less than the historical average. This reduction in rainfall could have influenced the amount of above ground DT activity (limited to the observation of live DTs and fresh DT scat) observed during the 2009 season. However, it should be noted that variation in the amount of rainfall in desert areas is high based on microclimatic conditions, as are variations in seasonal rainfall patterns from year to year. DTs are long-lived species and the detection of other DT sign, including DT burrows, shell remains, and older scat, is consistent between high rainfall and low rainfall years.

Subterranean termite (*Reticulitermes* sp.*)* activity was noted on DT scat. DT scat may not have been present as long after being deposited compared to areas without such a prevalence of termite activity. Within the drainages, the density of the vegetation (e.g., grasses, shrubs, and trees) may have lowered the detection rate of DT and/or DT sign. Additional effort for DT observation was expended in thickly vegetated areas, but the density of vegetation in some areas made visual inspection challenging.

Western Burrowing Owl

WBO surveys were performed according to the protocol established by the California Burrowing Owl Consortium (CBOC 1993) and accepted by CDFG. The CBOC protocol requires that the disturbance area as well as a 492-foot (150-meter) buffer surrounding the disturbance area be surveyed according to the CBOC protocol. As noted earlier in Section 2.2.1, CEC requires a habitat evaluation within a 1-mile buffer surrounding the disturbance area. The CBOC protocol involves three phases of surveys: Phase I is a habitat assessment to determine if suitable habitat for the WBO exists on site; Phase II involves mapping all potential WBO burrows; Phase III involves four repeat presence/absence focused WBO surveys during the breeding season, and, if there are no detections, during the wintering season as well.

On February 15 and 16, 2009, Project biologists Katie Hall, Shelly Dayman, Arthur Davenport, Gregg Lukasek, Charles German, and Milo Rivera assessed the BRSA for WBO habitat (Phase I of the CBOC protocol). A burrow survey (Phase II of the CBOC protocol) was conducted in conjunction with DT focused protocol surveys from March through May 2009, during which the entire disturbance area was surveyed by walking linear transects spaced 32.8 (10-meter) feet apart. Additional Phase II burrow surveys were conducted within the 492-foot (150-meter) buffer by surveying along line transects spaced at a maximum of 98.4-foot (30-meter) intervals. Two additional CEC-recommended transects within the 1-mile buffer, were also surveyed for suitable WBO burrows in conjunction with DT protocol surveys (see "Desert Tortoise" above). Phase II burrow surveys were conducted by surveyors walking slowly and systematically along and, when visibility was limited, between transects, while visually searching for WBOs, their sign (e.g., pellets, whitewash, feathers, bones, etc.), and burrows potentially suitable for use by WBO. All WBO observations, WBO sign, and burrows potentially suitable for use by WBO (regardless of sign presence) were mapped using GPS units and recorded on datasheets. Phase II burrow data also included the type of burrow if known (e.g., kit fox, DT), a GPS identity code, and the type of WBO sign observed.

Project biologists Jason Phillips, Dana Terry, Elizabeth Gruenstein, Mike Ireland, Vick Germany, Rob Conohan, Hildie Spautz, Katie Hall, Joshua Meidav, Steve Henderson, and Julie Roth conducted Phase III surveys (WBO presence/absence surveys, census, and mapping) during the peak breeding season (April 15–July 15, as defined in the CBOC protocol). Phase III surveys were initiated on April 15, 2009, and completed on June 15, 2009. Phase III surveys consisted of a minimum of four site visits completed on separate days. During the initial Phase III site visit, all burrows mapped during the Phase II survey were carefully examined for WBO sign. The disturbance area and 492-foot (150-meter) buffer were surveyed three additional times during the breeding season to determine WBO presence, focusing on burrows and burrow complexes with WBO sign. Where possible, biologists scanned for owls using binoculars or spotting scopes at a distance from burrows. However, due to the terrain and long distance of most burrows from roads or other fixed observation locations, surveyors typically approached the burrows on foot, carefully verifying presence or absence of WBOs at the burrows on their approach. All Phase III survey data were recorded on data forms. Data recorded included survey visit number (e.g., 1 to 4), weather conditions (temperature, wind, precipitation, cloud cover), dimensions and characteristics of all burrows surveyed (height, width, estimated depth, single burrow or complex), presence or absence of owl sign (feathers, prey remains, pellets, whitewash, etc.), burrow occupancy status (active, inactive), notes on any WBO detections (e.g., abundance, age, sex, behavior), and other wildlife species observed.

All WBO observations and old or fresh WBO sign were recorded on datasheets and mapped with GPS units. “Old” sign was defined as pellets that were bleached, desiccated, and disintegrated; and whitewash remnants that were sparse and partially eroded. In several cases, whether old whitewash remnants were from WBO or other bird species was unknown; those signs were recorded as potential WBO sign.

Survey Limitations

Protocol surveys for WBO were conducted in the disturbance area and 492-foot (150-meter) buffers during the 2009 breeding season only. However, owl abundance and patterns of use in the disturbance area during the non-breeding season cannot be determined from these survey results. The WBO population in the southern desert region is primarily resident (i.e., present year-round); however, some migration from northern populations to this area occurs during winter (Center for Biological Diversity et al. 2003 citing Garrett and Dunn 1981). Seasonal non-migration movements and shifts in burrow use by juveniles and adults within a region also occur. The results of the 2009 WBO protocol survey (see Section 3.4.2) suggest considerable variability in WBO use and abundance in the BRSA among years and possibly seasons. Also, as recommended in the CBOC protocol and by CDFG, Phase III surveys were initiated on April 15. However, WBO breeding can be initiated as early as February, particularly in desert populations. Therefore, WBO nesting attempts could have been initiated and not detected in 2009 before Phase III surveys were initiated.

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CHAPTER 3
EXISTING CONDITIONS

The existing conditions presented in this chapter represent findings within the BRSA (as defined in Section 2.2). The following sections describe existing conditions present on site in spring 2009 for vegetation communities, jurisdictional areas, and special status plant and wildlife species. Pertinent biological findings used for assessing impacts are reported separately for the disturbance area and buffer; however, since surveys were focused in the disturbance area, the remaining findings are reported for the entire BRSA to avoid misleading interpretations of the data. This is because the entire disturbance area was surveyed as opposed to only transects in the buffer, thus all of the data is mostly found in the disturbance area.

3.1 VEGETATION COMMUNITIES

Five vegetation communities and other cover types were identified within the BRSA during the surveys, including upland, riparian, and other cover types (Table 1 and Figure 6). The acreages of each vegetation community within the BRSA are provided in Table 1. Vegetation communities are described in detail below and based on a classification system by R. Holland (1986). When appropriate, vegetation classification by J.O. Sawyer and T. Keeler-Wolf (1995) are also considered. Community types according to CDFG (2003) are listed where applicable. Photographic documentation of vegetation communities is included in Attachment E. This section is based on the Botanical Survey Report included as Attachment F (EDAW 2009c).

Vegetation communities and other land cover types classified as “sensitive” within this report were determined by applying the following regulatory context. Guidance for determining sensitive vegetation communities is provided by the Resource Agencies including BLM, CDFG, and CNPS, as well as supporting documentation such as the CNDDB. These Federal, State, and local agencies and related publications typically are in concurrence on the classification of sensitive vegetation communities and other land cover types. For example, vegetation communities or other cover types that are considered potential jurisdictional State waters typically result in the vegetation community or nonvegetated area being considered sensitive. For this proposed Project, these waters are regulated by Sections 1600 et seq. of the California Fish and Game Code. Additionally, the occurrence of suitable habitat for special status plant and animal species also raises the sensitivity of a vegetation community. Biologically, the vegetation communities that provide the highest habitat values within the BRSA are the riparian communities and the native upland communities.

Table 1
Vegetation Communities and Cover Types (Acres)

Vegetation Communities and Other Cover Types	Disturbance area	Buffer (1-mile)	BRSA
Riparian			
Dry Desert Wash Woodland	120.5	532.1	652.7
Unvegetated Ephemeral Dry Wash	8.3	N/A[1]	8.3
Subtotal Riparian	*128.8*	*532.2*	*661.0*
Upland			
Sonoran Creosote Bush Scrub	6,897.0	10,036.6	16,933.7
Subtotal Upland	*6,897.0*	*10,036.6*	*16,933.7*
Other Cover Types			
Agricultural Land	0.8	1,227.3	1,228.1
Developed	0.0	175.3	175.3
Subtotal Other Cover Types	*0.8*	*1,402.6*	*1,403.4*
Total Acres	**7,026.6**	**11,971.4**	**18,998.0**

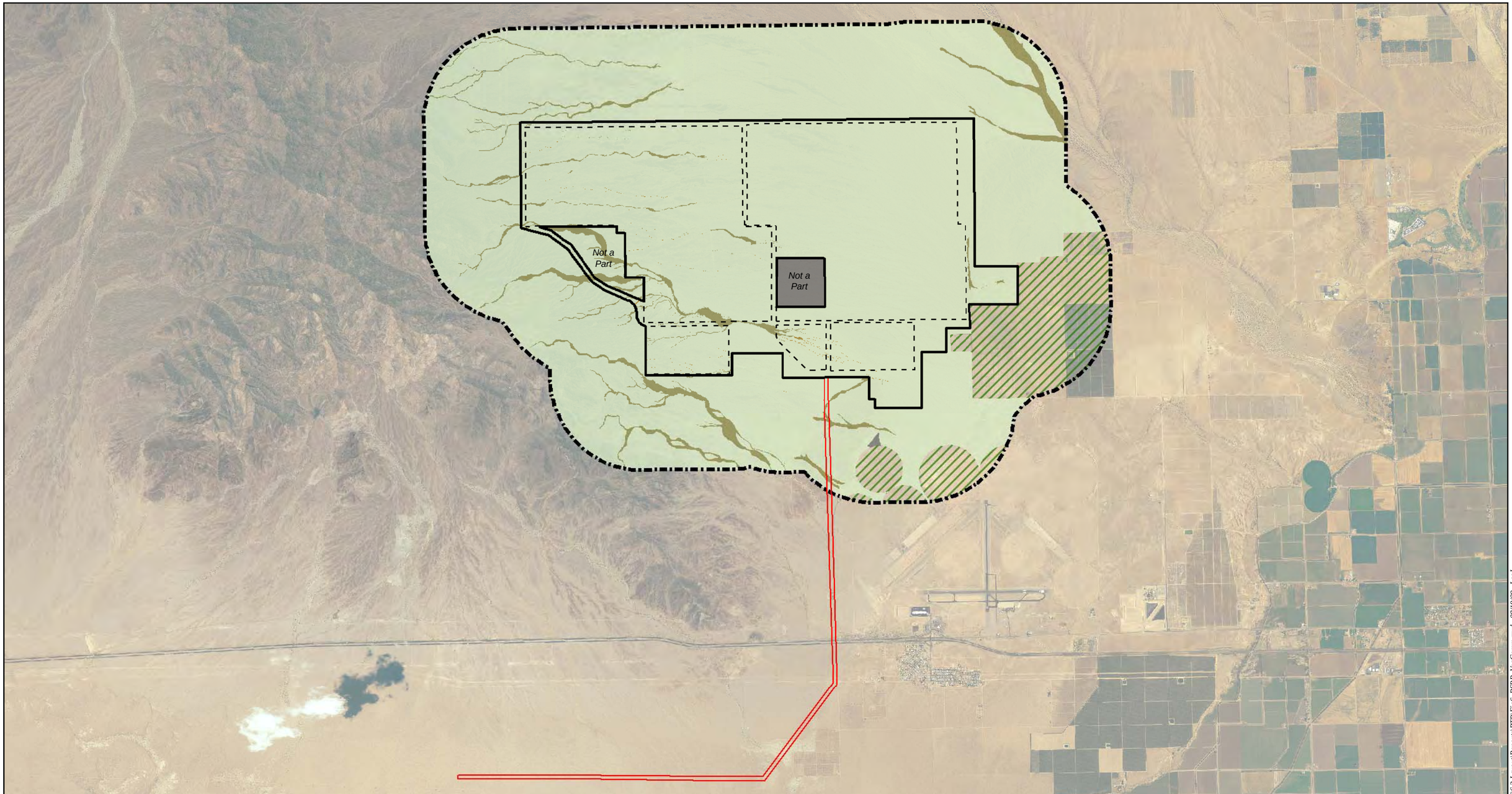
[1] Unvegetated channels are potentially jurisdictional aquatic features and were not mapped within the buffer because these surveys were conducted at a minimum mapping unit of 1.0 acre, as opposed to 0.01 of an acre for riparian vegetation communities within the disturbance area. This approach is consistent with the EDAW Jurisdictional Delineation methodology and is pursuant to Appendix B, Section (g), Subsection (13), Paragraph (B), Clause (iii) of the CEC Siting Regulations, which does not require detailed mapping of aquatic features beyond 250 feet of the disturbance limits (CEC 2007).

Two of the vegetation communities are considered sensitive: desert dry wash woodland and unvegetated ephemeral dry wash. Desert dry wash woodland and unvegetated ephemeral dry wash are sensitive because they are also State waters under the jurisdiction of CDFG. In addition, desert dry wash woodland is a special community types (e.g., high priority for inventory in the California Natural Diversity Database) per CDFG's Vegetation and Mapping Program (CDFG 2003).

3.1.1 Riparian Vegetation Communities

Desert Dry Wash Woodland

Desert dry wash woodland is designated by Holland as Code 62200. It also approximates the Sawyer and Keeler-Wolf's Catclaw Acacia Series 129. This vegetation community consists of open, drought deciduous, riparian scrub woodland and is made up of three primary components:



Map Location

Legend

- Facility Footprint
- Disturbance Area
- Possible Transmission Line Route
- Biological Resource Survey Area (BRSA)

Vegetation Communities

Riparian

- Desert Dry Wash Woodland
- Unvegetated Ephemeral Dry Wash

Upland

- Sonoran Creosote Bush Scrub

Other

- Agriculture (Active and Fallow)
- Developed

Source: NAIP 2005; AECOM 2009; EDAW 2009

N W E S

1 in = 1 miles

0 1 2 Miles

Blythe Solar Power Project
Biological Technical Report

Figure 6
Vegetation Communities

Solar Millennium

AECOM

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wash-dependent vegetation, vegetated ephemeral dry wash, and islands of Sonoran creosote bush scrub (e.g., riparian interfluves). Dominant and indicator plants of this community within the BRSA include ironwood, blue palo verde, cheesebush (*Hymenoclea salsola)*, desert lavender, catclaw acacia, Emory's indigo bush (*Psorothamnus emoryi)*, smoke tree, and sweetbush (*Bebbia juncea* var. *aspera*). Tamarisk, an invasive plant species, is also interspersed throughout this community. Overall, the cover of wash-dependent vegetation within the desert dry wash woodland is approximately 19 percent. The woodland occurs in and among dry washes that primarily traverse the western portion of the BRSA (Figure 6).

Approximately 120.5 acres of desert dry wash woodland occur within the disturbance area and 532.2 acres in the buffer, for a total of 652.7 acres within the BRSA (Table 1).

Unvegetated Ephemeral Dry Wash

This community consists of unvegetated washes that are dominated by sandy substrate and little to no vegetation. Unvegetated ephemeral dry wash (which approximates nonvegetated channel, Holland Code 64200) occurs within the transition zone between the desert dry wash woodland as the washes are transitioning to sheet flow as they drain to the east (Figure 6). There were no dominant plant species observed in association with nonvegetated channel, as these areas are primarily devoid of vegetation.

Approximately 8.3 acres of unvegetated ephemeral dry wash occur within the disturbance area (Table 1 and Figure 6). Corresponding unvegetated ephemeral dry wash were not mapped in the buffer, but is a component of the desert dry wash woodland. This is because the minimum mapping unit for riparian vegetation communities in the buffer was 1.0 acre, as opposed to 0.01 acre within the disturbance area.

3.1.2 <u>Upland Vegetation Communities</u>

Sonoran Creosote Bush Scrub

Sonoran creosote bush scrub is designated by Holland as Code 33100 and Sawyer and Keeler-Wolf as the Ocotillo Series 182. Within the BRSA, this community is characterized by sandy soils with a shallow clay pan on a broad gentle southeast trending slope. Dominant plants within the BRSA for this community include creosote bush (*Larrea tridentata)*, burro-weed (*Ambrosia dumosa)*, brittlebush (*Encelia farinosa)*, cheesebush, and ocotillo (*Fouqueria splendens).* This is the most common plant community within the BRSA, dominating the alluvial soil deposits. This

plant community intergrades into the dessert dry wash woodland. Within the BRSA there are areas of desert pavement that are covered with rounded cobbles that range in size from one to 3 inches. Typically these areas are higher than the surrounding landscape by 3 to 15 feet. These areas are within the Sonoran creosote bush scrub, though the plant density is lower.

Within the utility corridor on the south side of I-10; fine sand drifts are interspersed within this community type. In these areas, Emory's indigo bush occurs in stands and was more prevalent than in other portions of the Sonaran creosote bush scrub.

Disturbance within this community includes military training and agricultural use. These disturbances occurred in the past and the Sonoran creosote bush scrub within the BRSA has been recovering through natural recruitment. As a result, two invasive plant species, Russian thistle and Saharan mustard (*Brassica tournefortii*), can be found in disturbed areas throughout the BRSA, especially near roads, fallow, and active agricultural areas. Another exotic plant, Mediterranean grass (*Schismus* sp.), is prevalent throughout the Sonoran creosote bush scrub.

Approximately 6,897.0 acres of Sonoran creosote bush scrub were mapped within the disturbance area and 10,036.6 acres in the buffer, for a total of 16,933.7 acres within the BRSA (Table 1 and Figure 6).

3.1.3 Other Cover Types

Agricultural Land

The majority of agriculture land is fallow and active agriculture in the buffer at the southern and eastern border of the BRSA. On the far eastern side of the disturbance area a small amount (0.8 acres) of agriculture overlaps the disturbance area (Figure 6). The disturbance area boundary was designed to abut the dirt road present on the east side of the disturbance area. Inspection of aerial imagery shows the road slightly west of the boundary. This overlap is likely due to two factors: (1) there are inherent inaccuracies in road layer data mapped without the benefit of precise field measurements; and (2) the desert is an unbound, changing environment and it is likely the dirt road and agriculture field gradually shifted west over time. This area will not be included in the disturbance area once Project planning surveys commence on the ground.

There is no associated Holland or Sawyer and Keeler-Wolf classification for this land cover type. It includes lands that are currently under cultivation and those that are abandoned (e.g., fallow). In the soils within abandoned agriculture areas, native vegetation is growing back. Russian

thistle, Saharan mustard, and other exotic plants were observed interspersed with the native vegetation and are indicative of past agricultural disturbance.

Approximately 0.8 acres of agricultural land occurs within the disturbance area and 1,227.3 acres in the buffer, for a total of 1,228.1 acres within the BRSA (Table 1 and Figure 6).

Developed Areas

Developed areas consist of roadways (I-10, deteriorating asphalt road, and dirt access roads), a large concrete military runway, and cleared land around in holdings within the BRSA. No developed areas were mapped within the disturbance area and 175.3 acres in the buffer, for a total of 175.3 acres within the BRSA (Table 1 and Figure 6).

3.2 WATERS OF THE STATE

All desert dry wash woodland and unvegetated ephemeral dry washes within the disturbance area were delineated as waters of the State (Figure 7). A detailed analysis of the waters of the State within the disturbance area is provided in the Jurisdictional Delineation Report included as Attachment C. Waters of the State were not delineated outside of the disturbance area. Desert dry wash woodland and unvegetated ephemeral dry wash are primarily located within the western portion of the disturbance area and extend up to approximately 15,000 feet in a northwest to southeast orientation until jurisdictional waters of the State abate/terminate into the landscape.

The total area of all waters of the State delineated within the disturbance area is approximately 128.8 acres (Table 2). Of these 128.8 acres of jurisdictional waters, 120.5 acres are composed of desert dry wash woodland and 8.3 acres are composed of unvegetated ephemeral dry wash. Of the 120.5 acres of desert dry wash woodland occurring within the disturbance area, 22.9 acres are composed of wash-dependent vegetation (absolute cover), 76.5 acres are composed of vegetated ephemeral dry wash, and 21.1 acres of riparian interfluves (Figure 7).

3.3 FLORA

This section discusses plant species detected within the BRSA or with potential to occur on site. In total, 129 plant species were detected in the BRSA during vegetation mapping and rare plant surveys (Appendix F). Of these, 14 special-status plant species have potential to occur within the BRSA (Table 3). Two of these species, Harwood's milkvetch and Las Animas colubrine, were observed within the BRSA (Figure 8). Harwood's milkvetch, a CNPS List 2.2 (rare, threatened,

or endangered in California) species and NECO special status species, was not detected in the disturbance area, but was detected in the buffer. Las Animas colubrine, a CNPS List 2.3 (rare, threatened, or endangered in California but more common elsewhere) species and NECO special status species, was detected in the disturbance area and buffer. No other Federal listed, State listed, or other State sensitive special status plant species were observed within the BRSA. This section is based on the Botanical Survey Report included as Attachment F (EDAW 2009c).

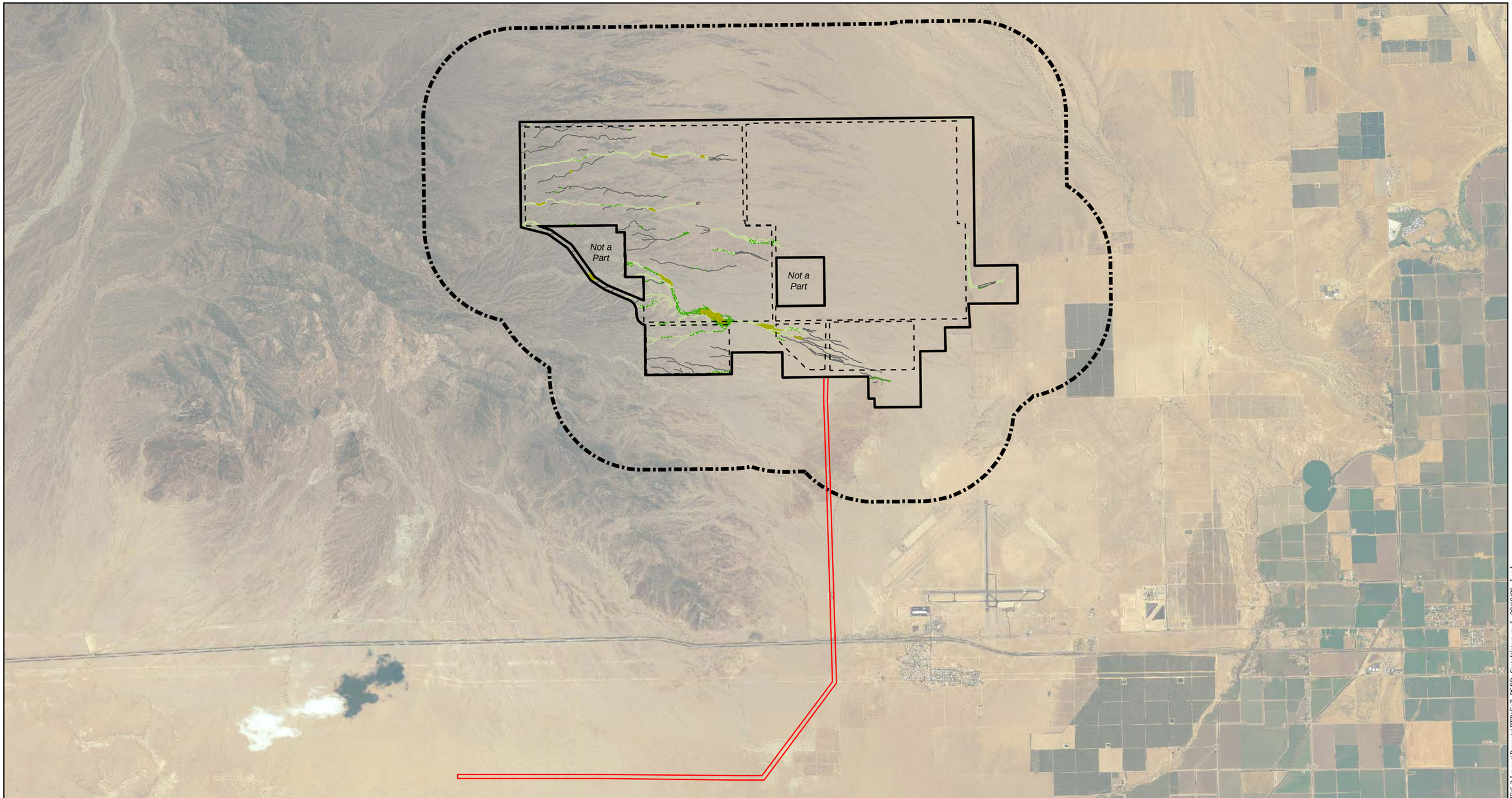
Table 2
Jurisdictional Waters of the U.S. and State Occurring within the Disturbance Area[a]

Type of Jurisdictional Waters	Type of Habitat (Holland 1986)	Type of Habitat (Cowardin et al. 1979)	Area of Aquatic Resource (ac)[b]
Jurisdictional Waters of the U.S.			
None	N/A	N/A	0.00
Total USACE Waters =			*0.00*
Subtotal Jurisdictional Waters of the U.S.			*0.00*
Jurisdictional Waters of the State			
Xeric Riparian Extent	Desert Dry Wash Woodland (Holland Code 62200)	Palustrine; Forested, Broad-Leaved, Evergreen, Intermittently Flooded/Temporary, Well Drained/Fresh, Alkaline	120.5
Ephemeral Channel	Unvegetated Ephemeral Dry Wash (e.g., Nonvegetated Channel [Holland Code 64200])	Riverine; Unconsolidated Bottom, Sand, Intermittently Flooded, Temporary, Well Drained/Fresh, Alkaline	8.3
Total CDFG Waters =			*128.8*
Subtotal Jurisdictional Waters of the State			*128.8*
Grand Total Jurisdictional Waters			128.8

[a] Based upon the total area of jurisdictional waters delineated within the disturbance area. Final acreages of jurisdictional waters of the U.S. will be based upon the JD process undertaken by USACE/USEPA to confirm the findings of this JDR (see above). The total area of federally regulated waters may change after the formal JD process.

[b] Acreage of the plant communities occurring within the survey area was determined by utilizing the Geographic Information System (GIS) program ArcGIS.

A discussion of the special status plant species categories and species detected within the BRSA follows. In addition, at the request of BLM, a section is included on cactus species detected within the BRSA.



Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Biological Resource Survey Area (BRSA)

State Waters

Desert Dry Wash Woodland

- Wash Dependant Vegetation
- Riparian Interfluve
- Vegetated Ephemeral Dry Wash
- Unvegetated Ephemeral Dry Wash

Source: NAIP 2005; AECOM 2009; EDAW 2009

1 in = 1 miles

0 1 2 Miles

Blythe Solar Power Project
Biological Technical Report

Figure 7
State Waters

Solar Millennium

AECOM

Date: August 2009

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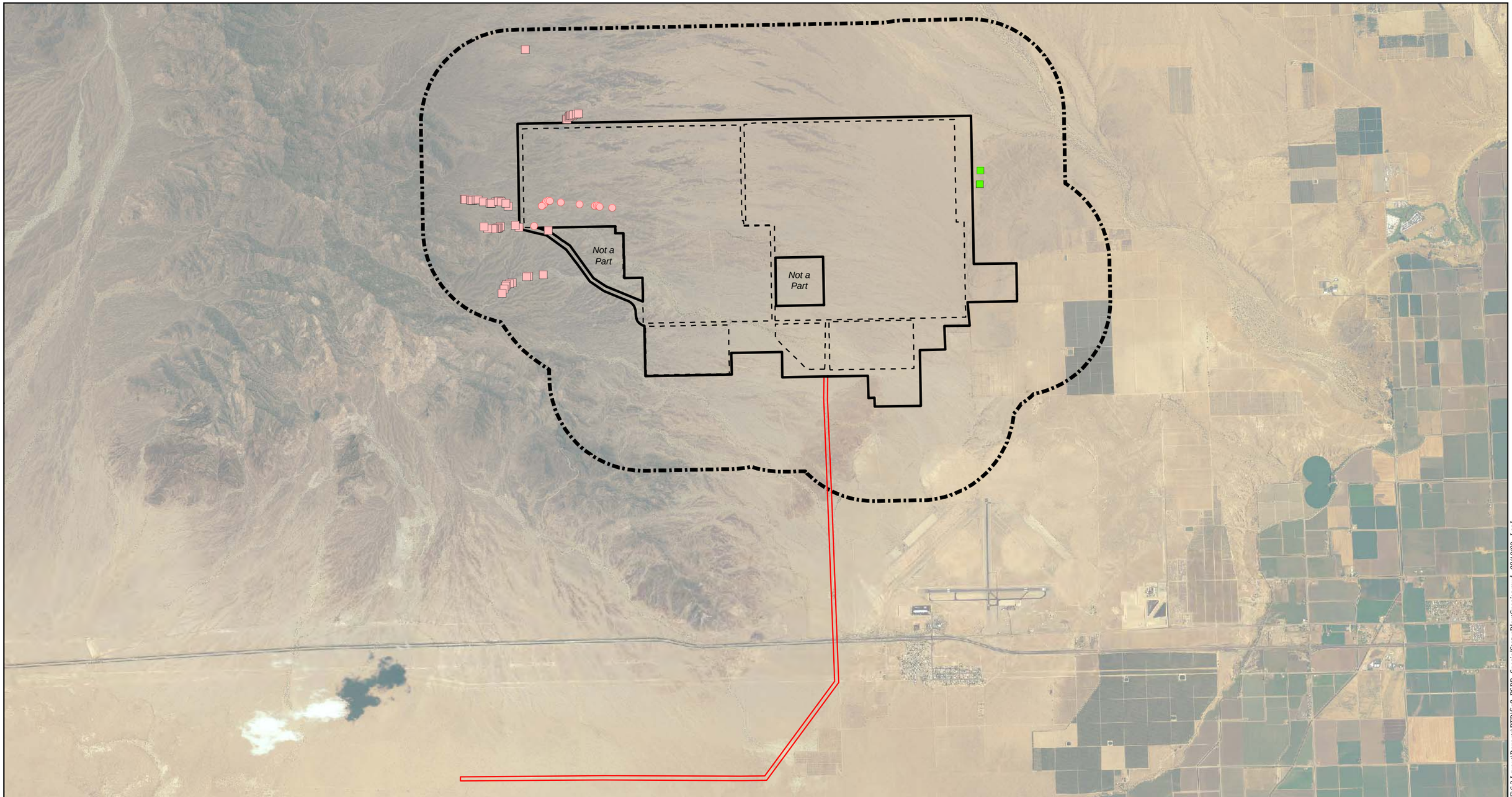

Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Biological Resource Survey Area (BRSA)

Special Status Plant Species

Within Disturbance Area

- Las Animas Colubrine (57 individuals)

Within Buffer

- Harwood's Milk-vetch (5 individuals)
- Las Animas Colubrine (117 individuals)

Source: NAIP 2005; AECOM 2009; EDAW 2009

N W E S

1 in = 1 miles

0 1 2 Miles

Blythe Solar Power Project
Biological Technical Report

Figure 8
Special Status Plant Species

Solar Millennium

AECOM

Date: August 2009

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3.3.1 Federal Listed Plant Species

No Federal listed plant species were detected within the BRSA during spring 2009. Based on a CNDDB search, one Federal endangered species, the Coachella Valley milkvetch, has potential to occur within the BRSA (Table 3 and Figure 4). Suitable habitat, within sandy soils, is present across the BRSA and the potential to occur in the disturbance area and buffer is high. Records from 2009 indicate this species occurs approximately thirty-one miles to the northwest of the BRSA (CDFG 2009). Project biologists visited a CNDDB reference population near the Coachella Valley on April 17, 2009 to determine if the species was flowering during spring 2009 surveys. The species was flowering at the CNDDB reference population indicating that if the species was present in the BRSA, it would have been detected by Project biologists during spring 2009. This provides confirmation that the species is not present within the BRSA.

3.3.2 State Listed Plant Species

Based on regional databases, no State listed plant species were determined to have potential to occur within the BRSA. Based on site-specific habitat evaluations conducted by EDAW and literature review, including a CNDDB record search and a compiled list, it was determined that no State listed plant species have been recorded near the BRSA or have potential to occur in the BRSA. No State listed plant species were detected within the BRSA.

3.3.3 Other Special Status Plant Species

Harwood's milkvetch, which is a CNPS List 2.2 species and a NECO special status plant species was not observed within the disturbance area; however, five individuals were recorded in the northeastern portion of the buffer (Table 3 and Figure 8).

Las Animas colubrine, a CNPS List 2.3 species and a NECO special status plant species, was detected in the incised washes of the bajada that skirts the west side of the McCoy Mountains in the northwestern part of the disturbance area and buffer. Fifty-seven individuals were observed in flower within the disturbance area and 117 individuals were recorded in the western portion of the buffer. These individuals are displayed as point locations in Figure 8.

Two of the special status plant species that were not detected in the BRSA, but have a high potential to occur within the BRSA. Coachella Valley milkvetch has been detected in sandy areas near Desert Center 31 miles away. This species has a high potential to occur because highly suitable habitat is present within the BRSA. Dwarf germander has a high potential to

Table 3
Special Status Plant Species Relevant to the Proposed Project Potentially Occurring in the BRSA

Common Name Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2007)	Plant Habit, Flowering Period	Survey Results and Discussion	Potential for Occurrence within the Disturbance Area[2]	Potential for Occurrence within the Buffer[2]
Coachella Valley Milkvetch(*Astragalus lentiginosus* var. *coachellae*)	ESA: Endangered CNPS: List 1B.2 BLM: Sensitive	Sonoran Desert, in sandy areas growing at elevations of 0 to 1,150 feet.	Annual or perennial herb that flowers February – May	This species was not detected within the BRSA. Habitat for this species occurs within the sandy washes in the northeast and western portions of the BRSA. The nearest record of this species is 31 miles to the WNW of the BRSA (CDFG 2009). Most populations are restricted to the Coachella Valley, approximately 50 miles west of the BRSA. A field visit, during spring 2009, to the Coachella Valley, verified that this plant was flowering in Aprilof 2009. Thus, if the species was present in the BRSA, it would have been detected flowering by Project biologists during spring 2009; however, this species was not detected within the BRSA.	High	High
Angel trumpets (*Acleisanthes longiflora*)	CNPS: List 2.3 NECO	Dry places, generally on carbonate/limestone derived soils in mountainous areas 30 to 8,000 feet	Prostrate to ascending perennial stems less than 3 feet. Flowers produced during May.	This species was not detected within the BRSA. The closest record of this species in the Big Maria Mountains 15 miles ESE of the BRSA. The soils within the BRSA are not appropriate for this species.	Not Expected	Not Expected

Common Name Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2007)	Plant Habit, Flowering Period	Survey Results and Discussion	Potential for Occurrence within the Disturbance Area[2]	Potential for Occurrence within the Buffer[2]
Harwood's milkvetch (*Astragalus insularis* var. *harwoodii*)	CNPS: List 2.2 NECO	Sonoran Desert, sandy to gravely areas 0 – 1,000 feet.	Annual that bloom January – May	This plant species was not detected in the disturbance area; however, five individuals were observed in the northeastern buffer.	High	Present
Fairyduster (*Calliandra eriophylla*)	CNPS: List 2.3, NECO	Sonoran Desert, sandy washes, slopes and mesas typically found at ± 5,000 feet.	Shrubs less that 1 foot in height; blooms March to April	This plant species was not detected within the BRSA. The BRSA is below the typical elevation range for this species. The nearest population occurs 16 miles to the west of the BRSA (CDFG 2009).	Not Expected	Moderate
Alkali mariposa lily (*Calochortus striatus*)	CNPS: List 1B.2 BLM Sensitive	Western Mojave Desert, Alkaline meadows, moist creosote-bush scrub found at 2,600 to 4,600 feet	The 2 inch stem has short lived basal leaves that are up to 8 inches in length. Plants bloom April to June	This plant species was not detected within the BRSA. The BRSA is below the typical elevation range for this species. The nearest population occurs 152 miles to the westnorthwest of the BRSA (CDFG 2009).	Not Expected	Not Expected
Crucifixion thorn (*Castela emoryi*)	CNPS: List 2.3, NECO	Desert areas on dry, gravelly washes, slopes, plains ±2,150 feet.	Shrub less than 10 feet in height; blooms April to May	This plant species was not detected within the BRSA. The BRSA is below the typical elevation range for this species. The nearest population occurs 20 miles to the northwest of the BRSA (CDFG 2009).	Low	Low
Las Animas colubrine (*Colubrina californica*)	CNPS: List 2.3 NECO	Sonoran creosote bush scrub less than 3,500 feet.	Plants are generally less than 3 feet blooms June to July	This species was observed in the western portion of the disturbance area and buffer in incised washes on the bajadas. Fifty seven plants were within the disturbance area and 117 plants were within the buffer. Specimens were observed in flower during April; an early blooming period for this species.	Present	Present

Common Name Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2007)	Plant Habit, Flowering Period	Survey Results and Discussion	Potential for Occurrence within the Disturbance Area[2]	Potential for Occurrence within the Buffer[2]
Glandular ditaxis (*Ditaxis claryana*)	CNPS List 2.2 NECO	Sonoran Desert at elevations less than 350 feet; sandy soils in creosote bush scrub	Annual or perennial herb that blooms from December to May.	This plant species was not detected within the BRSA. The habitat preferences of this species, sandy soils at low elevations, are present in the BRSA. There are records of this species 30 miles to the west of the BRSA (CDFG 2009).	Moderate	Moderate
California satintail (*Imperata brevifolia*)	CNPS List 2.1	San Bernardino Mountains, Mojave Desert, in cultivation. Found up to 1,700 feet	Perennial grass found near wet springs, meadows, streamsides and flood plains. Flowering September to May.	This plant species was not detected within the BRSA. The habitat preferences of this species: near wet springs, meadows, stream sides and flood plains are not present in the BRSA. The closest records of this species are near the Colorado River 13 miles east of the BRSA (CDFG 2009).	Not Expected	Not Expected
Orocopia sage (*Salvia greatae*)	CNPS List 1B.3, NECO	Southeast Sonoran Desert (Orocopia, Chocolate Mtns.) on alluvial slopes between 100 to 800 feet.	Shrubs are less than 3 feet in height with blooms from March to April.	This plant species was not detected within the BRSA. Habitat for this species is present within the western portion of the BRSA. This species has been recorded in the mountains 30 miles to the west of the BRSA at 2000 feet (CDFG 2009).	Moderate	Moderate

Common Name Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2007)	Plant Habit, Flowering Period	Survey Results and Discussion	Potential for Occurrence within the Disturbance Area[2]	Potential for Occurrence within the Buffer[2]
Desert spikemoss (*Selaginella eremophila*)	CNPS List 2.2	Eastern Peninsular Ranges to the Sonoran Desert at elevations less than 3,000 feet. Shaded sites among rocks, in crevices and gravelly soils.	Dense mat forming non-flowering plant.	This plant species was not detected within the BRSA. The habitat is in shaded sites on gravel soils in crevices and among rocks. This species has been recorded at higher elevations 32 miles to the west (CDFG 2009).	Low	Low
Coves' cassia (*Senna covesii*)	CNPS List 2.2, NECO	Dry, sandy desert washes, slopes of the Sonoran Desert between 1,600 to 2,000 feet.	Small perennial shrub to 2 feet tall blooming in April.	This plant species was not detected within the BRSA. This species occurs in desert washes and slopes. This species has been recorded in the Chuckwalla mountains at higher elevations 32 miles to the west of the BRSA (CDFG 2009).	Low	Low
Dwarf germander (*Teucrium cubense* ssp. *depressum*)	CNPS List 2.2	Sandy soils, washes and fields in the Sonoran Desert below 1,200 feet.	Annual plants up to 6 inches tall; blooms March to May.	This plant species was not detected within the BRSA. Habitat for this species is present within the BRSA. The closest recors for this species is 8 miles east of the BRSA (CDFG 2009).	High	High
Jackass clover (*Wislizenia refracta* ssp. *refracta*)	CNPS List 2.2 NECO	Sandy washes, roadsides, alkaline flats in the Mojave Desert, and northern Sonoran Desert between 1,600 to 2,000 feet	Annual; flowers between April and November.	This plant species was not detected within the BRSA. Habitat for this species within the BRSA is different from where it was recorded near 0908008 Dry Lake, 27 miles WNW of the BRSA (CDFG 2009).	Moderate	Moderate

Common Name Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2007)	Plant Habit, Flowering Period	Survey Results and Discussion	Potential for Occurrence within the Disturbance Area[2]	Potential for Occurrence within the Buffer[2]
Orcutt's woody-aster (*Xylorhiza orcuttii*)	CNPS List 1B.2 BLM Sensitive	Arid canyons between 60 to 1000 feet.	Shrubs less than 5 feet in height; blooms March to April.	This plant species was not detected within the BRSA. One plant recorded north of the San Diego / Imperial County border in Indio (Riverside County). All records are located 80 miles west of the BRSA (CDFG 2009)	Not Expected	Not Expected

[1] **Sensitivity Status Key**

ESA Endangered

CNPS California Native Plant Society Lists:

1B: Considered rare, threatened, or endangered in California and elsewhere.

2: Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere

Decimal notations: .1 - Seriously endangered in California, .2 – Fairly endangered in California, .3 – Not very endangered in California

BLM Special Status Plants (BLM 2009)

NECO Northern and Eastern Colorado Desert Coordinated Management Plan special status species (BLM 2002)

[2] Species Potential for Occurrence

Not Expected – Species not detected during Project surveys and not expected to occur

Low Potential – Species not detected during Project surveys, but has low potential to occur because suitable habitat present, but of marginal quality

Moderate Potential – Species not detected during Project surveys, but has moderate potential to occur because suitable habitat present

High Potential – Species not detected during Project surveys, but has high potential to occur because suitable habitat present, and species known to occur within the vicinity

Present – Species detected during Project surveys

occur because the soil conditions and elevation were in range, and plants have been recorded 8 miles east of the BRSA.

3.3.4 Cactus Species

Pre-initiation of field surveys, the BLM requested that cottontop cactus, hedgehog cactus, and any varieties of California barrel cactus be mapped for future salvage when construction begins (LaPre 2009). Seven species in the Cactaceae family were observed within the BRSA. Of these species, two species are within the genera requested by BLM: California barrel cactus (*Ferocactus cylindraceus* var. *cylindraceus)* and cottontop cactus were observed. These species of cactus are not special status; therefore, impacts to these are not required to be analyzed. For specific data on the number of individuals observed and their locations, refer to the Botanical Survey Report in Attachment F.

3.4 FAUNA

This section discusses wildlife species detected within the BRSA or with potential to occur on site. In total, 97 wildlife species were detected during general reconnaissance and protocol wildlife surveys (Attachment G). Of these, eight special status wildlife species were observed within the BRSA (Table 4 and Figures 8 through 11), including:

- Desert tortoise
- Western burrowing owl
- Loggerhead shrike
- Yellow warbler
- Ferruginous hawk
- American badger
- Desert kit fox
- Nelson's bighorn sheep

An additional special status species has a high potential to occur (Swainson's hawk), one special status species has a moderate potential to occur (pallid bat), and three special status species have a low potential to occur (Gila woodpecker, gilded flicker, and crissal thrasher) (Table 4). A discussion of non-special status wildlife species is provided below, followed by detailed discussions of each special status species detected within the BRSA.

Table 4
Special Status Wildlife Species Relevant to the Proposed Project Potentially Occurring in the BRSA

Common Name Scientific Name	Sensitivity Status[1]	Habitat Requirements	Survey Results and Discussion	Potential for Occurrence within the Disturbance Area[2]	Potential for Occurrence within the Buffer[2]
Reptiles					
Desert tortoise *(Gopherus agassizii)*	ESA: Threatened CESA: Threatened	Various desert scrubs and desert washes up to about 5,000 feet, but not including playas.	Three adult DTs were observed within the BRSA, one within the southwest corner of the disturbance area, one adult DT in the buffer approximately 600 feet to the west of the disturbance area, and another adult in the buffer approximately 4,000 feet to the SW of the disturbance area (Figure 9). Thirty-eight DT scat were observed in the disturbance area , all on the western side. A total of 80 DT burrows were observed mostly on the western side of the BRSA. A total of 4 active burrow and 29 definitely DT burrows were in the disturbance area. A total of 151 pallets were observed, mostly on the western side of the BRSA. A total of 3 active pallets and 16 definitely DT pallets were in the disturbance area. The closest documented DT observation based on CNDDB occurs approximately 0.2 mile from the BRSA (CDFG 2009c).	Present	Present

Common Name Scientific Name	Sensitivity Status[1]	Habitat Requirements	Survey Results and Discussion	Potential for Occurrence within the Disturbance Area[2]	Potential for Occurrence within the Buffer[2]
Birds					
Gila woodpecker *(Melanerpes uropygialis)*	CESA: Endangered	Requires live tree-size cactus or dead trees (Winkler et al. 1995).	This species was not detected within the BRSA. Suitable nesting habitat for this species is not present within the BRSA. Nearest occupied habitat is near Blythe on the Colorado River. If present, these highly conspicuous species would have likely been detected during point count surveys	Low	Low
Gilded flicker *(Colaptes chrysoides)*	CESA: Endangered	Found in habitats with giant cactus, Joshua trees (*Yucca brevifolia*), and riparian groves in desert lowlands and foothills (AOU 1995).	This species was not detected within the BRSA. Within California now confined to a small area of Joshua tree woodland in the eastern Mojave Desert (Cima Dome). If present, these highly conspicuous species would have likely been detected during point count surveys.	Low	Low
Swainson's hawk *(Buteo swainsoni)*	CESA: Threatened	Nesting habitat consists of open habitats with trees, either isolated, scattered or in windrows.	This species was not detected within the BRSA. Migrants more frequently occur near western edge of desert such as Borrego and Morongo valleys, as reflected in annual data from the various regional hawk-watch reports. No suitable breeding habitat exists onsite.	High (non-breeding)	High (non-breeding)
Ferruginous hawk *(Buteo regalis)*	CDFG: Watch List (wintering)	Open country, primarily plains, prairies, badlands, sagebrush, shrubland,	On April 6, 2009 an individual was seen southeast of the disturbance area in the buffer.	High (non-breeding)	Present (non-breeding)

Common Name Scientific Name	Sensitivity Status[1]	Habitat Requirements	Survey Results and Discussion	Potential for Occurrence within the Disturbance Area[2]	Potential for Occurrence within the Buffer[2]
		desert.	The species is known to winter in the Colorado River Valley annually. They are most often seen in agricultural fields around Blythe, but occasionally in the open desert as well. There is no breeding habitat onsite.		
Western burrowing owl *(Athene cunicularia hypugaea)*	CDFG: Species of Special Concern Priority 2	Found mainly in grassland and open scrub from the seashore to foothills. Also found in deserts and scrublands.	Two WBOs were observed during 2009 surveys: one was an individual flying from a burrow in the western-central part of the disturbance area, the other was an individual flying (no burrow identified) in the buffer on the western side of the BRSA (Figure 10). No breeding was documented during surveys. The entire BRSA is considered suitable WBO foraging and nesting habitat. 1,019 potentially suitable burrows were mapped in the disturbance area and 492-foot (150 meter) survey buffer; of these, 90 burrows with various levels of WBO sign were detected.	Present	Present
Crissal thrasher *(Toxostoma crissale)*	CDFG: Species of Special Concern, Priority 3	Occurs in dense riparian and mesquite scrub, microphyll woodland, and riparian washes with a dense understory of shrubs (Shuford and Gardali	This species was not detected within the BRSA. Although Shuford and Gardali (2008) mention examples of occupied areas between the Salton Sea and the Colorado River, no	Low	Low

Common Name Scientific Name	Sensitivity Status[1]	Habitat Requirements	Survey Results and Discussion	Potential for Occurrence within the Disturbance Area[2]	Potential for Occurrence within the Buffer[2]
		2008).	suitable habitat is present onsite.		
Loggerhead shrike *(Lanius ludovicianus)*	CDFG: Species of Special Concern, Priority 2	Occurs in semiopen country with utility posts, wires, and trees to perch on.	This species was detected in both the disturbance area and buffer. Suitable habitat occurs throughout the BRSA (Figure 11). Although declining over most of the range in California and elsewhere and now absent over large areas, this species is still common in the California deserts.	Present	Present
Yellow warbler *(Dendroica petechia sonorana)*	CDFG: Species of Special Concern	Found along mature riparian woodlands that consist of cottonwood, willow, alder, and ash trees.	Two male yellow warblers were observed within the disturbance area during 2009 surveys. Since the subspecies of yellow warbler are nearly indistinguishable in the field, it is not known if these were Sonoran yellow warblers or some other subspecies. These individuals were migrants. There is no breeding habitat for this species onsite.	Present (non-breeding)	Present (non-breeding)
Mammals					
American badger *(Taxidea taxus)*	CDFG: Species of Special Concern	Coastal sage scrub, mixed chaparral, grassland, oak woodland, chamise chaparral, mixed conifer, pinyon-juniper, desert scrub, desert wash,	This species was detected in both the disturbance area and buffer. Eleven badger dens and over 80 animal burrows showing evidence of predation by badgers were observed	Present	Present

Common Name Scientific Name	Sensitivity Status[1]	Habitat Requirements	Survey Results and Discussion	Potential for Occurrence within the Disturbance Area[2]	Potential for Occurrence within the Buffer[2]
		montane meadow, open areas, and sandy soils.	within the disturbance area during spring 2009 (Figure 11). Suitable badger habitat occurs throughout the BRSA in undeveloped areas.		
Desert kit fox *(Vulpes macrotis arsipus)*	Calif. Code of Regulations: PFM	Suitable habitat for this fossorial mammal consists of arid open areas, shrub grassland, and desert ecosystems.	This species was detected in both the disturbance area and buffer. Desert kit fox burrows, complexes and scat were observed throughout the BRSA during spring 2009 surveys. The desert kit fox population size within the BRSA, particularly on the eastern side, is substantial. Suitable prey base and habitat to support this species occurs throughout much of the undeveloped portions of the BRSA.	Present	Present
Nelson's bighorn sheep *(Ovis canadensis nelson)*	BLM: Sensitive	Mountain slopes with sparse growth of trees above the desert floor in California.	Nelson's bighorn sheep scat and tracks were observed within the disturbance area during 2009 surveys, indicating that it uses the site for dispersal and seasonal movement. Nelson's bighorn sheep is known within the region and while the species is generally associated with mountainous areas, desert floor areas are important for dispersal and seasonal movement.	Present	High

Common Name Scientific Name	Sensitivity Status[1]	Habitat Requirements	Survey Results and Discussion	Potential for Occurrence within the Disturbance Area[2]	Potential for Occurrence within the Buffer[2]
Pallid bat *(Antrozous pallidus)*	CDFG: Species of Special Concern	This gregarious species usually roosts in small colonies in rock crevices and buildings, but may nest in caves, mines, rock piles and tree cavities.	This species was not detected within the BRSA. Bats of unidentified species were observed foraging onsite during spring 2009. Roosting habitat for pallid bats is present in tree cavities in desert dry wash woodlands in the southeastern portion of the site. The closest documented occurrence in the CNDDB is from 1992 approximately 30 miles to the southwest of the BRSA near Corn Springs (CDFG 2009).	Moderate	Moderate

[1] Sensitivity Status Key

Federal Endangered Species Act (ESA)
State California Department of Fish and Game (CDFG)
California Endangered Species Act (CESA)
BLM Sensitive
NECO Northern and Eastern Colorado Desert Coordinated Management Plan special status species

[2] Species Potential for Occurrence

Not Expected – Species not detected during Project surveys and not expected to occur
Low Potential – Species not detected during Project surveys, but has low potential to occur because suitable habitat present, but of marginal quality
Moderate Potential – Species not detected during Project surveys, but has moderate potential to occur because suitable habitat present
High Potential – Species not detected during Project surveys, but has high potential to occur because suitable habitat present, and species known to occur within the vicinity
Present – Species detected during Project surveys

3.4.1 Non-Special Status Species

Reptiles

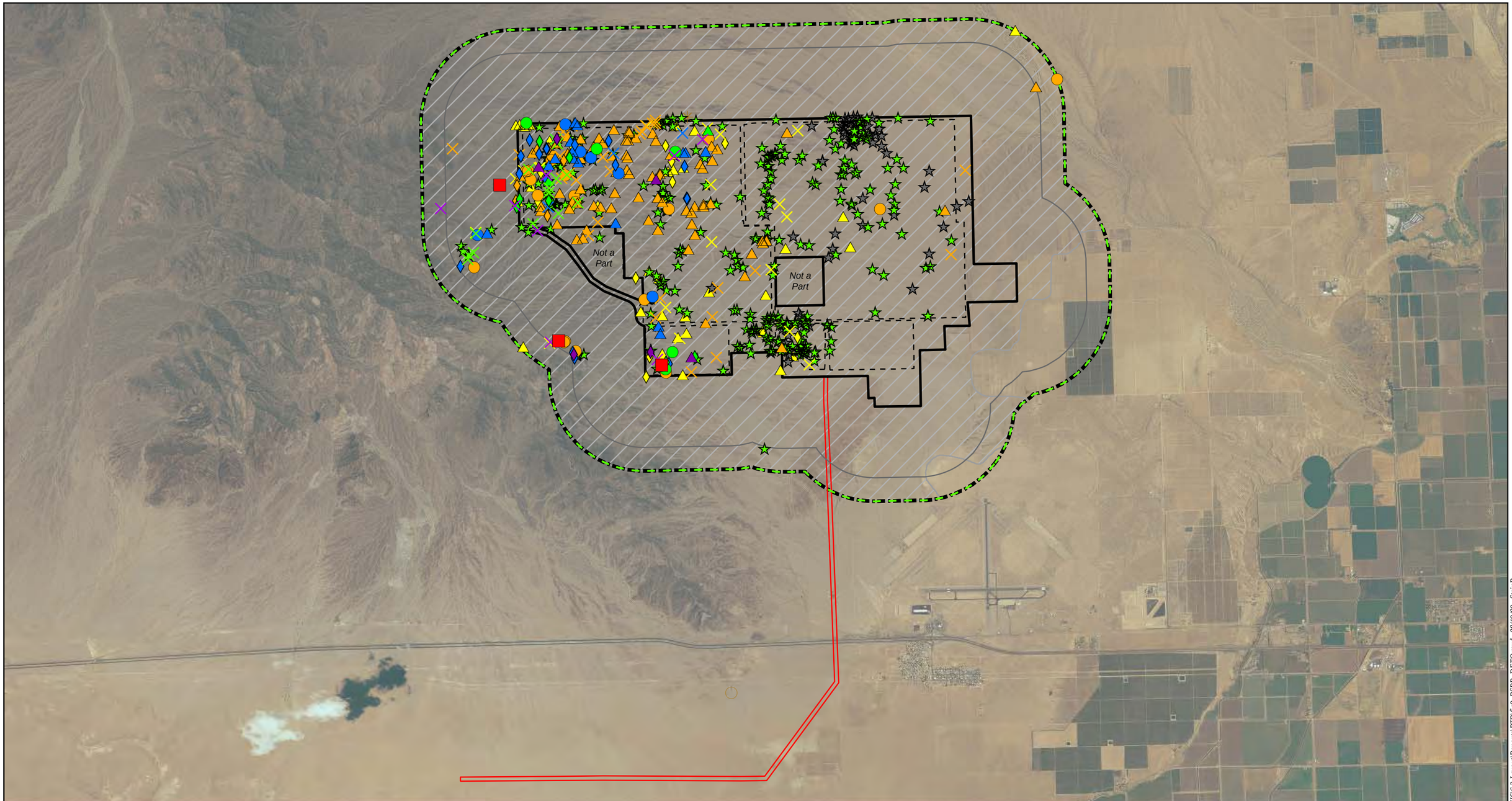
Nineteen species of reptiles were observed within the BRSA during spring 2009 surveys. Reptile species most commonly observed on site were the zebra-tailed lizard (*Callisaurus draconoides)*, side-blotched lizard (*Uta stansburiana*), desert iguana (*Dipsosaurus dorsalis)*, western whiptail (*Cnemidophorus tigris*), and desert horned lizard (*Phrynosoma platyrhinos*). These species were relatively common throughout the habitat types observed within the BRSA. Also frequently observed on site were the long-tailed brush lizard (*Urosaurus graciosus*), desert spiny lizard (*Sceloporus magister*), long-nosed leopard lizard (*Gambelia wislizenii*), desert patch-nosed snake (*Salvadora hexalepis hexalepis*), sidewinder (*Crotalus cerastes)*, western shovel-nosed snake (*Chionactis accipitalis*), and western banded gecko (*Coleonyx variegates*). One special status reptile species was observed on site: the Federal and State threatened DT. A more detailed discussion of this species is provided below.

Birds

A detailed analysis of avian use of the BRSA is provided in the point count survey summary report included as Attachment H (EDAW and Bloom Biological 2009). Overall, 15 species of resident breeding birds were recorded at the Blythe site between April 12 and May 8, 2009. Cumulatively across all habitat types, the loggerhead shrike, black-tailed gnatcatcher, ash-throated flycatcher, and verdin were the most commonly resident recorded species on the point counts.

Thirteen resident species were detected within Sonoran creosote bush scrub. The most common species observed were horned lark (*Eremophila alpestris*), loggerhead shrike (*Lanius ludovicianus*), ash-throated flycatcher (*Myiarchus cinerascens*), black-throated sparrow (*Amphispiza bilineata*), and lesser nighthawk (*Chordeiles acutipennis*). Individuals from these species accounted for approximately 77 percent of all the bird sightings during point counts.

Ten resident species were detected in habitat composed of Sonoran creosote bush scrub and desert dry wash woodland. . The most common species observed were black-tailed gnatcatcher (*Polioptila melanura*), ash-throated flycatcher, and verdin (*Auriparus flaviceps*). Individual from these species accounted for approximately 77 percent of all the bird sightings during point counts. It should be noted that most of the ash-throated flycatchers recorded in Sonoran creosote bush scrub were in the vicinity of desert dry wash woodland; they were not recorded in areas of Sonoran creosote bush scrub more distant from desert dry wash woodland.



Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Biological Resource Survey Area (BRSA)
- Tortoise Suitable Habitat

Desert Tortoise and CEC Buffer Transects

- 1-mile Transect
- 0.75-mile Transect

Desert Tortoise Observations

- Tortoise
- Bone Fragments - Class 5
- Bone Fragments - Class 5, Mineralized
- Burrow - Class 1
- Burrow - Class 2
- Burrow - Class 3
- Burrow - Class 4
- Burrow - Class 5
- Carcass - Class 2
- Carcass - Class 3
- Carcass - Class 4
- Drinking Depression
- Pallet - Class 1
- Pallet - Class 2
- Pallet - Class 3
- Pallet - Class 4
- Pallet - Class 5
- Scat - Class 1
- Scat - Class 2
- Scat - Class 3
- Scat - Class 4
- Scat - Class 5
- Tracks

Source: NAIP 2005; AECOM 2009; EDAW 2009

N W E S

1 in = 1 miles

0 1 2 Miles

Blythe Solar Power Project
Biological Technical Report

Figure 9
Desert Tortoise Observations

Solar Millennium

AECOM

Date: August 2009

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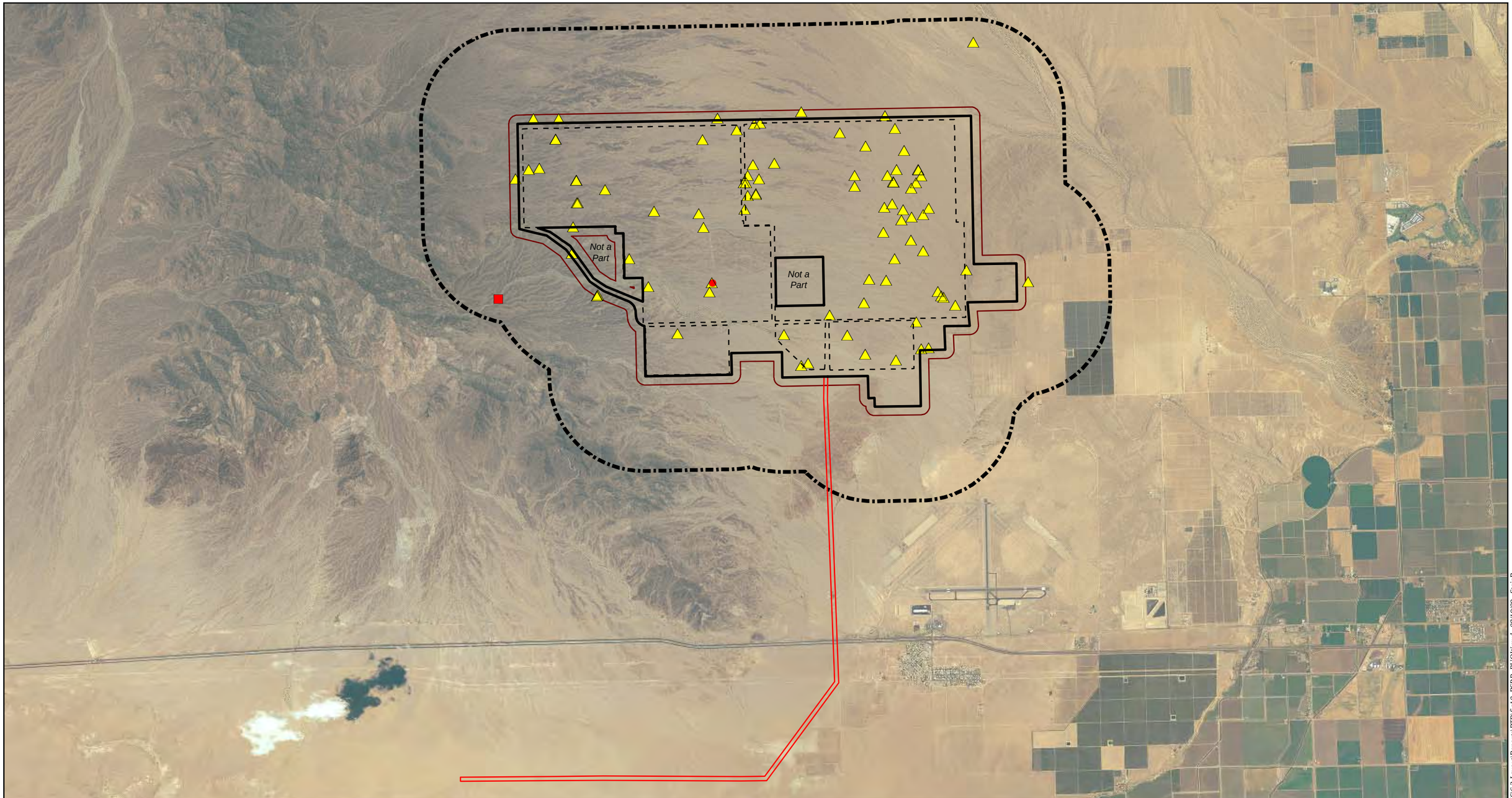

Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Biological Resource Survey Area (BRSA)

Western Burrowing Owl Observations

- Western Burrowing Owl and Active Burrow
- Western Burrowing Owl
- Burrow with Sign

Burrowing Owl Survey Buffer

- CBOC 492-foot

Source: NAIP 2005; EDAW 2009; AECOM 2009

N W E S

1 in = 1 miles

0 1 2 Miles

Blythe Solar Power Project
Biological Technical Report

Figure 10
Burrowing Owl Observations

Solar Millennium

AECOM

Date: August 2009

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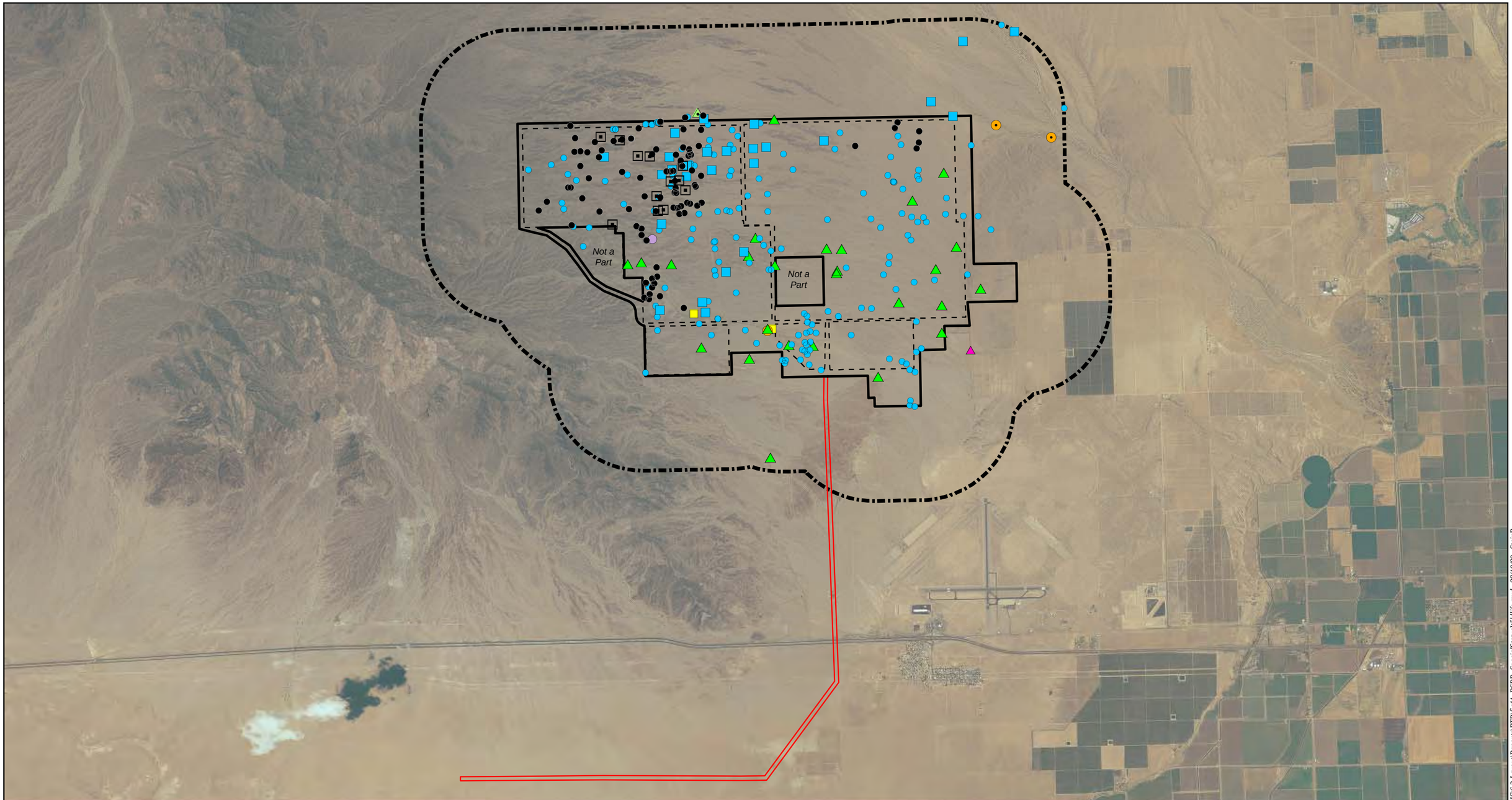

Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Biological Resource Survey Area (BRSA)

Special Status Wildlife Species Observations

- American Badger Den
- American Badger Predation Burrow
- Ferruginous Hawk
- Kit Fox Burrow
- Kit Fox Burrow Complex
- Loggerhead Shrike
- Loggerhead Shrike Nest
- Nelson's Bighorn Sheep Scat
- Nest Cavity - Unidentified Woodpecker Species
- Yellow Warbler

Source: NAIP 2005; NECO; AECOM 2009

N W E S

1 in = 1 miles

0 1 2 Miles

Blythe Solar Power Project
Biological Technical Report

Figure 11
Other Special Status
Wildlife Species Observations

Solar Millennium

AECOM

Date: August 2009

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Sonoran creosote bush scrub had the highest number of resident species detected, however, the majority of the site is Sonoran creosote bush scrub and a greater area was sampled for this habitat type. After adjusting the numbers for sample effort, habitat composed of Sonoran creosote bush scrub and desert dry wash woodland communities, as expected, have the highest number of resident species detected per station when compared to Sonoran creosote bush scrub. The average number of resident species detected per point count station was three and a half times greater for habitat composed of Sonoran creosote bush scrub and desert dry wash woodland than for Sonoran creosote bush scrub (3.08 species/point count station vs. 0.87, respectively). (Attachment H). Among terrestrial habitats in California, Sonoran creosote bush scrub is noted for its low avian diversity, and such is the case for resident birds within the BRSA.

Fourteen species of non-resident birds were identified within or flying over the point count circles during surveys (Attachment H). Of these, tree swallow (*Tachycineta bicolor*) and barn swallow (*Hirundo rustica*) accounted for more than 50 percent of the observations. Sonoran creosote bush scrub had the highest number of non-resident species detected, however, the majority of the site is Sonoran creosote bush scrub and a greater area was sampled for this habitat type. After adjusting the numbers for sample effort, Habitat composed of Sonoran creosote bush scrub and desert dry wash woodland communities, as expected, have the highest number of non-resident species detected per station when compared to Sonoran creosote bush scrub. The average number of non-resident species detected per point count station was approximately seven times greater for habitat composed of Sonoran creosote bush scrub and desert dry wash woodland than for Sonoran creosote bush scrub (1.42 species/point count station vs. 0.20, respectively). (Attachment H). Among terrestrial habitats in California, Sonoran creosote bush scrub is noted for its low avian diversity, and such is the case for non-resident birds within the BRSA. One nonlisted special status species, the yellow warbler (*Dendroica petechia*), was identified on site; however, this species is migratory only.

No raptor species (birds of prey) were recorded during surveys within the 382-foot radius point count circles during point count surveys; however, several raptor species were recorded incidental to the point count surveys, including a ferruginous hawk (*Buteo regalis*), a nonlisted special status species, that was located southeast of the site in the buffer. A complete list of incidental raptor species observations is included in Attachment E.

Mammals

Seventeen mammal species were detected within the BRSA during spring 2009 surveys. Numerous round-tailed ground squirrel (*Spermophilus tereticaudus*), white-tailed antelope

squirrel (*Ammospermophilus leucurus*), and desert kangaroo rat (*Dipodomys deserti*) burrows are present across the disturbance area. Less commonly observed were Merriam's kangaroo rat (*Dipodomys merriami)* tracks and burrows, and burrows likely used by the little pocket mouse (*Perognathus longimembris*). Several *Chaetodipus* pocket mouse species are likely present based on burrows and tracks. Desert woodrat (*Neotoma lepida*) nests were numerous and were observed mainly at the base of trees in the dry desert washes. Desert cottontail (*Sylvilagus audubonii*) and black-tailed jackrabbit (*Lepus californicus*) were often observed, as were pallets within bushes that indicate use by these species. Mule deer (*Odocoileus hemionus*) tracks and scat were sometimes (but rarely) observed within the desert dry wash areas. Nelson's bighorn sheep (*Ovis canadensis nelsoni*) scat and tracks were observed on the western portion of the disturbance area.

Large mammalian predator activity was documented across the BRSA during spring 2009. Predator digs, in round-tailed ground squirrel burrows, kit fox burrows, and desert kangaroo rat complexes, were numerous. The majority of predator activity in the BRSA appears to be by American badgers (*Taxidea taxus*) and desert kit foxes (*Vulpes macrotis arsipus*). Both badger dens and many mammal burrows with badger claw marks (where badgers were foraging for mammal prey) were present. Coyote (*Canis latrans*) activity was also noted, but more commonly observed on the eastern portion of the BRSA. Bobcat (*Lynx rufus*) scat was sometimes observed in several of the desert dry wash areas. Mountain lion (*Felis concolor*) likely uses the BRSA but no definitive sign for this species was observed.

3.4.2 Special Status Species

Four species listed under the ESA and/or the CESA occur or have potential to occur in the BRSA: DT, listed as threatened under the ESA and CESA; Swainson's hawk (*Buteo swainsoni*), listed as threatened under the CESA; and Gila woodpecker (*Melanerpes uropygialis*) and gilded flicker (*Colaptes chrysoides*), both listed as endangered under the CESA. Of these species, only DT was observed within the BRSA (Figure 9). Foraging habitat is present on site for Swainson's hawk, and the species could migrate through the BRSA. However, the Swainson's hawk is not expected to breed onsite because of the lack of suitable nesting trees and the absence of breeding records in the Colorado Desert, even historically when the species was more common (Grinnell and Miller 1944, Garrett and Dunn 1981). Two others, the Gila woodpecker and gilded flicker, have low potential to occur on site but were not detected. Four woodpecker nest cavities were observed within the BRSA, three within the buffer and one within the disturbance area. It was not confirmed what woodpecker species uses these nest cavities. No focused surveys were conducted for the Gila woodpecker and gilded flicker because the lack of habitat on site gives

them an extremely low probability of occurring in the BRSA. Eight other special status wildlife species were detected within the BRSA: DT, WBO, loggerhead shrike, yellow warbler, ferruginous hawk, desert kit fox, Nelson's bighorn sheep, and American badger (Table 4). Two additional special status species, pallid bat and crissal thrasher, have potential to occur on site but were not detected during spring 2009 general surveys or during protocol surveys for other species (Table 4). Detailed discussions of special status wildlife species detected and considered resident within the BRSA are provided below and summarized in Table 4. Those special status species considered as migrants/non-breeding season residents or with potential to occur but not detected are discussed in Table 4. Special status wildlife species observations (with the exception of DT [Figure 9] and WBO [Figure 10]) are displayed in Figure 11.

Federal Listed Wildlife Species

One adult DT was observed within the southwest corner of the disturbance area and two additional adult DTs were observed in the buffer on the west side of the BRSA. This section is based on the Desert Tortoise Technical Report included as Attachment I (EDAW 2009d). No other Federal listed species were detected or determined to have potential for occurrence on site.

The DT is Federal listed as threatened under the ESA, with critical habitat designated by USFWS (USFWS 1994a). The listing was initially made on August 4, 1989, by emergency rule (USFWS 1989) and by final rule on April 2, 1990 (USFWS 1990). This listing status applies to the entire population of DT, except in Arizona south and east of the Colorado River, and in Mexico. An approved recovery plan has been published by USFWS (1994b). The DT was listed as threatened under CESA on June 22, 1989 (CFGC 1989). No Federal-designated critical habitat for the DT occurs within the BRSA.

The DT is widely distributed in the deserts of California, southern Nevada, extreme southwestern Utah, western and southern Arizona, and throughout most of Sonora, Mexico. However, populations over about 50 percent of its U.S. range (30 percent of its overall range) began declining in the late 1960s and early 1970s (USFWS 1990, 1994b). These declines have been attributed to several factors, paramount of which are an upper respiratory tract disease, habitat loss and fragmentation due to urbanization and off-road vehicular use, illegal collecting and vandalism by humans, and predation on young DT, especially by ravens. Raven populations, for example, have exploded with the increasing use of the deserts by humans and their discarded garbage, a prime food source for ravens.

During habitat assessments in spring 2009, it was determined that the disturbance area and the majority of the buffer contains suitable habitat for DT, with the exception of agricultural and

developed land. As stated above, one adult DT was observed within southwest corner of the disturbance area and two additional adult DTs were observed outside of the disturbance area, but within the BRSA. The single adult male DT observed within the disturbance area on April 13, 2009, was seen walking on desert pavement toward the east. No active burrow was noted to be associated with this DT during this observation. During botanical surveys on March 26, 2009, an adult DT was observed within a caliche burrow (a cavity eroded or excavated into a hard calcium carbonate [caliche] soils) about 600 feet to the west of the disturbance area in the buffer. On June 4, 2009, a single adult male DT was observed in the buffer southwest of the disturbance area. This DT was observed both inside and outside of his caliche burrow.

USFWS guidelines cannot be applied to calculate DT density at BSPP due to the low number of DT found in the BRSA. The USFWS model requires a minimum of 20 individual DT to be observed during surveys (USFWS 2009). The fact that only three DT were observed in the BRSA and the USFWS model is not applicable indicates that DTs are present at low density in the BRSA. DT densities have shown declining trends at the Chuckwalla Bench (approximately 30 - 40 miles southwest of Blythe) (Tracy et al. 2004, Berry 1997). For comparison, adult DT densities at the Chuckwalla Bench in 1992 were estimated between 22 and 49 individuals per square kilometer (Berry 1997). BSPP covers approximately 28 square kilometers.

A total of 80 DT burrows were recorded in the BRSA. There were 52 DT burrows recorded within the disturbance area. Of these 52, 4 were active (Class 1) and 18 were definitely DT (Class 1, 2 and 3), There were 28 DT burrows recorded in the buffer. Of these 28, 4 were active and 12 were definitely DT. A total of 151 pallets or shallow depressions constructed under low shrubs were observed within the BRSA. There were 118 pallets recorded within the disturbance area. Of these 118, 3 were active and 16 were definitely DT pallets. There were 33 pallets observed in the buffer. Of these 33, only 4 pallets were recorded as definitely DT. A total of 49 observations of DT scat (both fresh and old) were made within the BRSA. Of these 49, 38 DT scat were within the disturbance area and 11 DT scat were within the buffer. Twenty observations of relatively fresh scat (Class 1, 2 and 3) were observed within the disturbance area and 8 observations of fresh scat were made within the buffer.

DT carcasses (relatively intact) and bone fragments were observed within the BRSA. Figure 5.3-7 displays carcasses separate from bone fragments and reflects that DT remains are more intact in the western portion of the BRS. The remains to the east are scattered and disarticulated bone fragments. In many cases these remains may have been washed down drainages from the western side of the BRSA to the east. Of the 398 observations of DT remains in the BRSA, 24 were classified as carcasses and 280 were classified as bone fragments (60 of these were

mineralized) in the disturbance area. There were 8 classified as carcasses and 86 were classified as bone fragments (16 of these were mineralized) in the buffer. The mineralized bone fragments are still considered modern by paleontological standards (i.e., within the past 100 years) and a few were likely fossilized bone fragments (pleistocene). The presence of only carcasses in areas may indicate recent die-offs of DT (Tracy et al. 2004). This is unlikely to be the case for BSPP because of the observations of recent DT scat and active burrows on the western side of the disturbance area (and also within the buffer) suggesting that there are may be more live DTs using this area than were observed.

While only one DT was observed on within the disturbance area, the presence of DT scat and active burrows suggests that other DTs live and/or forage within the western side of the disturbance area. Habitat quality within the disturbance area is moderate on the western portion and lower quality on the eastern side. Habitat quality for DT in the buffer on the western portion of the BRSA is better closer to the mountain areas or near large drainages (which are also usually associated with the mountainous areas). The desert dry wash woodlands and the drainages that flow from the west from the mountains onto the western areas of the buffer and disturbance area provide areas of moderate quality with higher productivity for forage for DT as compared to the eastern portion. The lower quality eastern portion of the disturbance area and buffer is generally drier. During surveys annual cover dried up earlier in the season than in the west. The lack of DT sign in the eastern side of the BRSA (other than disarticulated and scattered bone fragments that likely have washed down from carcasses on the western side of the BRSA) suggest that DTs do not occupy the eastern side of the BRSA.

CNDDB records show DT occurrences surrounding but not within the BRSA. The closest documented DT based on the CNDDB occurs approximately 0.2 mile from the BRSA (CDFG 2009). CNDDB record data is largely incomplete and may not provide an accurate depiction of the actual population size and distribution within the area, but can provide some insight into the distribution of DT. The next closest DT observation occurs approximately 35 miles to the west of the BRSA , south of the study area for the proposed Palen Solar Power Project

Habitat suitability for the DT is determined by examining vegetation, soils, landscape (topography, terrain, and elevation), and climate. A complex interaction of these variables determines site preference by the species (Nussear et al. 2009). It is likely that the most limiting factor in the distribution of DT within the BRSA site is water. Within this area, the amount of water available is related to both elevation and the orographic effects of the mountains on rainfall patterns.

Suitable landscapes for DT are generally defined as alluvial fans and plains and rocky slopes at elevations of 1,969 to 3,937 feet above sea level (USFWS 2008). There have been studies regarding slope and aspect preference for DT (Weinstein 1989 and Anderson et al. 2000), DT choose sites based on surface conditions, which are influenced by a complex interaction between climate and topography (Nussear et al. 2009).

DTs require soils that can support burrows, but also allow for excavation (Anderson et al. 2000). In some cases, DTs take advantage of existing natural shelters such as rock formations or exposed calcic soils horizons (Nussear et al. 2009). The soils within the disturbance area are suitable for burrowing. Therefore, there are no soils on site that would limit the distribution of DT.

Presence of ephemeral plant species is an indicator of habitat suitability for the DT because ephemeral plants are the primary components of the DT diet (Esque 1994, Jennings 1997, Avery 1998). Generally DTs prefer creosote bush scrub habitat with a high diversity and cover of perennial plant species and high productivity of ephemeral plants. Less commonly, DT will occur in blackbrush (*Coleogyne ramosissima*), Joshua tree and juniper at higher elevations, and saltbush (*Atriplex* sp.) at lower elevations (Nussear et al. 2009). The vegetation within the disturbance area consists primarily of Sonoran creosote bush scrub. In spring 2009, high ephemeral plant productivity was observed within the drainages on the western side of the BRSA. Ephemeral plant productivity was lower within the desert pavement areas, but there were often pockets of vegetation within the pavement that contains plants. DT scat was observed within these pockets in several areas and are likely important foraging spots. Within the eastern portion of the BRSA, in the spring of 2009, ephemeral plant production ended much sooner than on the western side. The deep drainages on the west have more water because of the proximity to the McCoy Mountains. Flow from the mountains is less farther to the east. It is likely that the ephemeral plant production is higher just east of the BRSA, closer to McCoy Wash, and the water associated with this drainage.

Rainfall in late 2008 and early 2009 within the region was lower than average. The rains that typically occur in the late summer/early fall were lower than the historical average for this area. The high ephemeral plant productivity within the western portion of the BRSA is probably typical for this site, but the lack of rains in February and March caused annual plants to dry up more quickly than normal, and this effect was more pronounced on the eastern portion of the BRSA in spring 2009.

The climate and vegetation within the BRSA are consistent with the Sonoran Desert rather than the Mojave Desert. This is important for explaining the distribution of DT in this area, as detailed below. Precipitation and temperature correlate to elevation, aspect and geographical location in the desert. Precipitation events such as the monsoon, which are important for DTs in the Sonoran Desert, are highly dependent on local orographic effects from topographic features such as mountains, and vary significantly from one area to another (Nussear et al. 2009). Within the Mojave Desert, the rainfall is a Mediterranean winter rainfall as opposed to a bimodal rainfall pattern with important summer monsoon rains in the Sonoran. It is important to understand that there is increased precipitation in this area at higher elevations. Also, as elevation increases, temperature decreases, which results in a lower evapotranspiration rate. The increased rainfall and reduced evapotranspiration rates associated with increases in elevation work in concert to allow for a higher availability of water (for drinking) and increased plant production as elevation increases. The higher temperatures at the Blythe site magnify the effect of the evapotranspiration rate when compared to Mojave Desert areas. So, DTs should be more abundant in the mountains and alluvial fans and drainages associated with the mountains rather than in the valleys (and is more common in the Mojave Desert). This is supported by the distribution of DT and DT sign within the BRSA. Ephemeral plant production was noted to be higher and longer lasting both within the drainages and at higher elevations during the spring 2009 survey season, which supports the supposition that water is more available here as elevation increases.

Other factors that may contribute to lower density/use levels of DT on the eastern (lower elevation) side of the disturbance area include the constraints to movement on the eastern and southeastern sides of the BRSA due to residential, commercial (airport), and agricultural use, and the constraint of I-10 to the south. It should be noted that the entirety of the BRSA is important for foraging and dispersal, with the western areas and the northeastern areas near McCoy Wash (a drainage associated with mountainous areas to the north) being used more frequently by DT than the eastern areas.

State Listed Wildlife Species

The only State (and Federal) listed species observed onsite was the DT during spring 2009 surveys. The Swainson's hawk was not detected on site, and no suitable breeding habitat occurs on or near the site for this species. Migrant Swainson's hawks have the potential to be in the area. Additionally, the Gila woodpecker and gilded flicker have potential to occur in the BRSA; however, neither of these species were detected on site. The Gila woodpecker and gilded flicker have a low potential to occur as residents due to the low suitability and poor quality of habitat

present and distance from known populations. These species are discussed in Table 4 but are not addressed further in the text.

Nonlisted Special Status Wildlife Species

In addition to the Federal and State listed species discussed above, seven nonlisted special status wildlife species were detected on site: WBO, loggerhead shrike, yellow warbler (however, migrating only on site), ferruginous hawk (however, wintering only on site), desert kit fox, Nelson's bighorn sheep, and American badger. These species are discussed in detail below. Two nonlisted special status species, the crissal thrasher and pallid bat, have potential to occur within the BRSA but were not detected during spring 2009 surveys. These species, along with yellow warbler and ferruginous hawk, are discussed in Table 4 but are not addressed further in the text.

Western Burrowing Owl

One WBO, was detected in the western-central area of the disturbance area and another individual was observed in the buffer on the western edge of the BRSA. Figure 10 displays the locations of WBOs observed, active burrows (i.e., occupied by WBO), and other locations where sign or potential sign were observed during surveys. This section is based on the survey results and discussion provided in the Burrowing Owl Technical Report prepared for the Project (Attachment J).

WBO is designated as a SSC (Priority 2 Bird Species of Special Concern) by CDFG due to rapid habitat loss and degradation from urbanization. Suitable WBO habitat consists of annual and perennial grasslands, deserts, and scrublands characterized by low-growing vegetation (Zarn 1974, CBOC 1993, Haug et al. 1993). Suitable WBO habitat may also include trees and shrubs if the canopy covers less than 30 percent of the ground surface (DeSante et al. 1996). Burrows are the essential component of WBO habitat, and both natural and artificial burrows provide protection, shelter, and nests for WBO. WBOs typically use burrows made by mammals such as kit foxes, ground squirrels, or badgers, but also may use human-made structures, such as cement culverts; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement (Collins and Landry 1977, Trulio 1994). Where the ranges of WBO and DT overlap, WBOs also use DT burrows.

WBOs in California are generally nonmigratory and most abundant in the Central and Imperial valleys, primarily in agricultural areas (Center for Conservation Biology et al. 2003). Small, scattered populations occur in the Mojave Desert. Although the WBO population in the southern

desert region is primarily resident (i.e., present year-round), some migration from northern populations to this area occurs during winter (Center for Biological Diversity et al. 2003 citing Garrett and Dunn 1981). Seasonal non-migration movements and shifts in burrow use by juveniles and adults within a region also occur. The West Mojave Plan documents 53 records of WBOs in the east Mojave Desert (Campbell 2004), only five of which are confirmed breeding pairs. Population density seems to be correlated with prey availability, particularly small mammals (Klute et al. 2003).

CNDDB reports 132 occurrences of WBO in Riverside County, concentrated in the west and west-central portions of the county. Prior to Project surveys conducted in 2009, and surveys conducted concurrently for the proposed Palen Solar Power Project (about 35 miles to the west of the BSPP), the only documented recent WBO occurrences in eastern Riverside County are located outside the disturbance area near Blythe, California (cited by Center for Conservation Biology et al. 2003). As of 2002, Higson (cited by Center for Conservation Biology et al. 2003) characterized the WBO population near Blythe as "sparse" and estimated a maximum of 12 to 14 pairs in the summer and two wintering pairs. CNDDB reports six occurrences of WBO near Blythe; five were documented in 2002 and one was documented in 1987. The next closest records to the disturbance area are approximately 22 miles to the west at the proposed Palen Solar Power Plant site (two breeding pairs and their juveniles were documented during surveys conducted in 2009 by EDAW), and 80 miles to the west in west-central Riverside County.

The entire BRSA is considered suitable WBO foraging and nesting habitat, as assessed on February 15 and 16, 2009, per Phase I of the CBOC protocol (see Chapter 2, Methodology). Numerous (1,019) burrows potentially suitable for use by WBO were detected and mapped throughout the disturbance area and 492-foot (150-meter) buffer. Potentially suitable burrows consisted of abandoned badger and kit fox burrows, DT burrows, and burrows of other unidentified fossorial mammals. A prevalence of small mammal burrows and a large arthropod population were noted during the Phase I assessment, indicating that a prey base for WBO is present.

Figure 10 displays the locations of WBOs observed, active burrows (i.e., occupied by WBO), and other locations where sign or potential sign were observed during surveys. One WBO was observed at a burrow during DT and WBO Phase II surveys on March 18, 2009, in the western-central area of the disturbance area (Figure 10). This active burrow had abundant and recent WBO sign and was located adjacent to another burrow with sign; however, no WBOs were observed there subsequently during Phase III surveys. Because WBO breeding can be initiated as early as February, particularly in desert populations, it is unknown whether this WBO attempted

to nest at this location in 2009 prior to initiation of focused Phase III surveys. On March 12, a second WBO was observed within the buffer near the western edge of the BRSA during vegetation surveys (Figure 10); this portion of the BRSA was outside the WBO Phase II and III survey area. No WBOs were documented within the disturbance area (Figure 10) or 492-foot (150-meter) buffer during Phase III surveys, although signs of previous WBO use were present throughout these areas.

One active WBO burrow was detected within the disturbance area. A total of 90 burrows with various levels of WBO sign were detected in the BRSA during the Phase II and Phase III surveys. The disturbance area and 492-foot (150-meter) buffer are composed of either Sonoran creosote bush scrub, desert dry wash woodland, or unvegetated ephemeral dry wash habitat, with desert pavement and cobble terraces in between. Vegetation within the desert dry wash woodland is composed primarily of creosote bush, ironwood, blue palo verde, and native annual grasses, while the desert scrub is predominantly vegetated with creosote bush. Suitable burrows were regularly distributed throughout most of the scrub habitat, which is relatively flat and sparsely vegetated and consists of loose sandy soils. Within the entire BRSA, burrows with signs of previous use by WBO are present at a relatively low density, but are regularly distributed across the BRSA except for the far western portion. The far western portion of the disturbance area, at the base of the adjacent mountains, is characterized by steep, rocky canyons, desert wash, and hard desert pavement and cobble terrace substrate, and contains few burrows suitable for nesting WBOs. This is probably due to the relative difficulty for fossorial mammals to excavate burrows in such a hard substrate. Despite the sparseness of suitable burrows in the western portion of the disturbance area, three suitable burrows in the southwestern portion of the 492-foot (150-meter) buffer, located within 100 feet of each other on the side of a steep, rocky canyon, had signs of heavy use by WBOs prior to the 2009 breeding season.

The presence of inactive burrows with WBO sign, particularly those with abundant old sign, suggests that the disturbance area may have been used previously by WBO for breeding. Also, WBOs may use a range of different satellite burrows irregularly during the breeding and non-breeding seasons. Many of the suitable burrows appeared to have sign that was severely degraded and left in previous seasons, implying that the 90 burrows with sign represent multiple years of WBO use across the BRSA. The length of time that WBO sign can remain visible on the landscape is not known and is expected to vary with local precipitation, wind patterns, soil moisture, and other abiotic and biotic factors. Due to the generally dry conditions at the BRSA, WBO sign may persist for multiple seasons. The majority of these burrows also had relatively small amounts of WBO sign, indicating that either owls only used them for a brief period of time before vacating, or previous use may have been more extended or regular but much of the

original sign has disappeared. If the small amount of sign at most burrows is a function of only temporary or infrequent use by WBOs, the BRSA may be used more during migration or other seasonal movements, or during winter. A low density of WBO in the BRSA is consistent with the documented general abundance of WBO in the surrounding region.

Loggerhead Shrike

The species was found at low densities in the creosote bush scrub and habitat composed of both creosote bush scrub and desert dry wash woodland. One nest was located in the southwest section of the disturbance area. Two other nests were located in the buffer, one just north of the disturbance area and the other along the northeast edge of the buffer in McCoy Wash. Suitable habitat for loggerhead shrike occurs throughout the BRSA, and it was the most common species recorded during the avian point count surveys (Attachment H).

The loggerhead shrike is an SSC. It inhabits open, habitat types such as grasslands, old (fallow) fields, pastures, farmland, and desert scrub. For foraging, they require perches of tall enough stature to overlook hunting areas, such as tree snags, stumps, and fenceposts. They also require vegetation with thorns (or barbed wire fences) for impaling their prey. Prey includes invertebrates and small vertebrates, including small mammals, birds, and reptiles. While this species has been in steady decline throughout much of its range, beginning in the northeast in the 1930s and in the southeast and midwest by the 1960s, it was still fairly common in California as late as 1970. It showed significant declines in most of California beginning around 1968 (Sauer et al. 2005); however, in the southern California deserts, it has shown no marked decline (Shuford and Gardali 2008). Shrikes remain on permanent territories throughout the year. Outside of the breeding season, males and females defend neighboring territories, which coalesce at the beginning of the nesting period.

American Badger

American badger dens and mammal burrows showing evidence of predation by American badger were observed throughout the disturbance area, and this activity is higher on the western portion of the BRSA (Figure 11). Prey species for American badgers are present and prevalent (round-tailed ground squirrels, kangaroo rats, mice, etc.), and observations of badger digging into kit fox burrows and complexes were made). Most of the BRSA, with the exception of agricultural and developed land, is suitable for this species. Eleven badger dens and more than 80 burrows showing evidence of predation by badgers were observed (Figure 11).

The American badger, an SSC, is a resident of level, open areas in grasslands, agricultural areas, and open shrub habitats. It digs large burrows in dry, friable soils and feeds mainly on fossorial mammals: ground squirrels, gophers, rats, mice, etc. Badgers are primarily active during the day, but may become more nocturnal in close proximity to humans. The home range of badgers has been measured to be 1,327 to 1,549 acres for males and 338 to 751 acres for females in Utah (Lindzey 1978) and 400 to 600 acres in Idaho (Messick and Hornocker 1981). Mating occurs in late summer or early fall, and two to three young are born 183 to 265 days later in March or April (Long 1973). Badgers are known to live up to 11 to 15 years (Messick and Hornocker 1981).

Without focused surveys for badgers it is difficult to determine population size and dynamics of badgers in the BRSA, as badger dens and evidence of foraging were observed incidentally during other general wildlife survey and focused surveys for other species. However, based on the distribution of burrows and burrows showing evidence of recent predation by badgers (claw marks),it can be concluded that this species is using the western portion of the disturbance area more heavily than the eastern portion. What is interesting to note is that the western areas actually had less small mammal activity than the eastern areas. Coyote activity was noted more commonly in the eastern areas. It could be that water is a limiting factor for badgers, as presumably water is more available and for a longer period in the western portions of the BRSA. Also, the few occurrences of badger activity noted in the east were in the vicinity of McCoy Wash, where water is likely more available than within the central portion of the disturbance area.

Desert Kit Fox

Active desert kit fox burrows and complexes were found scattered throughout the BRSA during spring 2009. A total of 163 burrows and 25 burrow complexes were recorded within the BRSA (Figure 11). A suitable prey base and habitat to support this species occurs throughout the BRSA, with the exception of agricultural and developed land.

Kit fox burrows and burrow complexes appear to be scattered somewhat uniformly across the entire disturbance area. The burrows were observed within drainages and in open areas, with a slightly lower abundance of kit fox burrows observed in the areas with a lot of desert pavement. Fewer small mammal burrows and kit fox burrows were noted in desert pavement areas, presumably because it is more difficult to excavate burrows there.

The desert subspecies of kit fox is a PFM. Suitable habitat for this fossorial mammal consists of arid open areas, shrub grassland, and desert ecosystems. Kit fox diet consists mostly of small rodents, especially kangaroo rats. Kit foxes will also eat rabbits, lizards, insects, and berries. Dens have multiple entrances and entrances are up to 8 inches wide, often keyhole-shaped. Litters of three to five young are born in February or March (Egoscue 1962, McGrew 1979).

Nelson's Bighorn Sheep

Bighorn sheep sign was observed within the disturbance area (Figure 11). To quantify the use of this site by this species, focused surveys would need to be conducted. This species is known within the region, and Nelson's bighorn sheep scat and tracks were observed within the disturbance area, indicating that it uses the site for dispersal and seasonal movement. Sheep may also use the site for winter foraging habitat. The closest documented occurrence in the CNDDB is approximately 25 miles northwest of the BRSA (CDFG 2009).

The Nelson's bighorn sheep is a BLM sensitive species. This species occurs on the mountain slopes above the desert floor in California. The species prefers open areas that are steep and rocky to avoid predators (Bleigh et al. 1990). While the species is generally associated with mountainous areas, desert floor areas are important for dispersal.

3.5 CRITICAL HABITAT

The BRSA does not include any designated critical habitat for special status plant or wildlife species.

3.6 WILDLIFE MOVEMENT

The site of the proposed Project could be used by a variety of wildlife species for movement purposes. Wildlife movement activities typically fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, or individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover).

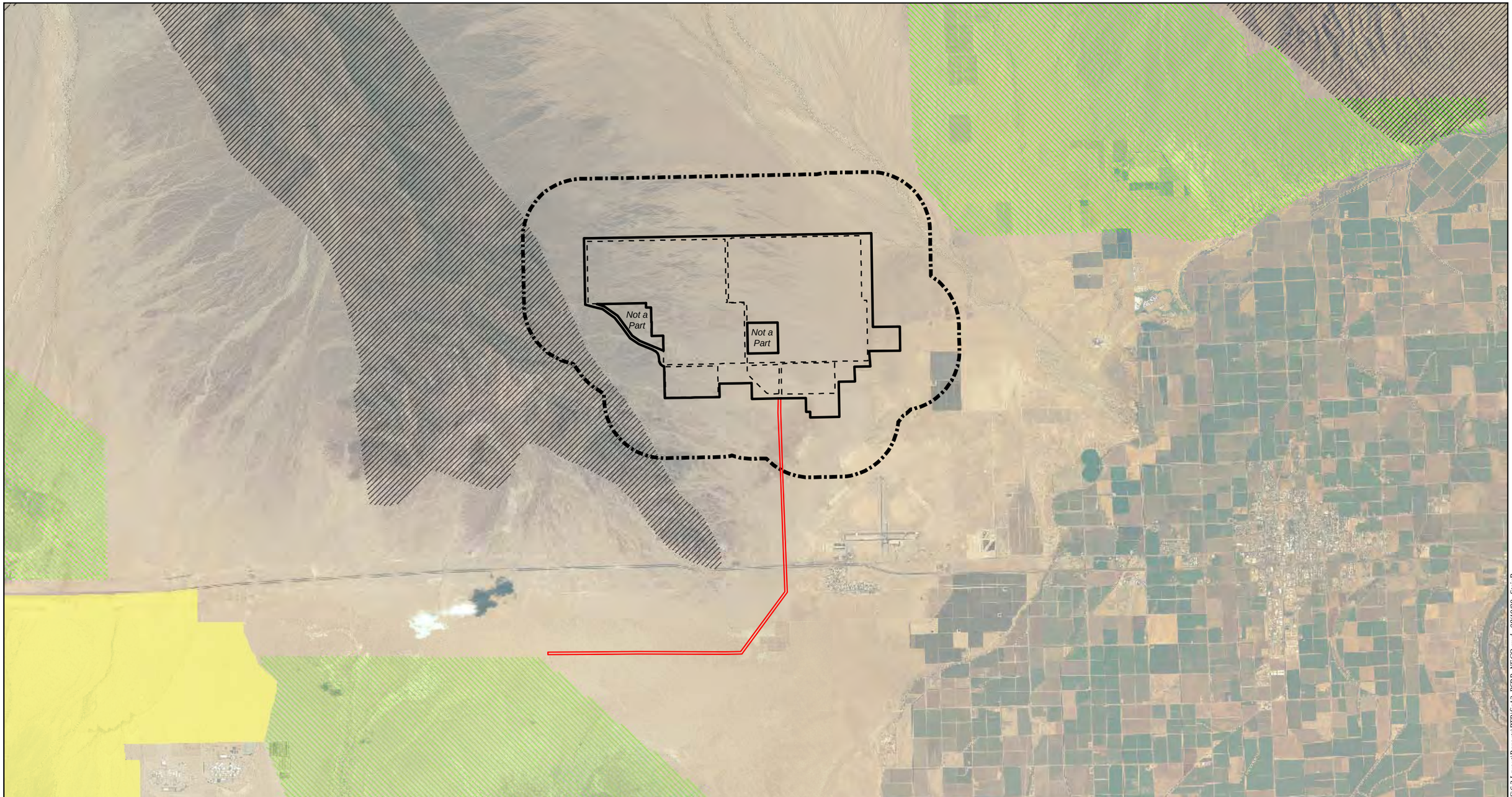
Regionally, the proposed Project is located to the east of the McCoy Wilderness (McCoy Mountains) and immediately west of the Colorado River within the NECO planning area of the California Desert Conservation Area (CDCA). The purpose of NECO and the other concurrent management plans is to provide a regional approach to managing desert ecosystems. The NECO

planning area consists of a series of desert wildlife management areas (DWMAs) for the Federal endangered DT and wildlife habitat management areas (WHMAs). The BRSA is also in proximity to several other similar management areas. The intention of these areas is to protect habitats assumed to be suitable for many species and therefore preserve biodiversity. The westernmost portion of the buffer is part of the Bighorn WHMA (Figure 12).

In general, several species are likely to use habitat on the disturbance area, especially the ephemeral desert washes and associated wash-dependent vegetation communities, as movement corridors at multiple scales for the above-mentioned wildlife movement activities. Movement by large mammals such as coyote, kit fox, mule deer, bobcat, American badger, and mountain lion would likely be concentrated in the wash areas because these areas may provide greater foraging opportunities.

The BSPP is located in an area that could support local dispersal opportunities and provide habitat connectivity for special status species, including DT, Nelson's bighorn sheep. DT and Nelson's bighorn sheep may move from the southwest to northeast or vice versa for population dispersal. While DT densities on the valley floor may be lower than in the adjacent mountain ranges, movement between local populations through intermountain valleys is important for long-term population viability (Averill-Murray and Averill-Murray 2005). DT home range varies with locality, year, resource availability, and social interactions (Berry 1986; O'Connor et al. 1994). Male DT home range (0.04 to 0.31 square miles) is estimated to be twice the size of females (Burge 1977; Berry 1986). DTs utilize multiple dens throughout individual home ranges and appear to migrate to steeper, rockier slopes in the winter (Barrett 1990). DT dispersal distances have been documented at 4.1 miles. DT has been observed in both the disturbance area and buffer (Figure 9).

The intermountain areas of desert (valley floor) where the BSPP occurs could potentially serve as a seasonal and dispersal movement area for Nelson's bighorn sheep, a CDFG fully protected and BLM sensitive species. Populations of bighorn sheep within individual mountain ranges are often small, and there is typically considerable movement between mountain ranges (Bleich et al. 1990); these intermountain movements are particularly important to long-term population viability. Bighorn sheep were documented moving through the disturbance area during 2009 field surveys (Figure 11).



Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Biological Resource Survey Area (BRSA)

Desert Wildlife Management Area (NECO)

- Chuckwalla

Wildlife Habitat Management Area (NECO)

- Nelson's Bighorn Sheep
- Multiple Species

Source: NAIP 2005; NECO; AECOM 2009;

N W E S

1 inch = 8,333 feet

0 8,333 16,666 Feet

Blythe Solar Power Project
Biological Technical Report

Figure 12
Proposed Project Relative to the Northern and Eastern Colorado Desert Coordinated Management Plan (NECO)

Solar Millennium

AECOM

Date: August 2009

Path: P:\2009\0980082 Sol MI Blythe\6.0 GIS\6.3 Layout\Reports\BTR\fig12_BSPP_NECO.mxd, 08/19/09, SteinB

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3.7 LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

This section discusses the laws, ordinances, and regulations (LORS) related to biological resources within the proposed Project's disturbance area.

3.7.1 LORS Compliance

The proposed Project will comply with applicable Federal, State, and local LORS throughout Project construction and operation. Potentially applicable LORS are summarized in Table 5 and discussed in the Sections 3.7.2 through 3.7.4.

Table 5
LORS Applicable to the Proposed Project

LORS	Applicability
Federal	
Endangered Species Act of 1973 (ESA), 16 USC Section 1531 et seq., and implementing regulations, Title 50 CFR Section 17.1 et seq.	Designates and protects Federal threatened and endangered plants and animals and their critical habitat. Requires Federal agency consultation with the U.S. Fish and Wildlife Service (USFWS) and issuance of Biological Opinion and incidental take authorization for listed species.
Migratory Bird Treaty Act (MBTA), 16 USC Sections 703-712	Prohibits take of protected migratory birds.
Clean Water Act (CWA), 33 U.S.C Section 1251et seq.	Restore and maintain the chemical, physical, and biological integrity of the nation's waters and regulate the discharge of pollutants and dredged or fill material to the navigable waters of the U.S.
National Environmental Policy Act (NEPA), 42 USC Section 4321 et seq., and implementing regulations,, 40 CFR 1500-1508	Requires Federal agencies to analyze environmental impacts of proposed actions with a Federal nexus and to disclose impacts to the public.
Northern and Eastern Colorado Desert Coordinated (NECO) Management Plan	Protects and conserves natural resources while simultaneously balancing human uses of the California portion of the Sonoran Desert ecosystem.
California Desert Conservation Area (CDCA) Plan	Under the Federal Land Policy and Management Act, BLM is required to develop Resource Management Plans. All activities proposed for public land must be consistent with the approved Resource Management Plan(s).
State	
California Environmental Quality Act (CEQA) (Public Resources Code Section 15000 et seq.)	CEQA requires identification of significant environmental effects of proposed projects (including impacts on biological resources) and avoidance (where feasible) or mitigation of the significant effects. CEQA applies to "projects" proposed to be undertaken or requiring approval by State and/or local governmental agencies. "Projects" are activities that have the potential to have a physical

LORS	Applicability
	impact on the environment. The CEC licensing process, under the Warren-Alquist Act, is a CEQA-equivalent process.
California Endangered Species Act (CESA) of 1984, Fish and Game Code Sections 2050 – 2098	Protects California's endangered and threatened species, including species designated as candidates for listing.
California Fish and Game Code (CFGC) Fully Protected Species: Section 3503, 3503.5, 3511: Fully protected birds Section 4700: Fully protected mammals Section 5050: Fully protected reptiles and amphibians Section 5515: Fully protected fishes	Prohibits the taking of listed plants and animals that are classified as "Fully Protected" in California.
Native Plant Protection Act (NPPA) of 1977, CFGC Section 1900 et seq.	Provides specific protection measures for identified populations of State rare and endangered plants.
Title 14 California Code of Regulations (CCR) Sections 670.2 and 670.5	Listings of plants and animals of California declared to be threatened or endangered.
CFGC Section 1600 et seq., Streambed Alteration Agreement (SAA)	Requires California Department of Fish and Game (CDFG) to review project impacts to waters of the State (bed, banks, channel, or associated riparian areas of a river, stream, or lake), including impacts to wildlife and vegetation from sediments, diversions, and other disturbances.
The 1969 Porter-Cologne Water Quality Control Act (Porter-Cologne) California Water Code (CWC) Section 13000 et seq.	Regulates discharges of waste and fill material to waters of the State, including "isolated" waters and wetlands.
Local	
Riverside County General Plan (2003)	Provides land use designations, goals, and policies for the development and conservation of land within the unincorporated areas of Riverside County.

Note: There are no Federal waters within the BRSA.

3.7.2 Federal LORS

Federal LOS that are applicable to the BSPP are discussed below.

Endangered Species Act (ESA) (16 USC Sections 1531 et seq.). This 1973 law, administered by USFWS, is designed to minimize impacts to imperiled plants and animals, as well as facilitate recovery of such species. Declining plant and animal species are listed as "endangered" or "threatened" based on a variety of factors. Applicants for projects requiring Federal agency action that could adversely affect listed species are required to consult with and mitigate impacts in consultation with USFWS. Adverse impacts are defined as "take" ("to harass, harm, pursue,

hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct"), which is prohibited except as authorized through consultation with USFWS and issuance of an Incidental Take Statement under Section 7 or Section 10 of the ESA, depending on whether there is a Federal nexus (Federal permit required or funding involved). The Project requires BLM to issue a right-of-way (ROW) grant, providing a Federal nexus. Therefore, the Project will conduct the ESA consultation process under Section 7.

Migratory Bird Treaty Act (MBTA) (16 USC Sections 703-711). This law prohibits actions resulting in the pursuit, capture, killing, and/or possession of any protected migratory bird, nest, egg, or parts thereof. USFWS maintains a list of designated migratory birds occurring in various regions of the United States. This regulation can constrain construction activities that have the potential to affect nesting birds either through vegetation removal and land clearing or other construction or operation-related disturbance.

Clean Water Act (CWA) Through formal field surveys following the latest established Federal protocol and guidance documents for delineating jurisdictional waters of the U.S. including hydrological investigation and analysis, the Project team determined that the disturbance area does not support jurisdictional waters of the U.S. It is anticipated that USACE will not assert jurisdiction over any waters and/or aquatic features occurring within the disturbance area. Final acreages of jurisdictional waters of the U.S. will be based on the Approved JD process per the March 30, 2007, U.S. Army Corps of Engineers Jurisdictional Determination (JD) Form Guidebook; the June 5, 2007, Approved JD Form; the June 5, 2007, Joint Guidance Memorandum; the December 2, 2008, Guidance Memorandum; or Regulatory Guidance Letter (RGL) 08-02 (if RGL 08-02 is deemed applicable and appropriate [i.e., the permit applicant, or other "affected party" can decline to request and obtain an Approved JD and elect to use a Preliminary JD instead]).

National Environmental Policy Act (NEPA) 1969 (42 U.S.C. 4321 et seq.) The National Environmental Policy Act established a national policy for promoting environmental protection that includes a multidisciplinary approach to considering environmental effects in decision making intended to "encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man…"

NEPA requires Federal agencies to analyze and publicly disclose of the environmental impacts of a proposed project. To do so, Federal agencies are required to prepare either an Environmental Assessment (EA) or, where an action may significantly affect the quality of the human

environment, an Environmental Impact Statement (EIS). These documents explore project alternatives and identify the likely environmental consequences of each action. These documents contain statements of the environmental impacts and include mitigation measures to lessen the effects of a proposed project to the extent practicable. The significance of an impact is determined by both its context and its intensity. "Context" includes society as a whole, the affected region, the affected interests, and the locality. "Intensity" refers to the severity of impact, including "the degree to which the action may adversely affect an endangered or threatened species or habitat that has been determined to be critical under [ESA]." Based on the potential for significant environmental impacts, it is anticipated that BLM would be required to prepare an EIS for the proposed Project to satisfy NEPA.

Northern and Eastern Colorado Desert Coordinated Management Plan (BLM 2002). The Federal Land Policy and Management Act (FLPMA) requires the BLM to develop land use plans also known as Resource Management Plans to guide BLM's management of public land. BLM is required to determine conformity of the project developments with the CDCA including NECO. NECO is a landscape-scale, multi-agency planning effort that protects and conserves natural resources while simultaneously balancing human uses of the California portion of the Sonoran Desert ecosystem. This plan was prepared under the regulations implementing the Federal Land Policy and Management Act of 1976. NECO provides reserve management for the DT, integrated ecosystem management for special status species and natural communities for all Federal lands, and regional standards and guidelines for public land health for BLM lands.

The BSPP buffer occurs within a Multi-species Wildlife Habitat Management Area (WHMA), as designated by NECO (Figure 12). The Multi-species WHMA is complementary to existing restricted areas within the NECO planning area and Desert Wildlife Management Areas, which also cover other special status species and habitats (e.g., DT and bighorn sheep). No restrictions are designated in the WHMA other than closure of some routes of travel. Management emphasis is placed on active management, specific species and habitats mitigation, and restoration from authorized allowable uses. The special situation of "fixed-point" rare plants is also addressed.

California Desert Conservation Area (CDCA) Plan. Per Title 43 CFR Section 1610.5-3, BLM must manage the land within its jurisdiction in compliance with a Resource Management Plan. With the exception of one 40-acre, privately owned parcel, the entire Project site (including the transmission line route) will be located on lands under BLM jurisdiction and managed pursuant to the CDCA Plan. The CDCA Plan serves as a guide for the management of all BLM-administered lands in three desert areas: the Mojave, the Sonoran, and a small portion of the Great Basin. The CDCA Plan covers approximately 25 million acres, of which 12 million are

public lands. The primary goal of the CDCA Plan is to provide overall maintenance of the land while planning for multiple uses and balancing the needs of people with the protection of the natural environment.

3.7.3 State LORS

The following are State LORS that are applicable to the proposed Project.

California Environmental Quality Act (CEQA) (Public Resources Code Section 15000 et seq.). CEQA requires identification of significant environmental effects of proposed projects (including impacts on biological resources) and avoidance (where feasible) or mitigation of the significant effects. CEQA applies to "projects" proposed to be undertaken or requiring approval by State and/or local governmental agencies. "Projects" are activities that have the potential to have a physical impact on the environment. The CEC licensing process, under the Warren-Alquist Act, is a CEQA-equivalent process.

California Endangered Species Act (CESA) (Fish and Game Code Section 2050 et seq.). This State law prohibits the "take" (defined as "to hunt, pursue, catch, capture, or kill") of State listed species except as otherwise provided in State law. CESA, administered by CDFG, is similar to the Federal ESA, although unlike the Federal law, CESA applies incidental take prohibitions to species currently petitioned for State-listing status (i.e., candidate species). State lead agencies are required to consult with CDFG to ensure that their authorized actions are not likely to jeopardize the continued existence of any State listed species or result in the degradation of occupied habitat.

Under Section 2081, CDFG authorizes "take" of State listed endangered, threatened, or candidate species through incidental take permits or memoranda of understanding if 1) the take is incidental to otherwise lawful activities, 2) impacts of the take are minimized and fully mitigated, 3) the permit is consistent with regulations adopted in accordance with any recovery plan for the species in questions, and 4) the applicant ensures suitable funding to implement the measures required by CDFG.

Because DT are present in areas associated with the proposed Project, the Project will obtain either a Section 2081 permit for DT, or a CDFG concurrence under CESA Section 2080.1 with the Federal take authorization issued by USFWS for DT under the Federal ESA (described in Section 3.7.2). If only Federal take authorization is pursued, it is assumed, with concurrence from CDFG, that this process will substantially meet the requirements of CESA.

California Fish and Game Code Section 3503. This Code prohibits take, possession, or needless destruction of the nests or eggs of any bird, except as otherwise provided by the code or any regulation made pursuant thereto.

California Fish and Game Code Section 3503.5. This Code makes it unlawful to take, possess, or destroy birds of prey. It also prohibits the take, possession, or destruction of nests or eggs of any bird of prey.

California Fish and Game Code Section 3511. This law describes bird species, primarily raptors, that are "fully protected." Fully protected birds may not be taken or possessed, except under specific permit requirements.

California Fish and Game Codes Sections 4700, 5050, and 5515. These Codes list mammal, amphibian, and reptile species that are classified as fully protected in California.

Native Plant Protection Act (NPPA) (Fish and Game Code Section 1900 et seq.). The NPPA includes measures to preserve, protect, and enhance rare and endangered native plant species. Definitions for "rare and endangered" are different from those contained in CESA, although CESA-listed rare and endangered species are included in the list of species protected under the NPPA.

Title 14, California Code of Regulations Sections 670.2 and 670.5. This Code lists plant and animal species designated as threatened and endangered in California. California Species of Special Concern (CSC) is a category applied by CDFG to those species that are indicators of regional habitat changes or are considered potential future protected species. CSCs do not have any special legal status, but are intended by CDFG for use as a management tool to take these species into special consideration when decisions are made concerning the future of any land parcel.

California Fish and Game Code Section 1600 et seq. Pursuant to these sections, CDFG regulates all changes to the natural flow, bed or bank, of any river, stream, or lake that support fish or wildlife resources. A stream is defined broadly as a body of water that flows at least periodically, or intermittently, through a channel that has banks and that supports fish or other aquatic biota. Such areas are formally referred to as "waters of the State." Impacts to vegetation and wildlife from sediment, diversions, and other disturbances are included in the review.

Project proponents must provide CDFG with written notification before activities begin that will do the following:

- Substantially divert or obstruct the natural flow of any river, stream, or lake;
- Substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake.

Notification is generally required for any activity that will take place in or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks and support fish or other aquatic life, and watercourses having a surface or subsurface flow that support or have supported riparian vegetation. Generally, CDFG is concerned with activities that have the potential to impact State-regulated resources at the activity site, as well as the effects of those actions on the ecosystem at and surrounding the activity (i.e., upstream, downstream, and neighboring). As the proposed Project's disturbance area contains "waters of the State," the Project will submit a CFGC Section 1600 et seq. Lake and Streambed Alteration Agreement (SAA) notification to CDFG. The SAA review process is subsumed within the CEC's review and approval process for the AFC.

<u>1969 Porter Cologne Water Quality Control Act (Porter-Cologne) (California Water Code Section 13000 et seq.).</u> Through a programmatic agreement between the Federal government and the States, the Regional Water Quality Control Board (RWQCB) has primary authority for permit and enforcement activities under Porter-Cologne) and the CWA. Under Porter-Cologne, the RWQCB regulates the "discharge of waste" to waters of the State. The term "discharge of waste" is also broadly defined in Porter-Cologne, such that discharges of waste include fill, any material resulting from human activity, or any other "discharge" that may directly or indirectly impact waters of the State relative to implementation of Section 401 of the CWA.

Porter-Cologne authorizes the RWQCB to regulate discharges of waste and fill material to waters of the State, including "isolated" waters and wetlands, through the issuance of waste discharge requirements (WDRs). Under Porter-Cologne, all parties proposing to discharge waste that could affect the quality of waters of the State, other than into a community sewer system, shall file with the appropriate RWQCB Report of Waste Discharge (ROWD) containing such information and data as may be required by the RWQCB. The RWQCB will then respond to the ROWD by issuing a WDR in a public hearing, or by waiving WDRs (with or without conditions) for that proposed discharge. The RWQCB has a statutory obligation to prescribe WDRs except where the RWQCB finds that a waiver of WDRs for a specific type of discharge is in the public

interest. Therefore, all parties proposing to discharge waste that could affect waters of the State, but do not affect Federal waters (which requires a CWA Section 404 permit and CWA Section 401 Certification) must file an ROWD with the appropriate RWQCB.

3.7.4 Local LORS

Riverside General Plan, Land Use, and Multi-Purpose Open Space Elements (2003). Riverside County requires actions to ensure that proposed development projects demonstrate a high degree of compatibility with any threatened or endangered species habitat they may affect. The administering agency is the Riverside County Planning Department.

3.7.5 Involved Agencies

The Federal, State, and local agencies involved in biological resource issues related to the BSPP are provided in Table 6. Copies of correspondence with agency personnel are provided in Attachment K.

Table 6
Agencies and Agency Contacts

Agency Contact	Phone/E-mail	Permit/Issue
Holly Roberts, Deputy Field Manager Bureau of Land Management Palm Springs South Coast Field Office 690 W. Garnet Ave., P.O. Box 581260 North Palm Springs, CA 92258-1260	(760) 251-4800 phone Holly_roberts@ca.blm.gov	Right-of-Way Permit and preparation of EIS per NEPA
Jim Bartel, Field Supervisor USFWS Carlsbad Office 6010 Hidden Valley Road, Suite 101 Carlsbad, CA 92011	(760) 431-9440 Jim_Bartel@fws.gov	Federal ESA, Section 10 Consultation – Habitat Conservation Plan.
Chris Hayes, Program Manager CDFG Blythe Office P.O. Box 2160 Blythe, CA 92226	(760) 922-6508 CHayes@dfg.ca.gov	Section 2081 Take Permit
Stephan Arvender CDFG Blythe Office P.O. Box 2160 Blythe, CA 92226	(760) 922-6783 SArvender@dfg.ca.gov	Streambed Alteration Agreement, Section 1600
Dan Swenson, Senior Project Manager USACE Regulatory Division 915 Wilshire Blvd Los Angeles, CA 90017-3401	(213) 452-3414 dan.swenson@usace.army.mil	Concurrence that proposed Project site does not include “waters of the U.S.”

3.7.6 Required Permits and Permit Schedule

As shown in Table 7, the proposed Project may require several permits that are specific to biological resources issues.

Table 7
Required Biological Resource Permits and Permitting Schedule

Permit/Approval	Schedule
Federal Endangered Species Act, Section 7 Consultation	Section 7 Consultation will be initiated by BLM to obtain a Biological Opinion from USFWS for the Project. Section 7 consultation for this Project is triggered by a right-of-way (ROW) Application to BLM from the Applicants. A Biological Assessment (BA) for the Project's effect on DT will be prepared and submitted to BLM and USFWS to initiate formal consultation. It is anticipated that the Draft BA will be submitted in January 2010. Once the Final BA is submitted by BLM, the 135-day consultation period with USFWS begins.
California Endangered Species Act, Incidental Take (2081) Permit	,CDFG will be invited to participate in the Section 7 consultation with USFWS regarding species protected under both the ESA and the CESA. For this Project, DT is the only State listed species detected on site. If CDFG agrees with the conditions of the Biological Opinion, CDFG will issue a concurrence letter within a few weeks of issuance of the Biological Opinion. If the Project determines that pursuing the 2081 is more appropriate, the Draft 2081 would be submitted in January 2010. Once the Final 2081 ITP is submitted, CDFG provides its determination to CEC and 2081 ITP take authorization is included in the CEC Decision Document. A separate 2081 ITP will not be issued by CDFG.
CDFG 1602 Streambed Alteration Agreement (SAA)	The SAA application will be submitted to CDFG approximately 3 months after the AFC submittal. CDFG provides its determination to CEC, and SAA authorization is included in the CEC Decision Document. A separate SAA will not be issued by CDFG.

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CHAPTER 4
IMPACTS

This section addresses BSPP-related impacts on vegetation communities and special status plant and wildlife species during both Project construction and operation. Direct and indirect impacts may be either permanent or temporary. These impact categories are defined below.

- Direct: Direct impacts are caused by the Project and occur at the same time and place as the Project. Any alteration, disturbance, or destruction of biological resources that would result from Project-related activities is considered a direct impact. Direct impacts would include direct losses to native habitats, potential jurisdictional waters, wetlands, and sensitive species, and diverting natural surface water flows. Specifically, direct impacts may include injury, death, and/or harassment of listed and/or sensitive species. Direct impacts may also include the destruction of habitats necessary for species breeding, feeding, or sheltering. Direct impacts to plants can include crushing of adult plants, bulbs, or seeds.
- Indirect: As a result of Project-related activities, biological resources may also be impacted in a manner that is not direct. Indirect impacts may occur later in time or at a place that is farther removed than direct impacts, in distance, from the BSPP, but are still reasonably foreseeable and attributable to Project-related activities. Examples include: habitat fragmentation; elevated noise, dust, and lighting levels; soil compaction; increased human activity; decreased water quality; changes in hydrology, runoff, and sedimentation; and the introduction of invasive wildlife and plants.
- Permanent: All impacts that result in the long-term or irreversible removal of biological resources are considered permanent. Examples include constructing a building or permanent road on an area containing biological resources. All direct impacts in the disturbance area are considered permanent.
- Temporary: Any impacts considered to have reversible effects on biological resources can be viewed as temporary. Examples include the generation of fugitive dust during construction, or removing vegetation for underground pipeline trenching activities and either allowing the natural vegetation to recolonize or actively revegetating the impact area. Surface disturbance that removes vegetation and disturbs the soil typically would be considered a long-term temporary impact if vegetation is allowed to reestablish overtime. However, because of the very slow natural recovery in arid ecosystems (such as those

present on the Project site and vicinity) and the altered surface hydrology for the planned rerouted wash, all such impacts in the BRSA are considered permanent.

For the purpose of this analysis, the following applicable thresholds of significance have been used to determine whether implementing the BSPP would result in a significant impact. These thresholds of significance are based on Appendix G of the State CEQA Guidelines. A biological resources impact is considered significant if implementation of the proposed Project would do any of the following:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFG or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFG or USFWS;
- Have a substantial adverse effect on Federal protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marshes, vernal pools, and coastal areas) or any state-protected jurisdictional areas not subject to regulation under Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy, or ordinance;
- Conflict with the provisions of an adopted habitat conservation plan; natural community conservation plan; or other approved local, regional, or State habitat conservation plan; or
- Substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

4.1 KEY DEFINITIONS AND BIOLOGY-RELATED DESIGN ELEMENTS

The following paragraphs define some of the key Project elements as they are used in the biological resources investigation discussion below.

The biological resources investigation uses a number of definitions for the area(s) of interest. As noted earlier, the BRSA includes the disturbance area acreage plus additional surrounding buffer that are covered by the investigation in order to comply with regulatory requirements. The 18,998-acre BRSA includes the entire area covered by the ROW application to BLM (9,405 acres). The 7,027-acre disturbance area encompasses the entire area within the fence line of the plant site (5,952 acres), as well as all additional proposed areas of disturbance outside of the fence (e.g., rerouted washes, etc.). It is assumed that the entire 7,027 acre disturbance area would be directly and permanently impacted by the proposed Project.

4.1.1 Solar Array, Access Roads, and Maintenance Facilities

Two of the solar fields associated with the BSPP would occupy approximately 1,600 acres each, while the other two will occupy 1,200 acres each. The total area occupied by facility footprint (i.e., area within the fence line, including the solar fields, office and maintenance buildings, laydown area, drainage channels, bioremediation area, leach fields,) is approximately 5,952 acres.

The minimum number of lights necessary to provide safety and security will be installed in the power block. All lights will be installed within the perimeter fence of the project. Lights will be focused downward and shielded toward the power block, away from adjacent undeveloped areas when near the perimeter of the site.

4.1.2 Rerouted Desert Washes

The following summary of existing drainage patterns and planned modifications is based on material described in greater detail in the Hydrology Report (AECOM 2009).

The proposed drainage modifications to the Project site seek to replicate as nearly as possible the existing flow patterns for the drainages as they exit the site. For this reason, five channels have been proposed adjacent to, through, or across the site: a north, southeast, central, south and west channel (see Figure 13). These channels would intercept flows prior to their entry to the site and convey them in re-aligned channels to approximately the same locations where they exit the site under existing conditions. Outlets for each channel would end in diffusers.

The following portions of the drainage channels would be located outside of the facility's security fence: the entire north channel, including the end diffuser; the entire south channel; and the portions of the west channel located west of the northwest power unit (Unit 2) and southwest

power unit (Unit 3). The portions of the drainage channels that would be located inside of the security fence include: the entire central channel, except for a small portion immediately before the junction with the north channel; the entire southeast channel; and portions of the west channel traversing Unit 3, south of the southeast power unit (Unit 4), and the area between Unit 3 and Unit 4.

The channels would be constructed with native material, and scour protection (i.e., rip rap) would be added to the channel sides and bottoms in stress areas such as curves and slope transitions. No scour protection is proposed for the channel bottom in the straight sections of the channels. This is to allow the low flows to meander across the bottom, replicating as nearly as possible the flow regimes under current conditions.

4.2 CONSTRUCTION IMPACTS

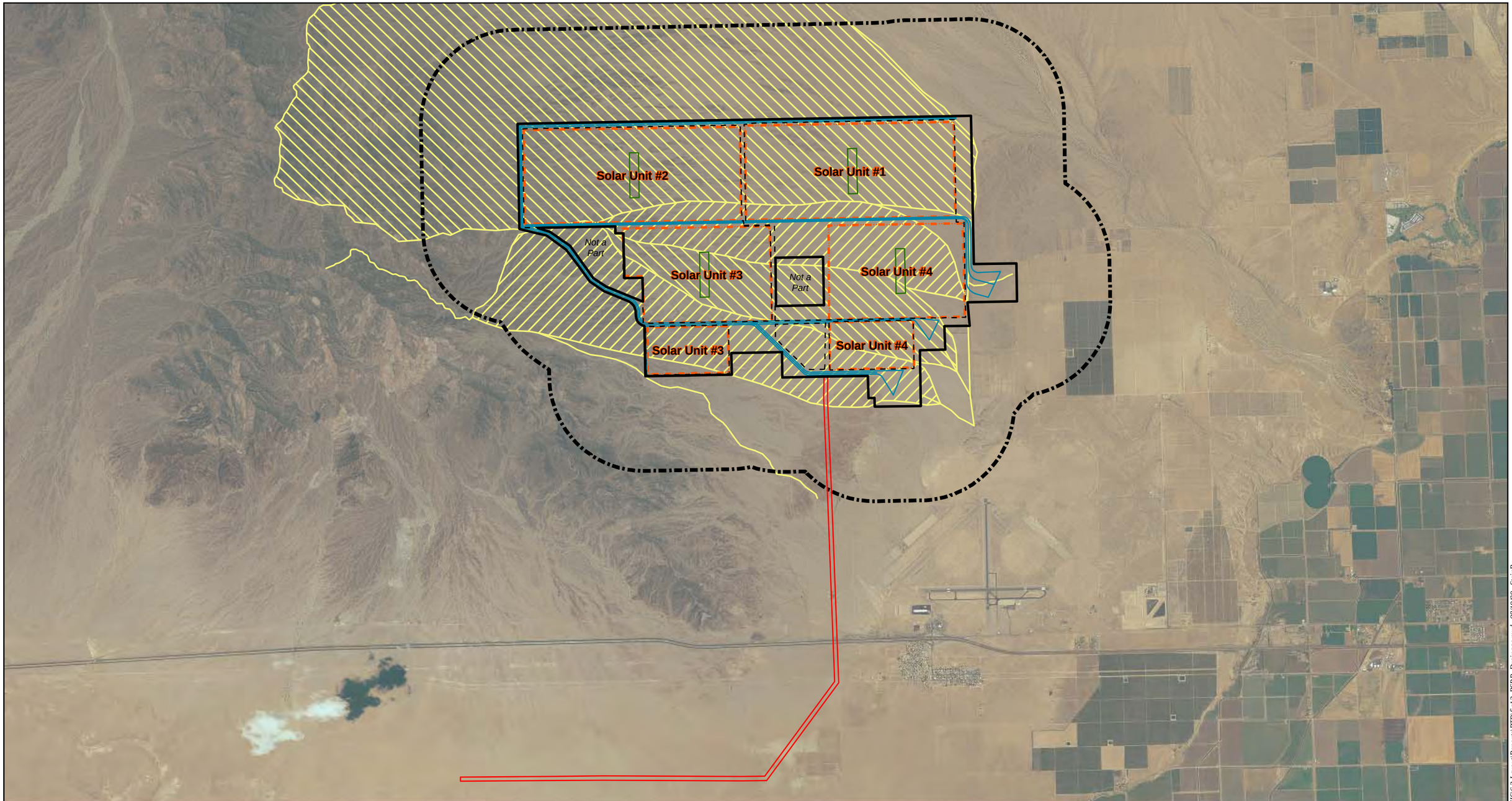
This section identifies impacts to the biological resources within the BRSA that would result from construction of the Project. Sensitive vegetation communities and other land cover types were defined in Section 3.1 and sensitive species were defined in Sections 3.3 and 3.4. All jurisdictional waters, including unvegetated channels, are considered sensitive.

4.2.1 Vegetation Communities

Sensitive vegetation communities and other land cover types were defined in Section 3.1. All potential jurisdictional waters, including desert dry wash woodland and unvegetated ephemeral dry wash, are considered sensitive vegetation communities. In addition, desert dry wash woodland is a special community type (e.g., high priority for inventory in the California Natural Diversity Database) per the CDFG Vegetation and Mapping Program (CDFG 2003).

Direct Impacts

Permanent direct impacts to both non-sensitive and sensitive vegetation communities within the disturbance area would occur as a result of construction activities. The permanent direct impacts would be a result of grading and installation of the solar facility, which would result in the permanent removal of vegetation within the disturbance area. Table 8 identifies the vegetation communities and other cover types within the disturbance area that will be directly and permanently impacted. Direct, permanent impacts to 6,897.0 acres of non-sensitive vegetation communities and cover types would not be considered significant. As mentioned above, both desert dry wash woodland and unvegetated ephemeral dry wash are considered potential jurisdictional State waters and are, therefore, considered sensitive vegetation communities.



Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Biological Resource Survey Area (BRSA)

Facilities Layout

- Solar Unit
- Location of Power Block
- Existing Flow Paths
- Rerouted Drainage

Source: NAIP 2005; NECO; AECOM 2009

N W E S

1 in = 1 miles

0 1 2 Miles

Blythe Solar Power Project
Biological Technical Report

Figure 13
Existing Flow Paths
and Proposed Channels

Solar Millennium

AECOM

Date: August 2009

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Direct permanent impacts would occur to 120.5 acres of desert dry wash woodland and 8.3 acres of unvegetated ephemeral dry wash for a total of 128.8 acres. The permanent removal of these sensitive vegetation communities (128.8 acres) would be considered a significant impact.

Table 8
Anticipated Permanent Impacts to
Plant Communities and Waters of the State in the Disturbance Area

Vegetation Communities and Other Cover Types	Total Permanent Impact Acreage
Riparian (Potential Waters of the State)	
Desert Dry Wash Woodland	120.5
Unvegetated Ephemeral Dry Wash	8.3
Subtotal Riparian	*128.8*
Upland	
Sonoran Creosote Bush Scrub	6,897.0
Subtotal Upland	6,897.0
Other	
Agricultural Land	0.8
Developed	0.0
Subtotal Other Cover Types	*0.8*
Total Acres	**7,026.6**

Indirect Impacts

Potential temporary and permanent, indirect impacts to the vegetation communities surrounding the disturbance area would occur as a result of Project construction. Grading activities that have potential to create air-born dust, sedimentation, and erosion, and can lead to the eventual death to buried vegetation. The potential spread of exotic species into the surrounding vegetation communities would be considered a permanent, indirect impact. Exotic species are opportunistic and could occupy disturbed soils within the disturbance area and spread into adjacent vegetation communities. Additionally, wildfires (caused by construction or downed transmission lines) are rare but do occur and exotic species often frequent burned areas following a wildfire. Once introduced, these exotic species often out-compete natives for resources resulting in a reduction in growth, future dispersal, and recruitment of native species and the eventual degradation of the vegetation community. As described previously, existing desert washes within the facility would be rerouted through and around the footprint. This can result in offsite vegetation receiving lower

or higher volumes and rates of water than current conditions. This in turn may lead to the desiccation of some vegetation communities and edema (excess water) in other vegetation communities. In addition, higher flow rates may result in erosion and root exposure leading to the eventual death of vegetation. These impacts would be considered significant if left unmitigated where desert dry wash woodland and unvegetated ephemeral dry wash are adjacent to the disturbance area.

Significance After Mitigation

Potential construction-related direct and indirect impacts to sensitive vegetation communities would be reduced to less than significant through implementation of the avoidance, minimization, and mitigation measures described in Chapter 5, including general measures BIO-1 through BIO-15 and resource-specific measures BIO-16 and BIO-17.

4.2.3 Jurisdictional Waters

Direct Impacts

As discussed in Chapter 3, the Project team has determined that the disturbance area does not support jurisdictional waters of the U.S. It is anticipated that USACE will not assert jurisdiction over any waters and/or aquatic features occurring within the disturbance area. Final acreages of jurisdictional waters of the U.S. will be based upon the Approved JD process, which is in process. The potential waters of the State that traverse the disturbance area (approximately 128.8 acres) would be directly and permanently impacted by Project construction. No temporary direct impacts to jurisdictional waters are expected as a result of construction. The permanent direct impacts would be a result of grading and installation of the solar facility, which would result in the permanent removal of all jurisdictional waters within the disturbance area. Direct permanent impacts would occur to 120.5 acres of desert dry wash woodland and 8.3 acres of unvegetated ephemeral dry wash for a total of 128.8 jurisdictional acres. The permanent removal of these jurisdictional waters would be considered a significant impact if left unmitigated.

Indirect Impacts

Potential temporary and permanent, indirect impacts to the jurisdictional waters surrounding the disturbance area would occur as a result of Project construction. Potential temporary, indirect impacts would occur as a result of grading activities creating air-born dust and potentially offsite erosion and sedimentation. The potential permanent, indirect impacts to the jurisdictional waters surrounding the disturbance area would result from the alteration of drainage patterns onsite.

The potential permanent, indirect impacts to the jurisdictional waters surrounding the disturbance area would result from the alteration of drainage patterns onsite. As described previously, existing desert washes within the facility would be rerouted through and around the disturbance area. This can result in offsite jurisdictional waters receiving lower or higher volumes and rates of water than current conditions. These impacts would be considered significant if left unmitigated where jurisdictional desert dry wash woodland and unvegetated ephemeral dry wash are adjacent to the disturbance area.

Significance After Mitigation

Potential construction-related direct and indirect impacts to jurisdictional waters of the State would be reduced to less than significant through project plans to re-route washes around the Project site and implementation of the avoidance, minimization, and mitigation measures described in Chapter 5 including general measures BIO-1 through BIO-15 and resource-specific measures BIO-16 and BIO-17.

4.2.4 Flora

Overview of Direct and Indirect Impacts to Special Status Plant Species

Direct Impacts

The proposed Project would result in direct impacts to special status plant species. Direct impacts to plants can include crushing of adult plants, bulbs, or seeds. Direct impacts specific to special status plant species are discussed below.

Indirect Impacts

Potential permanent, indirect impacts to special status plant species are likely to arise from construction of the proposed Project, as discussed below.

Federal and State Listed Plant Species

Direct Impacts

No Federal or State listed plants were detected within the BRSA; therefore, no direct impacts to listed plant species would result from Project construction.

Indirect Impacts

No Federal or State listed plants were detected within the BRSA; therefore, no indirect impacts to listed plant species would result from Project construction.

Other Special Status Plant Species

Direct Impacts

Permanent direct impacts to nonlisted special status species documented within the disturbance area would occur as a result of construction activities. Based on spring 2009 surveys, no Harwood's milkvetch (CNPS List 2.2) individuals were detected in the 7,027-acre disturbance area (Figure 8); thus, this species would not be directly impacted by Project construction. Fifty-seven Las Animas colubrine (CNPS List 2.3) individuals were detected within the disturbance area (Figure 8) and are expected to be permanently and directly impacted through removal during Project construction. Impacts to Las Animas colubrine in the form of permanent removal would be considered a significant impact if left unmitigated.

No direct temporary impacts to nonlisted special status species are expected as a result of Project construction.

Indirect Impacts

There is the potential for both temporary and permanent indirect impacts to nonlisted special status plant species occurring in the area surrounding the disturbance area as a result of Project-related construction activities, if left unmitigated. Five Harwood's milkvetch individuals were recorded in the northeastern portion of the buffer. In addition, 117 Las Animas colubrine individuals were detected in the buffer area within and adjacent to the washes located in the northwestern part of the BRSA (Figure 8).

Potential temporary, indirect impacts to nonlisted special status plant species would arise from unmitigated runoff and sedimentation, erosion, fugitive dust, and unauthorized access outside of the disturbance area by construction workers. Runoff, sedimentation, and erosion can adversely impact plant populations by damaging individuals or by altering site conditions sufficiently to favor other species (native and exotic nonnatives) that would competitively displace the special status species. Construction-generated fugitive dust can adversely affect plants by reducing the rates of metabolic processes such as photosynthesis and respiration. Potential permanent, indirect impacts to nonlisted special status plant species are also likely to arise from population

fragmentation and introduction of nonnative exotic species. Due to low densities in rare plant populations, they are susceptible to and are likely to become easily fragmented by the placement of Project facilities which can impact pollinator activity and, as a result, gene flow. In addition, the introduction and establishment of exotic species within, or adjacent to, special status plant populations can adversely affect native species by reducing growth in addition to dispersal and recruitment. Exotic species are opportunistic and often occupy disturbed soils such as those created in transmission line corridors and areas of exposed bare ground resulting from ground disturbing activities within the disturbance area. Wildfires caused by construction or downed transmission lines are rare but may occur. Exotics often frequent areas adjacent to and within burn areas following a wildfire. These potential permanent indirect impacts would be considered a significant impact if left unmitigated.

Significance After Mitigation

Potential construction-related direct and indirect impacts to special status plant species occurring within the BRSA (i.e., Harwood's milkvetch and Las Animas colubrine) would be reduced to less than significant through implementation of the avoidance, minimization, and mitigation measures described in Chapter 5 including general measures BIO-1 through BIO-15 and resource-specific measures BIO-18 and BIO-19.

4.2.5 Wildlife Species

Overview of Direct and Indirect Impacts to Special Status Wildlife Species

Direct Impacts

The BSPP would result in direct impacts to special status wildlife species. Direct impacts include destruction of habitat for sensitive species and could result in injury, death, and/or harassment of sensitive species.

Indirect Impacts

The BSPP would potentially result in permanent and temporary indirect impacts to special status wildlife species. Permanent, indirect impacts to special status wildlife species resulting from the proposed Project would include 1) habitat fragmentation, where removal of habitat elements results in isolated patches of formerly connected habitat; 2) edge effects, where Project facilities would lead to increased noise, lighting, exotic plant and wildlife invasion, dust/air pollution, predators, parasites, pesticides, fuel modification, and other factors; and 3) alteration of

hydrology, runoff, and sedimentation, which may cause differential senescence and death of plant species used by special status wildlife species.

if left unmitigated, temporary, indirect impacts would result from dust accumulation on surrounding vegetation, increased ambient noise levels adjacent to construction areas, and the rare chance of wildfires (caused by construction or downed transmission lines) would potentially lead to temporary, indirect impacts to special status wildlife species that may use the adjacent plant communities by disrupting their natural foraging patterns, destroying foraging habitat (dust can adversely affect plants by reducing the rates of metabolic processes such as photosynthesis and respiration), and adversely affecting species communication. If construction activities are conducted at night, the use of unnatural lighting would temporarily indirectly impact special status wildlife species adjacent to construction areas by increasing possible detection by predators, obscuring lunar cycles, and/or causing direct habitat avoidance in lighted areas. Potential indirect impacts from increased erosion and rates of scouring associated with changes in drainage patterns, which would result in downstream habitat loss for some species, would be reduced to less than significant by implementation of the SWPPP and DESCP, which will include flood management procedures.

The potential for Project direct and indirect impacts specific to special status wildlife species are discussed in the following text.

Federal Listed Wildlife Species – Desert Tortoise

Direct Impacts

Direct impacts would occur to suitable DT habitat as a result of construction grading and vegetation removal in the disturbance area. A single adult male DT that was observed on the west side of the disturbance area would be directly impacted. No active burrow was noted to be associated with this DT during this observation; however, there are six active burrows within the western portion of the disturbance area. These DT burrows and foraging habitat for the single male DT would be directly impacted by construction activities.

Direct permanent impacts to 7,027 acres of DT habitat would potentially occur as a result of construction of Project facilities. Temporary direct impacts to the DT would result from an increase in vehicle traffic during development of the disturbance area prior to the establishment of the DT exclusionary fencing. Since DT is a Federal listed species, any removal of active burrows and occupied foraging habitat would be considered significant if left unmitigated. To

limit direct mortality to individual DT, the disturbance area would be fenced and preconstruction DT clearance would occur.

Indirect Impact

Indirect impacts to DT would occur from increased common raven (*Corvus corax*) presence associated with the construction of new elevated perching sites (e.g., new transmission line towers, perimeter fencing). Development and new elevated perching sites as a result of Project construction could increase the probability that young ravens remain in the area and could increase raven numbers which, in turn, could result in increased predation on DT in the vicinity of the disturbance area. Common ravens were rarely observed within the BRSA during surveys in 2009 and there will be no standing water onsite which lowers the potential for common raven occurrence.

Indirect impacts would also result from invasive plants that out-compete native plants and reduce foraging habitat for DT. Potential deposition of sediment loads during heavy rain events and flooding downstream of the site, which would impact existing DT burrows outside of the survey area. Additionally, increased road used to the construction site may increase the potential of vehicles crushing DT.

Significance After Mitigation

Since DT is a federally listed species, any adverse impact would be considered significant if left unmitigated. The Project is not unique in the potential impacts (both direct and indirect) that are possible. Other large scale projects within the valley floor with similar conditions will also have similar effects. Potential construction-related direct and indirect impacts to DT would be reduced to less than significant through implementation of the avoidance, minimization, and mitigation measures described in Chapter 5, including general measures, BIO-1 through BIO-15, and resource-specific measures BIO-20 through BIO-37.

State Listed Wildlife Species - Desert Tortoise

See the discussion above regarding impacts to the Federal and State listed DT. The DT is the only State listed species known on site.

Other Special Status Wildlife Species

Direct Impacts

Direct impacts to other nonlisted, special status wildlife species would result from the construction of Project facilities and development of the disturbance area. Project construction would result in the crushing of occupied burrows and destruction of nests, collisions with construction and maintenance vehicles, and loss of habitat. Direct impacts specific to nonlisted special status wildlife species are discussed below.

Indirect Impacts

Indirect impacts from potential deposition of sediment loads during heavy rain events and flooding downstream of the site could impact existing habitat for nonlisted special status wildlife outside of the Project site. However, these impacts would be minimized by Project design (i.e., rerouting the desert wash and connecting to offsite channels, and grading and compacting the entire footprint of the solar array, thereby reducing onsite erosion). Similarly, indirect impacts to habitat by changes in drainage patterns potentially altering offsite vegetation communities would be minimized by Project design.

Temporary, indirect impacts are likely to arise from construction-generated fugitive dust accumulation on surrounding vegetation resulting in destruction and/or avoidance of habitat by wildlife. Nighttime lighting during the construction phase would also disrupt species movement and/or cause increased predation rates. Indirect impacts from potential deposition of sediment loads during heavy rain events and flooding downstream of the site would impact existing habitat for nonlisted special status wildlife outside of the survey area. However, these impacts would be minimized by Project design (i.e., rerouting the desert wash and connecting to an offsite channel, and grading and compacting the entire footprint of the solar array, thereby reducing onsite erosion). Similarly, indirect impacts to habitat by changes in drainage patterns potentially altering offsite vegetation communities would be minimized by Project design.

The potential for Project-related direct and indirect impacts specific to nonlisted special status wildlife species are discussed in the following text.

Western Burrowing Owl

Direct Impacts.

Based on spring 2009 data, construction grading and vegetation removal in the disturbance area would permanently impact WBO by removing one active WBO burrow and habitat for one individual WBO. No WBO breeding in 2009 was documented during surveys. Most of the disturbance area contains suitable WBO habitat, with the exception of the far western portion. The far western portion is characterized by steep, rocky canyons, desert wash, and hard desert pavement and cobble terrace substrate, and contains few burrows suitable for nesting WBOs. Most burrows with WBO sign had relatively small amounts of degraded sign, indicating that owls only used them for a brief period of time before vacating, or previous use may have been more extended or regular but much of the original sign has disappeared. It is possible that the BRSA may be used more during migration or other seasonal movements, or during winter. Temporary direct impacts to WBO would also result from an increase in vehicle traffic while the Project is under construction and, consequently, an increase in vehicular strikes of WBOs.

The loss of occupied WBO breeding or wintering habitat is considered a significant impact if left unmitigated. Specifically, based on the CBOC mitigation guidelines and definition of impacts, the following potential effects on WBO as a result of Project implementation would be significant and require mitigation: 1) disturbance or harassment of WBOs within 160 feet of occupied burrows; 2) destruction of active burrows and burrow entrances; and 3) degradation of foraging habitat adjacent to occupied burrows.

Indirect Impacts.

Indirect impacts of Project construction on WBO are discussed in general above (see Other Special Status Wildlife Species). Indirect impacts could result from increased common raven and raptor predation on WBO associated with the addition of new elevated perching sites, including the transmission structures, perimeter fencing, and transmission lines, as discussed previously for DT. Additionally, temporarily ponded water from construction (e.g., dust suppression during construction) and garbage from increase human presence might attract common ravens. These indirect impacts would potentially impact WBO and offsite WBO breeding habitat or burrows and adjacent foraging habitat. These indirect impacts would be considered significant.

Significance After Mitigation.

Potential construction-related direct and indirect impacts to WBO would be reduced to less than significant through implementation of the avoidance, minimization, and mitigation measures described in Chapter 5, including general measures among BIO-1 through BIO-15, and resource-specific measures BIO-20 and BIO-38 through BIO-44.

Loggerhead Shrike

Direct Impacts.

Suitable loggerhead shrike habitat present throughout the footprint would be directly impacted by construction of the disturbance area. The species was found at low densities, predominately in the Sonoran creosote bush scrub, and in transitional areas comprised of both Sonoran creosote bush scrub and desert dry wash woodland. One nest was located in the southwest section of the disturbance area.

The loss of occupied breeding habitat is considered to be a significant impact if left unmitigated, since this habitat is declining in availability in the region.

Indirect Impacts.

Indirect impacts of Project construction on loggerhead shrike are discussed above (see discussion under Other Special Status Wildlife Species). These indirect impacts would potentially impact offsite loggerhead shrike breeding habitat or burrows and adjacent foraging habitat. These indirect impacts would be considered significant if left unmitigated.

Significance After Mitigation.

The potential loss of an active nest (direct impact) is considered significant; however, this impact would be reduced to less than significant through implementation of the avoidance, minimization, and mitigation measures as described in Chapter 5, including general measures BIO-1 through BIO-15 and resource-specific measures BIO-45 and BIO-46.

American Badger

Direct Impacts.

Direct permanent impacts would occur to 7,027 acres of occupied American badger habitat as a result of construction of the disturbance area. Eleven American badger dens would be impacted by Project facilities. American badger predation and den activity occurs predominately on the western portion of the disturbance area; however, the entire disturbance area has suitable foraging and dispersal habitat for this species.

Temporary direct impacts to American badger would also result from an increase in vehicle traffic while the Project is under construction and, consequently, an increase potential for vehicular strikes of this species.

The permanent loss of occupied American badger burrows and adjacent foraging habitat is considered a significant impact if left unmitigated, since regionally this habitat is limited in availability.

Indirect Impacts.

Indirect impacts of Project construction on American badger are discussed above (see discussion under Other Special Status Wildlife Species). These indirect impacts would potentially impact offsite American badger breeding habitat or burrows and adjacent foraging habitat. These indirect impacts would be considered significant if left unmitigated.

Significance After Mitigation.

Potential construction-related direct and indirect impacts to American badger would be reduced to less than significant through implementation of the avoidance, minimization, and mitigation measures described in Chapter 5, including general measures BIO-1 through BIO-15 and resource-specific measures BIO-47.

Desert Kit Fox

Direct Impacts.

Direct permanent impacts would occur to 7,027 acres of occupied desert kit fox habitat as a result of construction of the disturbance area. Desert kit foxes are one of the three main

mammalian predators observed, and signs of predation by this species is evident on small mammal (burrows) throughout the BRSA. Similarly, desert kit fox burrows and complexes are distributed throughout the entire disturbance area and were noted within the buffer areas. A total of 163 desert kit fox burrows and 25 burrow complexes were recorded within the BRSA, most all of which were recorded in the disturbance area.

Temporary direct impacts to desert kit fox would result from an increase in vehicle traffic while the Project is under construction and, consequently, an increased potential for vehicular strikes of this species. The permanent loss of occupied desert kit fox burrows and adjacent foraging habitat is considered a significant impact if left unmitigated, since regional habitat is limited in availability.

Indirect Impacts.

Indirect impacts of Project construction on desert kit fox are discussed above (see discussion under Other Special Status Wildlife Species). These indirect impacts would potentially impact offsite desert kit fox breeding habitat or burrows and adjacent foraging habitat. These indirect impacts would be considered significant if left unmitigated.

Significance After Mitigation.

Potential construction-related direct and indirect impacts to desert kit fox would be reduced to less than significant through implementation of the avoidance, minimization, and mitigation measures described in Chapter 5, including general measures among BIO-1 through BIO-15 and resource-specific measures BIO-48.

Nelson's Bighorn Sheep

Direct Impacts.

Nelson's bighorn sheep scat and tracks were observed within the disturbance area and suitable habitat for local movement would be directly and permanently impacted by construction of the disturbance area. Although this area is likely to be useful for local movement, construction is not expected to adversely impact movement and/or population dispersal because similar desert habitat outside of the project perimeter would likely provide adequate movement opportunities for foraging and dispersal. Thus, direct impacts to this species are not considered to be significant.

Indirect Impacts.

Indirect impacts of Project construction on Nelsons' bighorn sheep are discussed above (see discussion under Other Special Status Wildlife Species). These indirect impacts would potentially impact offsite Nelsons' bighorn sheep breeding habitat and adjacent foraging habitat. These indirect impacts would be considered significant if left unmitigated.

Significance After Mitigation.

Potential construction-related indirect impacts to Nelson's bighorn sheep would be reduced to less than significant through implementation of the avoidance, minimization, and mitigation measures described in Chapter 5, including general measures among BIO-1 through BIO-15.

Migratory Birds

Direct Impacts

The Project would result in direct construction-related impacts to bird populations on site in the form of habitat destruction, and potentially death, injury, or harassment of nesting birds, their eggs and their young. "Take" under the MBTA is generally interpreted as the direct death or injury of birds from collisions with vehicles and other machinery. This most frequently occurs during the vegetation clearing stage of construction and involves eggs, nestlings, and recently fledged young that cannot safely avoid equipment. Other direct impacts on bird populations using the site are the same as those identified above for listed and nonlisted special status species. Direct construction related impacts to migratory birds would be considered significant if left unmitigated.

Indirect Impacts

Indirect impacts on migratory birds would include increased common raven and raptor predation associated with the addition of new elevated perching sites, including the tower structures, the transmission lines, perimeter fencing and support structures, and ponded water that are likely to attract common ravens, as discussed previously for DT. Temporary, indirect impacts are likely to arise from construction-generated fugitive dust accumulation on surrounding vegetation and construction-related erosion, runoff, and sedimentation into plant communities resulting in destruction and/or avoidance of migratory bird habitat.

Additionally, construction-related noise is likely to cause migratory bird nest abandonment in areas adjacent to construction in the disturbance area. Indirect impacts from these construction-related activities would be temporary, as these impacts would end with cessation of Project construction.

These indirect impacts would potentially impact breeding habitat and would be considered significant if left unmitigated.

Significance After Mitigation

Potential construction-related direct and indirect impacts to migratory birds would be reduced to less than significant through implementation of the avoidance, minimization, and mitigation measures described in Chapter 5, including general measures BIO-1 through BIO-15 and resource-specific measures BIO-45 and BIO-46.

4.2.6 Wildlife Movement

Direct Impacts

The proposed Project would result in direct impacts to wildlife movement and habitat connectivity. These impacts would result from construction of the perimeter fence that would surround the 5,952-acre surveyed facility footprint. The fence would represent a permanent barrier and prevent movement across the site by most terrestrial wildlife species. The five rerouted channels located between and around the solar fields will be fenced from the solar fields, but will remain open at the ends thereby leaving a 150-foot wide corridor for species to use. However, because of the increased human presence and very slow natural recovery in arid ecosystems, this corridor may provide limited use for terrestrial wildlife. Habitat connectivity would be reduced because the large facility footprint would contribute to fragmentation of a large and contiguous desert landscape.

Although impacts on wildlife movement are anticipated, these impacts would generally be less than significant for most species. The facility footprint is not located within documented important migration routes for any terrestrial wildlife species, and most of the animals expected to move across the BSPP are considered common in California. Regional habitat connectivity would be reduced by implementation of the proposed Project. The five channels will provide an opportunity for species to move through and around the site, but some species may avoid the channels within the disturbance area in response to human presence which could potentially force them to go completely around the site. However, much of the land surrounding the site is

expected to remain as natural desert plant communities for the foreseeable future, which would allow regional movement by common terrestrial wildlife species to continue outside of the perimeter of the site without significant impediment. For these reasons, impacts on common terrestrial wildlife species would be less than significant.

Special status terrestrial wildlife species detected or with potential to occur in the Project area include DT, Nelson's bighorn sheep, desert kit fox, and American badger. Of these, only DT dispersal would be adversely impacted outside of the perimeter fence. Although movement across the disturbance area would be limited to the rerouted channels, there is habitat outside of the disturbance area that would facilitate movement around the Project for other species, with the exception of DT. Movement by Nelson's bighorn sheep, desert kit fox, and American badger across the Project site would be eliminated by construction of the perimeter fence. However, this impediment is not expected to adversely impact movement and/or population dispersal by these species because similar desert habitat outside of the perimeter fence would likely provide adequate movement opportunities for foraging and dispersal.

The proposed Project would adversely impact local movement, and reduce habitat connectivity, of the state and Federal listed DT. Although DT is not a migratory species, opportunities for local movements within their home ranges and juvenile dispersal are important for maintaining viable populations. Impacts on DT in the context of impacting local population dispersal would be adverse because it is a resident species that generally only moves within its home range, with the exception of juvenile dispersal. Areas suitable for DT, but that are low density or occasionally not occupied can be important for DT, as this species is likely distributed in metapopulations (Tracy et al. 2004). Metapopulations are groups within a population that are typically confined to specific regions as a result of resource availability. If a metapopulation becomes fragmented it may no longer be sustainable because individuals are not exchanged between metapopulations. The mountains on the western side of the BRSA within the buffer and just outside the buffer probably have significantly more DTs present than observed within the disturbance area. DTs are likely present more frequently in the montane areas within this region due to the Sonoran climatic influence. The development of intervening valleys could preclude the natural dispersal of DTs between these montane populations. DT home ranges are small (25 - 200 acres) in relation to the 7,027-acre disturbance area and construction of the disturbance area may increase the number of DT generations it takes for individuals to disperse across the valley floor from southwest to northeast of the BRSA and vice versa. Adverse impacts to a species protected under the ESA and CESA would be considered significant if left unmitigated.

Indirect Impacts

The BSPP would potentially result in permanent indirect impacts to wildlife movement and population connectivity. Potential indirect impacts of the proposed Project and associated edge effects include but are not limited to altered behavior due to environmental stressors, changes in daily activity patterns, reductions in population reproductive capacity, and local population extinctions due to compromised population genetics over time or an inability to recolonize isolated patches of habitat. These impacts vary depending on the population structure, size of the home range, migrations, and dispersal movements of the species being considered, as well as the species' behavioral response to artificial light, noise, degraded surrounding habitat, and other anthropogenic influences.

Construction of the BSPP would have permanent indirect effects on wildlife movement. Wildlife movement would be altered due to edge effects associated with development. Individually, species respond behaviorally to the edge itself (the "ecotonal effect") or to the indirect habitat changes associated with edges (the "matrix effect") (Lidicker and Peterson 1999, Kristan et al. 2003). Behavioral avoidance of human-made structures and associated edges can decrease wildlife movement and deter connectivity. In addition, the BSPP would indirectly impact wildlife movement through species avoidance in response to human presence. All of these factors can contribute significantly to local species extinctions.

Conceptual models of edge effects (Ries and Sisk 2004; Ries et al. 2004) found different intraspecific reactions could be well predicted by how resources are concentrated between preferred and non-preferred habitat resulting in increases or decreases in abundance depending on the required resource allocation. While there is a wealth of studies documenting the effects of urban edges on wildlife species, there is a lack of previous studies identifying how edges impact wildlife movement of particular species when no anthropogenic subsidies are expected, as is the case for the BSPP. Edge effects similar to those that would be associated with the proposed Project have not been studied for the species addressed above as they relate to wildlife movement. Additional research is needed to understand the extent of the impacts for edge effects as a result of solar projects.

Significance After Mitigation

Potential construction-related direct and indirect impacts to wildlife movement and dispersal would be reduced to less than significant for all species, with the exception of DT dispersal, through implementation of the avoidance, minimization, and mitigation measures described in

Chapter 5, including general measures among BIO-1 through BIO-15 and resource-specific measures BIO-49 and BIO-52.

4.3 OPERATION

Direct and indirect impacts on biological resources during the operation of the Project are discussed below.

4.3.1 Vegetation Communities

Direct Impacts

No vegetation will occur within the disturbance area following construction. Therefore, operation of the Project would not result in temporary or permanent direct impacts to either non-sensitive or sensitive vegetation communities.

Indirect Impacts

Operation of the Project may result in permanent indirect impacts to non-sensitive and sensitive vegetation communities surrounding the disturbance area. Permanent, indirect impacts to sensitive vegetation communities may include edge effects and increased exposure to exotic plants. . Erosion and stormwater contaminant runoff may degrade adjacent sensitive vegetation communities. Exotic plant species are opportunistic and often occupy disturbed soils such as those within the transmission line corridors and areas of exposed bare ground that may occur within the disturbance area. Wildfires caused by downed transmission lines are rare but may occur. .Exotics often frequent areas adjacent to and within burn areas following a wildfire. Once introduced, these exotic plant species often out-compete natives for resources resulting in a reduction in growth, future dispersal, and recruitment of native species and the eventual degradation of the vegetation community. The impacts from exotic plant species would be considered significant where desert dry wash woodland and unvegetated ephemeral dry wash occurs adjacent to the disturbance area.

Significance After Mitigation

Potential operation-related indirect impacts to sensitive vegetation communities would be reduced to less than significant through implementation of the avoidance, minimization, and mitigation measures described in Chapter 5 including general measures BIO-53, BIO-55, BIO-56, and BIO-58.

4.3.2 Jurisdictional Waters

Direct Impacts

Operation of the Project would not result in temporary or permanent, direct impacts to jurisdictional waters, as they will not occur within the disturbance area following construction.

Indirect Impacts

Operation may result in permanent indirect impacts to jurisdictional waters of the State. Erosion and stormwater contaminant runoff may degrade adjacent jurisdictional waters of the State. These impacts would be considered significant where desert dry wash woodland and unvegetated ephemeral dry wash occurs adjacent to the disturbance area, if left unmitigated.

Significance After Mitigation

Potential operation-related indirect impacts to jurisdictional waters of the State would be reduced to less than significant through implementation of the avoidance, minimization, and mitigation measures described in Chapter 5 including general measures BIO-55 and BIO-56.

4.3.3 Flora

Direct Impacts

Operation of the Project would not result in temporary or permanent, direct impacts to nonlisted, special status plant species, as they will not occur within the disturbance area following construction.

Indirect Impacts

Operation of the Project may result in permanent indirect impacts to nonlisted, special status plant species. Erosion and stormwater contaminant runoff may degrade adjacent habitat for nonlisted, special status plant species. Exotic plant species are opportunistic and often occupy disturbed soils such as those within the transmission line corridors and areas of exposed bare ground that may occur within the disturbance area. Exotic plant species often out-compete natives for resources resulting in a reduction in growth, future dispersal, and recruitment of native species These impacts would be considered significant if left unmitigated where nonlisted, special status plant species occur adjacent to the disturbance area.

Significance After Mitigation

Potential operation-related indirect impacts to special status plant species occurring within the buffer (i.e., Harwood's milkvetch and Las Animas colubrine) would be reduced to less than significant through implementation of the avoidance, minimization, and mitigation measures described in Chapter 5 including general measures BIO-53, BIO-55, and BIO-58

4.3.4 Wildlife Species

Direct Impacts

Direct impacts to wildlife species would occur from mortality of individuals by crushing or vehicle collisions during operation and maintenance activities of the proposed Project.

Indirect Impacts

Operation of the Project may result in permanent, indirect impacts to special status wildlife species, which includes edge effects, where Project facilities would lead to increased lighting and exotic plant and wildlife invasion. Operation of Project facilities would not lead to increased noise greater than 60 dBA outside the disturbance area. Nighttime lighting could disrupt species movement and/or cause increased predation rates. . Wildfires caused by downed transmission lines are rare but may occur and damage adjacent habitat.

Significance After Mitigation

Potential operation-related direct and indirect impacts to special status wildlife species occurring or assumed to occur within the buffer (i.e., DT, WBO, loggerhead shrike, American badger, and desert kit fox) would be reduced to less than significant through implementation of the avoidance, minimization, and mitigation measures described in Chapter 5 including general measures BIO-53 through BIO-58 and BIO-60

4.3.5 Wildlife Movement

Direct Impacts

Operation of the Project would not result in any additional direct impacts to wildlife movement already described in Section 4.2.6.

Indirect Impacts

Operation of the Project would not result in any additional indirect impacts to wildlife movement as described in Section 4.2.6.

Significance After Mitigation

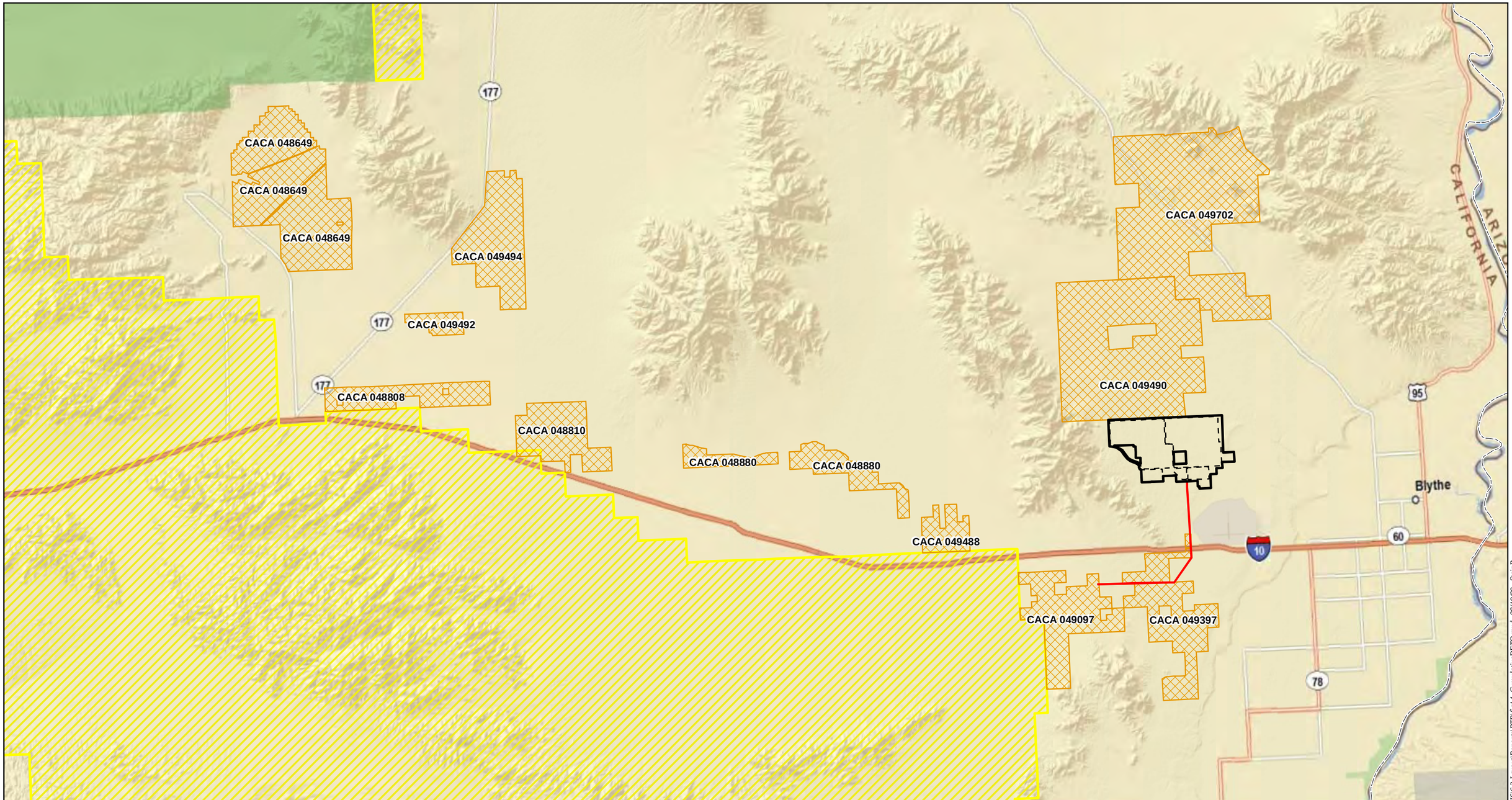
Operation does not result in any additional significant impacts to wildlife movement, thus no avoidance, minimization, and mitigation measures are necessary.

4.4 CUMULATIVE IMPACTS

This section addresses the potential additive impacts of implementing the BSPP in combination with other past, present, and reasonably foreseeable projects in proximity to the BSPP. The BSPP involves the development of land that is currently owned by the BLM and functions as open space. Impacts to biological resources have the potential to occur primarily in native habitat.

The impacts of multiple solar power projects identified in Attachment L are solar power or transmission projects on BLM land. The BLM rights-of-way for the multiple solar projects on BLM land would use up to approximately 100,000 acres of desert lands along the I-10 corridor, between 2010 and roughly 2014, based on currently available data. The actual disturbance area of these projects will be considerably smaller, perhaps around 20,000 acres. It should be noted that this acreage total assumes that all the projects that have been proposed will in fact be constructed, which is considered highly unlikely. Refer to Attachment L, for detailed information on projects considered for this cumulative analysis. The development of 20,000 acres would unavoidably impact biological resources currently found on the various project sites and would cumulatively reduce the available habitat for special status species such as DT and WBO. Only one (PSPP) of the 14 projects slightly overlaps with DT critical habitat found predominately to the south of I-10. The other 13 projects do not overlap with DT critical habitat (Figure 14).

Table 9 displays the potential cumulative loss of habitat for each special status species. The large acreage assumed to be developed in each of the various projects would impact wildlife movement corridors and fragment species populations despite mitigation (i.e., the permanent protection of offsite habitat for these species). Since most of the projects are in the valleys and along the I-10 corridor, this could potentially reduce habitat connectivity and impair gene flow among species populations.



Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Future Solar Projects
- Desert Tortoise Critical Habitat (USFWS)

Source: ESRI 2009; USFWS 2009; AECOM 2009

N W E S

1 in = 4 miles

0 4 8 Miles

Blythe Solar Power Project
Biological Technical Report

Figure 14
Location of Cumulative Projects Relative to DETO Critical Habitat

Solar Millennium

AECOM

Date: August 2009

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Through the project-specific environmental review process, these various projects would individually be required to mitigate their own impacts through measures such as providing suitable habitat at an agency agreed-upon ratio for the affected species to compensate for the habitat loss. Acquired mitigation lands should be planned with consideration of providing connectivity between areas of open space and between NECO-designated WHMAs and DWMAs. The BSPP will fully mitigate impacts to biological resources with the exception of DT dispersal movement. Therefore the cumulative contribution of the Project would be minimal. The rerouted washes will replicate as nearly as possible the flow regimes under current conditions and allow for wildlife to move through the Project disturbance area. Considering other proposed development in this valley floor (Figure 14), the rerouted drainages will help maintain connectivity between adjacent habitat areas, specifically between mountain ranges to the southwest and northeast of the BSPP.

Table 9
Potential Cumulative Impacts to Biological Resources[a]

Resource Name	Number of Projects[b]	Total ROW Acres of Potential Suitable Habitat		Total ROW Acres of Potential Suitable Habitat to be Developed	
		Occupied	Unoccupied	Occupied	Unoccupied
Vegetation					
Desert Dry Wash Woodland	2	7,724	N/A	150	N/A
Plants					
Harwood's Milkvetch	1	0	14,095	0	1,911
Wildlife					
Desert Tortoise	9	37,904	49,478	29,115	8,292
Western Burrowing Owl	4	34,820	29,669	30,900	1,797
Desert Kit Fox	1	25,000	0	25,000	0
Loggerhead Shrike	1	4,640	0	1,800	0

[a] Acreages depicted in this table represent a gross-level preliminary analysis of proposed projects based on preliminary project information in most cases; as a result, these acreages are subject to change and should be used as a guideline only.
[b] Proposed Project not included.

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CHAPTER 5
AVOIDANCE, MINIMIZATION, AND CONSERVATION MEASURES

5.1 GENERAL AVOIDANCE AND MINIMIZATION MEASURES DURING CONSTRUCTION

The following is a list of general impact avoidance and minimization measures that would apply to Project construction activities. These measures are standard practices designed to prevent environmental degradation, and the Project applicant will be responsible for implementation of these measures to avoid and minimize impacts to the greatest extent feasible. A Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) will be developed for review by the CEC as a Condition of Certification. The BRMIMP comprehensively describes avoidance, minimization, and mitigation measures, and provides a matrix to document their implementation and monitor their effectiveness. Those measures include:

BIO-1 The Project proponent will designate a BLM-, USFWS- and CDFG-approved Designated Biologist(s). The construction contractor(s)/crew(s) shall be informed about the biological constraints of the Project. All construction personnel who work in the BRSA shall attend a contractor education program, developed and presented by A Designated Biologist prior to the commencement of construction activity. The construction crews and contractor(s) shall be responsible for unauthorized impacts from construction activities to sensitive biological resources that are outside the areas defined as subject to impacts by the CEC and other agencies who issue approvals for the Project.

BIO-2 The Designated Biologist shall be responsible for overseeing monitoring and compliance with protective measures for the biological resources. A Section 10(a)(1)(A) permit would be necessary for the monitoring or handling of Federal listed species. The Designated Biologist shall maintain communications with the appropriate personnel (project manager, resident engineer) to ensure that issues relating to biological resources are appropriately and lawfully managed. The Designated Biologist shall also be present to verify compliance with all conservation measures. The Designated Biologist would submit reports that document compliance with these measures to BLM, USFWS and CDFG upon request or, at a minimum, included in the end-of-the-year report. In addition, Designated Biologist would perform the following duties.

a. The Designated Biologist shall conduct pre-construction surveys for listed species within 30 days prior to commencement of construction activities in the disturbance area.

b. The Designated Biologist shall be onsite during all vegetation clearing and grubbing and weekly during Project construction in upland and riparian habitat to be impacted.

c. A Storm Water Pollution Prevention Plan (SWPPP) and a Drainage, Erosion, and Sedimentation Control Plan (DESCP) shall be prepared to comply with Regional Water Quality Control Board (RWQCB) and CEC requirements; a preliminary DESCP (equivalent to a SWPPP but covering both construction and operation phases) has been prepared. The DESCP and SWPPP identify the design features and Best Management Practices (BMPs) that will be used to effectively manage drainage-related issues (e.g., erosion and sedimentation) during construction. Erosion control measures shall be regularly checked by inspectors, the Designated Biologist, and/or resident engineer. Specific best management practice plans shall be reviewed by A Designated Biologist and modified, if necessary, prior to implementation. Fencing and erosion control measures of all Project areas shall be inspected a minimum of once per week.

d. Each employee shall participate in a training/awareness program that shall be presented by the Designated Biologist, prior to working on the BSPP.

e. Proper implementation of protective measures developed in coordination with USFWS to avoid all impacts to all encountered sensitive species as well as other nesting birds shall be verified.

f. The resident engineer shall be immediately notified to halt work, if necessary, and coordinate with USFWS and CDFG to ensure the proper implementation of species and habitat protection measures. The Designated Biologist shall report any breech of the conservation measures within 24 hours of its occurrence.

BIO-3 The anticipated impact zones, including staging areas, equipment access, and disposal or temporary placement of spoils, shall be delineated with stakes and flagging prior to

construction to avoid natural resources where possible. No construction-related activities will occur outside of the designated impact area (i.e., disturbance area).

BIO-4 The Project proponent shall ensure that all construction materials, staging, storage, dispensing, fueling, and maintenance activities are located in upland areas outside of sensitive habitat, and that adequate measures are taken to prevent any potential runoff from entering waters of the U.S. Staging areas shall be located within permanent impact areas or previously disturbed sites within the Project footprint.

BIO-5 New and existing roads that are planned for either construction or widening shall not extend beyond the disturbance area. All vehicles passing or turning around shall do so within the disturbance area. Where new access is required outside of existing roads or the construction zone, the route shall be clearly marked (i.e., flagged and/or staked) prior to the onset of construction.

BIO-6 The solar units shall be graded generally following the existing contours of the site in order to minimize the amount of ground disturbance.

BIO-7 Spoils shall be stockpiled in disturbed areas presently lacking native vegetation. Stockpile areas shall be marked to define the limits where stockpiling can occur.

BIO-8 Spoils, trash, or any debris shall be removed offsite to an approved disposal facility. A trash abatement program shall be established. Trash and food items shall be contained in closed containers and removed daily to reduce the attractiveness to opportunistic predators such as common ravens, coyotes, and feral dogs that may prey on sensitive species.

BIO-9 Workers shall be prohibited from bringing pets and firearms to the site.

BIO-10 If construction activities occur at night, all Project lighting (e.g., staging areas, equipment storage sites, roadway) shall be directed onto the roadway or construction site and away from sensitive habitat. Light glare shields shall also be used to reduce the extent of illumination into adjoining areas.

BIO-11 Best Management Practices (BMPs) shall be employed to prevent loss of habitat due to erosion caused by Project-related impacts (i.e., grading or clearing for new roads). The Project inspector shall periodically monitor the work area to ensure that

construction-related activities do not generate erosion or excessive amounts of fugitive dust. All detected erosion shall be remedied within two (2) days of discovery.

BIO-12 Fueling of equipment shall take place within existing paved roads and not within 300 feet or adjacent to drainages or native desert habitats. Contractor equipment shall be checked for leaks prior to operation and repaired as necessary.

BIO-13 Wildfires shall be prevented by exercising care when driving and by not parking vehicles where catalytic converters could ignite dry vegetation. In times of high fire hazard (e.g. high wind or drought conditions), trucks may need to carry water and shovels or fire extinguishers in the field or high fire risk installations (e.g. electric lines) may need to be delayed. The use of shields, protective mats, or other fire prevention equipment shall be used during grinding and welding to prevent or minimize the potential for fire. No smoking or disposal of cigarette butts shall take place within vegetated areas.

BIO-14 The introduction of exotic plant species shall be avoided and controlled wherever possible, and may be achieved through physical or chemical removal and prevention. Preventing exotic plants from entering the site via vehicular sources shall include measures such as implementing Trackclean or other method of vehicle cleaning for vehicles coming and going from the site. Earth-moving equipment will be cleaned prior to transport to the project site. Weed-free rice straw or other certified weed-free straw shall be used for erosion control. Weed populations introduced into the site during construction shall be eliminated by chemical and/or mechanical means approved by CEC, BLM, CDFG, USFWS, and California Invasive Plant Council (Cal-IPC). These measures collectively form the Weed Management Plan for the BSPP.

BIO-15 In addition to the avoidance and minimization measures outlined in this chapter, the Project proponent shall implement any measures required by the CEC, BLM, USFWS and CDFG as a condition of Project certification, such as measures set forth in the USFWS BO and/or CDFG 2081 ITP.

5.2 RESOURCE-SPECIFIC AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES DURING CONSTRUCTION

Resource-specific impact avoidance, minimization, and mitigation measures for the Project impacts that were determined to be potentially significant are discussed below. Incorporation of these measures shall reduce potentially significant measures to below a level of significance except for potential impacts to wildlife corridors. Incorporation of these measures shall reduce potentially significant impacts to wildlife corridors, but potentially permanent impacts shall still be significant.

5.2.1 Vegetation Communities

No mitigation is required to compensate for nonsensitive vegetation that shall be directly impacted by the Project as no significant impact occurs (see below for mitigation required to compensate for impacts to the vegetation communities that are considered waters of the State or suitable habitat for listed species).

5.2.2 Sensitive Vegetation Communities

Impacts to desert dry wash woodland and unvegetated ephemeral dry wash (both waters of the State) shall be permanently and temporarily impacted by Project-related activities; therefore impacts are considered significant and mitigation is required. See below (waters of the State) for mitigation required to compensate for impacts to sensitive vegetation communities as both are waters of the State.

5.2.3 Waters of the State

BIO-16 Impacts to State waters shall require the following permit: (1) CDFG, California Fish and Game Code, Section 1602 agreement for alteration of a streambed. Mitigation for unavoidable permanent impacts to jurisdictional waters within the disturbance area could be mitigated via a combination of methods. The mitigation could occur in the form of approved mitigation bank credits: an approved in-lieu fee program; conservation easement(s), and/or jurisdictional habitat creation-restoration (that results in a net increase in jurisdictional habitat acreage), enhancement, or creation-restoration combined with enhancement. Project compliance with State policy, i.e., California Wetlands Conservation Policy (EO W-59-93), provides for "no overall net loss" of jurisdictional areas and achieving a "long-term net gain in the quantity, quality, and permanence of [jurisdictional areas] acreage and values in California."

Project-specific mitigation ratios shall be developed in consultation with CDFG and in consideration of the NECO mitigation requirements for desert dry wash woodland.

BIO-17 The development of a conceptual mitigation, maintenance, and monitoring plan shall be required for the mitigation, which is a requirement of CFGC Section 1600 et seq. if jurisdictional waters (including aquatic habitat) of the State are impacted as a result of the proposed Project. This plan shall include details regarding site preparation (e.g., grading), planting specifications, and irrigation design, as well as maintenance and monitoring procedures. The plan shall outline yearly success criteria and remedial measures shall the mitigation effort fall short of the success criteria. Any riparian mitigation that cannot be achieved through onsite creation-restoration and enhancement shall be performed off site, typically per agency guidance within the same hydrologic unit (watershed) where impacts occur. Alternatively, the mitigation obligations may also be satisfied by participating in a fee-based mitigation program through a mitigation bank. This plan shall be developed in consultation with CEC and CDFG and subject to their approval.

5.2.4 Special Status Plants

BIO-18 In the buffer, previously identified individuals shall be flagged for avoidance and further impacts shall be minimized through implementation of the following: no unnecessary or unauthorized trespass by workers and equipment in the Project buffer; and prohibiting staging and storage of equipment and materials, refueling activities, and littering or dumping debris in areas known to contain Harwood's milkvetch outside the disturbance area.

BIO-19 A Designated Biologist shall collect seed from Las Animas colubrine individuals identified within the disturbance area at the appropriate time during the spring before construction begins. Approximately 57 individuals were found in spring of 2009, but this number could vary any given year based on rainfall patterns and this species response. The seed shall be grown in 1-gallon containers by qualified individuals and incorporated into the planting palette for mitigation on site (including vegetation of the rerouted washes) or redistributed within 500 feet of the population in appropriate habitat to the north of the disturbance area. In addition, as a conservation measure, it is expected that the Project shall provide an herbarium specimen to the San Diego Natural History Museum for long-term documentation of this rare species. In the buffer, areas containing previously identified Las Animas colubrine individuals shall

be flagged for avoidance and further impacts shall be minimized through implementation of the following: no unnecessary or unauthorized trespass by workers and equipment in the Project buffer; and prohibiting staging and storage of equipment and materials, refueling activities, and littering or dumping debris in areas known to contain Las Animas colubrine outside the disturbance area.

5.2.5 Special Status Wildlife

BIO-20 Mitigation requirements for the Project's permanent impacts to habitats occupied, or presumed occupied, by special status wildlife species shall be mitigated at a ratio or other appropriate mitigation to be determined by the Wildlife Agencies (USFWS and CDFG). Mitigation for permanent impacts to these species is generally provided by acquiring and conserving in-kind habitat of equal value to the habitat impacted. Mitigation lands in the vicinity of the disturbance area shall be prioritized in order to provide protection for displaced wildlife and to maintain land connectivity in the area.

Additional discussion of the mitigation required for DT, WBO, American badger, and desert kit fox is presented below.

Desert Tortoise

Avoidance, minimization, and mitigation measures for the DT shall include the following:

BIO-21 Prior to the onset of construction, the entire disturbance area shall be enclosed with a permanent DT-proof fence to keep DT in habitat adjacent to the site from entering the site during construction and operations phases. The fencing type shall be 1- by 2-inch vertical mesh galvanized fence material, extending at least 2 feet above the ground and buried at least 1 foot. Where burial is impossible, the mesh shall be bent at a right angle toward the outside of the fence and covered with dirt, rocks, or gravel to prevent the DT from digging under the fence. DT-proof gates shall be established at all site entry points. Any utility corridors and tower locations shall be temporarily fenced to prevent DT entry during construction. Temporary fencing shall follow guidelines for permanent fencing and supporting stakes shall be sufficiently spaced to maintain fence integrity. All fence construction shall be monitored by the Designated Biologist to verify that no DTs are harmed. It is assumed that the central channel inflow and outflow points shall be fenced until construction is completed. Following installation, the fencing shall be inspected monthly and during all major rainfall events. Damage to the fencing shall be repaired immediately.

BIO-22 A clearance for any DTs that may be on the disturbance area shall be conducted in all areas with shrub cover. A minimum of two clearance passes shall be completed after DT-proof fencing is installed. These shall coincide with heightened DT activity, from late March through May and during October. This shall maximize the probability of finding all DT. It is anticipated that no or very few DT shall be found. Any DT found shall be moved by a Designated Biologist to a location outside of the DT-proof fencing but within the plant site (e.g., the newly rerouted desert wash) using techniques approved by Agency Representatives (CEC, BLM, USFWS, and CDFG). Translocation should only occur when daily ground temperatures do not exceed 107 degree Fahrenheit (°F), i.e., early spring or fall, so that DT can safely find refuge in potentially unfamiliar areas without the added constraints of lethal temperatures. No DT shall be moved between mid-April and early October, unless ambient temperatures are favorable. If the schedule of construction requires that clearance surveys continue past the safe time to move DT (i.e., past early April), then continued searches for DT shall include temporarily affixing found DT with transmitters for ease of re-finding them and moving them during autumn when ambient temperatures are favorable. Once the site is deemed free of DTs after two consecutive clearance passes, then heavy equipment shall be allowed to enter the sites to perform construction activities.

BIO-23 DT shall be monitored during construction activity to avoid direct impacts to individuals, or all DT shall be sought and fenced out of construction zones. DT may be moved during seasons when daily ambient temperatures exceed lethal levels, but only late in the day when ground temperatures fall below 107°F and air temperatures fall below 89.6°F These DT shall be temporarily monitored to ensure that being moved does not impact their survival.

BIO-24 Following site clearance, a report shall be prepared by the Designated Biologist (to document the clearance surveys, the capture and release locations of all DT found, individual DT data, and other relevant data. This report shall be submitted to Agency Representatives.

BIO-25 A Designated Biologist shall be appointed to oversee compliance with the protection measures for the DT and other species. The Designated Biologist shall be on site during fencing activities. The Designated Biologist shall have the right to halt all activities that are in violation of the DT protection measures. Work shall proceed only after hazards to the DT are removed and the species is no longer at risk, or the

individual has been moved from harm's way by the Designated Biologist. The Designated Biologist shall have in their possession a copy of all the compliance measures while work is being conducted on site.

BIO-26 The proponent shall submit the names and Statement of qualifications of all proposed Designated Biologist to the Agency Representatives for review and approval at least 30 days prior to initiation of any DT handling, clearance, and preactivity surveys. Project activities shall not begin until the Designated Biologist is approved by the aforementioned agencies. Only Designated Biologist shall be allowed to handle and relocate DT when necessary. Biological monitors shall ensure compliance with the protection measures but shall not be allowed to survey for or handle DT. Workers shall notify the Designated Biologist of all DT observations.

BIO-27 The Designated Biologist shall be responsible for awareness trainings, surveys, compliance monitoring, and reporting related to DT.

BIO-28 Proposed channels that reroute the washes through and around the site shall be made as natural as feasible, with earthen bottoms in order that they may facilitate DT movement around and/or through the site. Scour protection (i.e., rip rap) shall be added to the channel sides and bottoms in stress areas such as curves and slope transitions (refer to the Hydrology Report [AECOM 2009]). Fencing shall line the channel that passes through the site to ensure DT do not enter the facility.

BIO-29 Personnel shall use established roadways (paved or unpaved) in traveling to and from the survey area and also shall use existing tracks on site whenever possible. Cross-country vehicle and equipment use outside designated work areas shall be prohibited. To minimize the likelihood for vehicle strikes of DTs, a speed limit of 15 miles per hour shall be established for travel within the disturbance area and along off-highway access roads to the site.

BIO-30 To the greatest extent feasible, parking and storage shall occur within the DT exclusion fencing. Anytime a vehicle or construction equipment is parked in unfenced DT habitat, the ground under the vehicle shall be inspected for the presence of DT before the vehicle is moved. If a DT is observed, it shall be left to move on its own. If it does not move within 15 minutes, the Designated Biologist shall remove and relocate the DT to a safe location.

BIO-31 All vehicles and equipment shall be in proper working condition to ensure that there is no potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials. The Designated Biologist shall be informed of any hazardous spills within 24 hours. Hazardous spills shall be immediately cleaned up and the contaminated soil shall be properly disposed of at a licensed facility.

BIO-32 Intentional killing or collection of the DT in the survey area and surrounding areas shall be prohibited. The Designated Biologist shall be notified of any such occurrences immediately, and Agency Representatives shall be notified of any such occurrences within 24 hours.

BIO-33 For emergency response situations, the Designated Biologist shall notify Agency Representatives immediately. As a part of this response, the Agency Representatives may require additional measures to protect the DT. During any responses related to human health, fire, hazardous waste, or repairs requiring off-road vehicle and equipment use, the Agency Representatives may also require measures to recover damaged habitat.

BIO-34 Water shall be applied to the construction right-of-way, dirt roads, trenches, spoil piles, and other areas where ground disturbance has taken place to minimize dust emissions and topsoil erosion. During the DT active season, a Designated Biologist shall patrol these areas to ensure water does not puddle for long periods of time and attract DTs, common ravens, and other wildlife to the site.

BIO-35 Upon locating a dead or injured DT, the Designated Biologist shall make initial notification to the Agency Representatives within 24 hours of its finding. The notification must be made by telephone and writing to the nearest USFWS Field Office. The report shall include the date and time of the finding or incident (if known), location of the carcass, a photograph, cause of death (if known), and other pertinent information. DT fatally injured as a result of Project-related activities shall be submitted for necropsy as outlined in *Salvaging Injured, Recently Dead, Ill, and Dying Wild, Free-Roaming Desert Tortoises* (Berry 2003). DT with fewer major injuries shall be transported to a nearby qualified veterinarian for treatment at the expense of the proponent. If an injured DT recovers, the offices of the Agency Representatives shall be contacted for final disposition of the DT.

BIO-36 During construction activities, monthly and final compliance reports shall be provided by the Designated Biologist to CDFG and other applicable resource agencies documenting the effectiveness and practicality of the protection measures that are in place and making recommendations for modifying the measures to enhance species protection, as needed. The report shall also provide information on the overall biological resources-related activities conducted, including the worker awareness training, clearance/preactivity surveys, monitoring activities, and any observed DTs, including injuries and fatalities.

BIO-37 In addition to the measures discussed above, the Project proponent shall compensate for impacts to DT habitat in the disturbance area during construction activities. This shall be accomplished either by land acquisition acceptable to USFWS, CDFG, and CEC or an assessed financial contribution calculated based on the final construction footprint. Direct permanent impacts to 7,027 acres of potential DT habitat shall be mitigated at a ratio to be determined by the Wildlife Agencies. Habitat conservation generally consists of the offsite purchase of in-kind habitat of equal value to that impacted. Funding for the long-term management of mitigation land shall also be required. The offsite location of the mitigation land and a management program shall be negotiated between the resource agencies (including CEC) and the Project applicant.

Western Burrowing Owl

Avoidance, minimization, and mitigation of impacts to WBO shall consist of the following:

BIO-38 A preconstruction survey of the disturbance area shall be conducted no more than 30 days prior to construction to locate active WBO burrows and to estimate the current number of WBO individuals on site. The survey shall consist of walking parallel transects and noting any fresh WBO sign or presence of WBOs (may be combined with DT preconstruction surveys). Pre-construction surveys shall be conducted throughout the Project disturbance area and within 492 foot-buffer surrounding the disturbance area. The results of the preconstruction survey shall be provided to CDFG.

BIO-39 It is recommended that pre-construction surveys begin during the non-breeding season (September 1 through January 31) regardless of the construction start date to identify WBO that may breed onsite during the breeding season. If WBO activity is detected at a burrow during the nonbreeding season (September 1 through January

31), a 160-foot buffer shall be flagged surrounding the occupied burrow and all Project-related activity shall remain outside of the flagged area while the birds are passively relocated. WBOs shall be excluded from active burrows during the nonbreeding season (September 1 through January 31) and encouraged to passively relocate to suitable, unoccupied habitat at least 160 feet outside of the exclusion area. WBO shall be excluded by installing one-way doors in burrow entrances. One-way doors shall be left in place 48 hours to ensure owls have left the burrow before excavation. One alternate natural or artificial burrow shall be provided for each burrow to be excavated in the disturbance area. The excluded burrows shall be monitored daily for 1 week to confirm owl use of alternate burrows before excavating burrows. After burrows are confirmed to no longer be in use (1 week), the burrow shall be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe or burlap bag shall be inserted into the tunnels during excavation to maintain an escape route for any WBOs inside the burrow. Preconstruction surveys shall be conducted no more than 30 days prior to construction.

BIO-40 If, during preconstruction surveys, WBO activity is detected at a burrow during the breeding season (February 1 through August 31), a Designated Biologist approved by CDFG shall verify through noninvasive methods the breeding status of the birds. If the birds have not begun egg-laying and incubation or juveniles from the occupied burrow are foraging independently and are capable of independent survival, then WBO can be excluded from the burrows as described above. However, if it is determined that the burrow is occupied (e.g., eggs or juveniles still dependent on their parents are present) then, per CBOC guidelines, a 250-foot buffer shall be flagged surrounding the occupied burrow and all Project-related activity shall remain outside of the flagged area until a Designated Biologist determines the burrow is no longer occupied (e.g., juveniles are foraging independently and are capable of independent survival.

BIO-41 A Designated Biologist shall be on site during all construction activities in potential WBO habitat.

BIO-42 The WBO shall be covered as part of the Worker Environmental Awareness Program element of the CEC-required BRMIMP.

BIO-43 During construction activities, monthly and final compliance reports shall be provided to CDFG and other applicable resource agencies documenting the

effectiveness of mitigation measures and the level of take associated with the Project. Biological issues also shall be covered in the ongoing compliance reporting required by CEC.

BIO-44 The CBOC's mitigation guidelines used by CDFG recommend that mitigation for impacts to WBOs should be based on the number of pairs directly impacted. Mitigation ratios are based on whether suitable acquired habitat is occupied by the species or is contiguous to the impact area. Destruction of occupied and/or active burrows shall be supplemented at a 2:1 replacement ratio of enhanced natural, unoccupied burrows or artificial burrows, as per guidelines from the CBOC (1993) and CDFG Memorandum (1995). The CBOC and CDFG mitigation guidelines recommend a ratio of 9.75 to 19.5 acres per pair of WBOs (or single individual) impacted, depending on the replacement habitat type and/or Project-specific negotiations with CDFG. CBOC's mitigation guidelines recommend offsite mitigation should use one of the following ratios:

a. Replacement of occupied habitat with occupied habitat: 9.75 acres per pair or single bird;
b. Replacement of occupied habitat with unoccupied habitat contiguous to currently occupied habitat: 13 acres per pair or single bird;
c. Replacement of occupied habitat with suitable unoccupied habitat: 19.5 acres per pair or single bird.

One individual WBO was documented to occur within the disturbance area; therefore, the anticipated mitigation is to be 9.75 to 19.5 acres of suitable habitat at a location approved by CDFG. Destruction of occupied and/or active burrows shall be supplemented at a 2:1 replacement ratio of enhanced natural, unoccupied burrows or artificial burrows, as per guidelines from the CBOC (1993) and CDFG Memorandum (1995). Most typically the two burrows required (e.g., one active burrow impacted) shall be enhanced or created on the land set aside as preservation for this species. Funding for the long-term management of the land preserved shall also be provided (on a per–acre-of-impact basis).

Habitat mitigation acreage will be coincident with DT mitigation site acreage.

Other Special Status Wildlife Species

BIO-45 In accordance with the MBTA and California Fish and Game Code Sections 3503, 3503.5, and 3513, if vegetation removal is scheduled to take place during the breeding season (roughly February through June for most species in the desert), a Designated Biologist shall be retained 30 days prior to vegetation clearance within a 300-foot buffer of (including areas outside the disturbance area) the permanent and temporary impact areas to monitor, on a weekly basis, the protected native birds on the site for nesting activity. The last survey shall be conducted no more than 3 days prior to initiation of vegetation clearance. If a nest with eggs or young is found or suspected, every effort shall be made to avoid the area around the nest until the young have fledged; the nest has failed; or CDFG, USFWS, and CEC agree that construction can proceed with the incorporation of resource agency agreed-to monitoring measures.

BIO-46 If nesting birds, including but not limited to special status species and those species protected by the MBTA, are detected in these areas, the nest shall be flagged and no construction activity shall take place near the nest until nesting is complete (nestlings have fledged or nest has failed).

BIO-47 American badger dens present in the disturbance area shall have a one-way trap door installed to passively exclude the badger from the den. American badgers are known to use several dens in a wide area, frequently moving between dens. Therefore, all potential badger dens shall be fitted with the one-way trap doors to encourage badgers to move off site. After 48 hours post-installation, the den shall be excavated and collapsed, following the same protocol as with WBO burrows. These dens shall be collapsed prior to construction of the DT fence to allow badgers the opportunity to move off site without impediment. Alternatively, a Designated Biologist shall trap and remove badgers from occupied dens and move them off site into appropriate habitat.

BIO-48 Desert kit fox dens present in the disturbance area shall have a one-way trap door installed to passively exclude the kit foxes from the den. After 48 hours post-installation, the den shall be excavated and collapsed, following the same protocol as with WBO burrows. These dens shall be collapsed prior to construction of the DT fence, to allow foxes the opportunity to move off site without impediment.

Alternatively, a Designated Biologist shall trap and remove foxes from occupied dens and move them off site into appropriate habitat.

Habitat-based mitigation or other appropriate mitigation as discussed previously for DT and WBO shall provide mitigation for impacts to nonlisted special status species that inhabit overlapping suitable habitat.

5.2.6 Wildlife Movement

The following are recommendations regarding possible compensatory mitigation of impacts to wildlife corridors to reduce the extent of impact for the region and contribute to the general knowledge of wildlife movement. Despite this reduction in impacts, potential direct and indirect impacts to DT wildlife corridors would not be mitigated below a level of significance.

Measures that may reduce the extent of impact in the region include the following:

BIO-49 Prioritize and acquire land within the vicinity of the disturbance area that maintains connectivity to adjacent open spaces and provides corridors between open spaces for wildlife species impacted.

BIO-50 Restore degraded habitat within the vicinity of the disturbance area that may have formerly served as a wildlife corridor for impacted species and shall provide ecological value for overall connectivity. Areas for implementation of these measures shall be prioritized based on proximity to the proposed Project and impacted populations. Areas for implementation of these measures shall also consider quality of habitat and likelihood of use by species impacted.

BIO-51 Restore disrupted connectivity within the vicinity of the disturbance area that may have formerly served as a wildlife corridor for impacted species by creating wildlife crossings under or over current barriers such as local roads and highways. Areas for implementation of these measures shall be prioritized based on proximity to the proposed Project and impacted populations. Areas for implementation of these measures shall also consider the quality of surrounding habitat and the likelihood of use by the species impacted.

BIO-52 Measures may be taken to contribute to the general knowledge of wildlife movement, edge effects, and the role of dispersal in metapopulation dynamics. Measures may include, but are not limited to, contributing financing for research on species specific

movement through telemetry studies and population gene flow as it relates to species dispersal in the region, as well as specific studies on edge effects. Measures to contribute to the general knowledge shall require approval by State and Federal wildlife agencies.

5.3 GENERAL AVOIDANCE AND MINIMIZATION MEASURES DURING OPERATION

General impact avoidance and minimization measures that shall apply to Project operation are presented below.

BIO-53 All vehicles passing or turning around shall do so within the planned impact area.

BIO-54 Best Management Practices (BMPs) shall be employed to prevent raven occurrence onsite. BMPs shall include, but are not limited to the following:

a. potential use of perch-deterrent devices and locations of their installation;

b. measures that might reduce raven presence and nesting activities (e.g., removing food items, garbage. note that there shall be no standing water onsite); and

c. remedial actions that shall be employed (e.g., nest removal) if raven predation of DT is detected..

BIO-55 Fueling of equipment shall take place within existing paved roads and not within 300 feet or adjacent to drainages or native desert habitats. Maintenance equipment shall be checked for leaks prior to operation and repaired as necessary.

BIO-56 A Storm Water Pollution Prevention Plan (SWPPP) and a Drainage, Erosion, and Sedimentation Control Plan (DESCP) shall be prepared to comply with Regional Water Quality Control Board (RWQCB) and CEC requirements; a preliminary DESCP (equivalent to a SWPPP but covering both construction and operation phases) has been prepared. The Project shall employ a comprehensive system of management controls, including site-specific BMPs, to minimize erosion and stormwater contact with contaminants and thereby reduce exposure of wildlife and plants to pollutants in the stormwater. These management controls include erosion and sediment control BMPs; an employee training program; good housekeeping and preventive maintenance programs; structural BMPs, including temporary containment during

maintenance activities and permanent secondary containment structures at chemical storage and process areas; materials, equipment and vehicle management practices; spill prevention and response programs; and inspection programs. .

BIO-57 The Project's lighting system shall provide the minimum illumination required to meet safety and security objectives and shall be oriented to minimize additional illumination in areas not pertinent to the facility. If lighting is adjacent to sensitive habitat it shall be directed or shielded away from the habitat. No permanent lights are proposed to be installed within sensitive habitat. Light glare shields may also be used to reduce the extent of illumination into adjoining areas.

BIO-58 During Project operation, the facility footprint, including the transmission corridor, shall be maintained free from nonnative invasive species. This can be accomplished through physical or chemical removal and prevention. Application of an approved herbicide (not toxic to wildlife) shall be applied or directly supervised by a State licensed applicator following the label instructions, including application rates and protective equipment. Herbicide shall be applied only when wind speeds are less than 5 miles per hour.

BIO-59 Decommissioning of the facility shall include the removal of all improvements and restoration of the facility footprint to the preexisting ("as-found") condition. All surface improvements shall be removed, and all ground level penetrations and subsurface storage tanks (if any) shall be removed and filled/capped to prevent the access and entrapment of wildlife. The channel realignments shall be filled and the ephemeral desert washes shall be restored to preexisting hydrology. Funding for such restoration, whether it is needed at the anticipated facility closure date or it is needed earlier in time due to untimely closure (i.e., bankruptcy), shall be pursued once a comprehensive decommissioning plan is established.

BIO-60 To minimize the likelihood for vehicle strikes of DTs, a speed limit of 15 miles per hour shall be established for travel along off-highway access roads to the site. Access road shall be posted with DT awareness signs. DT-proof gates that roll open and close behind vehicles shall be installed at the entrance of the perimeter fence.

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CHAPTER 6
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ATTACHMENT A

LIST OF FIELD BIOLOGISTS AND QUALIFICATIONS

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LIST OF FIELD BIOLOGISTS AND QUALIFICATIONS

Name	Affiliation	Surveys Performed	Qualifications	Site		
				Palen	Blythe	Ridge.
Joshua Zinn	AECOM	Aquatic Resources/Jurisdictional Waters	BS Natural Resources MS Environmental Management Fifteen years experience as an ecologist. Formally trained in the latest federal delineation guidance and procedures (including 2008 Arid West regional supplement delineation manual). Up to date on latest regulatory framework (both State and federal) for jurisdictional waters. Formally trained in CRAM and HGM assessments for riverine wetlands. Up to date on resource agency practice, interpretation and application with regard to jurisdictional waters	X	X	X
Jason Phillips	AECOM	Aquatic Resources/ Jurisdictional Waters Western Burrowing Owl (Palen and Blythe only)	BS Biology (Ecology) MS Environmental Management (Wetland and Watershed Management) Ten years experience in the field of biology and nearly six as a biologist consultant. Regularly conducts habitat assessments and focused surveys for various sensitive fish and wildlife species, including burrowing owl. Additionally, conducts fish and wildlife exclusions and relocation for a number of species including burrowing owl. Strong academic background in aquatic and wetland ecology, as well as watershed level management. Formally trained in federal delineation guidance and procedures..	X	X	X
Lindsay Teunis	AECOM	Aquatic Resources/Jurisdictional Waters	BS Biology, Marine Emphasis MS Ecology Seven years experience as a terrestrial and marine ecologist. Formally trained in the latest federal	X	X	X

Name	Affiliation	Surveys Performed	Qualifications	Site		
				Palen	Blythe	Ridge.
			delineation guidance and procedures (including 2008 Arid West regional supplement delineation manual). Up to date on latest regulatory framework (both State and federal) for jurisdictional waters. Formally trained in CRAM and HGM assessments for riverine wetlands.			
Fred Sproul	AECOM	Botanical	BS in Biology SDSU, education Miami U; 30 years experience conducting rare plant surveys, and mapping of vegetation including San Diego County unincorporated lands. Regional experience in Riverside, Inyo, and Kern Counties and Great Basin.	X	X	X
Lance Woolley	AECOM	Botanical	MA Botany, Humboldt State Univ. 3 years of professional experience as a botanist that includes performing rare plant surveys, vegetation mapping, and habitat assessments throughout the northern and southern California regions.	X	X	X
Kristen Asmus	AECOM	Botanical	BS Plant Science Landscape Horticulture Option, UC Davis, MS Botanical Science, Univ. of Hawaii, Manoa 11 years experience in vegetation mapping and rare plant surveys in Hawaii and California. Including restoration ecology and GIS, with 6 years wetland delineations. Certified as an ISA certified arborist [WE-6139A] for 8 years. Regional experience in the Sonoran desert region, northern California: Alameda, Contra Costa, Santa Clara, San Joaquin, San Benito, Santa Cruz, San Mateo, San Francisco, Marin, Mendocino, Solano, and limited experience in the northern Sierra Nevada Mountain Range	X	X	
Dana Terry	AECOM	Western Burrowing Owl	BS in Zoology, BS in Ecology & Evolution. Five years of experience conducting surveys in California for special-status wildlife species including mammals, birds, reptiles, amphibians, and invertebrates. Regularly conducts site assessments and focused surveys for burrowing owls.	X	X	

Name	Affiliation	Surveys Performed	Qualifications	Site		
				Palen	Blythe	Ridge.
Josh Meidav	AECOM	Western Burrowing Owl	B.A. in Environmental Studies from UC Santa Cruz , and M.S. and Ph.D. from UC Davis in Restoration Ecology. Twelve years of experience as an ecologist/environmental scientist that includes assessment and monitoring of vegetation, wildlife, watershed factors, water quantity and quality, hydrology, geomorphology, and restoration (design and monitoring). Locales of projects include sites in Oregon, Nevada, Alaska, and Nicaragua, as well as throughout California.	X	X	
Sean Avent	AECOM	Western Burrowing Owl	BS in oceanography and marine biology from University of Washington Nine years as a biological research assistant at San Francisco State University, and 5 years performing various aquatic invertebrate, fish, mammal, bird and herpetological surveys throughout California.	X	X	
Mike Ireland	AECOM	Western Burrowing Owl	MA from UC Davis Seven years professional natural resource survey experience including over 1,500 hours of Western burrowing owl experience conducting habitat assessments, CBOC protocol surveys, passive exclusions, and preconstruction surveys in urban riparian corridors, grassland, agricultural and ranch areas, and desert areas throughout the San Francisco Bay area, Central Valley, and in Riverside County, California.	X	X	
Vick Germany, AIP	AECOM	Western Burrowing Owl	MA in Resource Management and Environmental Planning from San Francisco State UniversityBA in Biology (Ecology and Systematics) from San Francisco State University 22 years of experience as an environmental planner that includes conducting protocol and pre-construction surveys for burrowing owl, California red-legged frog	X	X	

Name	Affiliation	Surveys Performed	Qualifications	Site		
				Palen	Blythe	Ridge.
			and California tiger salamander in the San Francisco Bay Area.			
Robert Conohan	AECOM	Western Burrowing Owl	B.Sc in Environmental Science Trent University Approximately eight years of professional experience working as a field biologist with an expertise in conducting avian, herpetological and small mammal surveys. He has experience conducting biological investigations in the deserts of San Bernardino, Kern, Imperial and Riverside Counties. Mr. Conohan has participated in a variety of projects including environmental assessments, environmental impact studies, natural science inventories and habitat assessments for rare and endangered species.	X	X	
Elizabeth Gruenstein	AECOM	Western Burrowing Owl	BS in Biology with a concentration in Environmental Studies from Haverford College. 2.5 years of experience conducting wildlife surveys in the San Francisco Bay Area and the southern Sierra Nevada.	X	X	
Hildie Spautz	AECOM	Western Burrowing Owl	MA in Conservation Biology Sixteen years conducting avian surveys, botanical surveys, and vegetation assessments in Northern and Southern California. Two years conducting surveys for herps and mammals in northern California.	X	X	
Julie Roth	AECOM	Western Burrowing Owl	BS in Biology (Neurobiology and Behavior), MS in Biology Four years experience as a field research assistant in eastern California and western Nevada at the University of California, Riverside and University of Nevada, Reno. Seven years experience conducting protocol-level surveys for small mammals, birds, bats, amphibians and reptiles, including various special status species surveys in northern California.		X	X

Name	Affiliation	Surveys Performed	Qualifications	Site		
				Palen	Blythe	Ridge.
Steve Henderson	AECOM	Western Burrowing Owl	B.S., Environmental Biology (Terrestrial Ecology), UC Davis; M.S., Biological Sciences (Ecology), Montana State University Wildlife biologist with fifteen years experience designing, conducting, and managing large-scale avian surveys, including protocol surveys and habitat assessments for western burrowing owl and other special status species throughout California. California project experience has focused on biological inventories and analyses of desert, grassland, forest, woodland, and riparian habitats.		X	X
Heather Valentine	AECOM	Western Burrowing Owl	B.S., Ecology, Purdue University Wildlife biologist with seven years of experience. Specializes in the implementation of focused wildlife surveys and habitat assessments, primarily for raptors, Passerine birds, and mammals. Extensive experience conducting habitat assessments and protocol surveys for several species, including spotted owl, northern goshawk, willow flycatcher, and American marten.			X
Wendy Broadhead	AECOM	Western Burrowing Owl	B.S., Plant Science, University of Nevada, Reno, 1992 B.A., Anthropology, University of Nevada, Reno, 1985 B.A., Art, University of Nevada, Reno, 1985 Has more than 17 years of experience in resource management. Her experience in the field of ecology includes: plant and wildlife baseline surveys; threatened, endangered and sensitive species surveys including focused surveys for western burrowing owl.			X
Andy Hatch	AECOM	Western Burrowing Owl	M.S., Biological Sciences, Stanford University B.S., Earth Systems, Stanford University Wildlife biologist with 6 years professional experience in California with special-status wildlife species			X

Name	Affiliation	Surveys Performed	Qualifications	Site		
				Palen	Blythe	Ridge.
			including mammals, birds, reptiles, amphibians, and invertebrates.			
Richard Dwerlkotte	AECOM	Botanical	BS Environmental Biology and graduate studies, Humboldt State Univ. 19 years experience as a field botanist and ecologist conducting botanical resource studies on over 100 projects in the Western U.S. and northern Great Plains including rare plant surveys, vegetation mapping, wetland delineation, noxious weed surveys, biological constraints and impacts analyses on a wide variety projects, assessments of the effects of altered river hydrology on riparian and wetland vegetation.	X	X	X
Shirley Innicken	AECOM	Botanical	BS Ethanobotanical Ecology, Calif. State Univ., Chico 12 years experience in the field wildlife and botanical surveys. Conducted rare plant surveys following federal and state standards. Familiar with California floristic communities. Strong organizational skills for field work implementation.	X	X	
Caesara Brungraber (Wendin)	Sub	Botanical	BS Biology, BA Economics, Bucknell Univ., MS Horticulture, UC Davis 5 years experience as a botanical consultant in southern California. 10 years in the Pacific coast of the US from Alaska to California and New England. Conducted rare plant surveys, of federal and state listed species as well as vegetation mapping, floral inventories and restoration monitoring and design.	X	X	
Martus, Carolyn	Sub	Botanical	BS Biology, Rutgers Univ., MS Biology, San Marcos State Univ. 9 years experience in vegetation mapping, rare plant surveys, and invasive plant and animal monitoring projects. Regional experience includes coastal southern California, Sonoran and Mojave desert floristic communities. She has worked on military instillations and with public utilities.	X	X	

Name	Affiliation	Surveys Performed	Qualifications	Site		
				Palen	Blythe	Ridge.
Andrew Fisher	AECOM	Avian Point Count	BS in Wildlife, Fish, and Conservation Biology from UC Davis, 2.5 years experience conducting various bird, mammal, and herp surveys throughout San Diego County and in Imperial County.	X	X	
Shelly Dayman	AECOM	Desert Tortoise	Bachelor of Science - Ecology Shelly Dayman has 8 years of experience conducting biological surveys; vegetation mapping; construction monitoring; and wildlife surveys for desert tortoise, western burrowing owl, and small mammals in the southwestern United States.	X	X	X
Rob Wolfson	Sub	Desert Tortoise	Bachelor of Science Over five years of experience as a biologist and/or an environmental inspector in Nevada and California. Has worked as a desert tortoise biologist or monitor on numerous projects.	X	X	X
Charles German	Sub	Desert Tortoise	Bachelor of Science Over 14 years of experience as a biologist in southern California. Conducted DT presence/absence surveys in Nevada and California. Previously approved as a desert tortoise handler on various projects.	X	X	X
Arthur Davenport	Sub	Desert Tortoise, Botanical	Bachelor of Science Experience in southern California conducting biological surveys including focused rare plant surveys, small mammal trapping, desert tortoise surveys, sensitive bird species surveys and general biological surveys.	X	X	X
Milo Rivera	Sub	Desert Tortoise	Bachelor of Science Mr. Rivera has 11 years of applied and research experience in the field of environmental science, with particular emphasis on wildlife assessments, impact analysis and project management. He has conducted focused threatened and endangered species surveys, sensitive habitat surveys as well as preparing biological reports. He holds a Memorandum of Understanding	X	X	X

Name	Affiliation	Surveys Performed	Qualifications	Site		
				Palen	Blythe	Ridge.
			(MOU) for the DT. He has conducted and managed surveys for DT, WBO, flat-tailed horned lizard, Colorado fringed toed lizard and nesting bird surveys.			
Gregg Lukasek	Sub	Desert Tortoise	Bachelor of Science Experience in southern California conducting biological surveys including general assessments, desert tortoise and burrowing owl surveys.	X	X	X
Elias Elias	Sub	Avian Point Count, Desert Tortoise	Mr. Elias has worked conducting biological surveys for the past 14 years. His work has included wildlife censusing, including bird point count surveys and mist netting; wildlife tracking; whale surveys and herpetile searches.		X	X
James Huelsman	Sub	Desert Tortoise	Bachelor of Science Mr. Huelsman conducts presence/absence surveys for desert tortoise, coastal California gnatcatcher and Least Bell's vireo and conducts general biological assessments and focused surveys for a wide variety of special status species throughout southern California.	X	X	X
Ellen Schafhauser	Sub	Desert Tortoise	Bachelor of Professional Science Involved in DT projects for the past 17 years in California and Arizona.		X	X
Scott Cameron	Sub	Desert Tortoise	Bachelor of Arts Over 18 years of biological consulting experience in sensitive biological resources inventories, endangered species surveys, general wildlife biology, environmental mitigation monitoring and wildlife and botanical habitat evaluations in southern California. Experience with DT protocol surveys and preconstruction surveys.	X	X	
Andrew Forde	Sub	Desert Tortoise	Bachelor of Science Mr. Forde has been previously authorized by the USFWS to conduct presence/absence surveys for DT and monitor construction projects. He has conducted	X	X	

Name	Affiliation	Surveys Performed	Qualifications	Site		
				Palen	Blythe	Ridge.
			DT surveys in Riverside County, Imperial County and Yuma County (Arizona).			
Michael Gallagher	Sub	Desert Tortoise	Bachelor of Arts Mr. Gallagher has conducted clearance surveys, line distance sampling and presence/absence surveys for DT since 2004.	X	X	X
Kim Duncan	AECOM	Desert Tortoise	Bachelor of Science Ms. Duncan specializes in the biological requirements of rare and endangered species indigenous to central and northern California. She knows the survey methodologies for determination of the presence of endangered species.	X	X	X
Joseph Betzler	AECOM	Botanical, Desert Tortoise	BS Botany, SDSU, MS Biology-Botany, SSDU, Diploma Plant Conservation Techniques, Royal Botanic Gardens, Kew, UK 14 years experience in the field of biology. He has experience gathering data for biological assessments and evaluations, inventories, surveys, desert tortoise clearances and surveys (268 hours), and adaptive management plans. He has been a biological consultant for five years as a biologist. He specializes in the plants of the southwestern US floristic provinces.	X	X	X
Katie Hall	AECOM	Desert Tortoise, Burrowing Owl	Bachelor of Arts Ms. Hall has over 7 years of multidisciplinary experience serving as environmental scientist, ecologist, research assistant, and assistant manager on various projects. She has conducted surveys for state and federally listed plant and wildlife species. She has experience in performing protocol-level surveys for federally and state-listed threatened and endangered species including desert tortoise, Quino checkerspot butterfly, least Bell's vireo, and arroyo toad.	X	X	X

Name	Affiliation	Surveys Performed	Qualifications	Site		
				Palen	Blythe	Ridge.
James Jennings	Sub	Desert Tortoise	Bachelor of Science Mr. Jennings is a wildlife biologist with specific endangered or sensitive species survey experience with snowy plover, peregrine falcon, prairie falcon, bald eagle, Swainson's hawk, Northern goshawk, burrowing owl, loggerhead shrike, Le Conte's thrasher, sage grouse, bank swallow, yellow warbler, willow flycatcher, California gnatcatcher, least Bell's vireo, San Diego cactus wren, desert bighorn sheep, San Joaquin kit fox, giant kangaroo rat, antelope ground squirrel, desert tortoise, blunt-nosed leopard lizard, Western pond turtle, California red-legged frog, San Diego horned lizard, Belding's orange-throated whiptail and Hoover's woolly-star.	X	X	X
Patricia Seamount	Sub	Desert Tortoise	Bachelor of Science Ms. Seamount has conducted clearance surveys, line distance sampling and presence/absence surveys for DT since 2004.		X	
Nicole Stephens	Sub	Desert Tortoise	Bachelor of Arts Ms Stephens has worked for one year as crew member with Peter Woodman in the Mojave Desert. She has experience recognizing, analyzing and recording desert tortoise sign and has assisted with DT health assessments, including the handling of DTs.		X	
Jonathan "Brent" Vickers	Sub	Desert Tortoise	Requested resume; not yet received		X	
Ed LaRue	Sub	Desert Tortoise	Requested resume; not yet received		X	
H. Lee Jones	Sub	Avian Point Count, Western Burrowing Owl	Ph.D. in Biology, UCLA M.A. in Biology, UCLA B.S. in Zoology, NCSU An ornithologist with a Ph.D. in avian biogeography from UCLA. Has been studying birds, with a special	X	X	

Name	Affiliation	Surveys Performed	Qualifications	Site		
				Palen	Blythe	Ridge.
			emphasis on field identification and distribution, since the age of eight. An independent consulting biologist for the past sixteen years in the fields of environmental assessment, natural resource management, and biological research			
Jim C. Luttrell	Sub	Avian Point Count, Western Burrowing Owl, Desert Tortoise	M.S. in Environmental Studies B.Sc. Zoology An independent consulting biologist for the past fourteen years in the fields of environmental assessment, natural resource management, and biological research. Is working on an ongoing Raptor banding study including capture, banding and recording molt patterns on a variety of hawks and owls. Burrowing owl capture; passive and active relocation projects.	X	X	X

ATTACHMENT B

JURISDICTIONAL DELINEATION REPORT

BLYTHE SOLAR POWER PROJECT
JURISDICTIONAL DELINEATION REPORT
FOR REGULATED WATERS OF THE UNITED STATES AND STATE
RIVERSIDE COUNTY, CALIFORNIA

Prepared for:

Solar Millennium, LLC
1625 Shattuck Avenue
Berkeley, California 94709

Chevron Energy Solutions
A Division of Chevron U.S.A. Inc.
345 California St., 18th Floor
San Francisco, California 94104

Prepared by:

EDAW AECOM
1420 Kettner Boulevard, Suite 500
San Diego, California 92101
Phone: (619) 233-1454
Fax: (619) 233-0952
Contact: Joshua Zinn

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I. SUMMARY

EDAW AECOM (EDAW) performed biological resources studies for Solar Millennium, LLC and Chevron Energy Solutions who are the Applicants for the proposed Blythe Solar Power Project (Project or BSPP). The Project is proposed on public lands managed by the Bureau of Land Management (BLM) in Riverside County, California and the Applicants have submitted an application to BLM for a Right of Way (ROW) grant. The BSSP will be a 1,000-megawatt (MW) solar thermal electric generating facility using parabolic trough technology. The Project would be located in the southern California inland desert, approximately 2.5 miles northwest of Blythe Airport, in Riverside County, California (Figures 1 and 2 [all figures referred to herein are included in Attachment 1]). The primary solar energy facilities and associated construction and operations footprint are located within an approximate 7,030-acre disturbance area (Figure 3).

As a component of the needed biological resources work, a formal jurisdictional delineation for regulated waters was conducted to obtain baseline information for potential jurisdictional waters of the United States and State occurring within the disturbance area in support of the CEC/BLM combined environmental review and permitting process. The purpose of this jurisdictional delineation is to identify boundaries and acreages of potential regulated waters of the United States and State (including wetlands) occurring within the approximate 7,030-acre disturbance area. Due to recent project design changes, portions of the survey area for this delineation extend beyond the current disturbance area; additionally, new areas have been added to the disturbance area that were not delineated during field surveys (see below for clarification). The Applicants are requesting a jurisdictional determination (JD) of isolated waters (nonjurisdictional waters of the United States) from the U.S. Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency (USEPA) (Attachment 2), and the verification of the location, type, size, and extent of jurisdictional waters of the State under regulatory administration by the California Department of Fish and Game (CDFG).

This jurisdictional delineation report (JDR) summarizes the methodologies employed in conducting a formal jurisdictional delineation of waters of the United States and State, the results of the fieldwork, and the existing conditions of the surveyed portions of the disturbance area where potential jurisdictional waters occur. For this project, it was determined that there are no potential jurisdictional waters of the United States (0.0 acre)[1] and 128.8 acres that would be

[1] Final acreages of jurisdictional waters of the United States will be based on the Jurisdictional Determination (JD) process per the March 30, 2007 U.S. Army Corps of Engineers Jurisdictional Determination Form Guidebook; the June 5, 2007 Approved JD Form; the June 5, 2007 Joint Guidance Memorandum; the December 2, 2008 Guidance

considered potential jurisdictional waters of the State exclusively[2] that occur within the surveyed portion of the disturbance area.

II. INTRODUCTION

A. Project Location

The proposed BSPP is located in the Palo Verde Mesa east of the McCoy Mountains in eastern Riverside County, California approximately 8 miles east of Blythe, CA and approximately 2 miles north of Interstate-10 (I-10). Elevation ranges from approximately 200 to 650 feet above sea level (USGS 1975, 1983) (Figures 2 and 3).

B. Description of Project

The Applicants are proposing to construct two commercial solar thermal electric power generating stations with a total nominal output of 1,000 megawatts (MW). The BSPP would be located in the Palo Verde Mesa east of the McCoy Mountains in eastern Riverside County, California approximately 8 miles west of Blythe, CA and approximately 2 miles north of Interstate-10 (I-10). The Project would be located on a 9,405-acre right-of-way (ROW) owned by the Federal government and leased by the Applicant from the Bureau of Land Management (BLM). The Project facilities would occupy approximately 7,030 acres of the ROW. The Project would use solar parabolic trough technology to generate electricity. With this technology, arrays of parabolic mirrors collect heat energy from the sun and refocus the radiation on a receiver tube located at the focal point of the parabola. A heat transfer fluid (HTF) is heated to high temperature (750° F) as it circulates through the receiver tubes. The heated HTF is then piped through a series of heat exchangers where it releases its stored heat to generate high pressure steam. The steam is then fed to a traditional steam turbine generator where electricity is produced.

The Project would have a nominal output of 1,000 MW, consisting of four identical and independent 250 MW power plants (power units). The units would be developed in phases with construction scheduled to begin in late 2010 on the first unit; that unit would come on line in mid-2013 and subsequent units would come on line in each of the following three years.

Memorandum; or Regulatory Guidance Letter (RGL) 08-02 (if RGL 08-02 is deemed applicable and appropriate [i.e., the permit applicant, or other "affected party" can decline to request and obtain an Approved JD and elect to use a Preliminary JD instead]).

[2] Relevant to CDFG permitting only.

Each power unit would have its own solar field, comprised of piping loops arranged in parallel groups, and its own power block, centrally located within the solar field. Each power block would have its own HTF pumping and freeze protection system; solar steam generator; steam turbine generator; an air-cooled condenser (ACC) for cooling; transmission lines and related electrical system; and auxiliary equipment (e.g., water treatment system, emergency generators). The Project would require a new transmission line, which is in a preliminary design stage.

Access to the BSPP would be via an existing public road heading north from the frontage road along I-10. Improvements to portions of the public road would be required. Only a small portion of the overall disturbance area would be paved, primarily the site access road, the service roads to the power blocks, and six acres of each of the 18-acre power blocks. The solar fields would remain unpaved and without a gravel surface to prevent mirror damage. The Project solar fields and support facilities perimeter would be secured with chain link metal-fabric security fencing and controlled access gates.

Following completion of spring 2009 surveys, several changes were made to the disturbance area limits. First, a conceptual footprint of a possible transmission line was identified (Figure 2). The final Project transmission line route has not yet been selected. The possible transmission line footprint has not yet been surveyed and, therefore, is not discussed in this report. Surveys for the possible transmission line will be conducted following selection of the final transmission line route (anticipated spring 2010).

In addition, several portions of the disturbance area, totaling approximately 180 acres, are no longer a part of the proposed Project and have been removed from the disturbance area (Figure 2). For example, an approximately 6.2-mile-long linear feature was surveyed that was subsequently removed from the disturbance area. However, because the 180 acres were included in the spring 2009 surveys, in the interest of contributing to the body of scientific information, survey results for these areas are included in this document.

III. REGULATORY FRAMEWORK

Jurisdictional waters (including wetlands and other aquatic environments/habitats) occurring within the United States and California are regulated under the following Federal and State laws, as applicable to the project.

A. Federal Regulations

Pursuant to Section 404 of the Clean Water Act (CWA), USACE is authorized to regulate any activity that would result in the discharge of dredged or fill material into jurisdictional waters of the United States, which include those waters listed in 33 Code of Federal Regulations (CFR) 328.3 (Definitions). USACE, with oversight by the USEPA, has the principal authority to issue CWA Section 404 Permits.

Pursuant to Section 401 of the CWA, the Regional Water Quality Control Board (RWQCB) certifies that the discharge will comply with State water quality standards. RWQCB, as delegated by USEPA, has the principal authority to issue a CWA Section 401 water quality certification or waiver.

B. State Regulations

Pursuant to Section 1600 et seq. of the California Fish and Game Code (CFGC), CDFG is authorized to regulate any activity that would alter the flow, bed, channel, or bank of streams and lakes. Jurisdictional waters of the State include the channel bed and bank of a lake, river, or stream. In practice, CDFG usually extends its jurisdictional limit to the top of the bank of a stream or lake, or to the continuous outer edge of its riparian extent, whichever is wider.

Pursuant to Section 13000 et seq. of the California Water Code (the 1969 Porter-Cologne Water Quality Control Act), RWQCB is authorized to regulate activity that would result in discharges of waste and fill material to waters of the state, including "isolated" waters and wetlands (e.g., vernal pools and seeps) and groundwater within the boundaries of the State.

C. Purpose of Assessment

The purpose of performing a formal jurisdictional delineation is to identify, verify, and determine potential boundaries, acreages, and types of regulated waters of the United States and State (including wetlands) occurring within the approximately 7,030-acre disturbance area, over which the USACE,[3] CDFG, RWQCB, and the State will assert jurisdiction[4] The proposed BSPP has the potential to result in the loss of jurisdictional waters. This JDR will be suitable for support and agency documentation in the process of obtaining the following:

---

[3] Verification of the presence or absence of Federal waters by USACE will be based on the findings in this JDR and the JD process (Attachment 2).

[4] Federal and State jurisdictions may overlap but will remain distinct for authorization/permitting requirements.

1. Certification of compliance under Section 401 of the CWA (as regulated by RWQCB),
2. Review of regulatory administration and/or authorization under Section 404 of the CWA (as regulated by USACE),
3. Permitting under Section 1600 et seq. of the CFGC (as regulated by CDFG).

IV. PROJECT SETTING

In addition to the delineations described in this report, EDAW conducted plant community mapping and other biological surveys within the disturbance area and ROW (EDAW 2009). A summary of the parameters relevant to the presence and extent of potential jurisdictional waters in the form of wetlands (vegetation, hydrology, and soils), is provided below.

A. Xeric Riparian Plant Communities

The field delineation used the Holland Code Classification System for vegetation communities (Holland 1986) for identifying xeric riparian vegetation associated with all washes occurring within the disturbance area (Table 1). Only wash dependant plant species were mapped (Table 2). Where vegetation contains a mixture of upland and wash dependent indicator species from two or more Holland vegetation communities, the indicator species that appears with the greatest vegetation coverage (absolute dominance based on percent cover) was used to identify the vegetation community. The minimum mapping unit (MMU) for xeric riparian vegetation used for the field delineation was 0.10 acre.

The plant community mapping for the disturbance area project is provided in Figure 4. Although the xeric riparian, upland, and other cover types are displayed in Figure 4, only the xeric riparian plant communities are the focus of the following discussion. The one xeric riparian vegetation community occurring within the disturbance area has been identified as desert dry wash woodland (Holland Code 62200). Although desert dry wash woodland is a nonhydrophytic (nonwetland) plant community, it is still relevant to potential jurisdictional waters, and thus is discussed in this JDR.

Table 1
Xeric Riparian Plant Communities Occurring within the Survey Area[a]

Xeric Riparian Plant Communities	Acres		
	New Disturbance Area[b]	Now Excluded from Disturbance Area	Total Survey Area
Desert Dry Wash Woodland (Holland Code 62200)	120.5	3.3	123.8
Grand Total	120.5	3.3	123.8

[a] Acreage of the plant communities occurring within the survey area was determined by using the Geographic Information System (GIS) program ArcGIS. All acreages are rounded to the nearest tenth.
[b] Disturbance area is based on the August 11, 2009 design.

Table 2
Wash-Dependent Plant Species Observed within the Survey Area[a]

Scientific Name	Common Name	Region 0 (California) Indicator Status[a]
Tree Species		
Cercidium floridum ssp. *floridum*	blue palo verde	Not Listed (NL)
Olneya tesota	ironwood	NL
Psorothamnus spinosus	smoke tree	NL
Shrub Species		
Acacia greggii	catclaw	Facultative Upland (FACU)[b]
Hyptis emoryi	desert lavender	NL
Prosopis glandulosa	honey mesquite	NL
Senna armata	spiny senna	NL
Herbaceous Species		
Brandegea bigelovii	desert starvine	NL
Pleuraphis rigida	big galleta grass	NL

[a] Based on *National list of vascular plant species that occur in wetlands (*Reed1988). If a species does not occur in wetlands in any region, it is not on the National List.
[b] FACU species usually occur in nonwetlands (estimated probability 67 to 99%) but occasionally are found in wetlands (estimated probability 1 to 33%) under natural conditions in the region specified.

Desert Dry Wash Woodland (Holland Code 62200)

Desert dry wash woodland is similar to Mojave wash scrub (Holland Code 34250) and Mojave desert wash scrub (Holland Code 63700). Dry desert wash woodland is distributed along the larger drainages of the lower Mojave Desert and more generally through the Colorado Desert. This vegetation community occupies dry, sandy, or gravelly washes and arroyos of the lower Mojave and Colorado deserts, largely in frost-free areas. These washes and arroyos typically have braided channels that substantially rearrange with every surface flow event. Dry desert wash woodland is typically an open vegetation community; however, canopy development and density are variable and may depend on water supply. It is drought-deciduous, microphyllous

riparian thorn scrub woodland that can range between 15 and 60 feet tall, dominated by any of several fabaceous trees (Holland 1986, CDFG 1988).

This vegetation community occupies the major washes that traverse the disturbance area, and is dominated by an open overstory of blue palo verde, honey mesquite, ironwood, and smoke tree, with a scattered understory of catclaw acacia, honey mesquite, big galleta grass, desert starvine, and desert lavender primarily intermixed with creosote bush (*Larrea tridentata*). Desert dry wash woodland is most developed in the primary washes located within the southwest portion of the disturbance area where channel development is most pronounced and water supply likely more abundant from the surrounding mountains (see below). Within the southeastern portion of the disturbance area, as the washes become shallower and eventually abate into the landscape, desert dry wash woodland declines in species diversity and occurrence.

B. Hydrology

The disturbance area occurs within the Imperial Reservoir Watershed (HUC 15030104) and is located within the RWQCB Colorado River Basin Region 7, Colorado River Hydrologic Basin Planning Area, Colorado Hydrologic Unit (715.00), Palo Verde Hydrologic Area (715.40) (Figure 5). The rainfall pattern is bimodal with a rainy season in both summer and winter (December through March and July through September [the commonly wetter of the two]). Average annual rainfall for the disturbance area (Palo Verde Hydrologic Area) is approximately 3.6 inches (Table 3) (NOAA 2009).

Table 3
Survey Area Annual Precipitation Data from Base Weather Station 2008[a]

Time Period	Historical Average[b] (inches)	Past Year[b] (inches)
June	0.02	0.00
July	0.24	0.27
August	0.63	0.15
September	0.36	0.06
October	0.26	0.00
November	0.20	0.24
December	0.40	0.65
January	0.47	0.02
February	0.43	0.43
March	0.36	0.00
April	0.16	0.00
May	0.02	0.03
Annual Total	**3.56**	**1.85**

[a] Western Regional Climate Center 2008
[b] National Oceanic & Atmospheric Administration, National Climatic Data Center 2008, 2009a and 2009b.

Surface hydrology of the disturbance area is influenced by the surrounding mountain ranges during storm events. The disturbance area is located in the Palo Verde Mesa and is encompassed by the McCoy Mountains located directly west, the Little Maria Mountains located approximately 6.5 miles to the north, and the Big Maria Mountains located approximately 7.5 miles to the northeast. Stormwater flow pattern for the disturbance area is from the higher elevations west in the McCoy Mountains to the lower elevations east into the Palo Verde Mesa (Figure 6). Virtually all surface hydrology occurring within the disturbance area is from stormwater runoff originating in unnamed ephemeral washes, west of the disturbance area, flowing eastward from the McCoy Mountains, which collectively develop into a component of a large alluvial fan that generally comprises the Palo Verde Mesa (Figure 7).

The closest major watercourse to the disturbance area is the McCoy Wash, which is a large ephemeral wash that drains 210 square miles of the Palo Verde Mesa (including the McCoy Mountains, Little Maria Mountains, and Big Maria Mountains). The McCoy Wash is located outside the disturbance area and the ephemeral washes that traverse the disturbance area from the McCoy Mountains in a west to east orientation abate into the landscape prior to any surface hydrological connection with the McCoy wash.

Ephemeral stream channels are commonly linear features that are straight to slightly meandering (Whitford 2002, High and Picard 1973). As they flow eastward from the base of the McCoy Mountains, the ephemeral channels generally convert from sparsely vegetated slightly meandering to an anastomosed morphology, presented as semi-braided beds with regular incised compound channels and multiple relic channels. Compound channels are considered the most common channel types in arid regions and are characterized by a single, low-flow meandering channel inset into a wider braided channel network (Tooth 2000, Graf 1988). These channels are highly susceptible to widening and avulsions (i.e., rapid changes in channel position and/or channel relocation) during moderate to high discharges, reestablishing a low-flow channel during subsequent low flows (USACE 2008).

The ephemeral washes occurring within the disturbance area present themselves as micro-floodplains with compound channels, which is a common arid stream system (USACE 2008). With any compound/anastomosing ephemeral stream system in arid regions, the riparian corridor can be populated and lined with adapted riparian vegetation, unvegetated areas such as recently created swales and terraces (interfluves), or a mosaic of these types (Bendix and Hupp 2000). Within the disturbance area extended portions, the ephemeral drainage features are comprised of very shallow compound channels with non-cohesive sandy banks. The sandy substrate is composed of entisols and presents a high infiltration rate (see Section C [Soils] below). Surface

hydrology can vary from perennial to intermittent and, after a flooding event, water tables can drop quickly to low levels due to the permeability of the sandy substrate (Environmental Laboratory 2008).

As rainfall in arid regions is the primary source of water for the majority of the rivers and streams existing within these climactic regions, river and stream complexes are intermittent or ephemeral in character, flowing only during storm events and remaining dry for most of the year. As a result, the analysis of streamflow and changes in compound channel morphology in arid fluvial systems emphasizes flood events (Graf 1988). Flood events and the resulting channel avulsion that occur within arid river systems generally consist of four types:

1. Flash floods,
2. Single peak events,
3. Multiple peak events, and
4. Seasonal floods.

These flood events are partly scale dependent, with flash floods occurring on smaller stream systems (tributaries) and seasonal floods characteristic of large through-flowing rivers (Graf 1988). In arid fluvial systems, flood events are the physical factors that convert usually single meandering channels to a compound/anastomosing morphology (semi-braided [with regular incised channels and multiple relic channels]) (Dunne and Leopold 1978). In several arid regions, large storm events have been responsible for changing the dominant channel configuration from meandering to braided in watersheds of varying sizes (Bendix and Hupp 2000).

Because compound channel fluvial systems, such as the ephemeral washes occurring within the disturbance area, are subject to very wide fluctuations in discharges over a short period of time, their channels can frequently change configuration to accommodate large variations in surface flow as a result of storm events. As a result, arid fluvial systems usually exhibit long periods of little morphologic change interspersed with short-term dramatic changes in channel configuration. Therefore, arid stream geometry is more likely to be influenced strongly by a large event of low recurrence frequency (Allen 1999). The ephemeral washes do no support wetland hydrology because, outside of (remote) flooding events, the hydrology for the ephemeral washes occurring within the disturbance area is generally predictable (AECOM 2009) (Figure 7). The disturbance area is located within an area that presents possible, but undetermined, flood hazards (FEMA Flood Zone Designation D) (FEMA 2009).

C. Soils

The Arid West region is dominated by watersheds that have a high frequency of intermittent and ephemeral dry washes, such that many aquatic resources within the watersheds actually lack the three characteristic features of a wetland (see below). Due to arid climatic conditions and the uneven distribution of precipitation events over time, hydric soils rarely develop (Boettinger 1997, USACE 2007). No detailed soil survey exists for the disturbance area (NRCS 2009a and 2009b). The California Soil Resources Lab mapped three soil complexes occurring within the disturbance area (UC Davis 2009a):

1. Gunsight-Rillito-Chuckawalla
2. Cherioni-Hyder-Cipriano
3. Aco-Rositas-Carrizo

The three soil complexes are generally mapped having a shared boundary near the southern portion of the disturbance area. The Gunsight-Rillito-Chuckawalla complex is located in the western portion of the disturbance area, the Cherioni-Hyder-Cipriano complex is located within the central portion of the disturbance area, and the Aco-Rositas-Carrizo complex is located in the eastern portion of the disturbance area (Figure 8). Of these three complexes, Gunsight-Rillito-Chuckawalla and Aco-Rositas-Carrizo contain several soils that are listed on the National Hydric Soils List (NRCS 2009c).

Only soils that are listed as hydric, have diagnostic hydric properties and/or features, have hydric inclusions, meet the criteria and/or definition for a hydric soil, or have the potential for being hydric by definition are addressed herein. The National Technical Committee for Hydric Soils (NTCHS) define a hydric soil as "a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part" (NRCS 2009b).[5] The NTCHS definition identifies general soil properties that are associated with wetness. Additionally, specific criteria that identify those estimated soil properties unique to hydric soils have been established by NTCHS (1995).[6] Therefore, hydric soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

Hydric soil definitions and NTCHS approved hydric soil criteria are used to generate hydric soil lists (Environmental Laboratory 2008). The National Hydric Soils List (NRCS 2009c), primarily

[5] FR 59(133): 35680-35681 (July 13, 1994).
[6] FR 60(37): 10349 (February 24, 1995).

used as an offsite assessment tool, contains a listing of soils that have a probability of being hydric. Hydric soil indicators are primarily morphological indicators used for field identification of hydric soils and/or soils meeting the hydric soil definition. These hydric soil indicators are a subset of the NTCHS *Field Indicators of Hydric Soils in the United States: A Guide for Identifying and Delineating Hydric Soils, Version 6.0* (USDA 2006). Hydric soil indicators are not intended to replace or relieve the requirements contained in the definition of a hydric soil. Therefore, a soil that meets the definition and/or criteria of hydric can be considered hydric whether or not it exhibits diagnostic field indicators (e.g., the presence of mottles or gleying [redoximorphic features]) at the point of subsurface investigation.

All soils listed as hydric by the National Hydric Soils List (NRCS 2009c) occurring within the survey area are within the entisol soil order. Entisols are young soils primarily originating from sediments and alluvium that show little alteration of the parent material from which they were derived, and that exhibit little pedogenesis (soil formation process) (Brady 1990). Since entisols are associated with fluvial processes, they are by nature dynamic and do not have the ability to develop buried soil horizons, which in turn contribute to *in situ* development of redoximorphic features when conditions are hydric over the appropriate temporal frame.

Although not mapped in detail, three soil series, listed as hydric by the National Hydric Soils List (NRCS 2009c), are known occur within the western, central, and southern portions of disturbance area. An additional five soils occurring within the disturbance area not listed as hydric but classified within the entisol soil order are also discussed in this JDR, as they have the strong potential to be considered as hydric. The eight entisols occurring within the disturbance area are typically associated with drainage features and are described below.

Aco Soil Series

The Aco series are coarse-loamy, mixed, superactive, hyperthermic Typic Haplocalcids. They consist of very deep, well to somewhat excessively drained soils that formed in mixed alluvium on terraces slightly above the flood plain. A typical Aco pedon is composed of sandy loam populated by native shrubs. Slopes for this soil are 0 to 8 percent. The mean annual precipitation for this soil is approximately 4 inches (NRCS 2009a and 2009d).

Beeline Soil Series

The Beeline are loamy, mixed, superactive, calcareous, hyperthermic, shallow Typic Torriorthents. They consist of shallow and very shallow, well-drained soils that formed in mixed

alluvium. Beeline soils are on fan terraces and hillslopes. A typical Beeline pedon is composed of very gravelly sandy loam rangeland. Slopes for this soil range from 3 to 45 percent. The mean annual precipitation for this soil approximately 9 inches (NRCS 2009a and 2009d).

Carrizo Soil Series

The Carrizo series are sandy-skeletal, mixed, hyperthermic Typic Torriorthents. They consist of very deep, excessively drained soils formed in mixed alluvium. Carrizo soils are on flood plains, alluvial fans, fan piedmonts, and bolson floors. A typical Carrizo pedon is composed of extremely gravelly sand rangeland. The slopes for this soil range from 0 to 15 percent. The mean annual precipitation for this soil is approximately 5 inches. Carrizo very gravelly sand, 0 to 9 percent slopes, is on the National List of Hydric Soils (NRCS 2009a, 2009c, and 2009d).

Carsitas Soil Series

The Carsitas series are mixed, hyperthermic Typic Torripsamments. They consist of excessively drained, rapidly permeable, nearly level to strongly sloping and are on alluvial fans, moderately steep valley fills and dissected remnants of alluvial fans. A typical Carsitas pedon is composed of gravelly sand populated by desert shrubs. The mean annual precipitation for this soil is less than 5 inches. Carsitas gravelly sand, 0 to 9 percent slopes; Carsitas gravelly sand, 9 to 30 percent slopes; and Carsitas cobbly sand, 2 to 9 percent slopes, are on the National List of Hydric Soils (NRCS 2009a, 2009c, and 2009d).

Gilman Soil Series

The Gilman series are coarse-loamy, mixed, superactive, calcareous, hyperthermic Typic Torrifluvents. They consist of very deep, well-drained soils that formed in stratified stream alluvium. Gilman soils are on flood plains and alluvial fans. A typical Gilman pedon is composed of cultivated loam. Slopes for this soil range from 0 to 3 percent. The mean annual precipitation for this soil is approximately 7 inches (NRCS 2009a and 2009d).

Hyder Soil Series

The Hyder series are loamy-skeletal, mixed, superactive, calcareous, hyperthermic Lithic Torriorthents. They consist of very shallow and shallow, somewhat excessively drained soils that formed in alluvium from rhyolite and related volcanic rocks. Hyder soils are on mountains and hills. A typical Hyder pedon is composed of extremely gravelly sandy loam rangeland. Slopes

for this soil range between 1 to 70 percent. The mean annual precipitation for this soil is approximately 7 inches (NRCS 2009a and 2009d).

Quilotosa Soil Series

The Quilotosa series are Loamy-skeletal, mixed, superactive, calcareous, hyperthermic Lithic Torriorthents. They consist of very shallow and shallow, somewhat excessively drained soils that formed from granitic and metamorphic rocks. Quilotosa soils are on hills and mountains. A typical Quilotosa pedon is composed of extremely gravelly coarse sandy loam rangeland. Slopes for this soil range between 3 to 65 percent. The mean annual precipitation for this soil is approximately 7 inches (NRCS 2009a and 2009d).

Rositas Soil Series

The Rositas series are mixed, hyperthermic Typic Torripsamments. They consist of very deep, somewhat excessively drained soils formed in sandy eolian material. Rositas soils are on dunes and sand sheets. A typical Rositas pedon is composed of fine sand rangeland. Slope for this soil ranges from 0 to 30 percent with hummocky or dune micro relief. The mean annual precipitation for this soil is approximately 4 inches (NRCS 2009c). Rositas silty clay loam, wet, 0 to 2 percent slopes is on the National List of Hydric Soils (NRCS 2009a, 2009c, and 2009d).

V. METHODOLOGY

This jurisdictional delineation applied presurvey investigations and field surveys to determine the presence (type, area, and extent) or absence of jurisdictional waters of the United States and State.

A. Presurvey Investigations

Prior to conducting the field delineation, EDAW ecologist Joshua Zinn reviewed and identified areas with topographical configurations and vegetative signatures occurring within the disturbance area that may suggest the potential or presence of jurisdictional waters. This information was evaluated by consulting the following available sources:

- 7.5' U.S. Geological Survey (USGS) McCoy Wash (1975), McCoy Peak (1983), Ripley (1975), and Roosevelt Mine topographic quadrangles,
- 2005 Aerial Maps of the Biological Resource Study Area (BRSA) (USDA NAIP),
- The National Wetlands Inventory (NWI) Interactive Wetlands Mapper (USFWS 2009),

- The California Environmental Resources Evaluation System California Wetlands Information System Wetland Databases and Inventories (CERES 2009),
- California Online Soil Survey Manuscripts (NRCS 2009a),
- The Natural Resource Conservation Service Web Soil Survey (NRCS 2009b),
- The National List of Hydric Soils (NRCS 2009c),
- The California Soil Resource Lab (UC Davis 2009a),
- The Information Center for the Environment (ICE) (U.C. Davis 2009b),
- The California Watershed Network (CWN 2009),
- The California Watershed Portal (CalEPA 2009),
- The Office of Water Programs Water Quality Planning Tool (CSU Sacramento 2009),
- The Digital Watershed (USEPA 2009), and
- The National Weather Service Climate Office (NOAA 2009a).

B. Field Survey

EDAW ecologists Jason Phillips, Lindsay Teunis, and Joshua Zinn, and AECOM Environment ecologist Jessica Wilson conducted field assessments and surveys for 10 days (40 person-days) from March 18 through March 27, 2009 (Table 4), to formally delineate all potential jurisdictional waters of the United States and State (jurisdictional waters) occurring within the disturbance area.[7] The newly proposed conceptual Gen-Tie line was added to the disturbance area following completion of spring 2009 surveys and, therefore, has not yet been surveyed. Surveys for this additional area will be conducted following completion of project design (anticipated spring 2010).

Field delineation at the site involved two field teams, each with two ecologists. Teams recorded the presence (including extents, types, and boundaries) of jurisdictional waters with two Trimble XH sub-foot accuracy GPS units. At the close of each field day, all acquired field data were submitted via the internet to EDAW San Diego's Geographic Information Systems (GIS) specialists for post-field processing using Trimble GPS Analyst (Version 2.1) GIS software. Post-field analysis to code, define, designate, and edit all acquired GPS field data representing jurisdictional waters occurring within the disturbance area was conducted in tandem with an EDAW GIS specialist and the ecologists who performed the field work.

[7] Through field surveys, topographical and hydrological investigation, and analysis, EDAW determined that the disturbance area does not support jurisdictional waters of the United States A formal determination for the absence of Federal waters occurring within the disturbance area is currently being pursued through documentation (Jurisdictional Determination) with USACE.

Table 4
Survey Dates and Personnel Conducting Jurisdictional Delineations

Date	Survey Personnel	Survey Activity
03-18-2009	Jason Phillips, Lindsay Teunis, Jessica Wilson, and Joshua Zinn	Site reconnaissance and field delineation
03-19-2009	Jason Phillips, Lindsay Teunis, Jessica Wilson, and Joshua Zinn	Site reconnaissance and field delineation
03-20-2009	Jason Phillips, Lindsay Teunis, Jessica Wilson, and Joshua Zinn	Field delineation and vegetation subsampling
03-21-2009	Jason Phillips, Lindsay Teunis, Jessica Wilson, and Joshua Zinn	Field delineation and vegetation subsampling
03-22-2009	Jason Phillips, Lindsay Teunis, Jessica Wilson, and Joshua Zinn	Field delineation and vegetation subsampling
03-23-2009	Jason Phillips, Lindsay Teunis, Jessica Wilson, and Joshua Zinn	Field delineation and vegetation subsampling
03-24-2009	Jason Phillips, Lindsay Teunis, Jessica Wilson, and Joshua Zinn	Field delineation and vegetation subsampling
03-25-2009	Jason Phillips, Lindsay Teunis, Jessica Wilson, and Joshua Zinn	Field delineation and vegetation subsampling
03-26-2009	Jason Phillips, Lindsay Teunis, Jessica Wilson, and Joshua Zinn	Field delineation and groundtruthing features
03-27-2009	Jason Phillips, Lindsay Teunis, Jessica Wilson, and Joshua Zinn	Field delineation and groundtruthing features

Jurisdictional Waters of the United States

Jurisdictional waters of the United States are defined in 33 CFR. 328.3 (Definitions). The disturbance area has the potential for the presence of, at a minimum, two types of federally regulated waters, warranting the following:

1. Formal delineations for waters of the United States in the form of wetlands based on the three-parameter method.[8] The three-parameter method for identifying and delineating wetlands is outlined in and in accordance with Federal guidance and procedure following the *Corps of Engineers Wetlands Delineation* (Manual) (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (2008 Supplement) (Environmental Laboratory 2008).[9]

2. Formal delineations for other waters of the United States to define and identify the jurisdictional lateral extent of nonwetland waters using field indicators of ordinary high

[8] The three-parameter method is the simultaneous presence (cooccurrence) of wetland hydrology, hydric soil, and hydrophytic vegetation.

[9] The Manual and 2008 Supplement are guidance documents for delineating jurisdictional waters in the form of wetlands only.

water mark (OHWM) as defined by 33 CFR 238.3(e), Federal guidance and procedure outlined in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual* (USACE 2008),[10] and other relevant Federal guidance and procedural documents (see below).

This jurisdictional delineation applied two field methodologies in delineating potential jurisdictional waters of the United States as described below. All potential waters of the United States were delineated to their jurisdictional limits as defined by 33 C.F.R. 328.4 (Limits of Jurisdiction).

Methodology One: To make a determination that an area is a wetland, the Manual requires that under "normal circumstances" a minimum of one primary wetland indicator be confirmed for each of the three wetland parameters (Environmental Laboratory 1987). Pre-field surveys and a detailed field reconnaissance were conducted to ascertain and confirm the presence or absence of any one of the three wetland parameters occurring within the disturbance area (Table 5). Once pre-field surveys and field reconnaissance were completed, it was determined that no hydrophytic vegetation or wetland hydrology occurred within the disturbance area. Therefore, it was determined that a formal delineation for wetlands would not be required, as no potential for jurisdictional waters of the United States in the form of wetlands was present within the disturbance area. However, the Arid West region is dominated by watersheds with intermittent and ephemeral dry washes, such as the one occurring within the disturbance area. Consequently, many aquatic resources lack the three characteristic features of a wetland, but they still perform important wetland functions (USACE 2007).[11]

Table 5
Survey Results for Potential Jurisdictional Waters of the United States in the Form of Wetlands[a] Occurring within the Survey Area

Vegetation Community	Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	Potential Federal Waters	Potential State Waters	Comments
Desert Dry Wash Woodland	No	Likely (soil polygons and mapping are unconfirmed by NRCS)	No	No	Yes	Confirm Federal jurisdictional status with JD

[a] As defined by 33 CFR 328.3(b); 40 CFF 230.3(t); the Manual; and the 2008 Supplement.

[10] Datasheets from this field delineation manual were used as guidance documents for this delineation and are not included in this JDR.

[11] Based on field reconnaissance. Wetland Determination Data Forms were used as guidance documents for this delineation and are not included in this JDR, as the survey area did not support any one of the three wetland parameters.

Methodology Two: OHWM indicators were used to delineate the lateral jurisdictional extent of potential waters of the United States Lateral jurisdictional limits were established for all drainage features/channels occurring within the disturbance area in conjunction with field verification for a determination of the OHWM, which provides an acceptable estimate for the lateral jurisdictional limits. The OHWM of the drainage features/channels was identified on the basis of the following:

- Water marks within their respective channel banks established by the fluctuations of water and indicated by physical characteristics such as clear, natural lines impressed on the banks;
- Scour and shelving, local deposition, distinct and indistinct terraces, and changes in the character of soil;
- The presence of developed longitudinal bars within channel margins;
- Type, abundance, and relative age of vegetation and/or destruction of terrestrial vegetation, and the presence and absence of litter and debris within the channels;
- Channel configuration, estimated streamflow behavior, and other subtle geomorphic evidence indicative of regular flow levels;
- Consideration of precipitation patterns and lack of consistent flow;
- Geomorphic OHWM indicators (e.g., surface relief, cobblebars, benches, crested ripples, particle size distribution, mudcracks, gravel sheets, desert pavement, and dunes); and
- Pattern and location of relictual channels and discontinuous drainage features.

The criteria for frequency and duration of the OHWM have not been defined under the CWA or under any guidance from USACE for field delineators; therefore, identifiable field indicators and characteristics of OHWM, best professional judgment, interpretation of 33 C.F.R. 328.3(e), and appropriate regulatory guidance letters (RGLs) were applied to determine the potential jurisdictional extent of OHWM within the disturbance area. Arid West channels have recently been described as "ordinary" when they typically correspond to a 5- to 8-year event, and typically have an active floodplain with sparse vegetation cover, shifts in soil texture, and occasional alignment with distinctive bed and bank features (USACE 2007). However, modeling has shown that slightly larger events (5- to 10-year recurrence) may be necessary to engage the active floodplain in arid systems (Lichvar et al. 2006).

OHWM and the limits of jurisdiction are discussed in the Preamble to the USACE November 13, 1986, Final Rule, Regulatory Programs of the Corps of Engineers, Federal Register Volume 51, No. 219, page 41217, which discusses the proper interpretation of 33 C.F.R. Part 328.4 (c)(1) as follows:

> Section 328.4: *Limits of Jurisdiction.* Section 328.4 (c)(1) defines the lateral limit of jurisdiction in non-tidal waters as the OHWM provided the jurisdiction is not extended by the presence of wetlands. Therefore, it should be concluded that in the absence of wetlands the upstream limit of Corps jurisdiction also stops when the OHWM is no longer perceptible.

In addition, RGL 88-06, issued June 27, 1988, discussed the OHWM as follows:

> OHWM: The OHWM is the physical evidence (shelving, debris lines, etc.) established by normal fluctuations of water level. For rivers and streams, the OHWM is meant to mark the within-channel high flows, not the average annual flood elevation that generally extends beyond the channel.[12]

RGL 05-05, issued December 7, 2005, discusses the field practice and practicability of identifying, determining, and applying the OHWM for nontidal waters under Section 404 of the CWA (and under Sections 9 and 10 of the Rivers and Harbors Act of 1899), and states the following:

> Where the physical characteristics are inconclusive, misleading, unreliable, or otherwise not evident, districts may determine OHWM by using other appropriate means that consider the characteristics of the surrounding areas, provided those other means are reliable.[13] Such other reliable methods that may be indicative of the OHWM include, but are not limited to, lake and stream gage data, elevation data, spillway height, flood predictions, historic records of water flow, and statistical evidence.

[12] Following RGL 05-06 (Expired RGLs). Unless superseded by specific provisions of subsequently issued regulations or RGLs, the guidance provided in RGLs generally remains valid after the expiration date as discussed in the Federal Register notice on RGLs of March 22, 1999, FR Vol. 64, No. 54, page 13783.

[13] In some cases, the physical characteristics may be misleading and would not be reliable for determining the OHWM. For example, water levels or flows may be manipulated by human intervention for power generation or water supply. For such cases, districts should consider using other appropriate means to determine the OHWM (RGL 05-05).

Many stream channels in arid regions are dry for much of the year and, at times, may lack hydrology indicators entirely or exhibit relic OHWM features from exceptional hydrological events. RGL 05-05 further states the following:

> When making OHWM determinations, districts should be careful to look at characteristics associated with ordinary high water events, which occur on a regular or frequent basis. Evidence resulting from extraordinary events, including major flooding and storm surges, is not indicative of OHWM. For instance, a litter or wrack line resulting from a 200-year flood event would in most cases not be considered evidence of an OHWM.

Jurisdictional Determination

Determining whether the delineated waters within the disturbance area are in fact jurisdictional waters of the United States and under the regulatory administration of USACE (including the final acreages and types of jurisdictional waters of the United States) is primarily based on the procedural changes and Federal guidance outlined by the following:[14]

a. The June 5, 2007, USACE/USEPA Memorandum Re: Jurisdiction Following The U.S. Supreme Court Decision In *Rapanos v. United States* on the interpretation of the *Rapanos* Supreme Court case for making a Jurisdictional Determination (JD) for waters of the United States (including wetlands) (USEPA/USACE).[15, 16] This memorandum provides guidance to USEPA and USACE on implementing the *Rapanos* Supreme Court decision.

b. The June 5, 2007, USEPA/USACE Memorandum for the Field: Coordination on JDs under CWA in light of *SWANCC* [17] and *Rapanos* Supreme Court decisions.[18] This memorandum outlined procedures that replace the coordination procedures contained in the January 2003 USEPA/USACE guidance implementing the *SWANCC* decision (but

[14] This delineation followed these procedural guidance documents to ascertain the jurisdictional status of all delineated waters occurring within the disturbance area.

[15] "Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. United States & Carabell v. United States*" (June 5, 2007).

[16] 126 S. Ct 2208 (2006). This case was consolidated with *Carabell v. United States*.

[17] *Solid Waste Agency of Northern Cook County [SWANCC] v. United States Army Corps of Engineers* (531 U.S. 159, 121 S Ct 675 [2001]).

[18] "Memorandum for Director of Civil Works and US EPA Regional Administrators" (June 5, 2007).

leaves the remainder of that guidance unaffected) and articulates new coordination procedures for JDs affected by *Rapanos* (USEPA/USACE).[19]

c. The May 5, 2007, USACE *Jurisdictional Determination Form Instructional Guidebook* (USACE/USEPA 2007) and the Approved JD Form.

d. The January 28, 2008, Coordination Memorandum. This memorandum outlined the process for coordinating JDs with USEPA and USACE.

e. The June 26, 2008, USACE RGL 08-02. This RGL explains the differences between Approved JDs and Preliminary JDs, and provides guidance on when an Approved JD is required and when a landowner, permit applicant, or other "affected party" can decline to request and obtain an Approved JD and elect to use a Preliminary JD instead.[20]

f. The December 2, 2008, USACE Guidance Memorandum Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision In *Rapanos v. United States* & *Carabell v. United States*. This guidance incorporates revisions to the USEPA/USACE Memorandum originally issued on June 6, 2007, after careful consideration of public comments received and based on the agencies' experience in implementing the *Rapanos* decision.

g. The December 2, 2008, USACE Response To Comments "Clean Water Act Jurisdiction Following The Supreme Court's Decision In *Rapanos v. United States & Carabell v. United States Guidance*" Issued June 5, 2007.

h. The December 2, 2008, USACE Questions and Answers Regarding the Revised *Rapanos & Carabell* Guidance.

For this JDR, the formal procedure for a JD requires the submittal of an Approved JD Form (Attachment 2) to USACE (Los Angeles District, South Coast Branch) following Federal guidance, as applicable. Based on the results of the delineation and Federal guidance outlined above, this JDR was prepared to provide support to USACE in formal determination of all waters delineated within the disturbance area as isolated waters, and thus not under regulatory administration by USACE for the following reasons:

1. All ephemeral washes delineated within the disturbance area abate into the landscape and become a discontinuous ephemeral wash.

[19] "Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. United States & Carabell v. United States*" (June 5, 2007).
[20] RGL 08-02 outlines that Preliminary JDs cannot be appealed.

2. No ephemeral wash delineated within the disturbance area directly connected with the McCoy Wash, which is itself a large ephemeral wash that presents an indirect hydrological connection with the Colorado River.

3. The lack of hydrological connectivity of the ephemeral washes into storm drains, culverts, or ditches (no storm drains are present within the disturbance area).

4. The lack of hydrological connectivity (presenting a significant nexus [SNX] to any traditional navigable waterbody [TNW]) for washes occurring within the disturbance area.

5. The evaluation of the ephemeral washes not presenting a SNX to a TNW include the volume, duration, and frequency of the flow of water to a TNW (the Salton Sea, 60 miles southwest and the Colorado River, 15 miles east of the disturbance area).

6. Examination of the flow characteristics and functions of ephemeral washes (which do not support adjacent wetlands) has been determined not to present a significant effect on the chemical, physical, and biological integrity of downstream TNWs.

7. Lack of an ecological connection to TNWs. The ephemeral washes present a low to no potential or capacity to transfer nutrients and organic carbon (vital to support downstream foodwebs [e.g., macroinvertebrates] present in headwater streams or to convert carbon in leaf litter making it available to species downstream), nor present habitat services such as providing spawning areas for recreationally or commercially important species in downstream waters.

Jurisdictional Waters of the State

Under Section 1600 et seq. of the CFGC, the CDFG regulates activities that would alter the flow, bed, channel, or bank of streams and lakes. The limits of CDFG jurisdiction are defined in CFGC Section 1600 et seq. as the "bed, channel or bank of any river, stream or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit."[21] However, in practice, CDFG usually extends its jurisdictional limit and assertion to the top of a bank of a stream, the bank of a lake, or outer edge of the riparian vegetation, whichever is wider.

[21] The California Code of Regulations (Title 14 CCR 1.72) defines a stream as: "…a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation."

Boundaries for xeric riparian waters of the State were determined (and recorded) by the presence of shelving and/or scour resulting in an established bank, bed, and channel of an ephemeral wash feature and its associated riparian areas (where applicable). In specific areas within the ephemeral wash channels, where evidence of shelving or scour were absent, subsurface investigations were undertaken to identify established channel banks. Although some portions of the ephemeral washes present shelving with smooth-toe transitions, these features are composed of friable sand and are evidence of recent sand deposition covering the bank features.

For wetlands and other aquatic habitats occurring in California, CDFG relies on USFWS wetland definition and classification system, which is based on *Classification of Wetland and Deepwater Habitats of the United States* (Cowardin et al. 1979). Therefore, jurisdictional wetland delineations within the disturbance area have been conducted based on the one-parameter[22] method outlined in CDFG/USFWS guidance documents and classification manual(s) to define presence and State jurisdictional extent. The Cowardin method requires diligence to avoid false positive conclusions (e.g., concluding that an area with no transitional relation to the aquatic system is a wetland based on presence of vegetation equally likely to be found in wetland or nonwetland circumstances).[23]

Based on the CFGC Section 1600 et seq. definition and CDFG regulatory practice, field diagnostic features were used to determine and delineate the presence of two types of jurisdictional waters, which collectively and individually represent the jurisdictional extent, occurring within the disturbance area:

1. Desert Dry Wash Woodland, and
2. Unvegetated Ephemeral Dry Wash.

<u>Desert Dry Wash Woodland</u>

The jurisdictional limits of desert dry wash woodland was considered, recorded, and mapped for areas within all washes and wash features where the association of wash-dependent vegetation *was* present and/or where Sonoran creosote bush scrub (Holland Code 33100) was not established at more than 5 percent absolute cover. The jurisdictional linear and lateral extent of

[22] For Federal jurisdictional waters, a determination for the presence of wetland is based on the presence of three parameters occurring simultaneously at the area of investigation and study. These three wetland parameters are 1) hydrophytic vegetation, 2) hydric soils, and 3) wetland hydrology. Therefore, for State-defined wetlands, only one of these three wetland criteria is required to be present for the State to consider an aquatic feature a wetland.

[23] Although aquatic features can be delineated and defined as wetlands under the Cowardin Classification System, they are not necessarily *jurisdictional* waters of the United States or State.

desert dry wash woodland occurring within the disturbance area is collectively composed of three xeric riparian features:

i. wash-dependent vegetation,
ii. vegetated ephemeral dry wash, and
iii. riparian interfluves.

Wash-Dependent Vegetation

Wash-dependent vegetation was considered, recorded, and mapped for ephemeral washes and desert dry wash woodland occurring within the disturbance area. Subsampling of wash-dependent vegetation occurred for 19 selected portions (reaches) of the (relatively) major washes occurring within the western, central, and southern portions of the disturbance area (Table 6) (Figure 9) (Attachment 3). The MMU used for the wash-dependent vegetation subsampling was 0.01 acre. The wash-dependent vegetation occurring within desert dry wash woodland is composed of nine plant species:

a. catclaw (*Acacia greggii*),
b. desert starvine (*Brandegea bigelovii*),
c. desert lavender (*Hyptis emoryi*),
d. ironwood (*Olneya tesota*),
e. blue palo verde (*Parkinsonia florida*),
f. big galleta grass (*Pleuraphis rigida*),
g. smoke tree (*Psorothamnus spinosus*),
h. honey mesquite (*Prosopis glandulosa*), and
i. spiny senna (*Senna armata*).

Table 6
Primary Ephemeral Wash-Dependent Vegetation Cover Subsampling[a]

Sub-Sampling Area	Vegetated[b] Ephemeral Dry Wash (DDWW)	Sampled[b] Wash Dependent Vegetation (DDWW)	Riparian[b] Interfluve (DDWW)	Total[b] Subsample Area (ωi)	% Cover Wash Dependent Vegetation (χi)	(ωi*χi)
1	1.22	0.02		1.24	0.016129	0.02
2	0.5	0.13		0.63	0.206349	0.13
3	1.52	0.34		1.86	0.182796	0.34
4	0.1	0.14		0.24	0.583333	0.14
5	2.1	0.46		2.56	0.179688	0.46
6	2.13	0.26		2.39	0.108787	0.26

Sub-Sampling Area	Vegetated[b] Ephemeral Dry Wash (DDWW)	Sampled[b] Wash Dependent Vegetation (DDWW)	Riparian[b] Interfluve (DDWW)	Total[b] Subsample Area (ωi)	% Cover Wash Dependent Vegetation (χi)	(ωi*χi)
7	0.83	0.38	0.01	1.22	0.311475	0.38
8	0.83	0.35		1.18	0.296610	0.35
9	3.85	1.32		5.17	0.255319	1.32
10	2.68	1.11	2.36	6.15	0.180488	1.11
11	0.18	0.13		0.31	0.419355	0.13
12	0.21	0.18		0.39	0.461538	0.18
13	0.57	0.29		0.86	0.337209	0.29
14	4.92	1.85	8.03	14.8	0.125000	1.85
15	0.55	0.07		0.62	0.112903	0.07
16	0.59	0.19		0.78	0.243590	0.19
17		0.31		0.31	1.000000	0.31
18[c]	0.96	0.3		1.26	0.238095	0.3
19[c]	0.71	0.28		0.99	0.282828	0.28
*SUM(ωi*χi)*						*8.11*
SUM ωi						*42.96*
Weighted Mean SUM (ωi*χi)/SUM ωi						**0.19**

[a] A weighted arithmetic mean was calculated where the estimate of absolute cover (χ) equals the sum of each sample of absolute cover (χi) multiplied by the area of each sample, or the weight (ωi), divided by the sum of all weights. The formula used was: $\chi = \sum\omega i(\chi i)/\sum\omega i$ OR $X = \omega 1(\chi 1) + \omega 2(\chi 2) + \omega 3(\chi 3)\ldots / \omega 1 + \omega 2 + \omega 3\ldots$

[b] In acres.

[c] A two subsampling areas (subsampling areas 18 and 19) are not included with the August 11, 2009 disturbance area (see below).

Using GPS units, field data points were taken for all seven wash-dependent plant species occurring within the three designated subsampling areas of the desert dry wash woodland. Their canopy diameters (individuals and mixed/monotypic stands) were recorded for absolute cover. For the three subsample areas within the primary wash, a weighted arithmetic mean of percent cover for wash-dependent vegetation was calculated by dividing the total acres of the subsample area by the acres of mapped wash-dependent vegetation. An overall mean of the three subsample areas was then calculated. This percent cover was extrapolated to estimate total cover of wash-dependent vegetation occurring within desert dry wash woodland of the primary wash. For the smaller washes located in the west and northwest portion of the disturbance area, all wash-dependent vegetation was mapped discretely to determine absolute cover of desert dry wash woodland occurring in these features.

As noted above in the project description, several modifications were made to the disturbance area after completion of spring 2009 surveys. The wash-dependent vegetation subsampling areas were initially chosen to obtain a comprehensive ecological perspective, with regard to the composition and distribution the wash-dependent vegetation (as a component of desert dry wash

woodland) occurring within the original disturbance area. Considering the recent project footprint changes that have resulted in avoiding dry desert wash woodland, the latest disturbance area now excludes portions of subsampling areas 18 and 19 (located within the southern-most portion of the original disturbance area [Figure 9]).

The now excluded subsampling areas 18 and 19 were observed to contain densely populated wash-dependent vegetation onsite. Retaining these data creates a more conservative estimate of the wash-dependent vegetation acreage within the new disturbance area, and preserves the statistical integrity of the original subsampling model. This is the rationale for retaining the weighted arithmetic mean depicted in Table 6, despite the aforementioned disturbance area modifications.

Vegetated Ephemeral Dry Wash

Vegetated ephemeral dry wash are desert washes that present an established bed, bank, and channel that support wash-dependent vegetation (see methodology for delineating unvegetated ephemeral dry wash, below).

Riparian Interfluves

Riparian interfluves are islands or terraces populated by wash-dependent vegetation or an intermix of wash-dependent vegetation and Sonoran creosote bush scrub that are encompassed by vegetated and/or unvegetated ephemeral dry wash (see below) and desert dry wash woodland (the xeric riparian extent). Riparian interfluves are considered a jurisdictional water (as a component of desert dry wash woodland).

<u>Unvegetated Ephemeral Dry Wash</u>

Unvegetated ephemeral dry washes make up the other component of jurisdictional waters within the disturbance area. They are defined by shelving and/or scour resulting in an established bed, bank, and channel. In areas where evidence of distinct shelving and/or scour were absent, but some indication of past surface waterflow could be observed, it was ascertained that these features were either swales (that support low volume and duration surface flow and/or were low lying undefined relatively linear features in the landscape that are unvegetated or primarily populated exclusively by Sonoran creosote bush scrub) or eroded relictual washes (that support sheetflow) during rain events. Unvegetated ephemeral dry wash primarily does not support wash-dependent vegetation. There are sporadic occurrences of individual trees; however, based on the minimum mapping unit of 0.01 acre, these areas are unvegetated.

Jurisdictional lateral extents of the washes were determined by the farthest extents of the respective established channel bed and banks (including shelving and scouring) of each subchannel. The delineation of unvegetated ephemeral washes collectively includes all respective subchannels of each larger wash into linear ephemeral wash features for jurisdictional waters (see below). Jurisdictional linear extents of the washes were determined by the farthest extents of the established channel bed and banks (including shelving and scouring). When the established channel bed and banks began to transition into less distinct features, such as features that only support sheet flow, and/or features that began to blend into the landscape and/or reflect the features of a swale or relictual channel, jurisdictional linear extent(s) ceased.

All washes occurring within the disturbance area are generally linear. However, the washes are collectively made up of multiple subchannels of varying sizes, which exhibit sinuosity and interface, resulting in anastomosed morphology. By virtue of the anastomosed morphology occurring within the washes, there are interfluves that have been formed by these multiple subchannels. Within the unvegetated ephemeral dry wash, there are interfluves of Sonoran creosote bush scrub habitat between the channels of the dry washes. These interfluves are upland features, encompassed by unvegetated ephemeral dry wash, and are not considered jurisdictional. Channels appear to remain visible on a recent aerial map of the disturbance area (USDA NAIP 2005) beyond what was delineated. However, these areas were ground-truthed during spring 2009 to confirm that all evidence of bed, banks, scour, and shelving have abated and/or the vegetation associated with swales is Sonoran creosote bush scrub.

VI. RESULTS

A. Jurisdictional Waters of the United States

The disturbance area does not support or contain jurisdictional waters of the United States (see above) (Table 7). A summary of jurisdictional waters of the United States delineated within the disturbance area is provided in Table 8.

Table 7
Potential Jurisdictional Waters of the U.S. and State Occurring within the Survey Area[a]

Type of Jurisdictional Waters	Type of Habitat (Holland 1986)	Type of Habitat (Cowardin et al. 1979)	Area of Aquatic Resource (ac)[b]		
			Disturbance Area[c]	Surveyed, No Longer a Part	Total Survey Area
Jurisdictional Waters of the U.S.					
None	N/A	N/A	0.0	0.0	0.0
		Total USACE Waters =	*0.0*	*0.0*	*0.0*
		Subtotal Jurisdictional Waters of the U.S.	***0.0***	***0.0***	***0.0***
Jurisdictional Waters of the State					
Xeric Riparian Extent	Desert Dry Wash Woodland (Holland Code 62200)	Palustrine; Forested, Broad-Leaved, Evergreen, Intermittently Flooded/ Temporary, Well Drained/Fresh, Alkaline	120.5	3.3	123.8
Ephemeral Channel	Nonvegetated Channel (Holland Code 64200)	Riverine; Unconsolidated Bottom, Sand, Intermittently Flooded, Temporary, Well Drained/ Fresh, Alkaline	8.3	0.5	8.8
		Total CDFG Waters =	*128.8*	*3.8*	*132.6*
		Subtotal Jurisdictional Waters of the State	***128.8***	***3.8***	***132.6***
Grand Total Jurisdictional Waters			**128.8**	**3.8**	**132.6**

[a] Based on the total area of jurisdictional waters delineated within the disturbance area. Final acreages of jurisdictional waters of the U.S. will be based on the JD process undertaken by the USACE/USEPA to confirm the findings of this JDR (see above). The total area of federally regulated waters may change after the formal JD process.

[b] Acreage of all jurisdictional waters occurring within the disturbance area was determined by using the GIS program ArcGIS. All acreages are rounded to the nearest tenth.

[c] Disturbance area is based on the August 11, 2009 design.

Table 8
Summary of Potential Jurisdictional Waters of the U.S. Occurring within the Survey Area

Form of Jurisdictional Waters of the U.S.	Federal Regulatory Authority	Type of Habitat	Acres within the Survey Area		
			Disturbance Area[a]	Surveyed, No Longer a Part	Total Survey Area
None	N/A	N/A	0.0	0.0	0.0
Total			**0.0**	**0.0**	**0.0**

[a] Disturbance area is based on the August 11, 2009 design.

B. Jurisdictional Waters of the State

All desert dry wash woodland and unvegetated ephemeral dry desert washes within the disturbance area were delineated as waters of the State. Jurisdictional Waters were mapped on a current aerial photograph at a scale of 1 inch = 750 feet (Figure 10). Photo locations occurring within the disturbance area are included in Figure 11. Survey area photos are included in Figures 12 through 22. Waters of the State were not delineated outside of the disturbance area.

There are multiple ephemeral washes occurring within the disturbance area. These ephemeral washes are primarily located within the western, central, and southern portions of the disturbance area. Virtually all the ephemeral washes occurring within the disturbance area exhibit a northwest to southeast flow orientation, with the largest ephemeral wash extending up to approximately 15,000 feet. All ephemeral washes occurring within the disturbance area abate (terminate) into the desert landscape. This more developed ephemeral washes support extensive desert dry wash woodland within the western, central, and southern portions of the disturbance area. Unvegetated ephemeral dry desert, which is primarily devoid of wash-dependent plant species due to less availability of surface and subsurface hydrology, primarily occurs within the east and southeast portions of the disturbance area.

The total area of all waters of the State delineated within the disturbance area is 128.8 acres (Table 7). A summary of jurisdictional waters of the State delineated within the disturbance area is provided in Table 9. Of the 128.8 acres of jurisdictional waters of the State, 120.5 acres are composed of desert dry wash woodland and 8.3 acres are composed of unvegetated ephemeral dry wash. Based on wash-dependent vegetation subsampling for the primary wash (19 percent absolute cover [22.9 acres wash-dependent vegetation]) the 120.5 acres of desert dry wash woodland occurring within the disturbance area is composed of 22.9 acres of wash-dependent vegetation (Attachment 3). The 22.9 acres absolute cover of wash dependent vegetation is a separate component of the desert dry wash woodland, which is distributed throughout the 76.5 acres of vegetated ephemeral dry wash, and 21.1 acres of riparian interfluves occurring (Table 10).

Table 9
Summary of Potential Jurisdictional Waters of the State Occurring within the Survey Area[a]

Form of Jurisdictional Waters of the State	Regulatory Authority	Type of Habitat	Acres within the Survey Area		
			Disturbance Area[b]	Surveyed, No Longer a Part	Total Survey Area
Xeric Riparian Extent	CDFG, RWQCB	Desert Dry Wash Woodland	120.5	3.3	123.8
Unvegetated Washes	CDFG, RWQCB	Ephemeral Drainage Features	8.3	0.5	8.8
Total			**128.8**	**3.8**	**132.6**

[a] Acreage of all jurisdictional waters occurring within the disturbance area was determined by utilizing the GIS program ArcGIS. All acreages are rounded to the nearest tenth.
[b] Disturbance area is based on the August 11, 2009 design.

Table 10
Components of Jurisdictional Waters of the State Occurring within the Disturbance Area[a]

Type of Jurisdictional Waters	Acres
Unvegetated Ephemeral Dry Wash	8.3
Dry Desert Wash Woodland	120.5
Wash-Dependent Vegetation	*22.9*
Riparian Interfluve	*21.0*
Vegetated Ephemeral Dry Wash	*76.6*
Total	**128.8**

[a] Disturbance area is based on the August 11, 2009 design. Acreage of all components of jurisdictional waters occurring within the disturbance area was determined by utilizing the GIS program ArcGIS. All acreages are rounded to the nearest tenth.
[b] Acreage for wash-dependent vegetation occurring within the primary wash was extrapolated based on weighted mean cover obtained through subsampling of 120.5 acres of desert dry wash woodland and multiplying this figure by the 19 percent weighted average of wash-dependent vegetation which resulted in 22.9 acres of wash-dependent vegetation occurring within the primary wash (Table 6). The portion of wash-dependent vegetation that was mapped as riparian interfluves or vegetated ephemeral dry wash in the field was deleted from the acreages for riparian interfluves and vegetated ephemeral dry wash to accurately reflect the acreage of the components of desert dry wash woodland. Of the 22.9 acres of wash-dependent vegetation, approximately 8.3 acres was physically mapped as a part of field subsampling, **3.2** acres of extrapolated area was subtracted from riparian interfluves, and the remaining **11.4** acres of extrapolated area was subtracted from vegetated ephemeral dry wash (an expanded methodology is located in Attachment 3).

C. Discussion

128.8 acres of jurisdictional waters of the State have been delineated within the disturbance area. For any activity proposing to adversely impact and discharge waste that could affect waters of the State, but do not affect Federal waters, issuance of the following permits by the requisite State resource agencies are required:

1. CFGC Section 1602 Lake and Streambed Alteration Agreement. CDFG regulates activities that would alter the flow, bed, channel, or bank of streams and lakes. As conditional to this permit, mitigation will be required. Mitigation for unavoidable permanent impacts to jurisdictional waters within the disturbance area could be mitigated via a combination of methods. The mitigation could occur in the form of approved mitigation bank credits, an approved in-lieu fee program, conservation easement(s), and/or jurisdictional habitat creation-restoration (that results in a net increase in jurisdictional habitat acreage), enhancement, or creation-restoration combined with enhancement; however, the mitigation could not result in a net loss of jurisdictional habitat or wetland functions and values. Project compliance with State policy, i.e., California Wetlands Conservation Policy (EO W-59-93), provides for "no overall net loss" of wetlands and achieving a "long-term net gain in the quantity, quality, and permanence of wetlands acreage and values in California." Therefore, a minimum 1:1 creation-restoration ratio would be applied toward any impacts to jurisdictional waters. Project-specific mitigation ratios would be developed in consultation with CDFG.

   As a requirement of the 1602 permit application, the development of a conceptual mitigation, maintenance, and monitoring plan would be required for the mitigation, which is a requirement of both the State 1602 permit applications. This plan should include details regarding site preparation (e.g., grading), planting specifications, and irrigation design, as well as maintenance and monitoring procedures. The plan should outline yearly success criteria and remedial measures should the mitigation effort fall short of the success criteria. Any riparian mitigation that cannot be achieved through onsite creation-restoration and enhancement should be performed off site, typically per agency guidance within the same hydrologic unit (watershed) where impacts occur. Alternatively, the mitigation obligations may also be satisfied by participating in a fee-based mitigation program through a wetland mitigation bank. The proposed mitigation is subject to the resource agencies' review and discretion; thus, the mitigation obligations for the impacts to jurisdictional wetland habitats may change from those recommended here.

2. CWC Section 13000 et seq. (Porter-Cologne) Waste Discharge Requirement (WDR). RWQCB regulates the "discharge of waste" to waters of the State.[24] The definition of the waters of the State is broader than that for waters of the United States in that all waters are considered to be a water of the State regardless of circumstances or condition. The term "discharge of waste" is also broadly defined in Porter-Cologne, such that discharges of waste include fill, any material resulting from human activity, or any other "discharge" that may directly or indirectly impact waters of the State. As conditional to this permit, best management practices (BMPs) will be required to ensure compliance with State water quality standards. BMPs can also be specified by RWQCB, based on the report of waste discharge (ROWD) (filed with RWQCB by the applicant), which is authorized to regulate discharges of waste and fill material to waters of the State (including "isolated" waters and wetlands), through the issuance of a WDR.[25] WDRs are commonly issued based on the threshold of allowable pollutants into waters of the State.

   Under Porter-Cologne, all applicants proposing to discharge waste that could affect the quality of waters of the State, other than into a community sewer system, shall file with the appropriate RWQCB an ROWD containing such information and data as may be required by RWQCB.[26] RWQCB will then respond to ROWD by issuing a WDR in a public hearing, or by waiving WDRs (with or without conditions) for that proposed discharge. RWQCB has a statutory obligation to prescribe WDRs, except where RWQCB finds that a waiver of WDRs for a specific type of discharge is in the public interest.[27] Therefore, all parties proposing to discharge waste that could affect waters of the State, but do not affect Federal waters (which requires a CWA Section 404 permit and CWA Section 401 Certification) must file an ROWD with the appropriate RWQCB prior to issuance of the WDR.[28]

[24] "Waters of the State" is defined in CWC Section 13050(e).
[25] Section 13263 of Porter-Cologne. "Waters of the State" is defined in CWC Section 13050(e).
[26] CWC Section 13260(a).
[27] CWC Section 13269.
[28] CWC Section 13260.

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ATTACHMENT 1

FIGURES

Map Location

1 inch = 40 miles

0 40 80 Miles

Blythe Solar Power Project Jurisdictional Delineation Report

Figure 1 Regional Map

Source: ESRI; AECOM 2009

Solar Millennium

AECOM

Date: August 2009

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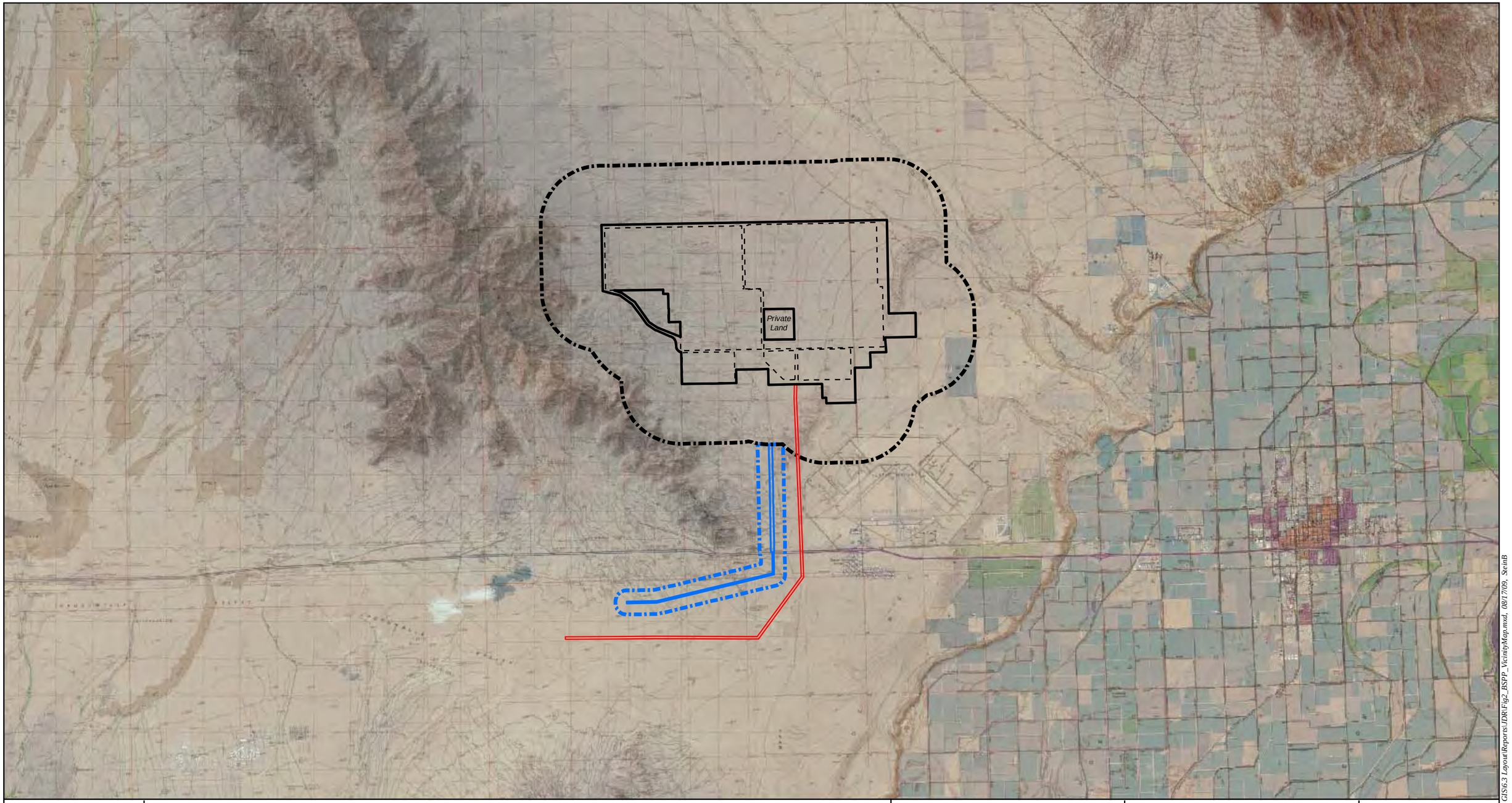

Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Biological Resource Survey Area (BRSA)
- Buffer Survey Area (Surveyed No Longer a Part)
- Disturbance Area (Surveyed - No Longer a Part)

Source: USGS; NAIP 2005; AECOM 2009

N W E S

1 inch = 8,333 feet

0 8,333 16,666 Feet

Blythe Solar Power Project
Jurisdictional Delineation Report

Figure 2
Project Vicinity Map

Solar Millennium

AECOM

Date: August 2009

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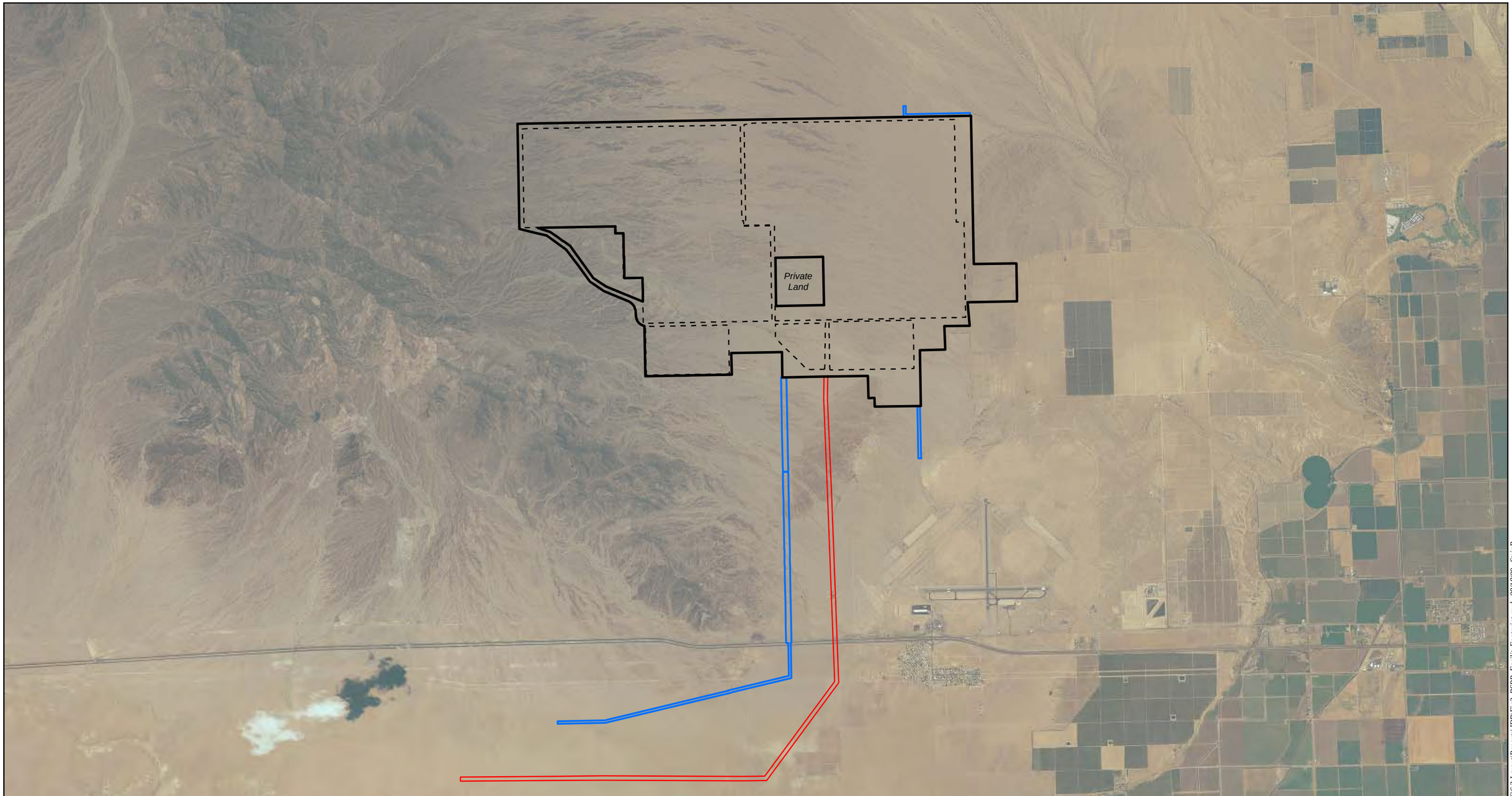


Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Disturbance Area (Surveyed - No Longer a Part)

Source: NAIP 2005; AECOM 2009

N
W E
S

1 inch = 5,280 feet

0 5,280 10,560 Feet

Blythe Solar Power Project
Jurisdictional Delineation Report

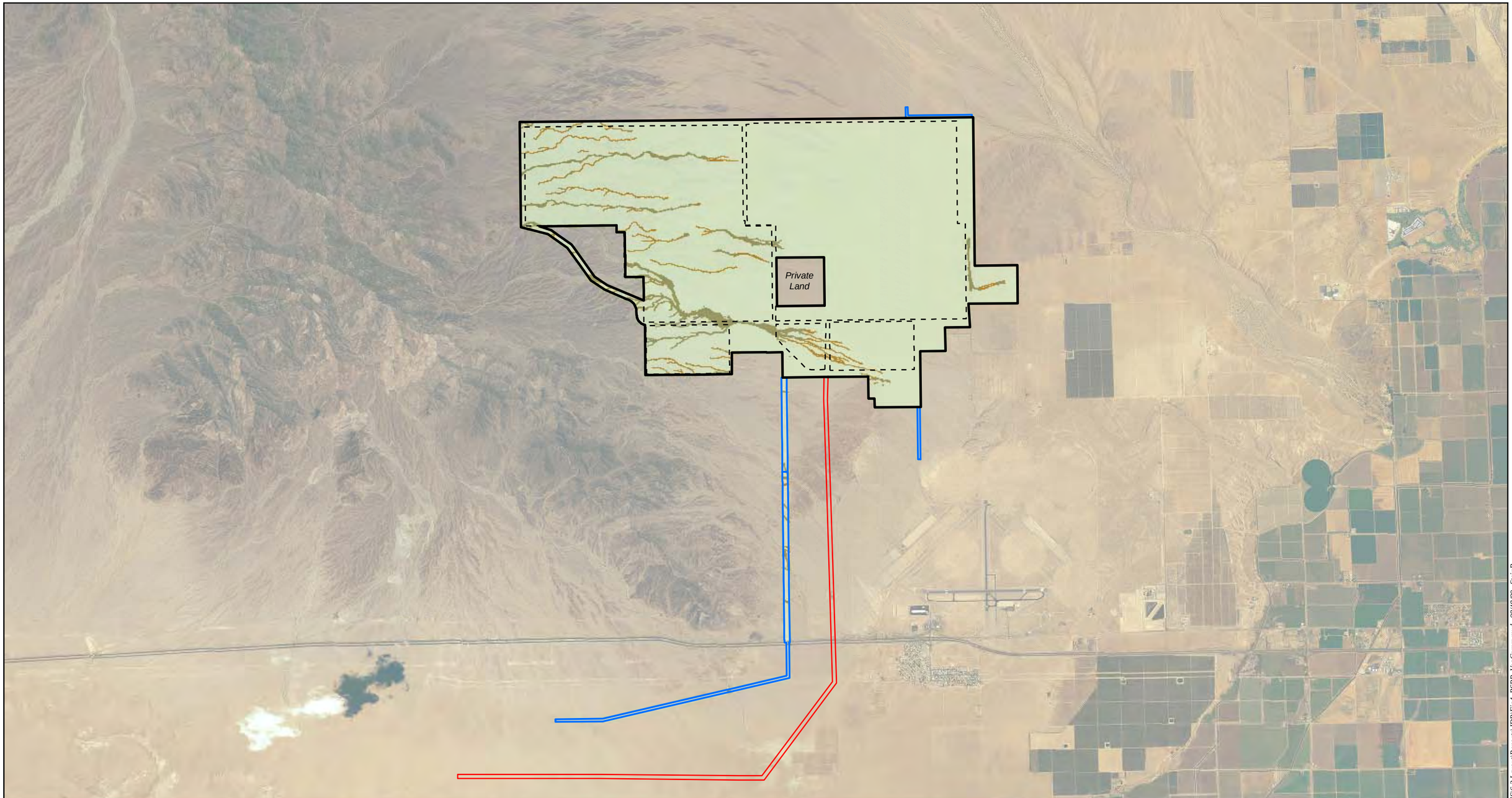
Figure 3
Facility Footprint

Solar Millennium

AECOM

Date: August 2009

Path: P:\2009\09080082 Sol MI Blythe\6.0 GIS\6.3 Layout\Reports\JDR\Fig3_BSPP_FacilityFootprint.mxd, 08/18/09, SteinB



Map Location

Legend

- Facility Footprint
- Disturbance Area
- Possible Transmission Line Route
- Disturbance Area (Surveyed - No Longer a Part)

Vegetation Communities

Riparian

- Desert Dry Wash Woodland
- Unvegetated Ephemeral Dry Wash

Upland

- Sonoran Creosote Bush Scrub

Other

- Agriculture (Active and Fallow)
- Developed

Source: NAIP 2005; AECOM 2009; EDAW 2009

N W E S

1 in = 1 miles

0 1 2 Miles

Blythe Solar Power Project
Jurisdictional Delineation Report

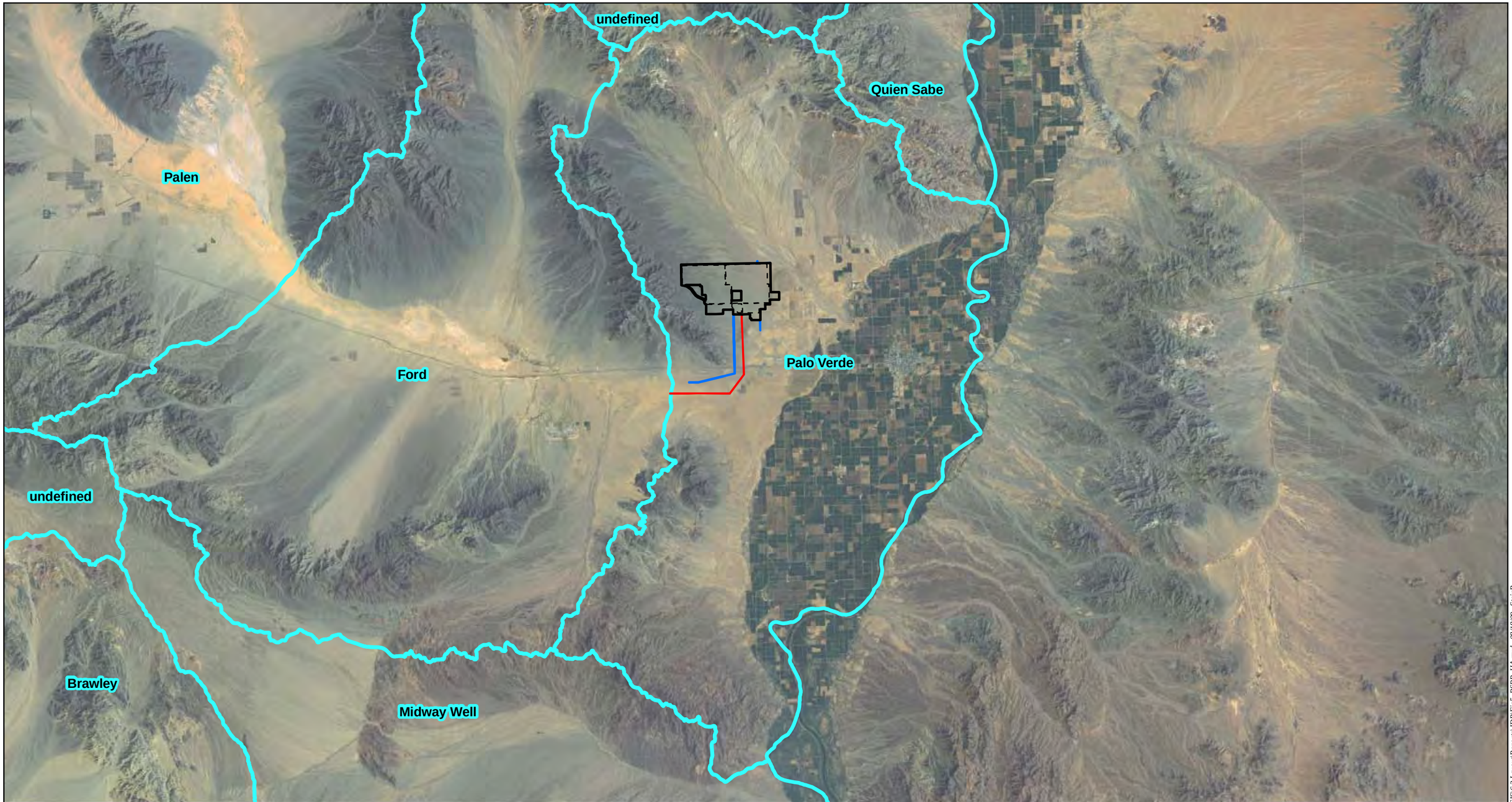
Figure 4
Vegetation Communities

Solar Millennium

AECOM

Date: August 2009

Path: P:\2009\09080082 Sol Mil Blythe\6.0 GIS\6.3 Layout\Reports\JDR\Fig4_BSPP_VegComm.mxd, 08/18/09, SteinB



Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Disturbance Area (Surveyed - No Longer a Part)
- Hydrologic Areas

Source: NAIP 2005; CDFG; AECOM 2009; EDAW 2009

1

N W E S

1 inch = 5 miles

0 5 10 Miles

Blythe Solar Power Project
Jurisdictional Delineation Report

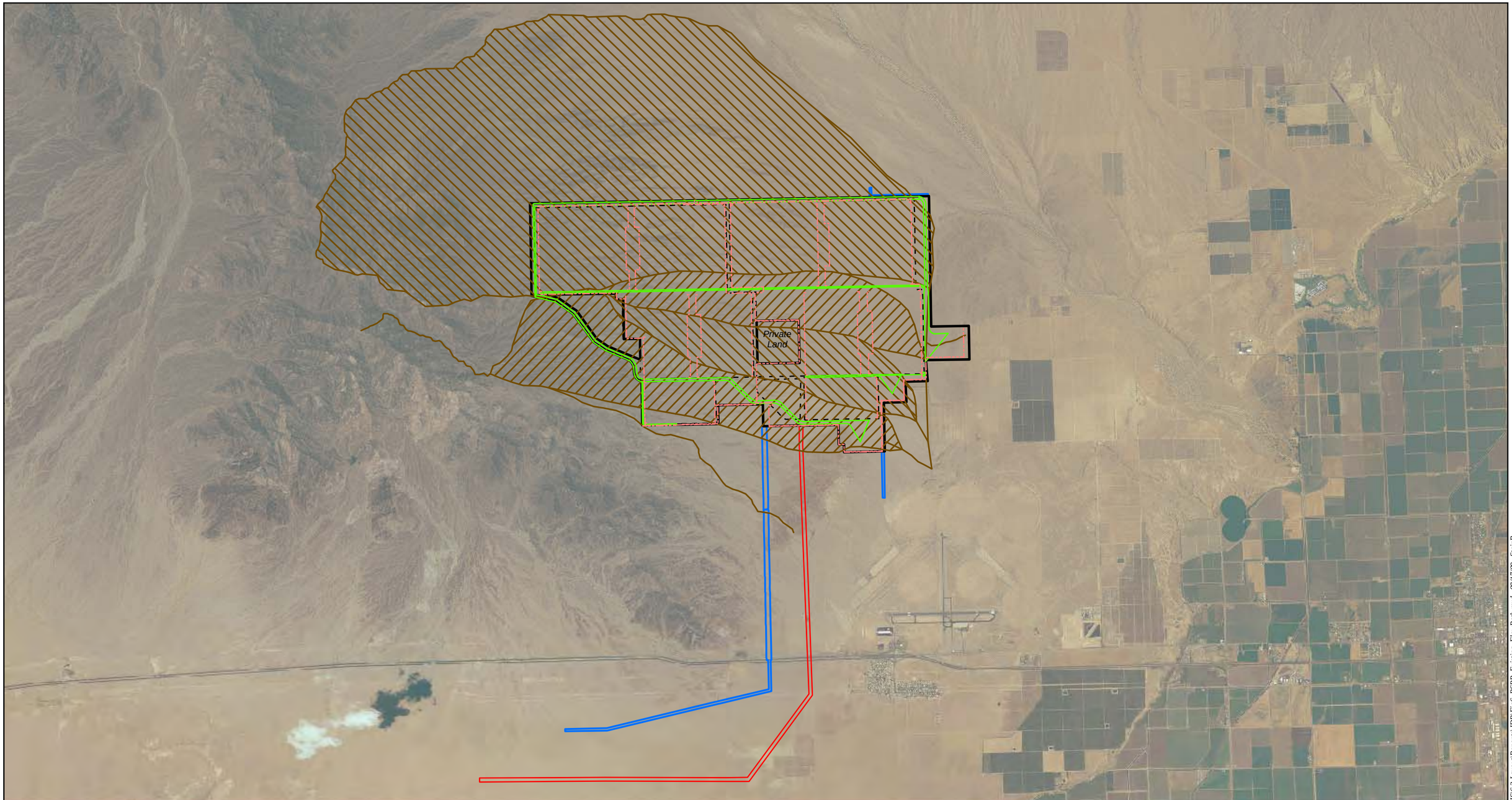
Figure 5
Hydrologic Areas

Solar Millennium

AECOM

Date: August 2009

Path: P:\2009\09080082 Sol Mil Blythe\6.0 GIS\6.3 Layout\Reports\JDR\Fig5_BSPP_HA.mxd, 08/18/09, SteinB



Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Disturbance Area (Surveyed - No Longer a Part)
- Existing Flow Paths
- Proposed Channels
- Fence Line

Source: NAIP 2005; NECO; AECOM 2009

1 inch = 6,000 feet

0 6,000 12,000 Feet

Blythe Solar Power Project
Juridsictional Delineation Report

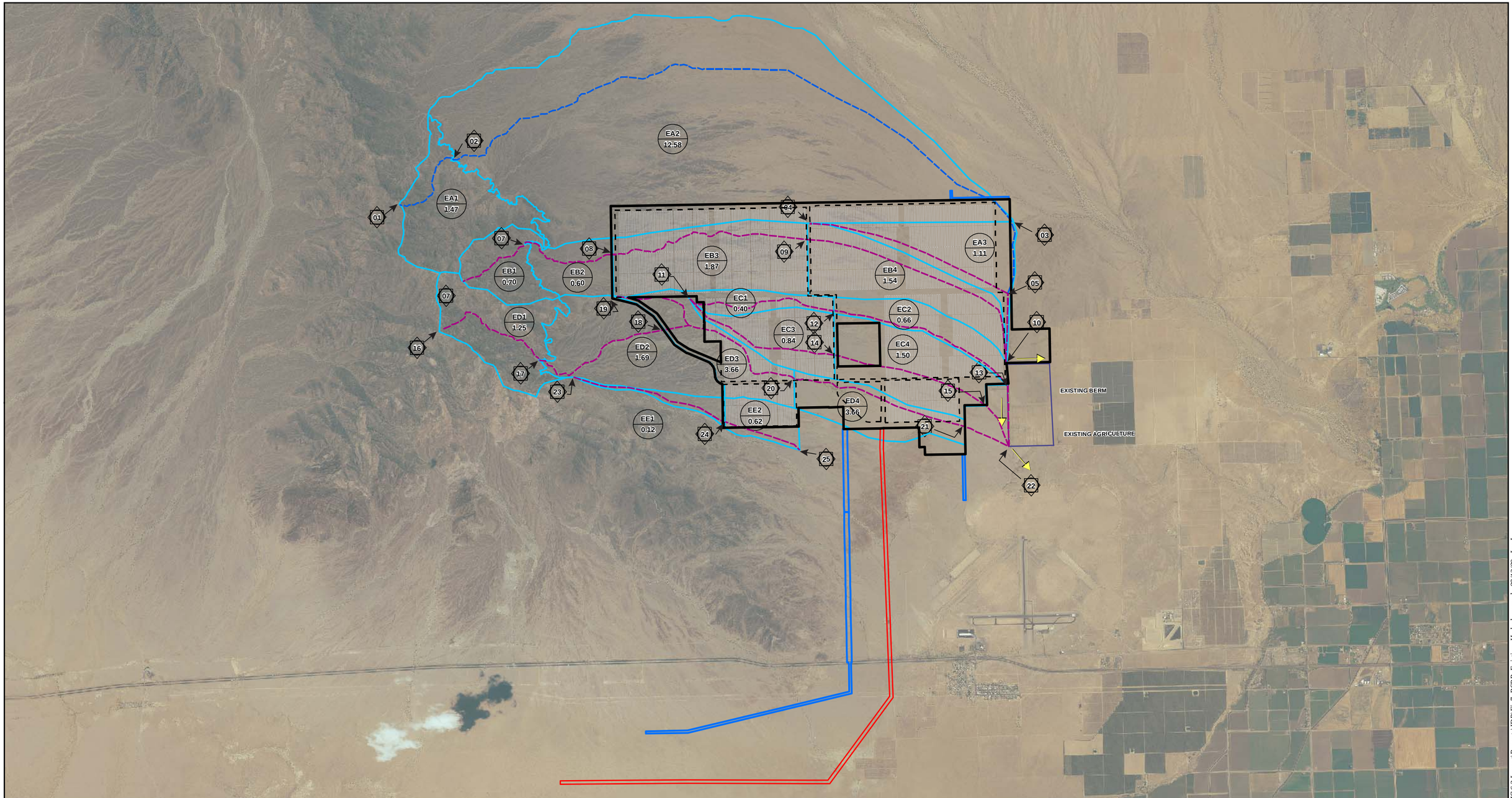
Figure 6
Existing Flow Paths Map

Solar Millennium

AECOM

Date: August 2009

Path: P:\2009\09080082 Sol Mil Blythe\6.0 GIS\6.3 Layout\Reports\JDR\Fig6_BSPP_Existing_FlowPath.mxd, 08/17/09, SteinB



Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Disturbance Area (Surveyed - No Longer a Part)

Source: NAIP 2005; NECO; AECOM 2009

EA — DRAINAGE AREA NAME
15.35 — AREA (SQ. MILES)
01 — NODE NUMBER
FLOWLINE
SITE BOUNDARY
DRAINAGE AREA BOUNDARY

1 inch = 6,000 feet
0 6,000 12,000 Feet

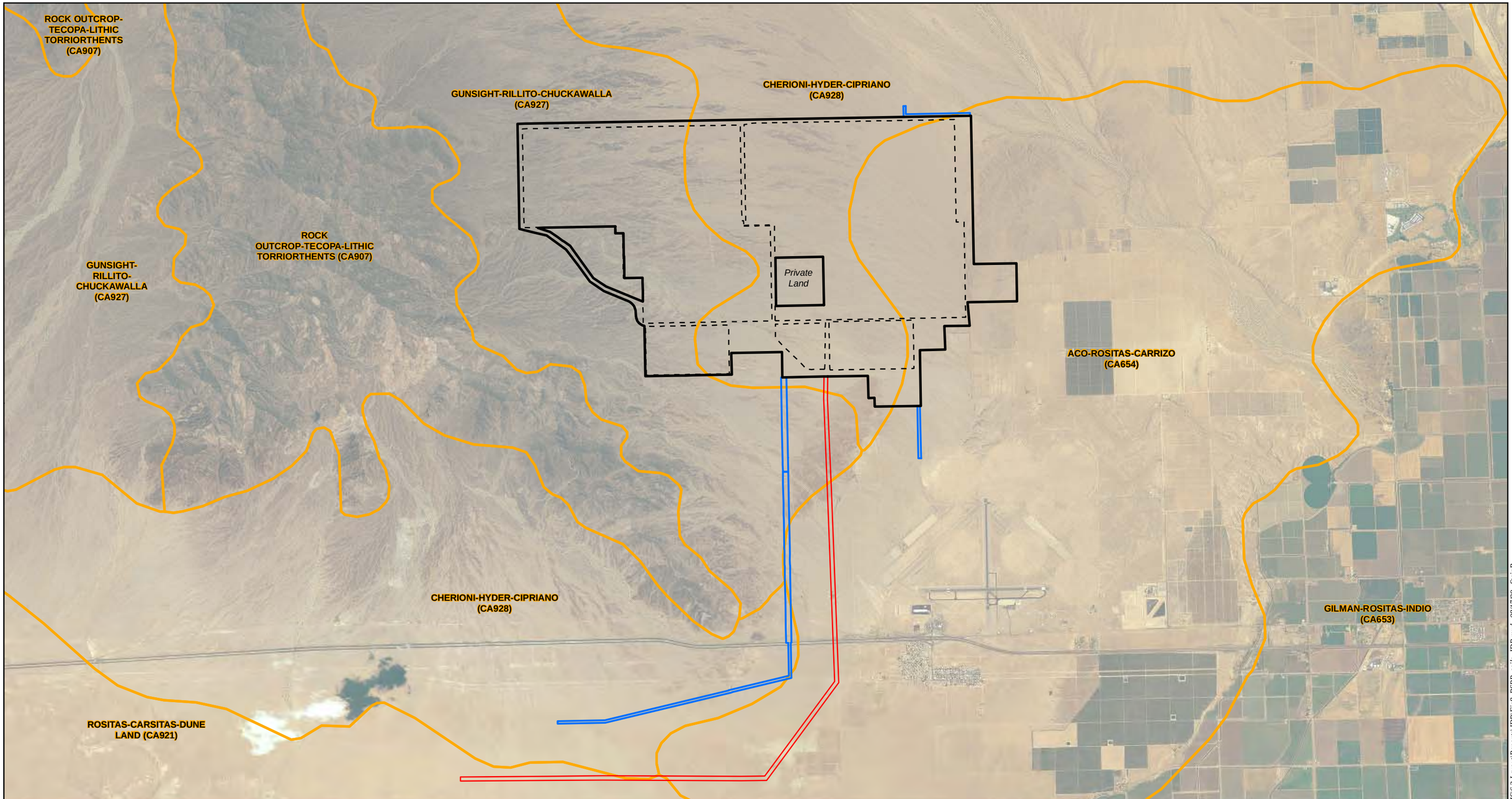
Blythe Solar Power Project
Juridsictional Delineation Report

Figure 7
Existing Hydrology Map

Solar Millennium
AECOM

Date: August 2009

Path: P:\200910908082 Sol Mil Blythe\6.0 GIS\6.3 Layout\Reports\JDR\Fig7_BSPP_Existing_Hydrology.mxd, 08/13/09, LeeJ



Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Disturbance Area (Surveyed - No Longer a Part)
- Soil Types

Source: NAIP 2005; AECOM 2009; EDAW 2009; SSURGO 2009

N W E S

1 inch = 5,280 feet

0 5,000 10,000 Feet

Blythe Solar Power Project
Jurisdictional Delineation Report

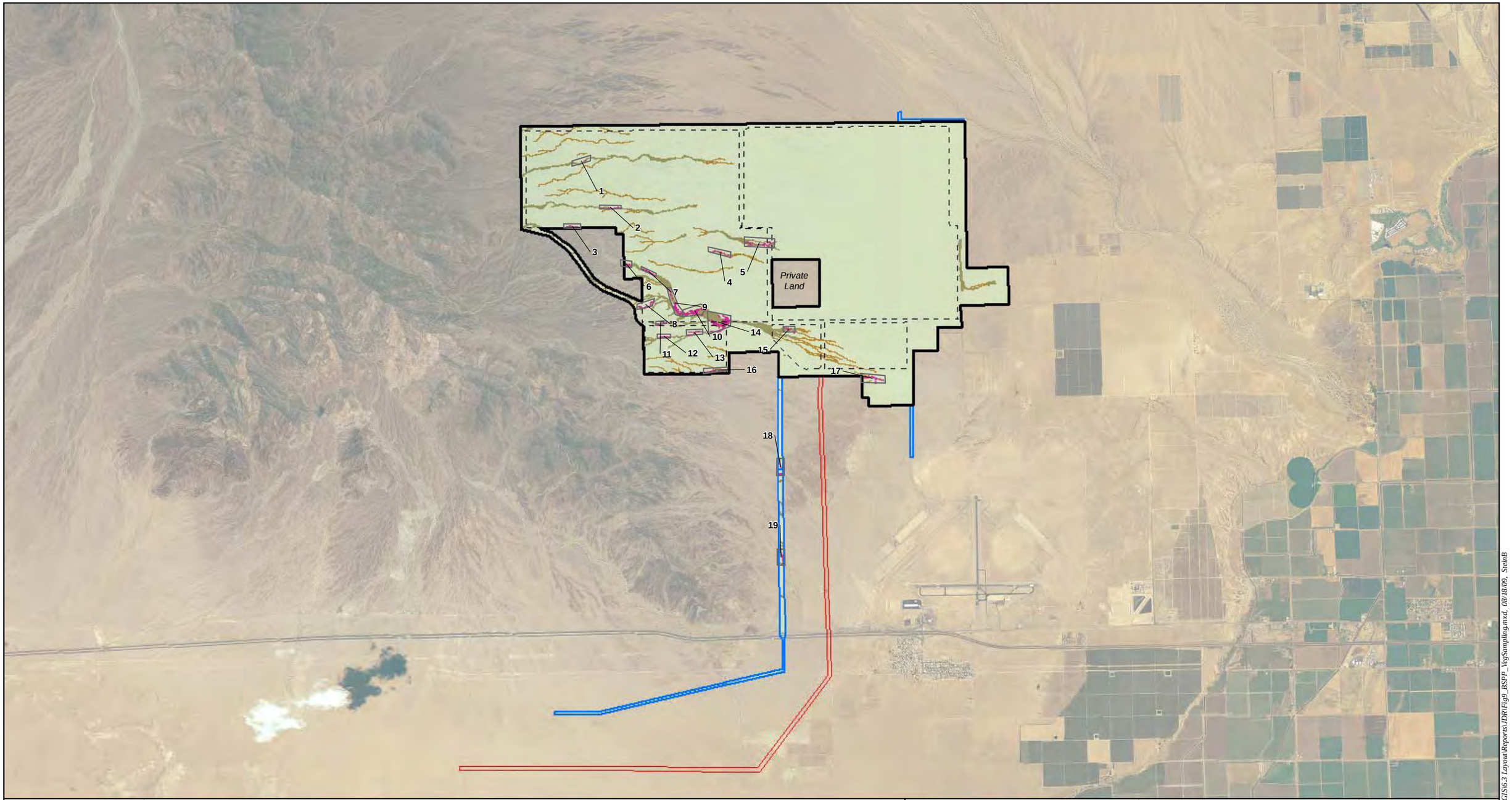
Figure 8
Soils Map

Solar Millennium

AECOM

Date: August 2009

Path: P:\2009\09B0002 Sol Mil Blythe\6.0 GIS\6.3 Layout\Reports\JDR\Fig8_BSPP_soils_JDR.mxd, 08/17/09, SteinB



Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Disturbance Area (Surveyed - No Longer a Part)
- Vegetation Subsampling Areas

Vegetation Communities

Riparian

- Desert Dry Wash Woodland
- Unvegetated Ephemeral Dry Wash

Upland

- Sonoran Creosote Bush Scrub

Other

- Agriculture (Active and Fallow)
- Developed
- Wash Dependent Vegetation

Source: NAIP 2005; AECOM 2009; EDAW 2009

N W E S

1 in = 1 miles

0 1 2 Miles

Blythe Solar Power Project
Jurisdictional Delineation Report

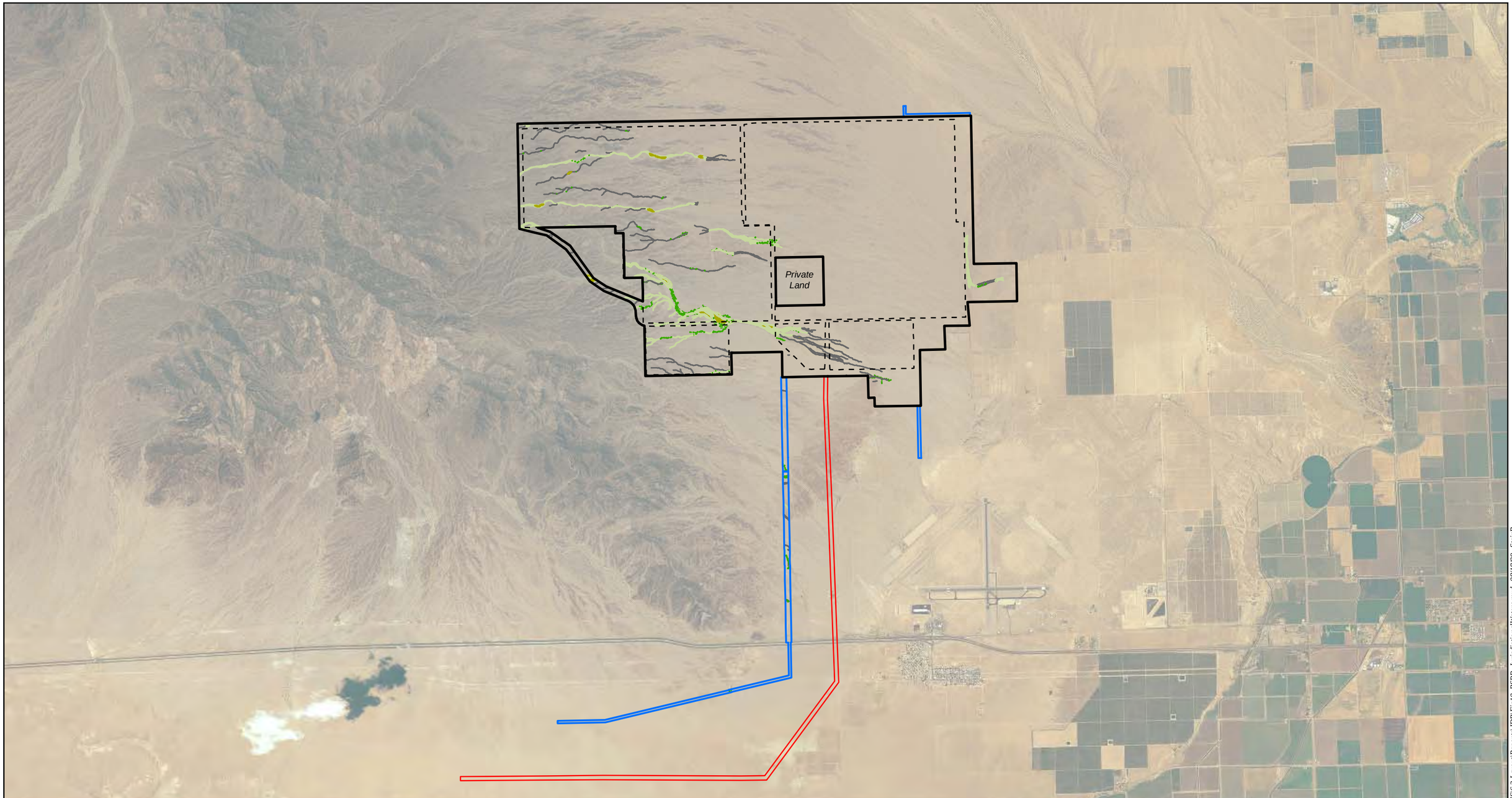
Figure 9
Wash-Dependent
Vegetation Subsampling

Solar Millennium

AECOM

Date: August 2009

Path: P:\20090/09080082 Sol Mil Blythe\6.0 GIS\6.3 Layout\Reports\JDR\Fig9_BSPP_VegSampling.mxd, 08/18/09, SteinB



Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Disturbance Area (Surveyed - No Longer a Part)

Jurisdictional Waters of the State

Desert Dry Wash Woodland

- Wash Dependent Vegetation
- Riparian Interfluve
- Vegetated Ephemeral Dry Wash

Other Waters

- Unvegetated Ephemeral Dry Wash

Source: NAIP 2005; AECOM 2009; EDAW 2009

W S N E

1 inch = 5,280 feet

0 5,280 10,560 Feet

Blythe Solar Power Project
Jurisdictional Delineation Report

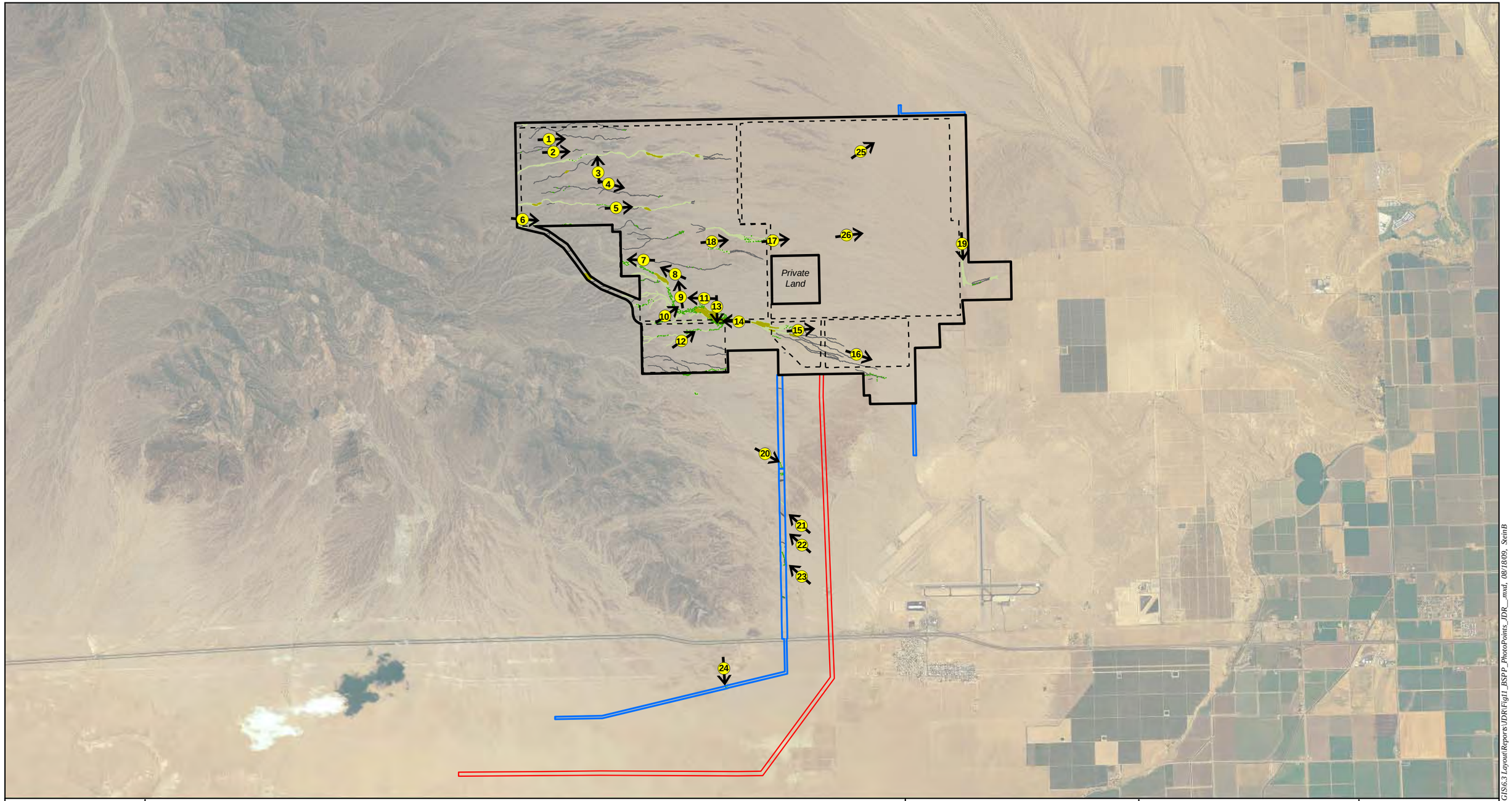
Figure 10
Jurisdictional Waters

Solar Millennium

AECOM

Date: August 2009

Path: P:\2009\09080082 Sol M\I Blythe\6.0 GIS\6.3 Layout\Reports\JDR\Fig10_BSPP_JurisdictionalWaters.mxd, 08/18/09, SteinB



Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Disturbance Area (Surveyed - No Longer a Part)

State Waters

Desert Dry Wash Woodland

- Wash Dependant Vegetation
- Riparian Interfluve
- Vegetated Ephemeral Dry Wash
- Unvegetated Ephemeral Dry Wash,

Photo Point Location

Source: NAIP 2005; AECOM 2009; EDAW 2009

N W E S

1 in = 1 miles

0 1 2 Miles

Blythe Solar Power Project
Jurisdictional Delineation Report

Figure 11
Photo Point Locations Map

Solar Millennium

AECOM

Date: August 2009

Path: P:\2009\09080082 Sol Mil Blythe\6.0 GIS\6.3 Layout\Reports\JDR\Fig11_BSPP_PhotoPoints_JDR__mxd, 08/18/09, SteinB

Photograph 1: Looking west (upstream) at a secondary unvegetated ephemeral dry wash. Note that the dominant vegetation along the banks consists of upland species and wash is unvegetated with small amounts of cobble.

Photograph 2: Looking east at a swale lacking a defined bed and bank and dominated by upland vegetation. These features are found throughout the disturbance area within shallow depression adjacent to the desert pavement.

Map Location

Blythe Solar Power Project Jurisdictional Delineation Report

Figure 12 Representative Photographs 1 and 2

Solar Millennium

AECOM

Date: August 2009

Photograph 3: Looking northwest across the desert pavement. Note the concentration of creosote bush scrub occupying depressions within the landscape. These features were predominantly classified as swales as they were lacking in a defined bad and bank and populated by upland vegetation.

Photograph 4: Looking east (downstream) at a 4-foot wide unvegetated ephemeral dry wash.

Map Location

Blythe Solar Power Project Jurisdictional Delineation Report

Figure 13 Representative Photographs 3 and 4

Solar Millennium

AECOM

Date: August 2009

Photograph 5: Looking east at a ephemeral dry wash populated by wash dependent plant species (including catclaw and ironwood) growing within and adjacent to the channel, shrubs and iron wood.

Photograph 6: Looking east from the edge of the disturbance area across the primary wash. Note the sandy substrate with cobble and scarcity of vegetation within the wash.

Map Location

Blythe Solar Power Project Jurisdictional Delineation Report

Figure 14 Representative Photographs 5 and 6

Solar Millennium

AECOM

Date: August 2009

Photograph 7: Looking west (upstream) at the primary wash. Note the presence of cobble in the channel and the dense wash dependent vegetation.

Photograph 8: Looking west (upstream) at the primary wash. The wash in this area is less confined than in other areas and as such the wash dependent vegetation is more prevalent outside of the primary channel. Note the sandy substrate (entisols) and the alluvial deposition composing the channel.

Map Location

Blythe Solar Power Project Jurisdictional Delineation Report

Figure 15 Representative Photographs 7 and 8

Solar Millennium

AECOM

Date: August 2009

Photograph 9: Looking west (upstream) at the primary wash. Note the prevalence of wash dependent trees on and at the base of the bank, including ironwood and blue palo verde

Photograph 10: Looking northeast at a swale/erosive feature that drains to the primary wash. This was a common feature along the primary wash, often occurring in depressions in the desert pavement. Note the lack of a defined bed and bank and the presence of upland vegetation occupying this feature.

Map Location

Blythe Solar Power Project Jurisdictional Delineation Report

Figure 16 Representative Photographs 9 and 10

Solar Millennium

AECOM

Date: August 2009

Photograph 11: Looking west (upstream) at the primary wash. East of this point the wash splits into two large channels that surround a large riparian interfluve. Note the southern bank along the right side of the photo and the dense wash dependent vegetation throughout the wash.

Photograph 12: Looking northeast at a small 3-5 foot wide secondary channel that feeds into the primary channel onsite. Note the defined bed and bank in the foreground and the density of big galleta grass within the channel.

Map Location

Blythe Solar Power Project Jurisdictional Delineation Report

Figure 17 Representative Photographs 11 and 12

Solar Millennium

AECOM

Date: August 2009

Photograph 13: Looking southeast at the southern bank of the primary wash. Note the transition from wash dependent vegetation at the base of the slope to creosote bush at the top of the bank.

Photograph 14: Looking west at the southern channel of the primary drainage. Note the prevalence of wash dependent trees including ironwood and blue palo verde. Note the sandy soil characteristic on an entisol and alluvial deposition.

Map Location

Blythe Solar Power Project Jurisdictional Delineation Report

Figure 18 Representative Photographs 13 and 14

Solar Millennium

AECOM

Date: August 2009

Photograph 15: Looking east where primary wash begins to abate into the upland.

Photograph 16: Looking east where small unvegetated ephemeral dry wash transitions to swale features. Note the lack of a defined bad and bank.

Map Location

Blythe Solar Power Project Jurisdictional Delineation Report

Figure 19 Representative Photographs 15 and 16

Solar Millennium

AECOM

Date: August 2009

Photograph 17: Looking east at the terminus of a secondary wash where the bed and bank fades out and water becomes sheet flow across the uplands.

Photograph 18: looking east at a vegetated ephemeral dry wash. Note the prevalence of wash dependent species including big galleta grass and ironwood.

Map Location

Blythe Solar Power Project Jurisdictional Delineation Report

Figure 20 Representative Photographs 17 and 18

Solar Millennium

AECOM

Date: August 2009

Photograph19: Looking north (upstream) at a secondary channel that forms as a result of onsite swale features terminating and coalescing along a segment of desert pavement before dissipating again into the upland. Note the desert pavement berm along the right side of the photo and the dense coverage of wash dependent vegetation.

Photograph 20: Looking east at a large secondary wash that bisects the utility corridor. Much of this feature is bound by desert pavement to the north and south. Note the dense coverage of wash dependent species along the outer boundary of the channel. Note the sandy soil characteristic on an entisol and alluvial deposition.

Map Location

Blythe Solar Power Project Jurisdictional Delineation Report

Figure 21 Representative Photographs 19 and 20

Solar Millennium

AECOM

Date: August 2009

Photograph 21: Looking west at a vegetated ephemeral dry wash occurring within the initial utility corridor. Note the bed and bank in the center of the photo and the prevalence of wash dependent species within and adjacent to the channel including big galleta grass and ironwood.

Photograph 22: Looking west at an unvegetated ephemeral dry wash occurring within the initial utility corridor. Although scattered big galleta grass occurs along the upland interfluves (as seen in the center of the photo) the feature is dominated by upland vegetation including creosote bush.

Map Location

Blythe Solar Power Project Jurisdictional Delineation Report

Figure 22 Representative Photographs 21 and 22

Solar Millennium

AECOM

Date: August 2009

Photograph 23: Looking west at a vegetated ephemeral dry wash occurring within the initial utility corridor. Note the prevalence of wash dependent species within the channel including big galleta grass and ironwood.

Photograph 24: Looking south at a large secondary wash that bisects the southern portion of the initial utility corridor. Note the large wash dependent trees along the channel banks including ironwood and blue palo verde.

Map Location

Blythe Solar Power Project Jurisdictional Delineation Report

Figure 23 Representative Photographs 23 and 24

Solar Millennium

AECOM

Date: August 2009

Photograph 25: Looking northeast across the disturbance area. Water moves through the majority of the northeastern portion of the footprint as sheet flow through the uplands. This is evident by the lack of bed and bank and dominance by upland species.

Photograph 26: Looking east at a swale. Note the lack of bed and bank and dominance by upland species.

Map Location

Blythe Solar Power Project Jurisdictional Delineation Report

Figure 24 Representative Photographs 25 and 26

Solar Millennium

AECOM

Date: August 2009

ATTACHMENT 2

APPROVED JD FORM

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Los Angeles District, South Coast Branch, Blythe Solar Power Plant

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: CA County/parish/borough: Riverside City: Approximately 8.5 miles northwest of Blythe, CA (refer to Figures 1-3 in the Jurisdictional Delineation Report [JDR]).

Center coordinates of site (lat/long in degree decimal format): Lat. 33.672328° **N**, Long. -114.727844° **W**

Universal Transverse Mercator: 11 N 711399.24 mE 3728992.41 mN

Name of nearest waterbody: Colorado River (approximately 15 miles east of project location) and the Salton Sea (approximately 60 miles southwest of project location).

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: N/A

Name of watershed or Hydrologic Unit Code (HUC): Imperial Reservoir (HUC 15030104)

- ☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request (refer to Figures 3 through 11 in the JDR).
- ☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc.) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- ☐ Office (Desk) Determination. Date:
- ☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]

- ☐ Waters subject to the ebb and flow of the tide.
- ☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **are no** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):[1]

- ☐ TNWs, including territorial seas
- ☐ Wetlands adjacent to TNWs
- ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
- ☐ Non-RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- ☐ Impoundments of jurisdictional waters
- ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: linear feet: width (ft) and/or acres.

Wetlands: acres.

c. Limits (boundaries) of jurisdiction based on: **Not Applicable**

---

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.

[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Elevation of established OHWM (if known):

2. **Non-regulated waters/wetlands (check if applicable):**[3]
☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

1. All ephemeral washes delineated within the disturbance area abate into the landscape and become a discontinuous ephemeral wash.
2. No ephemeral wash delineated within the disturbance area directly connected with the McCoy Wash, which is itself a large ephemeral wash that presents an indirect hydrological connection with the Colorado River.
3. The lack of hydrological connectivity of the ephemeral washes into storm drains, culverts, or ditches (no storm drains are present within the disturbance area).
4. The lack of hydrological connectivity (presenting a significant nexus [SNX] to any traditional navigable waterbody [TNW]) for washes occurring within the disturbance area.
5. The evaluation of the ephemeral washes not presenting a SNX to a TNW include the volume, duration, and frequency of the flow of water to a TNW (the Salton Sea, 60 miles southwest and the Colorado River, 15 miles east of the disturbance area).
6. Examination of the flow characteristics and functions of ephemeral washes (which do not support adjacent wetlands) has been determined not to present a significant effect on the chemical, physical, and biological integrity of downstream TNWs.
7. Lack of an ecological connection to TNWs. The ephemeral washes present a low to no potential or capacity to transfer nutrients and organic carbon (vital to support downstream foodwebs [e.g., macroinvertebrates] present in headwater streams or to convert carbon in leaf litter making it available to species downstream), nor present habitat services such as providing spawning areas for recreationally or commercially important species in downstream waters.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
Identify TNW: .

Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

[3] Supporting documentation is presented in Section III.F.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:
Watershed size: **acres**
Drainage area: **acres**
Average annual rainfall: inches
Average annual snowfall: inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.
Project waters are **Pick List** river miles from RPW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Project waters are **Pick List** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW[5]: .
Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: feet
Average depth: feet
Average side slopes: **Pick List**

Primary tributary substrate composition (check all that apply):
☐ Silts ☐ Sands ☐ Concrete
☐ Cobbles ☐ Gravel ☐ Muck
☐ Bedrock ☐ Vegetation. Type/% cover:
☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Describe flow regime: .
Other information on duration and volume: .

Surface flow is: **Pick List**. Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☐ Bed and banks
☐ OHWM[6] (check all indicators that apply):
- ☐ clear, natural line impressed on the bank
- ☐ changes in the character of soil
- ☐ shelving
- ☐ vegetation matted down, bent, or absent
- ☐ leaf litter disturbed or washed away
- ☐ sediment deposition
- ☐ water staining
  - ☐ other (list): .
- ☐ the presence of litter and debris
- ☐ destruction of terrestrial vegetation
- ☐ the presence of wrack line
- ☐ sediment sorting
- ☐ scour
- ☐ multiple observed or predicted flow events
- ☐ abrupt change in plant community

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
☐ High Tide Line indicated by:
- ☐ oil or scum line along shore objects
- ☐ fine shell or debris deposits (foreshore)
- ☐ physical markings/characteristics
- ☐ tidal gauges
- ☐ other (list): .

☐ Mean High Water Mark indicated by:
- ☐ survey to available datum;
- ☐ physical markings;
- ☐ vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

(iv) Biological Characteristics. Channel supports (check all that apply):
☐ Riparian corridor. Characteristics (type, average width): .
☐ Wetland fringe. Characteristics: .
☐ Habitat for:
- ☐ Federally Listed species. Explain findings: .
- ☐ Fish/spawn areas. Explain findings: .
- ☐ Other environmentally-sensitive species. Explain findings: .
- ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:
(a) <u>General Wetland Characteristics</u>:
Properties:
Wetland size: acres
Wetland type. Explain: .
Wetland quality. Explain: .
Project wetlands cross or serve as state boundaries. Explain: .

(b) <u>General Flow Relationship with Non-TNW</u>:
Flow is: **Pick List**. Explain: .

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[6] A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7] Ibid.

Surface flow is: **Pick List**. Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

☐ Directly abutting

☐ Not directly abutting

☐ Discrete wetland hydrologic connection. Explain: .

☐ Ecological connection. Explain: .

☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

☐ Riparian buffer. Characteristics (type, average width): .

☐ Vegetation type/percent cover. Explain: .

☐ Habitat for:

☐ Federally Listed species. Explain findings: .

☐ Fish/spawn areas. Explain findings: .

☐ Other environmentally-sensitive species. Explain findings: .

☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet, width (ft) Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☐ Tributary waters: linear feet, width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   - ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☐ Tributary waters: linear feet, width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
     - ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

[8] See Footnote #3.

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.[9]

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]

☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

☐ Tributary waters: linear feet, width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

☒ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☒ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  ☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☒ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: see Section II.B.2 above and JDR.
☒ Other: (explain, if not covered above): refer to Figures and Hydrology Section in JDR.

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.

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[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos*.**

☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☒ Other non-wetland waters: A total of 107.8 acres. List type of aquatic resource: 8.3 acres of unvegetated ephemeral channel (*Riverine; Unconsolidated Bottom, Sand, Intermittently Flooded, Temporary, Well Drained/Fresh, Alkaline*) and 99.5 acres of vegetated ephemeral channel (*Palustrine; Forested, Broad-Leaved, Evergreen, Intermittently Flooded/ Temporary, Well Drained/Fresh, Alkaline*). Note: the 99.5 acres of vegetated ephemeral channel include vegetated ephemeral dry wash (76.6 acres) and wash-dependent vegetation (22.9 acres) which are present and/or occur within OHWM. Riparian interfluves are not included as other non-wetland waters because they do not exhibit an established bed or bank. Please refer to Table 10 in the JDR.
☐ Wetlands: acres.

SECTION IV: DATA SOURCES

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: JDR with figures.
☐ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  ☐ Office concurs with data sheets/delineation report.
  ☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
  ☐ USGS NHD data.
  ☒ USGS 8 and 12 digit HUC maps.
☐ U.S. Geological Survey map(s). Cite scale & quad name: 7.5' U.S. Geological Survey (USGS) McCoy Wash (1975), McCoy Peak (1983), Ripley (1975), and Roosevelt Mine topographic quadrangles.
☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: The facility footprint is located within an area which presents possible but undetermined flood hazards (FEMA Flood Zone Designation D).
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): USDA NAIP 2005.
  or ☒ Other (Name & Date): Site Photos located in JDR (August 2009).
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
  ☒ Other information (please specify): Blythe Solar Plant Hydrology Report (AECOM 2009).

B. ADDITIONAL COMMENTS TO SUPPORT JD: refer to JDR and Figures.

ATTACHMENT 3

FIELD DATA AND SUBSAMPLING METHOD

ATTACHMENT 3
Primary Ephemeral Wash-Dependent Vegetation Cover Subsampling

Raw Data (from GIS)

The raw GIS data are displayed below. These data were used to calculate the quantity of wash-dependent vegetation within the survey area, based on subsampling results. While the subsampling method is detailed in the next section, the purpose of displaying this raw, unformatted data is to present in detail how the extrapolated wash-dependent vegetation is depicted in Table 10 of the JDR.

Sum of Acres Zone	JD_TYPE	DDWW_TYPE	Total
Buffer Survey Area			12265.95
	Total		**12265.95**
Buffer Survey Area Total			**12265.95**
Buffer Survey Area - No Longer a Part			1180.54
	Total		**1180.54**
Buffer Survey Area - No Longer a Part Total			**1180.54**
Disturbance Area			6897.76
	Total		**6897.76**
	DDWW	***RI***	***24.24***
		VEG	***88.03***
		WD	***8.27***
	DDWW Total		**120.54**
	UV		8.27
	UV Total		**8.27**
Disturbance Area Total			**7026.57**
Former Disturbance - No Longer a Part			115.62
	Total		**115.62**
	DDWW	VEG	2.43
		WD	0.46
	DDWW Total		**2.89**
	UV		0.43
	UV Total		**0.43**
Former Disturbance - No Longer a Part Total			**118.95**
Former Disturbance - Now in BSA			60.31
	Total		**60.31**
	DDWW	VEG	0.33
		WD	0.11
	DDWW Total		**0.44**
	UV		0.03
	UV Total		**0.03**
Former Disturbance - Now in BSA Total			**60.78**
Not Yet Surveyed - Possible Transmission	**(blank)**	(blank)	179.00
	(blank) Total		**179.00**
Not Yet Surveyed - Possible Transmission Total			**179.00**
Possible Transmission in BSA			32.79
	Total		**32.79**
Possible Transmission in BSA Total			**32.79**
Proposed Additional Disturbance Area			5.12
	Total		**5.12**
	DDWW	VEG	0.57
		WD	0.50
	DDWW Total		**1.08**
Proposed Additional Disturbance Area Total			**6.20**
Grand Total			20870.77

Summing all "Dry Desert Wash Woodland" acreages for the "Disturbance Area" (highlighted dark gray above) gives a total of 120.5acres (rounded to tenths). However, substituting the 22.9 acres of extrapolated wash-dependent vegetation for the 8.3 acres of physically subsampled wash-dependent vegetation shown in the table above, the total adds to 135.1 acres. The resultant 14.6 acres of "extra" area is due to the wash-dependent vegetation being interspersed throughout the non-subsampled area mapped as riparian interfluve and/or vegetated ephemeral dry wash. These areas cannot and should not be double-counted.

The 22.9 acres of wash-dependent vegetation is interspersed throughout the non-subsampled area mapped as riparian interfluve and/or vegetated ephemeral dry wash. Of this amount, 14.6 acres are extrapolated and 8.3 acres were physically mapped during subsampling. To ensure the extrapolated wash-dependent vegetation area was not double-counted, weighted proportions of the 14.6 acres were subtracted from both the 24.2 acres of riparian interfluve (RI) and the 88.0 acres of vegetated ephemeral dry wash (VEDW). The ratio used for distributing the 14.6 acres was calculated as follows:

For Riparian Interfluve (RI):	For Vegetated Ephemeral Dry Wash (VEDW):
(24.2 acres RI) / (24.2 acres RI + 88.0 acres VEDW) = 21.6% (14.6 acres)(0.216) = **3.2 acres**	(88.0 acres RI) / (24.2 acres RI + 88.0 acres VEDW) = 78.4% (14.6 acres)(0.784) = **11.4 acres**

Thus, 3.2 acres were subtracted from the riparian interfluve and 11.4 acres were subtracted from the vegetated ephemeral dry wash.

Subsampling Method

To estimate total coverage of wash dependent vegetation occurring within the primary wash the , a weighted arithmetic mean was calculated where the estimate of absolute cover (χ) equals the sum of each sample of absolute cover (χi) multiplied by the area of each sample, or the weight (ωi), divided by the sum of all weights. The formula used was:

$\chi = \sum \omega i(\chi i)/\sum \omega i$ OR $X = \omega 1(\chi 1) + \omega 2(\chi 2) + \omega 3(\chi 3)\ldots / \omega 1 + \omega 2 + \omega 3\ldots$

Sub-Sampling Area	Vegetated Ephemeral Dry Wash (DDWW)	Sampled Wash Dependent Vegetation (DDWW)	Riparian Interfluve (DDWW)	Total Subsample area (ωi)	% Cover Wash Dependent Vegetation (χi)	(ωi*χi)
1	1.22	0.02		1.24	0.016129	0.02
2	0.5	0.13		0.63	0.206349	0.13
3	1.52	0.34		1.86	0.182796	0.34
4	0.1	0.14		0.24	0.583333	0.14
5	2.1	0.46		2.56	0.179688	0.46
6	2.13	0.26		2.39	0.108787	0.26
7	0.83	0.38	0.01	1.22	0.311475	0.38
8	0.83	0.35		1.18	0.296610	0.35
9	3.85	1.32		5.17	0.255319	1.32
10	2.68	1.11	2.36	6.15	0.180488	1.11
11	0.18	0.13		0.31	0.419355	0.13
12	0.21	0.18		0.39	0.461538	0.18
13	0.57	0.29		0.86	0.337209	0.29
14	4.92	1.85	8.03	14.8	0.125000	1.85
15	0.55	0.07		0.62	0.112903	0.07
16	0.59	0.19		0.78	0.243590	0.19
17		0.31		0.31	1.000000	0.31

Sub-Sampling Area	Vegetated Ephemeral Dry Wash (DDWW)	Sampled Wash Dependent Vegetation (DDWW)	Riparian Interfluve (DDWW)	Total Subsample area (ωi)	% Cover Wash Dependent Vegetation (χi)	(ωi*χi)
18	0.96	0.3		1.26	0.238095	0.3
19	0.71	0.28		0.99	0.282828	0.28
*SUM(ωi*χi)*						*8.11*
SUM ωi						*42.96*
Weighted Mean SUM (ωi*χi)/SUM ωi						**0.19**

Primary Ephemeral Wash-Dependent Vegetation Cover Mapping

Type of Jurisdictional Water of the State	Acres
Unvegetated Ephemeral Dry Wash	8.3
Dry Desert Wash Woodland	120.5
Wash-Dependent Vegetation (based on weighted mean percent [3.7%])	*22.9*
Riparian Interfluve	*21.0*
Vegetated Ephemeral Dry Wash	*76.6*
Total Waters	**128.8**

ATTACHMENT C

FLORAL SPECIES OBSERVED WITHIN THE BIOLOGICAL RESOURCES SURVEY AREA

ATTACHMENT C
Floral Species Observed within the Biological Resources Survey Area

Family	Scientific Name	Common Name
GNETALES		
Ephedraceae – Ephedta Family		
	Ephedra sp.	ephedra
MONOCOTS		
Poaceae – Grass Family		
	Aristida adscensionis	sixweeks threeawn
	Aristida purpurea	purple threeawn
	Bouteloua barbata var. *barbata*	sixweeks grama
	Bromus madritensis ssp. *rubens**	red brome, foxtail chess
	Erioneuron pulchellum (*syn. Dasyochloa pulchella*)	fluff grass
	Pleuraphis rigida	big galleta grass
	Schismus sp.*	Mediterranean grass
	*Vulpia bromoides**	brome fescue
	Vulpia octoflora	sixweeks fescue
DICOTS		
Asclepiadaceae – Milkweed Family		
	Asclepias subulata	rush milkweed
	Cynanchum utahense	Utah cynanchum
	Sarcostemma cynanchoides ssp. *hartwegii*	climbing milkweed
	Sarcostemma hirtellum	trailing townula, hairy milkweed
Asteraceae – Sunflower Family		
	Adenophyllum porophylloides	San Felipe dyssodia
	Ambrosia dumosa	burroweed , white bursage
	Atrichoseris platyphylla	parachute plant , gravel ghost
	Bebbia juncea var. *aspera*	sweetbush
	Calycoseris wrightii	white tackstem
	Chaenactis carphoclinia	pebble pincushion
	Chaenactis stevioides	desert pincushion
	Encelia farinosa	brittlebush, incienso
	Encelia frutescens	button brittlebush
	Geraea canescens	desert-sunflower
	Hymenoclea salsola	cheesebush
	Malacothrix glabrata	desert dandelion
	Monoptilon bellioides	Mojave desertstar
	Palafoxia arida var. *arida*	Spanish needle, desert palafox
	Perityle emoryi	Emory's rockdaisy
	Pectis papposa	chinchweed
	Porophyllum gracile	odora
	Prenanthella exigua	brightwhite
	Rafinesquia neomexicana	desert chicory
	Senecio mohavensis	Mojave ragwort, Mohave Groundsel
	Stephanomeria pauciflora var. *pauciflora*	wire lettuce
	Trichoptilium incisum	yellowhead, yellowdome
	Trixis californica var. *californica*	American threefold
Boraginaceae – Borage Family		
	Amsinckia menziesii var. *menziesii*	rancher's fireweed
	Cryptantha angustifolia	narrow leaved cryptantha
	Cryptantha barbigera	bearded cryptantha
	Cryptantha costata	ribbed cryptantha

Family	Scientific Name	Common Name
	Cryptantha maritima	Guadalupe cryptantha
	Cryptantha pterocarya	wingnut cryptantha
	Pectocarya penicillata	chuckwalla combseed
	Pectocarya platycarpa	broadfruit combseed
	Tiquilia plicata	fanleaf crinklemat, plicate coldenia
Brassicaceae – Mustard Family		
	*Brassica tournefortii**	Saharan mustard, Sahara mustard
	Dithyrea californica	spectacle-pod
	Guillenia lasiophyllum	California mustard
	Lepidium sp.	pepperweed
	Tropidocarpum gracile	dobie pod
Cactaceae – Cactus Family		
	Echinocactus polycephalus var. *polycephalus*	cottontop cactus, clustered barrel cactus
	Ferocactus cylindraceus var. *cylindraceus*	California barrel cactus
	Mammillaria tetrancistra	common fishhook cactus
	Opuntia basilaris	beavertail cactus
	Opuntia echinocarpa (*Cylindropuntia e.*)	silver cholla, golden cholla
	Opuntia ramosissima (*Cylindropuntia r.*)	pencil cactus, diamond cholla
Chenopodiaceae – Goosefoot Family		
	Atriplex polycarpa	allscale saltbrush
	Atriplex hymenelytra	desert holly
	Chenopodium murale	nettleleaf goosefoot
	Chenopodium sp.	goosefoot
	*Salsola tragus**	Russian thistle, tumbleweed
Cucurbitaceae – Gourd Family		
	Brandegea bigelovii	desert starvine
Euphorbiaceae – Spurge Family		
	Chamaesyce polycarpa	smallseed sandmat
	Ditaxis lanceolata	Narrowleaf ditaxis, narrowleaf silverbush
	Ditaxis neomexicana	New Mexico ditaxis
	Euphorbia eriantha	beetle spurge
Fabaceae – Legume Family		
	Acacia gregii	catclaw
	Astragalus nuttallianus var. *imperfectus*	turkey peas
	Astragalus insularis var. *harwoodii*	Harwood's milkvetch
	Cercidium floridium ssp. *floridium*	blue palo verde
	Dalea mollis	silky dalea, hairy prairie clover
	Lotus wrangelianus	Chilean bird's-foot trefoil
	Lupinus cf. *arizonicus*	Arizona lupine
	Marina parryi	Parry's false prairie clover
	Olneya tesota	ironwood
	Prosopis glandulosa	honey mesquite
	Psorothamnus spinosum	smoke tree
	Senna armata	spiny senna, desert senna
Fouquieriaceae – Ocotillo Family		
	Fouquieria splendens ssp. *splendens*	ocotillo
Geraniaceae – Geranium Family		
	Erodium texanum	Texas storksbill, Desert Heron's Bill
Hydrophyllaceae – Waterleaf Family		
	Eucrypta micrantha	dainty desert hideseed
	Nama demissum var. *demissum*	purplemat

Family	Scientific Name	Common Name
	Phacelia crenulata var. *ambigua*	purplestem phacelia
	Phacelia crenulata var. *minutiflora*	cleftleaf wildheliotrope
Krameriaceae – Rhatany Family		
	Krameria erecta	Pima rharany, littleleaf ratany
	Krameria grayi	white rhatany
Lamiaceae – Mint Family		
	Hyptis emoryi	desert-lavender
Loasaceae – Loasa Family		
	Mentzelia cf. *albicaulis*	small flowered blazing star, white stemmed stickleaf
	Mentzelia involucrata	whitebract blazingstar
Malvaceae – Mallow Family		
	Eremalche rotundifolia	desert five-spot
	Hibiscus denudatus	paleface
	Sphaeralcea ambigua	desert globemallow , apricot mallow
Martyniaceae – Unicorn-Plant Family		
	Proboscidea althaeifolia	desert unicorn-plant
Nyctaginaceae – Four O'Clock Family		
	Allionia incarnata	trailing allionia, windmills
Onagraceae – Evening Primrose Family		
	Camissonia boothii ssp. *desertorum*	desert suncup
	Camissonia brevipes ssp. *brevipes*	golden suncup
	Camissonia cf. *cardiophylla*	heartleaf suncup
	Camissonia claviformis	browneyes
	Camissonia refracta	narrowleaf suncup
Papaveraceae – Poppy Family		
	Eschscholzia glyptosperma	desert poppy , desert golden poppy
	Eschscholzia minutiflora	pygmy poppy, Coville's poppy
Plantaginaceae – Plantain Family		
	Plantago ovata	desert Indianwheat, woolly plantain
Polemoniaceae – Phlox Family		
	Gilia brecciarum ssp. *brecciarum*	Nevada gilia
	Gilia latifolia	broadleaf gilia
	Gilia stellata	star gilia
	Langloisia setosissima ssp. *setosissima*	bristly langloisia
	Linanthus jonesii	Jones' linanthus
	Loeseliastrum schottii	Schott's calico
Polygonaceae – Buckwheat Family		
	Chorizanthe brevicornu var. *brevicornu*	brittle spineflower
	Chorizanthe corrugata	wrinkled spineflower
	Chorizanthe rigida	spiny-herb
	Eriogonum inflatum	desert trumpet
	Eriogonum reniforme	kidneyleaf buckwheat
	Eriogonum thomasii	Thomas Eriogonum
	Eriogonum trichopes	little deserttrumpet
Resedaceae – Mignonette Family		
	Oligomeris linifolia	lineleaf whitepuff
Rhamnaceae – Buckthorn Family		
	Colubrina californica	las animas colubrina
	Ziziphus cf. *obtusifolia* var. *canescens*	graythorn
Scrophulariaceae – Figwort Family		
	Antirrhinum filipes	twining snapdragon
	Mohavea confertiflora	ghost flower

Family	Scientific Name	Common Name
Solanaceae – Nightshade Family		
	Lycium andersonii	water jacket, Anderson's desert thorn
	Physalis hederifolia var. *fendleri*	Fendler's groundcherry
Tamaricaceae – Tamarisk Family		
	Tamarx sp. *	Tamarisk
Viscaceae – Mistletoe Family		
	Phoradendron californicum	desert mistletoe
Zygophyllaceae – Caltrop Family		
	Fagonia laevis	California fagonbush
	Larrea tridentata	creosote bush
	Kallstroemia parviflora	warty caltrop

* Nonnative species

ATTACHMENT D

INFORMATION INDEX FOR DESERT TORTOISE SIGN

ATTACHMENT D

INFORMATION INDEX FOR DESERT TORTOISE SIGN
Burrows and Dens, Scats, and Shell Remains

From: USFWS *Field Survey Protocol for any Non-Federal Action That May Occur within the Range of the Desert Tortoise* (protocol) (USFWS 1992).

(1) Burrows and Dens:
1. currently active, with tortoise or recent tortoise sign
2. good condition, definitely tortoise; no evidence of recent use
3. deteriorated condition (please describe); definitely tortoise
4. deteriorated condition; possibly tortoise (please describe)
5. good condition; possibly tortoise (please describe)

(2) Scats:
1. wet (not from rain or dew) or freshly dried; obvious odor
2. dried with glaze; some odor; dark brown
3. dried; no glaze or odor; signs of bleaching (light brown), tightly packed material
4. dried; light brown to pale yellow, loose material; scaly appearance
5. bleached, or consisting only of plant fiber

(3) Shell Remains:
1. fresh or putrid
2. normal color; scutes adhere to bone
3. scutes peeling off bone
4. shell bone is falling apart; growth rings on scutes are peeling
5. disarticulated and scattered

ATTACHMENT E

REPRESENTATIVE PHOTOS OF VEGETATION COMMUNITIES WITHIN THE BIOLOGICAL RESOURCES SURVEY AREA

Photograph 1: Desert dry wash, blue palo verde, and creosote in western part of the BRSA (view looking east).

Photograph 2: Unvegetated ephemeral dry wash (looking west).

Map Location

Blythe Solar Power Project Biological Technical Report

Attachment E Representative Vegetation Community Photographs 1 and 2

Solar Millennium

AECOM

Date: August 2009

Photograph 3: Sonoran Creosote Bush scrub in the background with desret pavement in foreground (view looking northeast).

Map Location

Blythe Solar Power Project Biological Technical Report

Attachment E Representative Vegetation Community Photograph 3

Solar Millennium

AECOM

Date: August 2009

ATTACHMENT F

BOTANICAL SURVEY REPORT

BLYTHE SOLAR POWER PROJECT
BOTANICAL SURVEY REPORT
RIVERSIDE COUNTY, CALIFORNIA

Prepared for:

Solar Millennium, LLC
1625 Shattuck Avenue
Berkeley, California 94709

Chevron Energy Solutions
A Division of Chevron U.S.A. Inc.
345 California St., 18th Floor
San Francisco, California 94104

Prepared by:

EDAW AECOM
1420 Kettner Boulevard, Suite 500
San Diego, California 92101
Phone: (619) 233-1454
Fax: (619) 233-0952
Contact: Cecilia Meyer Lovell

August 2009

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INTRODUCTION

EDAW AECOM (EDAW) performed biological resources studies for Solar Millennium, LLC and Chevron Energy Solutions, who are the Applicants for the proposed Blythe Solar Power Project (also referred to as "Project" or "BSPP"). The Project is proposed on public lands managed by the Bureau of Land Management (BLM) in Riverside County, California, and the Applicants have submitted an application to BLM for a Right of Way grant. The BSPP will be a 1,000-megawatt (MW) solar thermal electric generating facility using parabolic trough technology.

This study was prepared to support an Application for Certification submitted to the California Energy Commission (CEC), which must license all thermal power plants over 50 MW in California. Because the Project is proposed on Federal land, compliance with the National Environmental Policy Act (NEPA) is also required. CEC and BLM are conducting a joint review of the BSPP through a combined California Environmental Quality Act (CEQA)/NEPA document, and this Botanical Survey Report (BSR) also supports BLM's NEPA compliance. Finally, this report will also support Project permitting from State and Federal biological resources agencies: U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG). This BSR describes existing biological conditions in a Biological Resources Study Area (BRSA) that encompasses the proposed disturbance area (area inside and outside the facility fenceline that will be disturbed by the Project), solar facility footprint (area inside the facility fenceline: solar fields, office and maintenance buildings, lay down area, drainage channels, bioremediation area, leach fields, a corridor for the transmission line, and roads), and buffer. The BSR summarizes the botanical surveys conducted for the Project and analyzes how the proposed Project will potentially impact threatened, endangered, or special status plants and sensitive vegetation communities (Figures 1 and 2).

Solar Millennium, LLC and Chevron Energy Solutions (the Applicants) are proposing to construct a commercial solar thermal electric power generating facility, referred to as the Blythe Solar Power Project. The BSPP would be located in the southern California inland desert, approximately 1 mile northwest of Blythe Airport, in Riverside County, California. The Project would be located on an approximately 9,400-acre right-of-way (ROW) owned by the Federal government and leased by the Applicant from BLM. The area inside and outside the solar facilities fenceline that would be disturbed by Project construction and operation (disturbance area), would occupy approximately 7,030 acres of the ROW. The Project would use solar parabolic trough technology to generate electricity. With this technology, arrays of parabolic mirrors collect heat energy from the sun and

Map Location

1 inch = 40 miles

0 40 80 Miles

Blythe Solar Power Project
Botanical Survey Report

Figure 1
Regional Map

Source: ESRI; AECOM 2009

Solar Millennium

AECOM

Date: August 2009

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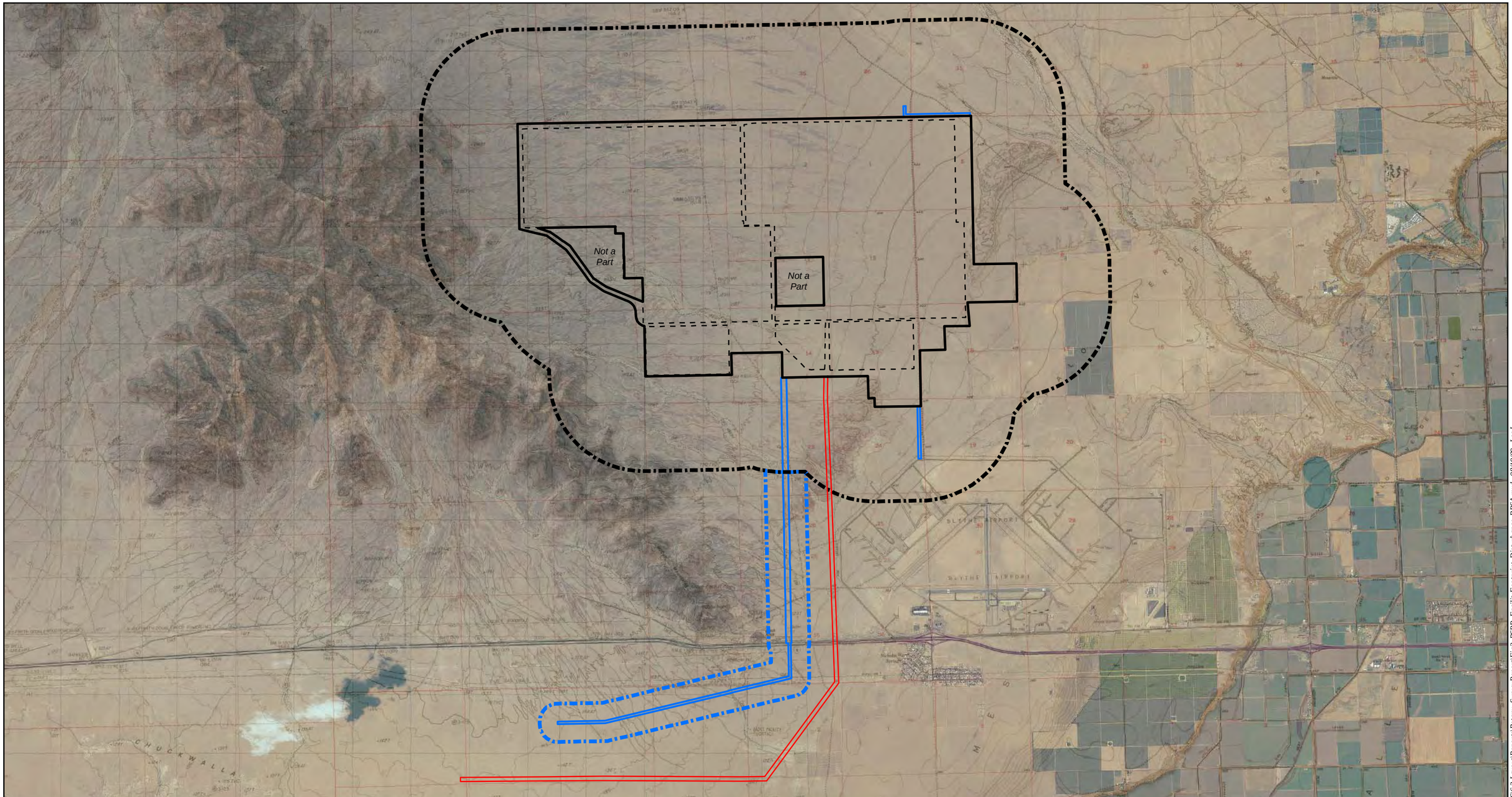

Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Biological Resource Survey Area (BRSA)
- Buffer Survey Area (Surveyed No Longer a Part)
- Disturbance Area (Surveyed - No Longer a Part)

Source: NAIP 2005; AECOM 2009

N W E S

1 in = 1 miles

0 1 2 Miles

Blythe Solar Power Project
Botanical Survey Report

Figure 2
Facility Footprint, Disturbance Area, and Biological Resources Survey

Solar Millennium

AECOM

Date: August 2009

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refocus the radiation onto a receiver tube located at the focal point of the parabola. A heat transfer fluid (HTF) is heated to a high temperature (750° F) as it circulates through the receiver tubes. The heated HTF is then piped through a series of heat exchangers where it releases its stored heat to generate high-pressure steam. The steam is then fed to a traditional steam turbine generator where electricity is produced.

The Project would have a nominal output of 1,000 MW, consisting of four identical and independent 250 MW power plants (Units #1 and #2). The units would be developed in phases with construction scheduled to begin in late 2010 on the first unit; that unit would come on line in mid-2013 and subsequent units would come on line in each of the following three years.

Each power unit would have its own solar field comprised of piping loops arranged in parallel groups, and its own power block, centrally located within the solar field. Each power block would its own HTF pumping and freeze protection system; solar steam generator; steam turbine generator; an air-cooled condenser (ACC) for cooling; transmission lines and related electrical system; and auxiliary equipment (e.g., water treatment system, emergency generators). The Project would require a new transmission line, which is in a preliminary design stage.

Access to the BSPP would be via an existing public road heading north from the frontage road along Interstate 10 (I-10). Improvements to portions of the public road would be required. Only a small portion of the overall facility footprint would be paved, primarily the site access road, the service roads to the power blocks, and six acres of each of the 18-acre power blocks. The solar fields would remain unpaved and without a gravel surface in order to prevent mirror damage. The Project solar fields and support facilities perimeter would be secured with chain link metal-fabric security fencing and controlled access gates.

Following completion of spring 2009 surveys, several changes were made to the disturbance area limits. First, a conceptual footprint of a possible transmission line was identified (Figure 2). The final Project transmission line route has not yet been selected. The possible transmission line route has not been surveyed and, therefore, is not discussed in this report. Surveys for the possible transmission line will be conducted following selection of the final transmission line route (anticipated spring 2010).

In addition, several portions of the disturbance area, totaling 180 acres, are no longer a part of the proposed Project and have been removed from the disturbance area (Figure 2). For example, an approximately 6.2-mile-long linear feature was surveyed that was subsequently removed from the disturbance area. However, because the 180 acres were included in the spring 2009 surveys,

in the interest of contributing to the body of scientific information, survey results for these areas are included in this document.

METHODS

EDAW biologists conducted field assessments and focused botanical surveys February through April 2009. Exact dates of surveys and a list of staff are summarized in Table 1.

Table 1
2009 Floral Survey Schedule

Dates / Surveyors[1]	February 10, 13	March 19–20	March 24–25	March 31, April 2	April 9–10	April 15, 17	April 22–23
Amus, Kristen		X	X				
Betzler, Joseph					X	X	X
Dwerlkotte, Richard					X		
Innicken, Shirley	X						
Martus, Carolyn				X	X	X	X
Sproul, Fred	X	X	X	X	X		
Wendin, Caesara				X		X	
Wooley, Lance		X	X		X	X	

[1] Qualifications for biologists listed in Table 1 can be reviewed in Attachment 1.

Vegetation Communities

Vegetation communities within the BRSA were classified based on Holland (1986). Sawyer and Keeler-Wolf (1995) and CDFG (2003) classifications were used to provide additional detail where appropriate. Field biologists used 200-foot scale ortho-topo maps for both vegetation mapping and rare plant points or polygons. If rare plants were documented during vegetation mapping, these sites were noted and revisited during focused rare plant surveys in order to map plants in more detail and accurately delineate species populations using Global Positioning System (GPS) equipment.

The minimum mapping unit was 0.01 acre for riparian areas and 1.0 acre for all other cover types within the disturbance area. Within the buffer, the minimum mapping unit for all land cover types, including riparian, was 1.0 acre. Vegetation mapping within the disturbance area was conducted concurrently with rare plant surveys by walking transects ranging from 10 to 100 feet apart. The buffer was surveyed by pedestrian transects within native habitat, but developed and

agricultural vegetation were surveyed by a combination of walking transects and selecting key vantage points from existing dirt access roads.

Dominant plant species for the various riparian and upland vegetation communities were recorded according to the 50/20 dominance rule. According to this rule, dominant plant species are defined as those that, when ranked in order of abundance, collectively make up 50 percent relative cover. Each dominant species individually makes up at least 20 percent relative cover, or is needed to surpass the 50 percent relative cover threshold. Once the dominant plant species were identified according to this method, they were grouped according to relative cover: species below 20 percent, species ranging from 20 to 50 percent cover, and species exceeding 50 percent cover.

An observation number was recorded on the map and keyed to the field notes for representative locations. A description of the vegetation community was written in field notes and included disturbance, special soils, potential jurisdictional waters, and habitat suitability for sensitive species.

Invasive species on the California Invasive Plant Council (Cal-IPC) List: A-1, A-2, and B (Cal-IPC 2009) were noted when occurring in high concentrations (107.64 square feet) and nearly monotypic stands. Examples of invasive plant species relevant to this report include tamarisk (*Tamarix* spp.), Saharan mustard (*Brassica tournefortii*) (USDA 2009a), and Mediterranean grass (*Schismus* sp.).

Vegetation communities and other land cover types classified as “sensitive” within this report were determined by applying the appropriate regulatory context. Guidance for determining sensitive vegetation communities is provided by resource agencies including BLM, CDFG, and the California Native Plant Society (CNPS), as well as supporting documentation such as the California Natural Diversity Database (CNDDB). These Federal, State, and local agencies and related publications typically are in concurrence on the classification of sensitive vegetation communities and other land cover types. For example, vegetation communities or other cover types that are considered potential jurisdictional State waters typically result in the vegetation community or nonvegetated area being considered sensitive. For this proposed Project, these waters are regulated by Sections 1600 et seq. of the California Fish and Game Code. Additionally, the occurrence of suitable habitat for special status plant and animal species also raises the sensitivity of a vegetation community. Biologically, the vegetation communities that

provide the highest habitat values within the BRSA are the riparian communities and the native upland communities.

Floral Inventory and Rare Plant Survey Methods

A list of potentially occurring sensitive plant species was compiled based on CDFG's CNDDB (RareFind Version 3.1.0, CDFG 2009), CNPS Inventory of Rare and Endangered Plants (CNPS 2009), the Natural Resources Conservation Service Web Soil Survey (USDA 2009b), and EDAW biologists with floral expertise in the region of the proposed Project. Additionally, the U.S. Fish and Wildlife Service (USFWS) provided a letter on March 19, 2009, detailing special status species that it requires to be considered. No plant species were mentioned in this letter.

For the purposes of this report, plant species are considered to have special status if they meet at least one of the following criteria:

- Covered under the Federal or California Endangered Species Act (ESA and CESA, respectively) (CDFG 2009);
- CDFG species of special concern (SSC) (CDFG 2009);
- CDFG fully protected species (CDFG 2009);
- BLM sensitive species (BLM Sensitive) (BLM 2009);
- CNPS List: 1A (presumed extinct in California), 1B (rare, threatened, and endangered in California and elsewhere), or 2 (rare, threatened, or endangered in California, but more common elsewhere) species are considered special status plant species if they meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Sections 2050 through 2098 (CESA);
- CNPS List: 3 (plants about which we need more information a review list), or 4 (plants of limited distribution–a watch list was also recorded here); and/or
- The Northern and Eastern Colorado Desert Coordinated Management Plan (NECO) (BLM 2002) was consulted for maps of lands designated for Wildlife Management Areas, documentation of sensitive vegetation communities, and documentation of sensitive species with potential for occurrence within the BRSA.

Results from previous reconnaissance-level survey efforts in the vicinity of the proposed Project (CH2MHill 2008) were added, as well as plants listed as sensitive by CDFG and BLM with the

potential to occur within the vicinity of the BRSA, and the presence of suitable habitats for sensitive species. These resources and range maps were consulted to determine historic occurrence of special status plant and wildlife species and other natural resources within the BRSA. Additionally, USFWS provided a letter detailing special status species that it requires to be considered (USFWS 2009a). At the direction of BLM, cottontop cactus (*Echinocactus polycephalus*), hedgehog cactus (*Echinocereus* spp.), and all varieties of California barrel cactus (*Ferocactus cylindraceus*) encountered onsite were recorded and mapped (LaPre 2009).

Surveys were conducted by walking or driving existing dirt access roads throughout the entire BRSA focusing on plant species inventory and rare plant species. Rare plant surveys followed survey guidelines from the following resources: 1) Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants (USFWS 2000); 2) Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (CDFG 1996); 3) CNPS Botanical Survey Guidelines (CNPS 2001); and 4) Survey Protocols for Survey and Manage Strategy 2: Vascular Plants (Whiteaker et. al. 1998).

Plant nomenclature is always changing. For the purposes of this survey report, the main authority was The Jepson Desert Manual (Baldwin et. al. 2002). The Jepson Desert Manual often does not list a common name; therefore, other sources were consulted: Calflora.org (Calflora 2009) and the USDA Plant Database (USDA 2009a). Common names are problematic but useful. Each plant listed has at least one common name indicated and occasionally two appear in the plant list (Floral Species Observed, Attachment 2).

The surveys included all locations within the BRSA where suitable habitats for sensitive plant species were present. In the buffer zone of the BRSA (extending out one mile from the facilities fenceline), vegetation mapping was conducted from strategic vantage points whenever direct access was not feasible. Suitable habitats were determined based on geography, slope aspect, soil substrate, vegetation community, associated plant species, and familiarity with each species based on reference populations and historical surveys conducted in the region. Survey dates were selected based on the most phenologically appropriate time for each plant species, when reproductive structures (i.e., flowers and fruits) and distinctive leafy parts were present and easily identifiable. Several rounds of focused surveys were required to accommodate the distinct phenologies of each rare plant species with potential to occur.

Surveys were scheduled to coincide with optimum flowering times in spring 2009 for all of the special status species potentially occurring onsite. When appropriate, known locations of rare plants in the vicinity of the Project were visited to verify the status of these species during the 2009 growing season (germinating, flowering, seeding, etc.). In general, the ideal survey window for 2009 was closely associated with the rainfall pattern, including rainfall totals and the timing of precipitation. Most areas were visited at least three times during the 2009 surveys to detect all of the potential sensitive plant species, and some areas were surveyed four or more times where appropriate. Vegetation communities known or suspected to support sensitive plant populations were walked in a meandering fashion. If a sensitive plant population was located, the population was assessed and the number of individuals were counted. All sensitive plant locations identified were recorded directly with Trimble GeoXT submeter GPS units and were mapped on aerial photograph field maps. Additionally, all plant species observed during the rare plant surveys are included in the floral inventory (Attachment 2).

RESULTS

This section details the results of 2009 field surveys, including the special status plant species, vegetation communities, and other land cover types observed within the BRSA. Additionally, this section provides a discussion of special status plant species that are not documented but have potential to occur within the BRSA. As noted earlier, the transmission line route to interconnect the Project with the regional grid has not yet been finalized. When this route is finalized, the needed botanical surveys will be conducted and the results provided to the regulatory agencies and other stakeholders. This will occur during the post-AFC portion of the CEC/BLM joint Project review process.

Vegetation Communities

Five vegetation communities and other cover types were identified within the BRSA during the surveys, including upland, riparian, and other cover types. The acreages of each vegetation community within the BRSA are provided in Table 2. Vegetation communities are described in detail below and based on a classification system by R. Holland (1986). When appropriate, vegetation classification by J.O. Sawyer and T. Keeler-Wolf (1995) are also considered. Community types according to CDFG (2003) are listed where applicable. Photographic documentation of vegetation communities is included in Attachment 3.

Table 2
Vegetation Communities and Cover Types (Acres)

Vegetation Communities and Other Cover Types	Disturbance Area		Buffer		BRSA
	Disturbance Area[a]	Surveyed, No Longer a Part	Buffer	Surveyed, No Longer a Part	
Riparian					
Desert Dry Wash Woodland	120.5	4.0	531.7	39.5	695.7
Unvegetated Ephemeral Dry Wash	8.3	0.5[b]	NA[b]	NA[b]	8.8
Subtotal Riparian	*128.8*	*4.5*	*531.7*	*39.5*	*704.5*
Upland					
Sonoran Creosote Bush Scrub	6,897.0	174.5	9,976.3	1,135.2	18,183.0
Subtotal Upland	*6,897.0*	*174.5*	*9,976.3*	*1,135.2*	*18,183.0*
Other Cover Types					
Agricultural Fields	0.8	0.0	1,621.6	0	1,622.4
Developed	0.0	0.7	175.3	5.9	181.9
Subtotal Other Cover Types	*0.8*	*0.7*	*1,796.9*	*5.9*	*1,804.3*
Total Acres	**7,026.6**	**179.7**	**12,304.9**	**1,180.6**	**20,691.8**

[a] Disturbance area is based on the most recent design, as shown in Figure 2.

[b] Unvegetated channels are potentially jurisdictional aquatic features and were not mapped within the buffer because these surveys were conducted at a minimum mapping unit of 1.0 acre, as opposed to 0.01 of an acre for riparian vegetation communities within the disturbance area. This approach is consistent with the EDAW Jurisdictional Delineation methodology and is pursuant to Appendix B, Section (g), Subsection (13), Paragraph (B), Clause (iii) of the the CEC Siting Regulations, which does not require detailed mapping of aquatic features beyond 250 feet of the disturbance limits (CEC 2007).

Riparian Vegetation Communities

Desert Dry Wash Woodland

Desert dry wash woodland is designated by Holland as Code 62200. It also approximates the Sawyer and Keeler-Wolf's Catclaw Acacia Series 129. This vegetation community consists of open, drought deciduous, riparian scrub woodland and is made up of three primary components: wash dependent vegetation, vegetated ephemeral dry wash, and islands of Sonoran desert creosote bush scrub (e.g., riparian interfluves). Dominant and indicator plants of this community within the BRSA include ironwood (*Olneya tesota*), blue palo verde (*Parkinsonia florida*), desert lavender (*Hyptis emoryi*), cheesebush (*Hymenoclea salsola)*, catclaw (*Acacia gregii*), dye bush (*Psorothamnus emoryi)*, smoketree (*Psorothamnus spinosus)*, and sweetbush (*Bebbia juncea* var. *aspera*). Tamarisk species, which are invasive, are also interspersed throughout this community. Overall, the cover of wash dependent vegetation within the desert dry wash woodland is less than

5 percent. The woodland occurs in and among dry washes that traverse the southwestern and western portion of the BRSA, passing under I-10 at two bridges (Figure 3).

Approximately 126.6 acres of desert dry wash woodland occur within the current disturbance area, 4.0 acres have been excluded from the original disturbance area and are now part of the buffer, and 571.2 acres occur in the original buffer, for a total of 695.7 acres within the BRSA (Table 2, Figure 3).

Unvegetated Ephemeral Dry Wash

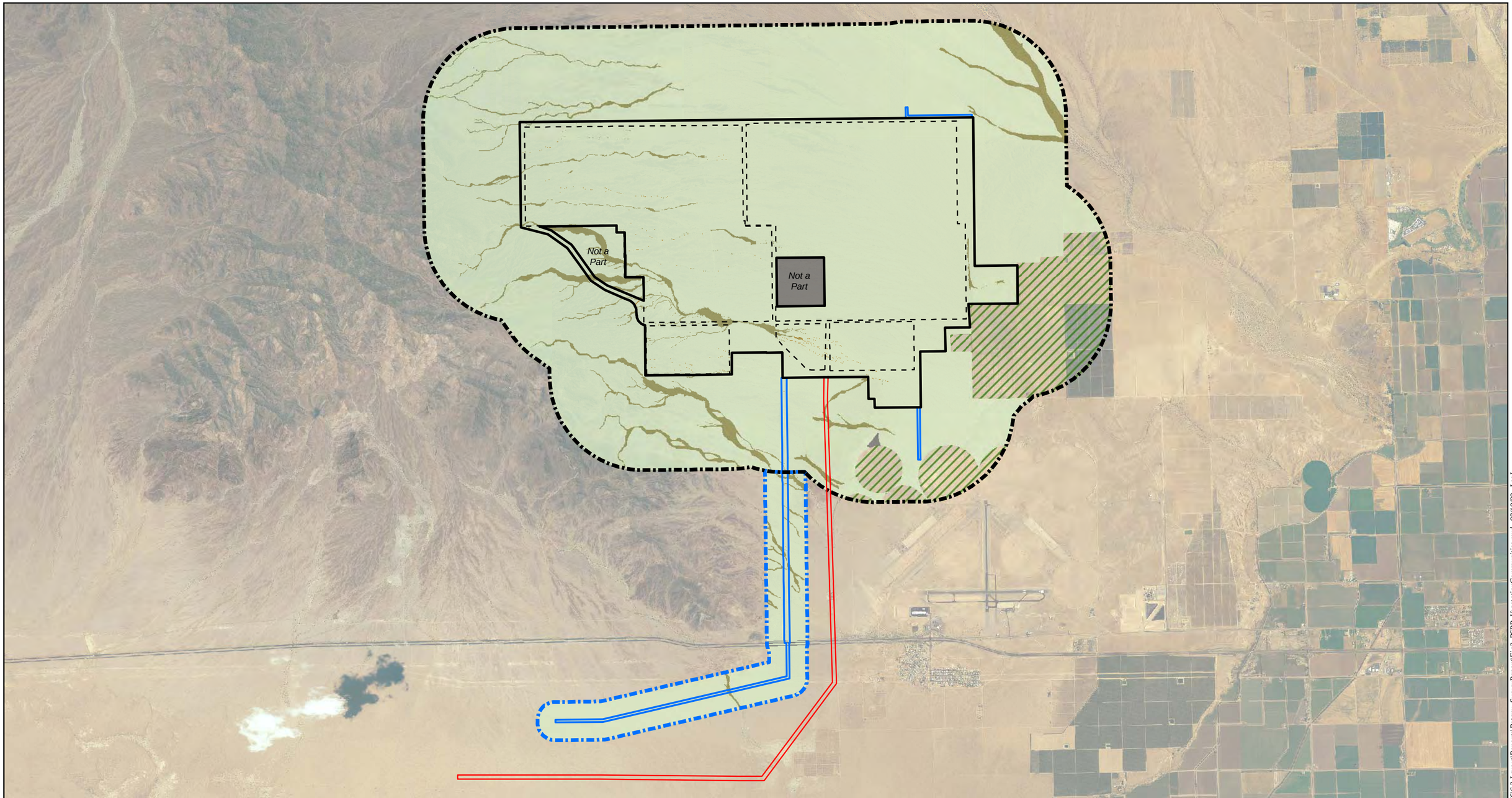
This community consists of unvegetated washes that are dominated by sandy substrate and little to no vegetation. Unvegetaed emphemeral dry wash occurs within the transition zone between the desert dry wash woodland, as the washes are transitioning to sheet flow as they drain to the northeast (Figure 3). There were no dominant plant species observed in association with nonvegetated channel, as these areas are primarily devoid of vegetation.

Approximately 8.3 acres of unvegetated ephemeral dry wash occur within the disturbance area (Table 2, Figure 3). Corresponding unvegetated ephemeral dry wash was not mapped in the buffer, but is a component of the desert dry wash woodland. This is because the minimum mapping unit for riparian vegetation communities in the buffer was 1.0 acre, as opposed to 0.01 acre within the disturbance area. However, due to disturbance area alterations, there is now 0.5 acre of mapped unvegetated ephemeral dry wash within the buffer for a total of 8.8 acres of unvegetated ephemeral dry wash within the BRSA.

Upland Vegetation Communities

Sonoran Creosote Bush Scrub

Sonoran creosote bush scrub is designated by Holland as Code 33100 and Sawyer and Keeler-Wolf as the Ocotillo Series 182. This community is characterized by sandy soils with an underlying shallow clay pan on a broad gentle southeast trending slope that drains into the Colorado River. Dominant plants within the BRSA for this community include creosote bush (*Larrea tridentata*) and burroweed (*Ambrosia dumosa*). Brittlebush (*Encelia farinosa*), cheesebush (*Hymenoclea salsola*), and ocotillo (*Fouquieria splendens*) also occur. This is the most common plant community within the BRSA, dominating the alluvial soil deposits. This plant community intergrades into most of the BRSA plant communities, including the desert dry



Map Location

Legend

- Facility Footprint
- Disturbance Area
- Possible Transmission Line Route
- Biological Resource Survey Area (BRSA)
- Buffer Survey Area (Surveyed No Longer a Part)
- Disturbance Area (Surveyed - No Longer a Part)

Source: NAIP 2005; AECOM 2009; EDAW 2009

Vegetation Communities

Riparian

- Desert Dry Wash Woodland
- Unvegetated Ephemeral Dry Wash

Upland

- Sonoran Creosote Bush Scrub

Other

- Agriculture (Active and Fallow)
- Developed

N W E S

1 in = 1 miles

0 1 2 Miles

Blythe Solar Power Project
Botanical Survey Report

Figure 3
Vegetation Communities

Solar Millennium

AECOM

Date: August 2009

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wash woodland. Within the BRSA, there are areas of desert pavement that are covered with rounded cobbles that range in size from 1 to 3 inches. Typically these areas are higher than the surrounding landscape by 3 to 15 feet. These areas are within the Sonoran creosote bush scrub, though the plant density is lower.

Within the utility corridor on the south side of I-10, fine sand drifts are interspersed within this community type. In these areas, dye bush occurs in stands and was more prevalent than in other portions of the Sonoran creosote bush scrub.

Past disturbance within this community includes military training and agricultural use. These are historical disturbances and the Sonoran creosote bush scrub within the BRSA has been recovering through natural recruitment. As a result, two invasive plant species, Russian thistle (*Salsola tragus*) and Saharan mustard (*Brassica tournefortii*), can be found in disturbed areas throughout the BRSA, especially near roads and in fallow and active agricultural areas. Another exotic plant, Mediterranean grass, is prevalent throughout the Sonoran creosote bush scrub. Approximately 6,897.0 acres of Sonoran creosote bush scrub occur within the current disturbance area, 174.5 acres have been excluded from the original disturbance area and are now part of the buffer, and 11,111.5 acres occur in the original buffer, for a total of 18,183.0 acres within the BRSA (Table 2, Figure 3).

Other Cover Types

Agricultural Land

There is no agriculture within the disturbance area. However, there is fallow and active agriculture at the southern and eastern border of the buffer. There is no associated Holland or Sawyer and Keeler-Wolf classification for this land cover type. It includes lands that are currently under cultivation and those that are abandoned (e.g., fallow). In the soils within abandoned agriculture areas, native vegetation is growing back. Russian thistle, Asian mustard, and other exotic plants were observed interspersed with the native vegetation and are indicative of past agricultural disturbance. All disturbed areas associated with past and present agricultural activities are included under this cover type.

Approximately 0.8 acre of agricultural land occurs within the disturbance area and 1,621.6 acres in the buffer, for a total of 1,622.4 acres within the BRSA (Table 2, Figure 3).

Developed Areas

Developed areas consist of roadways (I-10, deteriorating asphalt road, and dirt access roads), a large concrete military runway, and cleared land around holdings within the BRSA. No developed areas were mapped within the current disturbance area, 0.7 acre has been excluded from the original disturbance area, and 181.2 acres occur in the original buffer, for a total of 181.9 acres within the BRSA (Table 2, Figure 3).

Sensitive Vegetation Communities

Vegetation communities and other land cover types classified as "sensitive" within this report were determined by applying the following regulatory context. Guidance for determining sensitive vegetation communities is provided by resource agencies including BLM, CDFG, and CNPS, as well as supporting documentation such as the CNDDB. These Federal, State, and local agencies and related publications typically are in concurrence on the classification of sensitive vegetation communities and other land cover types. For example, vegetation communities or other cover types that are considered potential jurisdictional State waters typically result in the vegetation community or nonvegetated areas being considered sensitive. For this proposed Project, these waters are regulated by Sections 1600 et seq. of the California Fish and Game Code. Additionally, the occurrence of suitable habitat for special status plant and animal species also raises the sensitivity of a vegetation community. Biologically, the vegetation communities that provide the highest habitat values within the BRSA are the riparian communities and the native upland communities. All jurisdictional waters, including desert dry wash woodland and unvegetated ephemeral dry washes, are considered sensitive.

Special Status Plants

Habitat conditions for special status species were evaluated with respect to conditions in the BRSA, and surveys were initiated to determine presence/absence of species with the potential to occur on or near the BRSA. The following 18 special status species were identified as having the potential to occur on or near the BRSA and are discussed in detail below:

Federal or State Listed (ESA or CESA)

- Coachella Valley milkvetch (*Astragalus lentiginosus* var. *coachellae*) – ESA endangered, CNPS List 1B.2, BLM Sensitive, NECO

CDFG Species of Special Concern, California Code of Regulations, BLM Sensitive, NECO, or CNPS List 1A, 1B, or 2

- Angel trumpets (*Acleisanthes longiflora*) – CNPS List 2.3, NECO
- Harwood's milkvetch (*Astragalus insularis* var. *harwoodii*) – CNPS List 2.2, NECO
- Fairyduster (*Calliandra eriophylla*) – CNPS List 2.3, NECO
- Alkali mariposa lily (*Calochortus striatus*) – CNPS List 1B.2, BLM Sensitive
- Crucifixion thorn (*Castela emoryi*) – CNPS List 2.3, NECO
- Las Animas colubrine (*Colubrina californica*) – CNPS List 2.3, NECO
- Glandular ditaxis (*Ditaxis claryana*) – CNPS List 2.2, NECO
- California satintail (*Imperata brevifolia*) CNPS List 2.1
- Orocopia sage (*Salvia greatae*) – CNPS List 1B.3, NECO
- Desert spikemoss (*Selaginella eremophila*) – CNPS List 2.2
- Coves' cassia (*Senna covesii*) – CNPS List 2.2, NECO
- Dwarf germander (*Teucrium cubense* ssp. *depressum*) – CNPS List 2.2
- Jackass clover (*Wislizenia refracta* ssp. *refracta*) – CNPS List 2.2, NECO
- Orcutt's Woody-aster (*Xylorhiza orcuttii*) – CNPS List 1B, BLM Sensitive

CNPS List 3 (review list) and 4 (watch list)

- Foxtail cactus (*Corypantha alversonii*) – CNPS List 4.3 (watch list), NECO
- Utah vine milkweed (*Cynanchum utahense*) – CNPS List 4.3 (watch list), NECO
- California ditaxis (*Ditaxis serrata* var. *californica*) – CNPS List 3.2 (review list), NECO

Floral Inventory

A total of 129 plant species were detected during vegetation mapping and rare plant surveys (Attachment 2). Past agricultural and military uses have influenced the exotic weeds found within the BRSA. From the plants found, six nonnative species were detected. The nonnative plants consisted of three grasses: red brome (*Bromus madritensis* ssp. *rubens*), Mediterranean grass, and brome fescue (*Vulpia octoflora*). Saharan mustard (*Brassica tournefortii*), Russian thistle (*Salsola tragus*), and tamarisk (*Tamarix* sp.) are the remaining nonnative plants found within the BRSA.

A discussion of the special status plant species categories and species detected within the BRSA follows. In addition, at the request of BLM, a section is included on cactus species detected within the BRSA.

Sensitive Plant Species

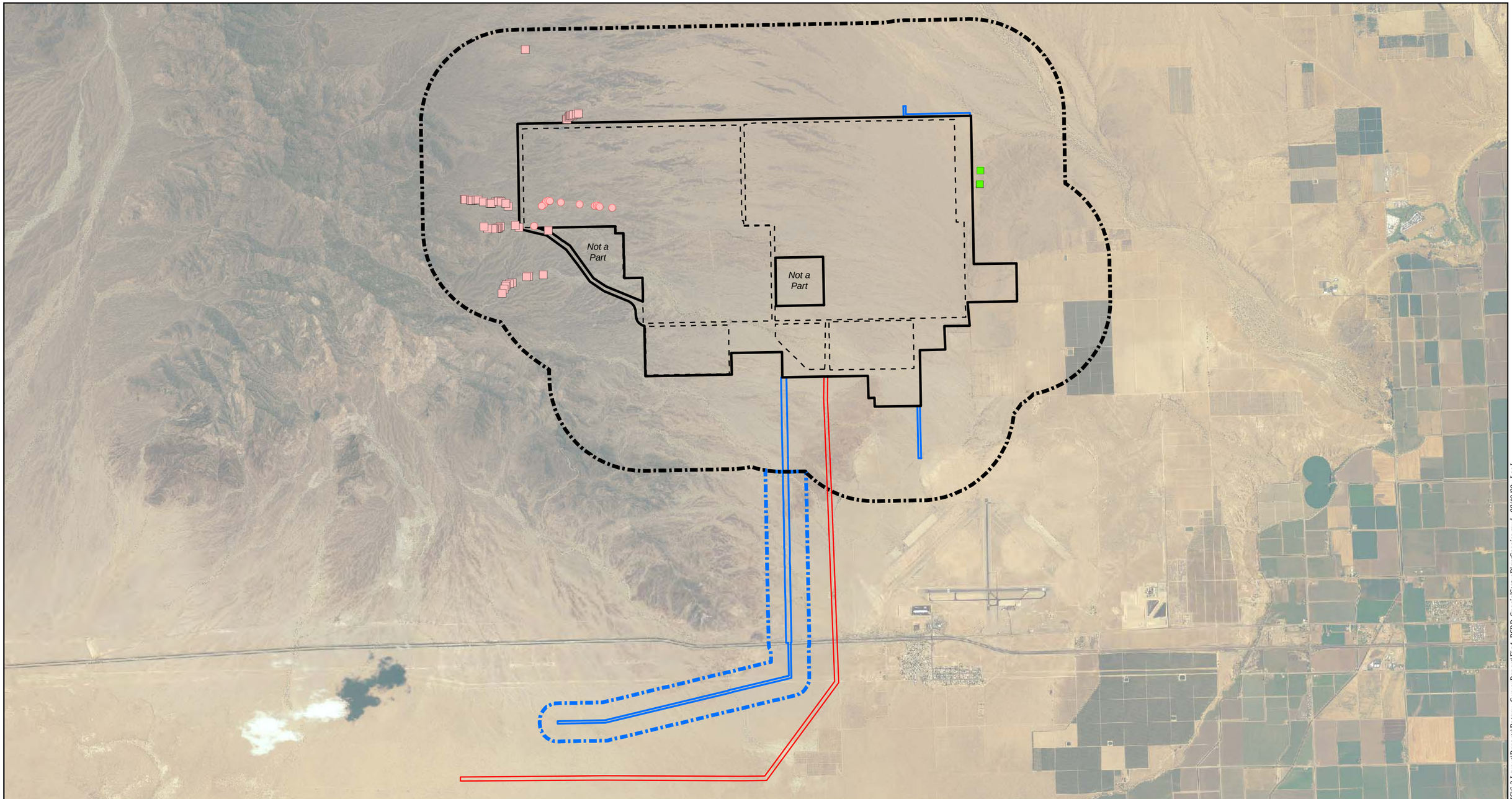
Special status plants are species that are either legally protected under the State and/or Federal Endangered Species Acts (ESAs) or other regulations, or species considered by the scientific community to be sufficiently rare to qualify for such listing. Furthermore, CNPS list 1A, 1B, and 2 species are fully considered, as they meet the definitions of Section 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California ESA) during the preparation of environmental documents relating to the California Environmental Quality Act (CNPS 2001).

Fifteen special status plant species have potential to occur onsite (Table 3). Two of these species, Harwood's milkvetch and Las Animas colubrine, were observed within the BRSA (Figure 4). Harwood's milkvetch is a CNPS List 2.2 (rare, threatened, or endangered in California) species and NECO special status species. Las Animas colubrine is a CNPS List 2.3 (rare, threatened, or endangered in California but more common elsewhere) species and NECO special status species. There is potential for these species to be found in similar areas within the BRSA. No other federally listed, State listed, or other State sensitive special status plant species were observed within the BRSA. Prior to the 2009 surveys, no rare plant species have been documented as occurring on the Project site, or in the immediate vicinity.

Two special status plant species were not detected but have a high potential to occur within the BRSA. Coachella Valley milkvetch has been detected in sandy areas near Desert Center. Although this location is 31 miles away, there is an abundance of sand within the BRSA. Dwarf germander (*Teucrium cubense* ssp. *depressum*) has a high potential to occur because the soil conditions and elevation were in range, and plants have been recorded 8 miles east of the BRSA.

Four special status plant species were not detected, but have a moderate potential to occur. Fairyduster is typically found at higher elevations, but plants have been found in similar habitats. Glandular ditaxis has been found in similar elevations and soil conditions, although 30 miles to the west of the BRSA. Orocopia sage has been found in similar habitats 30 miles to the west side of the BRSA. Jackass clover has been found in similar conditions near Palen Dry Lake 27 miles WNW of the BRSA.

Seven special status plants have a low potential to occur or are not expected to be found within the BRSA. Angel trumpets, alkali mariposa lily, California satintail, and Orcutt's woody-aster were not expected to occur. Angel trumpets is found at higher elevations growing on carbonate



Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Biological Resource Survey Area (BRSA)
- Buffer Survey Area - No Longer a Part
- Former Disturbance - No Longer Proposed

Special Status Plant Species

Within Disturbance Area

- Las Animas Colubrine (57 individuals)

Within Buffer

- Harwood's Milk-vetch (5 individuals)
- Las Animas Colubrine (117 individuals)

Source: NAIP 2005; AECOM 2009; EDAW 2009

N W E S

1 in = 1 miles

0 1 2 Miles

Blythe Solar Power Project
Botanical Survey Report

Figure 4
Special Status Plant Species

Solar Millennium

AECOM

Date: August 2009

Path: P:\2009\09080082 Sol MI Blythe\6.0 GIS\6.3 Layout\Reports\Botany_SurveyReport\Fig4_BSPP_SpecialStatusPlantSpecies.mxd, 08/19/09, LeeJ

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Table 3
Special Status Plant Species Potentially Occurring within the Project

Common Name Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2009)	Plant Habit, Flowering Period	Potential for Occurrence within BRSA[2]	Disturbance Area		Buffer	
					Findings[3]	Potential[4]	Findings[3]	Potential[4]
Coachella Valley Milkvetch (*Astragalus lentiginosus* var. *coachellae*)	ESA: Endangered CNPS: List 1B.2 BLM: Sensitive	Sonoran Desert, in sandy areas growing at elevations of 0 to 1,150 feet.	Annual or perennial herb that flowers February to May	Habitat for this species occurs within the sandy washes in the northeast and western portions of the BRSA. The nearest record of this species is 31 miles to the WNW of the BRSA (CDFG 2009). Most populations are restricted to the Coachella Valley, approximately 50 miles west of the BRSA. A field visit by members of the survey team to the Coachella Valley verified that this plant was growing in spring 2009.	ND	H	ND	H
Angel trumpets (*Acleisanthes longiflora*)	CNPS: List 2.3 NECO	Dry places, generally on carbonate/limestone derived soils in mountainous areas 30 to 8,000 feet.	Prostrate to ascending perennial stems <3 feet. Flowers produced during May	The closest record of this species is in Big Maria Mountain 15 miles ESE of the BRSA. The soils within the BRSA are not appropriate for this species.	ND	NE	ND	NE
Harwood's milkvetch (*Astragalus insularis* var. *harwoodii*)	CNPS: List 2.2 NECO	Sonoran Desert, sandy to gravely areas 0 to 1,000 feet.	Annual that blooms January to May	Five plants were observed in the northeastern portion of the buffer.	P	H	P	H
Fairyduster (*Calliandra eriophylla*)	CNPS: List 2.3, NECO	Sonoran Desert, sandy washes, slopes and mesas typically found at ± 5,000 feet.	Shrub <1 foot that blooms March to April	The BRSA is below the typical elevation range for this species. The nearest population occurs 16 miles to the west of the BRSA (CDFG 2009).	ND	NE	ND	M

Common Name Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2009)	Plant Habit, Flowering Period	Potential for Occurrence within BRSA[2]	Disturbance Area		Buffer	
					Findings[3]	Potential[4]	Findings[3]	Potential[4]
Alkali mariposa lily (*Calochortus striatus*)	CNPS: List 1B.2 BLM Sensitive	Western Mojave Desert, Alkaline meadows, moist creosote-bush scrub found at 2,600 to 4,600 feet	The 2-inch stem has short lived basal leaves that are up to 8 inches in length; plants bloom April to June	The BRSA is below the typical elevation range for this species. The nearest population occurs 152 miles to the northwest of the BRSA (CDFG 2009).	ND	NE	ND	NE
Crucifixion thorn (*Castela emoryi*)	CNPS: List 2.3 NECO	Desert areas on dry, gravelly washes, slopes, plains ±2,150 feet	Shrub <10 feet; blooms April through May	The BRSA is below the typical elevation range for this species. The nearest population occurs 20 miles to the northwest of the BRSA (CDFG 2009).	ND	L	ND	L
Las Animas colubrine (*Colubrina californica*)	CNPS: List 2.3 NECO	Sonoran Desert creosote bush scrub <3,500 feet	Plants are generally <3 feet; blooms June to July	This species was observed in the western portion of the BRSA in incised washes on the bajadas. Fifty seven plants were within the disturbance area and 117 plants were within the buffer. Specimens were observed in flower during April; an early blooming period for this species.	P	H	P	H
Foxtail cactus (*Corypantha alversonii*)	CNPS List 4.3 (Watch List) NECO	Sonoran and Mojave Desert Scrub (Creosote Bush Series) growing in rocky soils on hills, mountains, and bajadas between 250 and 2,000 feet	One to many spheric or cylindric stems, and grow up to 1 foot in height; blooms May to June	The closest record of this species is in Big Maria Mountain 9 miles northeast of the BRSA. All records are associated with mountainous areas, though soil requirements are similar to BRSA.	ND	NE	ND	NE

Common Name Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2009)	Plant Habit, Flowering Period	Potential for Occurrence within BRSA[2]	Disturbance Area		Buffer	
					Findings[3]	Potential[4]	Findings[3]	Potential[4]
Utah vine milkweed (*Cynanchum utahense*)	CNPS List 4.3 (Watch List) NECO	Mojave or Sonoran Desert, dry sandy or gravely areas <3,280 feet	Perennial vine growing on shrubs for support; blooms April to June	This species was found in the western portion of the BRSA at the base of McCoy Mountain. Approximately 680 plants were found growing in the buffer and approx. 640 plants were found in the disturbance area.	P	H	P	H
Glandular ditaxis (*Ditaxis claryana*)	CNPS List 2.2 NECO	Sonoran Desert at elevations <350 feet; sandy soils in creosote bush scrub	Annual or perennial herb that blooms from December to May	The habitat preferences of this species, sandy soils at low elevations, are present in the BRSA. There are records of this species 30 miles to the west of the BRSA (CDFG 2009).	ND	M	ND	M
California ditaxis *(Ditaxis serrata* var. *californica)*	CNPS List 3.2 (review list) NECO	Mojave Desert and northwest Sonoran Desert (Coachella Valley) 150 to 3,300 feet	Annual or perennial herb that blooms from March to May and October to December	The habitat preferences of this species, sandy soils in washes and canyons. There are records of this species within 34 miles to the west of the BRSA (CDFG 2009).	ND	M	ND	M
California satintail *(Imperata brevifolia)*	CNPS List 2.1	San Bernardino Mountains, Mojave Desert, in cultivation. Found up to 1,700 feet	Perennial grass found near wet springs, meadows, streamsides, and flood plains; flowering September to May	The habitat preferences of this species, near wet springs, meadows, stream sides and flood plains, are not present in the BRSA. The closest records of this species are near the Colorado River 13 miles east of the BRSA (CDFG 2009).	ND	NE	ND	NE

Common Name Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2009)	Plant Habit, Flowering Period	Potential for Occurrence within BRSA[2]	Disturbance Area		Buffer	
					Findings[3]	Potential[4]	Findings[3]	Potential[4]
Orocopia sage (*Salvia greatae*)	CNPS List 1B.3, NECO	Southeast Sonoran Desert (Orocopia, Chocolate Mtns.) on alluvial slopes between 100 and 800 feet	Shrubs are <3 feet with blooms from March to April	Habitat for this species is present within the western portion of the BRSA. This species has been recorded in the mountains 30 miles to the west of the BRSA at 2,000 feet (CDFG 2009).	ND	M	ND	M
Desert spikemoss (*Selaginella eremophila*)	CNPS List 2.2	Eastern Peninsular Ranges to the Sonoran Desert at elevations <3,000 feet. Shaded sites among rocks, in crevices, and in gravelly soils	Dense mat forming non-flowering plant	The habitat is in shaded sites on gravel soils, in crevices, and among rocks. This species has been recorded at higher elevations 32 miles to the west (CDFG 2009).	ND	L	ND	L
Coves' cassia (*Senna covesii*)	CNPS List 2.2 NECO	Dry, sandy desert washes, slopes of the Sonoran Desert between 1,600 and 2,000 feet	Small perennial shrub to 2 feet tall; blooming in April	This species occurs in desert washes and slopes. This species has been recorded in the Chuckwalla Mountains at higher elevations 32 miles to the west of the BRSA (CDFG 2009).	ND	L	ND	L
Dwarf germander *(Teucrium cubense* ssp. *depressum)*	CNPS List 2.2	Sandy soils, washes, and fields in the Somoran Desert below 1,200 feet	Annual plants up to 6 inches tall; blooms March to May	Habitat for this species is present within the BRSA. The closest records for this species are 8 miles east of the BRSA (CDFG 2009).	ND	H	ND	H
Jackass clover (*Wislizenia refracta* ssp. *refracta*)	CNPS List 2.2 NECO	Sandy washes, roadsides, alkaline flats in the Mojave Desert, and northern Sonoran Desert between 1,600 and 2,000 feet	Annual. Blooms between April and November	Habitat for this species within the BRSA is different from where it was recorded near Palen Dry Lake, 27 miles WNW of the BRSA (CDFG 2009).	ND	M	ND	M

Common Name Scientific Name	Sensitivity Status[1]	General Habitat Description (CNPS 2009)	Plant Habit, Flowering Period	Potential for Occurrence within BRSA[2]	Disturbance Area		Buffer	
					Findings[3]	Potential[4]	Findings[3]	Potential[4]
Orcutt's woody-aster (*Xylorhiza orcuttii*)	CNPS List 1B.2 BLM Sensitive	Arid canyons between 60 and 1,000 feet	Shrub <5 feet; blooms March to April	One plant recorded north of the San Diego/Imperial County border in Indio (Riverside County). All records are located 80 miles west of the BRSA (CDFG 2009)	ND	NE	ND	NE

[1] **Sensitivity Status Key**

ESA Federal Endangered Species Act (ESA) Threatened

CNPS California Native Plant Society Lists:
1B: Considered rare, threatened, or endangered in California and elsewhere.
2: Plants rare, threatened, or endangered in California, but more common elsewhere
3: Plants for which we need more information – review list
4: Plants of limited distribution a watch list
Decimal notations: .1 - Seriously endangered in California, .2 – Fairly endangered in California, .3 – Not very endangered in California

BLM Special Status Plants (Palm Springs Field Office)

NECO Northern and Eastern Colorado Desert Coordinated Management Plan special status species

[2] Some populations of rare plants were observed onsite, at other locations in the Sonoran Desert during the focused survey periods, or have records near the BRSA.

[3]**Findings**

P (present) – Species detected during Project surveys
ND (not detected) – Species not detected during Project surveys
TBD – To be determined following spring 2009 field surveys

[4]**Potential**

NE (not expected) – Suitable habitat for species does not occur
L (low potential) – Suitable habitat present, but of marginal quality
M (moderate potential) – Suitable habitat present
H (high potential) – Suitable habitat present, and species known to occur within the vicinity

soils, alkali mariposa lily is found in the Mojave desert at higher elevations, California satintail is found in more mesic environments generally closer to irrigation from the Colorado River, and the closest record for Orcutt's woody-aster is 80 miles to the west. Crucifixion thorn, Desert spikemoss, and Coves' cassia had a low potential to occur within the BRSA. Crucifixion thorn has been found in similar habitat but 20 miles to the northeast, Desert spikemoss has also been found in similar habitat and exposures but at higher elevations 32 miles to the west of the BRSA, and Coves' cassia has been recorded 32 miles to the west of the BRSA at higher elevations.

CNPS List 3 (Review List), and 4 (Watch List) Species

Three CNPS List 3 and List 4 species had the potential to occur within the BRSA: Utah vine milkweed (*Cynanchum utahense*) – CNPS List 4.3 (watch list), NECO; California ditaxis (*Ditaxis serrata* var. *californica*) – CNPS List 3.2 (review list), NECO; and Foxtail cactus (*Corypantha alversonii*) – CNPS List 4.3 (watch list), NECO.

Utah vine milkweed was present in the western portion of the BRSA in the washes near the base of McCoy Mountain. Approximately 680 plants were found growing on shrubs that lined these washes in the buffer. Within the disturbance area, approximately 640 plants were found growing on shrubs that lined the washes. This species uses shrubs for support and tends to form many twining branches that are highly variable in number. Individual plants growing at the base of the same shrub may cause an undercount; therefore, these numbers are approximate.

California ditaxis was not observed within the BRSA, but there is a moderate potential for occurrence since sandy low-elevation habitat is present within the BRSA. Foxtail cactus is not expected within the BRSA since the records close to the BRSA (9 miles northeast) are associated with mountainous areas in the Big Maria Mountains.

<u>Cactus Species</u>

The BLM requested that any varieties of California barrel cactus (*Ferocactus cylindraceus*), cottontop cactus (*Echinocactus polycephalus*), and hedgehog cactus (*Echinocereus* spp.) be mapped for future salvage when construction begins (LaPre 2009). Seven species in the Cactaceae family were observed within the BRSA. Of these species, two are within the genera targeted by BLM; California barrel cactus (*Ferocactus cylindraceus* var. *cylindraceus)* and cottontop cactus (*Echinocactus polycephalus* var. *polycephalu*s). Sixty-seven specimens were located within the BRSA (Figure 4).

DISCUSSION

This section contains a discussion of how climate may have affected 2009 field surveys, followed by a summary of the survey results.

Climate for the 2008/2009 Season

Rainfall patterns and totals can be a limiting factor in detecting rare plant species in desert environments. Rainfall totals between November 2008 and February 2009 at Blythe Airport, California, 2 miles to the southeast, were 0.24 inch, 0.65 inch, 0.02 inch, and 0.43 inch, respectively (WRCC 2009). Historic mean totals for rainfall during the same period are 0.20 inch, 0.40 inch, 0.47 inch, and 0.43 inch, respectively (WRCC 2009). During the time period that most relates to plant growing seasons, January 2009 was the only month that was not at or above the mean rainfall totals. Late season rain fall in March and April, which historically totals 0.36 inch and 0.16 inch on average, was 0.00 for both months in 2009. Table 4 contains the growing season rainfall data discussed above.

Table 4
Blythe Precipitation Data[1]

Time Period	Historical Average (inches): July 1948 to December 2008	Past Year (inches): November 2008 to February 2009
November	0.20	0.24
December	0.40	0.65
January	0.47	0.02
February	0.43	0.43
Total	**1.00**	**1.34**

[1] Western Regional Climate Center 2009 for Blythe CAA Airport, California (040927)

The below-average rainfall in January 2009 and lack of late season rain events may have depressed germination of annual plant species, but based on site conditions observed by field staff and conditions at known reference populations, sensitive plant species (annual and perennial) were detectable in spring 2009 when the surveys were conducted. In addition, some plant species were observed blooming earlier this year and for shorter duration than would be expected if late season (March and April) rainfall occurred. For example, Las Animas colubrine, a CNPS List 2.3 and a NECO species found at Blythe, typically blooms in June and July, but was observed blooming in April within the BRSA.

Summary

The project area and surrounding 1-mile buffer area consist of large expanses of five different plant communities and land cover types. The most common plant community type is the Sonoran creosote bush scrub. The sensitive vegetation communities, desert dry wash woodland and unvegetated ephemeral dry wash, were detected within the Project boundary during spring 2009 surveys.

Fifteen other special status species were identified to have some potential for occurrence within the BRSA. Two sensitive plant species, Harwood's milkvetch and Las Animas colubrine, were detected within the project boundary during spring 2009 surveys. One watch list species, Utah vine milkweed, was detected within the project boundary. Given the rainfall patterns in November and December 2008, and January to March 2009, plants received adequate moisture to bloom during the 2008–2009 growing season. It is likely that sensitive species would have been highly detectable during the field survey period if they were present within the BRSA, especially the annual species listed in Table 3. The Project site was adequately evaluated for general and sensitive plant species in 2009.

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ATTACHMENT 1

BIOLOGIST QUALIFICATIONS

Attachment 1
Biologist Qualifications

Name	Affiliation	Surveys Performed	Qualifications
Asmus, Kristen	AECOM	Botanical	BS Plant Science Landscape Horticulture Option, UC Davis, MS Botanical Science, University of Hawaii, Manoa Eleven years experience in vegetation mapping and rare plant surveys in Hawaii and California, including restoration ecology and GIS, with 6 years wetland delineations. Certified as an ISA certified arborist (WE-6139A) for 8 years. Regional experience in the Sonoran desert region, northern California: Alameda, Contra Costa, Santa Clara, San Joaquin, San Benito, Santa Cruz, San Mateo, San Francisco, Marin, Mendocino, Solano, and limited experience in the northern Sierra Nevada Mountain Range.
Battaglia, Charles	AECOM	Botanical	BS Environmental Biology and Management, with minor in Insect Ecology, University of California, Davis; MS in Rangeland Ecology and Management, University of California, Berkeley Eight years experience as a biologist and field ecologist: 4 years in consulting conducting botanical surveys, plant community and resource mapping, riparian/wetland restoration (design, implementation, monitoring), wetland delineation, fisheries sampling, CEQA and NEPA impact analysis, compliance monitoring; 4 years on water quality studies in rangeland streams and vernal pools involving livestock management, macroinvertebrate community analysis, mosquito and vector ecology, and source reduction techniques.
Betzler, Joseph	AECOM	Botanical, Desert Tortoise	BS Botany, San Diego State University, MS Biology-Botany, San Diego State University, Diploma Plant Conservation Techniques, Royal Botanic Gardens, Kew, UK Fourteen years experience in the field of biology. Experience gathering data for biological assessments and evaluations, inventories, surveys, desert tortoise clearances and surveys (268 hours), and adaptive management plans. Biological consultant for 5 years as a biologist. Specializes in the plants of the southwestern U.S. floristic provinces.

Name	Affiliation	Surveys Performed	Qualifications
Brungraber, (Wendin) Caesara	Independent Consultant	Botanical	BS Biology, BA Economics, Bucknell University, MS Horticulture, UC Davis Five years experience as a botanical consultant in southern California. Ten years in the Pacific coast of the U.S. from Alaska to California, and New England. Conducted rare plant surveys of Federal and State listed species, as well as vegetation mapping, floral inventories, and restoration monitoring and design.
Dwerlkotte, Richard	AECOM	Botanical	BS Environmental Biology and graduate studies, Humboldt State University Nineteen years experience as a field botanist and ecologist conducting botanical resource studies on over 100 projects in the western U.S. and northern Great Plains including rare plant surveys, vegetation mapping, wetland delineation, noxious weed surveys, biological constraints and impacts analyses on a wide variety of projects, and assessments of the effects of altered river hydrology on riparian and wetland vegetation.
Innicken, Shirley	AECOM	Botanical	BS Ethanobotanical Ecology, California State University, Chico Twelve years experience in the field wildlife and botanical surveys. Conducted rare plant surveys following Federal and State standards. Familiar with California floristic communities. Strong organizational skills for field work implementation.
Martus, Carolyn	Independent Consultant	Botanical	BS Biology, Rutgers University, MS Biology, San Marcos State University Nine years experience in vegetation mapping, rare plant surveys, and invasive plant and animal monitoring projects. Regional experience includes coastal southern California, and Sonoran and Mojave deserts floristic communities. Worked on military instillations and with public utilities.
McMillan, Scott	AECOM	Botanical	BS Biology and graduate studies, San Diego State University More than 18 years experience as botanist and restoration ecologist in the Western U.S. and Baja California, Mexico. Conducted general botany, rare plant surveys, vegetation analyses, and other impact studies on over 100 projects in the southwest. Also developed and implemented numerous native habitat and wildlife habitat restoration programs, many of which included endangered plant and animal species.

Name	Affiliation	Surveys Performed	Qualifications
Sproul, Fred	AECOM	Botanical	BS Biology, San Diego State University, education Miami University Thirty years of experience conducting rare plant surveys and mapping of vegetation, including on San Diego County unincorporated lands. Regional experience in Riverside, Inyo, and Kern Counties and Great Basin.
Woolley, Lance	AECOM	Botanical	MA Botany, Humboldt State University Three years of professional experience as a botanist that includes performing rare plant surveys, vegetation mapping, and habitat assessments throughout the northern and southern California regions.

ATTACHMENT 2

FLORAL SPECIES OBSERVED

Attachment 2
Floral Species Observed

Family	Scientific Name	Common Name
GNETALES		
Ephedraceae – Ephedta Family		
	Ephedra sp.	ephedra
MONOCOTS		
Poaceae – Grass Family		
	Aristida adscensionis	sixweeks threeawn
	Aristida purpurea	purple threeawn
	Bouteloua barbata var. *barbata*	sixweeks grama
	Bromus madritensis ssp. *rubens**	red brome, foxtail chess
	Erioneuron pulchellum (*syn. Dasyochloa pulchella*)	fluff grass
	Pleuraphis rigida	big galleta grass
	Schismus sp.*	Mediterranean grass
	*Vulpia bromoides**	brome fescue
	Vulpia octoflora	sixweeks fescue
DICOTS		
Asclepiadaceae – Milkweed Family		
	Asclepias subulata	rush milkweed
	Cynanchum utahense	Utah cynanchum
	Sarcostemma cynanchoides ssp. *hartwegii*	climbing milkweed
	Sarcostemma hirtellum	trailing townula, hairy milkweed
Asteraceae – Sunflower Family		
	Adenophyllum porophylloides	San Felipe dyssodia
	Ambrosia dumosa	burroweed, white bursage
	Atrichoseris platyphylla	parachute plant , gravel ghost
	Bebbia juncea var. *aspera*	sweetbush
	Calycoseris wrightii	white tackstem
	Chaenactis carphoclinia	pebble pincushion
	Chaenactis stevioides	desert pincushion
	Encelia farinose	brittlebush, incienso
	Encelia frutescens	button brittlebush
	Geraea canescens	desert-sunflower
	Hymenoclea salsola	cheesebush
	Malacothrix glabrata	desert dandelion
	Monoptilon bellioides	Mojave desertstar
	Palafoxia arida var. *arida*	Spanish needle, desert palafox
	Perityle emoryi	Emory's rockdaisy
	Pectis papposa	chinchweed
	Porophyllum gracile	odora
	Prenanthella exigua	brightwhite
	Rafinesquia neomexicana	desert chicory
	Senecio mohavensis	Mojave ragwort, Mohave Groundsel
	Stephanomeria pauciflora var. *pauciflora*	wire lettuce
	Trichoptilium incisum	yellowhead, yellowdome
	Trixis californica var. *californica*	American threefold
Boraginaceae – Borage Family		
	Amsinckia menziesii var. *menziesii*	rancher's fireweed
	Cryptantha angustifolia	narrow leaved cryptantha
	Cryptantha barbigera	bearded cryptantha
	Cryptantha costata	ribbed cryptantha

Family	Scientific Name	Common Name
	Cryptantha maritime	Guadalupe cryptantha
	Cryptantha pterocarya	wingnut cryptantha
	Pectocarya penicillata	chuckwalla combseed
	Pectocarya platycarpa	broadfruit combseed
	Tiquilia plicata	fanleaf crinklemat, plicate coldenia
Brassicaceae – Mustard Family		
	*Brassica tournefortii**	Saharan mustard, Sahara mustard
	Dithyrea californica	spectacle-pod
	Guillenia lasiophyllum	California mustard
	Lepidium sp.	pepperweed
	Tropidocarpum gracile	dobie pod
Cactaceae – Cactus Family		
	Echinocactus polycephalus var. *polycephalus*	cottontop cactus, clustered barrel cactus
	Ferocactus cylindraceus var. *cylindraceus*	California barrel cactus
	Mammillaria tetrancistra	common fishhook cactus
	Opuntia basilaris	beavertail cactus
	Opuntia echinocarpa (*Cylindropuntia e.*)	silver cholla, golden cholla
	Opuntia ramosissima (*Cylindropuntia r.*)	pencil cactus, diamond cholla
Chenopodiaceae – Goosefoot Family		
	Atriplex polycarpa	allscale saltbrush
	Atriplex hymenelytra	desert holly
	Chenopodium murale	nettleleaf goosefoot
	Chenopodium sp.	goosefoot
	*Salsola tragus**	Russian thistle, tumbleweed
Cucurbitaceae – Gourd Family		
	Brandegea bigelovii	desert starvine
Euphorbiaceae – Spurge Family		
	Chamaesyce polycarpa	smallseed sandmat
	Ditaxis lanceolata	Narrowleaf ditaxis, narrowleaf silverbush
	Ditaxis neomexicana	New Mexico ditaxis
	Euphorbia eriantha	beetle spurge
Fabaceae – Legume Family		
	Acacia gregii	catclaw
	Astragalus nuttallianus var. *imperfectus*	turkey peas
	Astragalus insularis var. *harwoodii*	Harwood's milkvetch
	Cercidium floridium ssp. *floridium*	blue palo verde
	Dalea mollis	silky dalea, hairy prairie clover
	Lotus wrangelianus	Chilean bird's-foot trefoil
	Lupinus cf. *arizonicus*	Arizona lupine
	Marina parryi	Parry's false prairie clover
	Olneya tesota	ironwood
	Prosopis glandulosa	mesquite, honey mesquite
	Psorothamnus emoryi	dye bush
	Psorothamnus spinosum	smoke tree
	Senna armata	spiny senna, desert senna
Fouquieriaceae – Ocotillo Family		
	Fouquieria splendens ssp. *splendens*	ocotillo
Geraniaceae – Geranium Family		
	Erodium texanum	Texas storksbill, Desert Heron's Bill
Hydrophyllaceae – Waterleaf Family		
	Eucrypta micrantha	dainty desert hideseed

Family	Scientific Name	Common Name
	Nama demissum var. *demissum*	purplemat
	Phacelia crenulata var. *ambigua*	purplestem phacelia
	Phacelia crenulata var. *minutiflora*	cleftleaf wildheliotrope
Krameriaceae – Rhatany Family		
	Krameria erecta	Pima rharany, littleleaf ratany
	Krameria grayi	white rhatany
Lamiaceae – Mint Family		
	Hyptis emoryi	desert-lavender
Loasaceae – Loasa Family		
	Mentzelia cf. *albicaulis*	small flowered blazing star, white stemmed stickleaf
	Mentzelia involucrate	whitebract blazingstar
Malvaceae – Mallow Family		
	Eremalche rotundifolia	desert five-spot
	Hibiscus denudatus	paleface
	Sphaeralcea ambigua	desert globemallow, apricot mallow
Martyniaceae – Unicorn-Plant Family		
	Proboscidea althaeifolia	desert unicorn-plant
Nyctaginaceae – Four O'Clock Family		
	Allionia incarnate	trailing allionia, windmills
Onagraceae – Evening Primrose Family		
	Camissonia boothii ssp. *desertorum*	desert suncup
	Camissonia brevipes ssp. *brevipes*	golden suncup
	Camissonia cf. *cardiophylla*	heartleaf suncup
	Camissonia claviformis	browneyes
	Camissonia refracta	narrowleaf suncup
Papaveraceae – Poppy Family		
	Eschscholzia glyptosperma	desert poppy, desert golden poppy
	Eschscholzia minutiflora	pygmy poppy, Coville's poppy
Plantaginaceae – Plantain Family		
	Plantago ovate	desert Indianwheat, woolly plantain
Polemoniaceae – Phlox Family		
	Gilia brecciarum ssp. *brecciarum*	Nevada gilia
	Gilia latifolia	broadleaf gilia
	Gilia stellata	star gilia
	Langloisia setosissima ssp. *setosissima*	bristly langloisia
	Linanthus jonesii	Jones' linanthus
	Loeseliastrum schottii	Schott's calico
Polygonaceae – Buckwheat Family		
	Chorizanthe brevicornu var. *brevicornu*	brittle spineflower
	Chorizanthe corrugate	wrinkled spineflower
	Chorizanthe rigida	spiny-herb
	Eriogonum inflatum	desert trumpet
	Eriogonum reniforme	kidneyleaf buckwheat
	Eriogonum thomasii	Thomas Eriogonum
	Eriogonum trichopes	little deserttrumpet
Resedaceae – Mignonette Family		
	Oligomeris linifolia	lineleaf whitepuff
Rhamnaceae – Buckthorn Family		
	Colubrina californica	las animas colubrina
	Ziziphus cf. *obtusifolia* var. *canescens*	graythorn

Family	Scientific Name	Common Name
Scrophulariaceae – Figwort Family		
	Antirrhinum filipes	twining snapdragon
	Mohavea confertiflora	ghost flower
Solanaceae – Nightshade Family		
	Lycium andersonii	water jacket, Anderson's desert thorn
	Physalis hederifolia var. *fendleri*	Fendler's groundcherry
Tamaricaceae – Tamarisk Family		
	Tamarx sp. *	Tamarisk
Viscaceae – Mistletoe Family		
	Phoradendron californicum	desert mistletoe
Zygophyllaceae – Caltrop Family		
	Fagonia laevis	California fagonbush
	Larrea tridentate	creosote bush
	Kallstroemia parviflora	warty caltrop

* = nonnative species

ATTACHMENT 3

REPRESENTATIVE PHOTOGRAPHS OF VEGETATION COMMUNITIES WITHIN THE BIOLOGICAL RESOURCE SURVEY AREA

Photograph 1: Desert dry wash, blue palo verde, and creosote in western part of the BRSA (view looking east).

Photograph 2: Unvegetated ephemeral dry wash (looking west).

Map Location

Blythe Solar Power Project Biological Technical Report

Attachment 3 Representative Vegetation Community Photographs 1 and 2

Solar Millennium

AECOM

Date: July 2009

Photograph 3: Sonoran Creosote Bush scrub in the background with desret pavement in foreground (view looking northeast).

Map Location

Blythe Solar Power Project Biological Technical Report

Attachment 3 Representative Vegetation Community Photograph 3

Solar Millennium

AECOM

Date: July 2009

ATTACHMENT G

WILDLIFE SPECIES DETECTED WITHIN THE BIOLOGICAL RESOURCES SURVEY AREA

ATTACHMENT G

WILDLIFE SPECIES DETECTED WITHIN THE BIOLOGICAL RESOURCES SURVEY AREA

	Scientific Name	Common Name
INVERTEBRATES		
Order Araneae		
	Family Theraphosidae	
	Aphonopelma chalcodes	desert tarantula
Order Hymenoptera		Ants, Bees, Wasps and Sawflies
	Family Pompilidae	
	Pepsis sp.	tarantula hawk
Order Lepidoptera		Insects and Butterflies
	Family Danaidae	
	Danaus gilippus strigosus	striated queen
	Family Hesperidae	
	Erynnis funeralis	funereal duskywing
	Family Pieridae	
	Nathalis iole	dainty sulphur
	Pontia protodice	checkered white
	Family Lycaenidae	
	Brephidium exilis	pigmy blue
	Family Nymphalidae	
	Vanessa cardui	painted lady
	Vanessa virginiensis	Virginia lady
Order Orthoptera		Grasshoppers and Crickets
REPTILES		
Order Squamata		Lizards and Snakes
	Family Crotaphytidae	
	Crotaphytus bicinctores	great basin collared lizard
	Gambelia wislizenii	long-nosed leopard lizard
	Family Iguanidae	
	Dipsosaurus dorsalis	desert iguana
	Sauromalus ater	common chuckwalla
	Family Phrynosomatidae	
	Uta stansburiana	side-blotched lizard
	Callisaurus draconoides	zebra-tailed lizard
	Sceloporus magister	desert spiny lizard
	Urosaurus graciosus	long-tailed brush lizard
	Phrynosoma platyrhinos	desert horned lizard
	Family Teiidae	
	Cnemidophorus tigris	western whiptail
	Family Colubridae	
	Chionactis occipitalis	western shovel-nosed snake
	Masticophis flagellum piceus	red coachwhip
	Pituophis melanoleucus	gopher snake
	Salvadora hexalepis	patch-nosed snake
	Sonora semiannulata	variable groundsnake
	Family Viperidae	

	Scientific Name	Common Name
	Crotalus atrox	western diamond-backed rattlesnake
	Crotalus cerastes	sidewinder
	Crotalus mitchelli	speckled rattlesnake
Order Testundines		Turtles
	Family Testudinidae	
	Gopherus agassizii[1 2]	desert tortoise
BIRDS		
Order Ciconiiformes		Herons, Storks, Ibises, and Relatives
	Family Cathartidae	
	Cathartes aura	turkey vulture
Order Falconiformes		Diurnal Birds of Prey
	Family Accipitridae	
	Accipiter striatus[+]	sharp-shinned hawk
	Buteo jamaicensis	red-tailed hawk
	Buteo swainsoni[2]	Swainson's hawk
	Buteo regalis	ferruginousferruginous hawk
	Pandion haliaetus	osprey
	Family Falconidae	
	Falco sparverius	American kestrel
	Falco mexicanus[+]	prairie falcon
Order Galliformes		Pheasants, Grouse, Quail and Relatives
	Family Odontophoridae	
	Callipepla californica	California quail
	Callipepla gambelii	Gambel's quail
Order Charadriiformes		Shorebirds, Gulls and Relatives
	Family Charadriidae	
	Charadrius vociferus	killdeer
	Family Scolopacidae	
Order Columbiformes		Pigeons and Doves
	Family Columbidae	
	Zenaida asiatica	white-winged dove
	Zenaida macroura	mourning dove
Order Caprimulgiformes		Goatsuckers and Relatives
	Family Caprimulgidae	
	Caprimulgus vociferus	whip-poor-will
	Chordeiles acutipennis	lesser nighthawk
	Phalaenoptilus nuttallii	common poorwill
Order Cuculiformes		Cuckoos and Relatives
	Family Cuculidae	
	Geococcyx californianus	greater roadrunner
Order Strigiformes		Owls
	Family Strigidae	
	*Athene cunicularia**	burrowing owl
Order Apodiformes		Hummingbirds and Swifts
	Family Apodidae	
	Aeronautes saxatalis	white-throated swift
	Family Trochilidae	
	Calypte anna	Anna's hummingbird

	Scientific Name	Common Name
	Calypte costae	Costa's hummingbird
Order Passeriformes		Song birds
	Family Tyrannidae	
	Empidonax oberholseri	dusky flycatcher
	Myiarchus cinerascens	ash-throated flycatcher
	Sayornis nigricans	black phoebe
	Sayornis saya	Say's phoebe
	Tyrannus verticalis	western kingbird
	Family Troglodytidae	
	Campylorhynchus brunneicapillus	cactus wren
	Salpinctes obsoletus	rock wren
	Family Laniidae	
	*Lanus ludovicianus**	loggerhead shrike
	Family Corvidae	
	Corvus corax	common raven
	Family Alaudidae	
	Eremophila alpestris[+]	horned lark
	Family Hirundinidae	
	Hirundo pyrrhonota	cliff swallow
	Hirundo rustica	barn swallow
	Stelgidopteryx serripennis	northern rough-winged swallow
	Tachycineta bicolor	tree swallow
	Tachycineta thalassina	violet-green swallow
	Family Remizidae	
	Auriparus flaviceps	verdin
	Family Mimidae	
	Mimus polyglottos	northern mockingbird
	Toxostoma sp.	thrasher
	Toxostoma lecontei	Le Conte's thrasher
	Family Muscicapidae	
	Polioptila melanura	black-tailed gnatcatcher
	Family Emberizidae	
	Agelaius phoeniceus	red-winged blackbird
	Amphispiza bilineata	black-throated sparrow
	Dendroica petechia	yellow warbler
	Dendroica coronata	yellow-rumped warbler
	Dendroica sp.	Townsend's or Hermit warbler
	Geothlypis tolmiei	Macgillivray's warbler
	Pheucticus melanocephalus	black-headed grosbeak
	Vermivora celata	orange-crowned warbler
	Vermivora ruficapilla	Nashville warbler
	Wilsonia pusilla	Wilson's warbler
	Family Fringillidae	
	Carpodacus mexicanus	house finch
	Family Vireonidae	
	Vireo cassinii	Cassin's vireo
MAMMALS		
Order Lagomorpha		Rabbits, Hares, and Pikas
	Family Leporidae	
	Sylvilagus audubonii	Audobon's cottontail

	Scientific Name	Common Name
	Lepus californica	black-tailed jackrabbit
Order Rodentia		Rodents
	Family Geomyidae	
	Thomomys bottae	Botta's pocket gopher
	Family Heteromyidae	
	Dipodomys sp.	kangaroo rat
	Dipodomys deserti	desert kangaroo rat
	Dipodomys merriami	Merriam's kangaroo rat
	Perognathus longimembris	little pocket mouse
	Chaetodipus sp.	pocket mouse species
	Family Scuiridae	
	Spermophilus tereticaudus	round-tailed ground squirrel
	Ammospermophilus leucurcus	antelope ground squirrel
Order Carnivora		Carnivores
	Family Canidae	
	Vulpes macrotis arsipus	desert kit fox
	Canis latrans	coyote
	Canis familiaris	domestic dog
	Family Mustelidae	
	*Taxidea taxus**	American badger
	Family Felidae	
	Lynx rufus	bobcat
Order Perissodactyla		Horses, Tapirs, and Relatives
	Family Equidae	
	Equus asinus	feral burro
Order Artiodactyla		Even-toed Ungulates
	Family Bovidae	
	Ovis canadensis nelsoni	Nelson's bighorn sheep
	Family Cervidae	
	Odocoileus hemionus	mule deer

[1] Federal threatened or endangered species
[2] State threatened or endangered species
[3] State fully protected species
*State Species of Special Concern
+State special animal/CDFG watch list

ATTACHMENT H

AVIAN POINT COUNT SURVEY TECHNICAL REPORT

BLYTHE SOLAR POWER PROJECT
AVIAN POINT COUNT TECHNICAL REPORT
RIVERSIDE COUNTY, CALIFORNIA

Prepared for:

Solar Millennium, LLC
1625 Shattuck Avenue
Berkeley, California 94709

Chevron Energy Solutions
A Division of Chevron U.S.A. Inc.
345 California St., 18th Floor
San Francisco, California 94104

Prepared by:

EDAW AECOM
1420 Kettner Boulevard, Suite 500
San Diego, California 92101
Phone: (619) 233-1454
Fax: (619) 233-0952
Contact: Cecilia Meyer-Lovell

Bloom Biological, Inc.
13611 Hewes Avenue
Santa Ana, California 92705
Phone: (714) 544-6147
Fax: (714) 832-4414
Contact: Pete Bloom

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ATTACHMENT 1 – FIGURES

Figure

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I. SUMMARY

Solar Millennium, LLC and Chevron Energy Solutions (Applicants) propose to develop the 1,000-megawatt (MW) Blythe Solar Power Project (BSPP or Project) that would be located on Bureau of Land Management (BLM)-managed land in eastern Riverside County, approximately 8 miles west of the City of Blythe, California (Figure 1 [all figures referred to herein are included in Attachment 1]). The primary solar energy facilities and associated construction and operations footprint are located within an approximately 7,030-acre disturbance area (Figure 2).

EDAW AECOM and Bloom Biological, Inc. performed avian point count surveys for the Applicants at the site of the proposed Project. This report was prepared to support the joint review process for the BSPP being undertaken by the California Energy Commission and BLM. It describes methods and results of avian point count surveys within the proposed disturbance area, which is defined as the area inside and outside the facility fenceline that will be disturbed by the Project.

II. INTRODUCTION

A. Description of Project

Solar Millennium, LLC and Chevron Energy Solutions (Applicants) are proposing to construct a commercial solar thermal electric power generating project, herein referred to as the Blythe Solar Power Project (BSPP or Project). The BSPP would be located in the southern California inland desert, approximately 7 miles west of the City of Blythe, in Riverside County, California. The Project would be located on a 9,400-acre right-of-way (ROW) owned by the Federal government and leased by the Applicant from the Bureau of Land Management (BLM). Construction and operation of the Project facilities would disturb approximately 7,245 acres of the ROW both inside and outside the facilities fenceline; the footprint (area inside the fenceline) of Project facilities themselves. The Project would use solar parabolic trough technology to generate electricity. With this technology, arrays of parabolic mirrors collect heat energy from the sun and refocus the radiation on a receiver tube located at the focal point of the parabola. A heat transfer fluid (HTF) is heated to high temperature (750°F) as it circulates through the receiver tubes. The heated HTF is then piped through a series of heat exchangers where it releases its stored heat to generate high-pressure steam. The steam is then fed to a traditional steam turbine generator where electricity is produced.

The Project would have a nominal output of 1,000 MW, consisting of four identical and independent 250 MW power plants (power units). The units would be developed in phases with

construction scheduled to begin in late 2010 on the first unit; that unit would come on line in mid-2013 and subsequent units would come on line in each of the following three years.

Each power unit would have its own solar field, comprised of piping loops arranged in parallel groups, and its own power block, centrally located within the solar field. Each power block would have its own HTF pumping and freeze protection system; solar steam generator; steam turbine generator; an air-cooled condenser (ACC) for cooling; transmission lines and related electrical system; and auxiliary equipment (e.g., water treatment system, emergency generators). The Project would require a new transmission line, which is in a preliminary design stage.

Access to the BSPP would be via an existing public road heading north from the frontage road along Interstate 10 (I-10). Improvements to portions of the public road would be required. Only a small portion of the overall facility footprint would be paved, primarily the site access road, the service roads to the power blocks, and six acres of each of the 18-acre power blocks. The solar fields would remain unpaved and without a gravel surface in order to prevent mirror damage. The Project solar fields and support facilities perimeter would be secured with chain link metal-fabric security fencing and controlled access gates.

Following completion of spring 2009 surveys, several changes were made to the disturbance area limits. First, a conceptual footprint of a possible transmission line was identified (Figure 2). The final Project transmission line route has not yet been selected. The possible transmission line route has not yet been surveyed and, therefore, is not discussed in this report. Surveys for the possible transmission line will be conducted following selection of the final transmission line route (anticipated spring 2010).

In addition, several portions of the disturbance area, totaling approximately 180 acres, are no longer a part of the proposed Project and have been removed from the disturbance area (Figure 2). For example, an approximately 6.2-mile-long linear feature was surveyed that was subsequently removed from the disturbance area. However, because the 180 acres were included in the spring 2009 surveys, in the interest of contributing to the body of scientific information, survey results for these areas are included in this document.

B. Vegetation

Three vegetation communities were identified within the Project site where avian point counts were located, including upland and riparian vegetation communities (Figure 3). Vegetation communities are based on a classification system by R. Holland (1986). When appropriate, vegetation classification by J.O. Sawyer and T. Keeler-Wolf (1995) are also considered.

Community types according to CDFG (2003) are listed where applicable. These vegetation communities and cover types include desert dry wash woodland (DDWW), unvegetated ephemeral dry wash (UEDW), and Sonoran creosote bush scrub (CBS). CBS was the dominant vegetation community where avian point counts were located, followed by DDWW and UEDW.

III. SURVEY METHODOLOGY

Point count surveys were conducted in spring 2009 by EDAW and Bloom Biological to characterize avian use of the BSPP site during the spring breeding season. These surveys were based on the methodology outlined in the *Handbook of Field Methods for Monitoring Landbirds* (Ralph et al. 1993) and guidance from BLM (LaPre 2009). Point counts were conducted for four consecutive weeks between April 12 and May 8, 2009. A total of 88 point count stations were established along 11 transect lines, placed in a configuration designed to sample all major vegetation communities represented on the Project. The 11 transects were given a letter (B, C, D, E, F, G, H, I, K, L, M) and number (1 through 8) to give them an individual identifier (Figure 3). A total of 76 point count stations were located in CBS and 12 were located in mixed CBS and DDWW (CBS/DDWW). Point count stations in CBS/DDWW were located where CBS and DDWW were intermixed, overlapped, or abutted. No point count stations were located within UEDW, and no point count stations were located entirely within DDWW. The number of stations in each vegetation community is generally based on the relative percent cover of each vegetation community onsite. Each transect line was comprised of eight 328-foot (100-meter)-radius point count stations, each placed 820 feet (250 meters) apart (Figure 3). This design allows for a 164-foot (50-meter) zone between each point count, a distance deemed sufficient to avoid duplicate counts of individual birds in most circumstances.

Each of the 88 point count stations was visited four times over the 4-week period. Each point count lasted 10 minutes. The daily point count period was from approximately 15 to 30 minutes before sunrise until approximately 3 hours after sunrise when bird activity is typically highest and individuals are most easily detected. Each point count station was visited once a week. The order in which point count stations along a transect line were visited was reversed each week so that all stations were visited both earlier and later in the morning survey window.

All birds detected within the 328-foot (100-meter) radius of each point count station, including those flying birds whose flight paths intersected the point count circle, were recorded on datasheets. At each station, the 10-minute time interval, temperature, wind, cloud cover, and visibility were recorded on datasheets. For each species, the number of individuals detected, their age and sex (if known), the direction and approximate distance of the bird from the observer, its

activity, and its habitat were recorded on datasheets. Additionally, special status species detected were mapped using Global Positioning System units. Notes on other birds detected beyond the 328-foot (100-meter) radius were also made and separately recorded. While these additional observations are discussed, they were not included in the quantitative analyses of avian use of the site.

A. Survey Limitations

Depending on their design, point counts can be effectively used to sample large, conspicuous birds such as raptors, or small relatively inconspicuous species like passerines (songbirds) and near passerines (doves, hummingbirds, woodpeckers, etc.). Since raptors are relatively scarce in the open desert, and the Project site is most likely to have a greater effect on the more abundant smaller species, point count stations with a smaller sampling radius were used. The assumption is that the detection rate of most passerines diminishes rapidly beyond 328 (100 meters) feet; therefore, the point counts in this study were designed with the purpose of determining resident breeding species use and recording incidental observations of other avian use of the site, including migratory species and foraging raptors.

Strong wind and temperature extremes can have a profound effect on point count results. Weather conditions during surveys were ideal for detecting bird species activity. On only one day (May 7, 2009) at the end of the survey period did the temperature reach 90°F. The detection rate on this day was similar to that on cooler days.

IV. RESULTS

The results of avian point count surveys are broken down based on whether the species detected were resident species or nonresident (migratory) species. A separate section details the raptors and special status bird species detected during point count surveys. The raptors and special status bird species could either be resident or nonresident migratory species. The number of individuals for each species was compared across the two vegetation communities on the Project site where avian point count stations were located. The mean number of individuals detected per point count station for each vegetation community was also calculated. This allowed for a comparison across the vegetation communities to see if bird species were using different vegetation communities.

A. Species Diversity and Abundance: Resident Species

Fifteen species of resident breeding birds were recorded at the BSPP site between April 12 and May 8, 2009. Of these, 14 were recorded within the 328-foot (100-meter) radius point count circles during point counts at least once (Table 1). The other one was Le Conte's thrasher (*Toxostoma lecontei*), recorded when a pair was observed near the southern edge of the property in CBS on April 29, 2009, while conducting other survey work (Figure 3).

Table 1
Resident Bird Species Recorded on Point Counts at the Blythe Solar Power Project[1, 2]

Species	CBS	CBS/DDWW	Total
Loggerhead Shrike	27 (0.36)	5 (0.42)	32 (0.36)
Black-tailed Gnatcatcher	7 (0.09)	28 (2.33)	35 (0.40)
Ash-throated Flycatcher	13 (0.17)	16 (1.33)	29 (0.33)
Verdin	2 (0.03)	16 (1.33)	18 (0.20)
Black-throated Sparrow	16 (0.21)	1 (0.08)	17 (0.19)
Horned Lark	16 (0.21)	0	16 (0.18)
Lesser Nighthawk	11 (0.14)	6 (0.50)	17 (0.19)
Mourning Dove	4 (0.05)	2 (0.17)	6 (0.07)
House Finch	5 (0.07)	0	5 (0.06)
Gambel's Quail	2 (0.03)	1 (0.08)	3 (0.03)
Common Raven	3 (0.04)	0	3 (0.03)
White-winged Dove	0	2 (0.17)	2 (0.02)
Costa's Hummingbird	1 (0.03)	1 (0.08)	2 (0.02)
Northern Mockingbird	1 (0.01)	0	1 (0.01)
Individuals/Station	**1.42**	**6.50**	**2.11**
Species/Station	**0.87**	**3.08**	**1.17**

[1] Represented as the total number of individual birds per species (mean number of individuals detected per station for each vegetation community)
[2] Mean number of individuals detected per station in parentheses

In CBS, the loggerhead shrike (*Lanius ludovicianus*) was the most common species detected at the Project site. Four other species detected in CBS had numerous individuals recorded, including horned lark (*Eremophila alpestris*) and black-throated sparrow (*Amphispiza bilineata*) with 16 individuals each, ash-throated flycatcher (*Myiarchus cinerascens*) with 13 individuals, and lesser nighthawk (*Chordeiles acutipennis*) with 11 individuals.

In mixed CBS/DDWW, the most common species was the black-tailed gnatcatcher (*Polioptila melanura*) with 28 individuals recorded. Also in CBS/DDWW, the ash-throated flycatcher and

verdin (*Auriparus flaviceps*) were observed (16 individuals each). It should be noted that most of the ash-throated flycatchers recorded in CBS were in the vicinity of DDWW.

In total, 108 individuals of 13 species were recorded in CBS and 78 individuals of 10 species were recorded in mixed CBS/DDWW (Table 1). Eighty-six percent of the point count stations were in CBS and 14 percent were in CBS/DDWW. Thus, considerably more survey time was spent in the CBS than CBS/DDWW. No stations were located entirely in DDWW. This is because the DDWW corridor was narrower than the total area sampled by these point counts; thus, the sampling area overlapped to some extent with CBS at each of the 12 stations. Therefore, the bird composition of these sites, at least to some extent, reflects the intermediate nature of the habitat.

To compare bird use between habitat types, the average number of birds detected per point count station (mean use) was calculated for each of the two habitats sampled, CBS and mixed CBS/DDWW. Point count stations with at least 90 percent CBS, as determined by the site vegetation analysis conducted by EDAW AECOM, were classified as CBS. Stations with 10 to 75 percent DDWW were considered to be comprised of mixed CBS/DDWW. No stations had more than 75 percent DDWW.

Using the mean use index, the avian use (across all species) of CBS/DDWW was 458 percent greater than for CBS (6.50 individuals/point count station vs. 1.42) despite the greater number of individuals recorded in the latter. While these numbers show that birds in general are more common in CBS/DDWW, a species by species examination helps to explain the bird community changes between habitat types. The results indicate that loggerhead shrike, black-tailed gnatcatcher, ash-throated flycatcher, verdin, and lesser nighthawk are more abundant in CBS/DDWW than CBS. On the contrary, black-throated sparrow and horned lark appear to be more abundant in CBS. The remaining species either don't show a trend or the sample numbers are too small to determine if a trend exists. The average number of species detected was 54 percent greater for DDWW than for CBS (3.08 species/point count station vs. 0.87).

B. Species Diversity and Abundance: Non-Resident Species

Fourteen species of non-resident birds were identified within or flying over the point count stations during surveys (Table 2). Four swallow species totaling 34 individuals were detected in flight over various vegetation communities. Six warbler species were detected totaling 19 individuals. Four more species were detected: western kingbird (*Tyrannus verticalis*), flycatchers in the genus *Empidonax*, black-headed grosbeak (*Pheucticus melanocephalus*), and red-winged

blackbird (*Agelaius phoeniceus*). All swallow and the blackbird species were observed in flight over various vegetation communities. All warbler species were observed perched for at least part of the observation period. Table 2 lists each non-resident species recorded, along with numbers of each by habitat.

Table 2
Non-Resident Bird Species Recorded on Point Counts at the Blythe Solar Power Project[1, 2]

Species	Status[3]	CBS	CBS/DDWW	Total
Tree Swallow	W	16 (0.21)	4 (0.33)	20 (0.22)
Barn Swallow	V	5 (0.07)	5 (0.42)	10 (0.11)
Yellow-rumped Warbler	W	5 (0.07)		5 (0.06)
Western Kingbird	V	2 (0.03)	1 (0.08)	3 (0.03)
Wilson's Warbler	T	1 (0.01)	3 (0.25)	4 (0.05)
Northern Rough-winged Swallow	V	2 (0.03)		2 (0.02)
Cliff Swallow	V	1 (0.01)	1 (0.08)	2 (0.02)
Orange-crowned Warbler	W	1 (0.01)	1 (0.08)	2 (0.02)
Nashville Warbler	T		2 (0.17)	2 (0.02)
Black-headed Grosbeak	T	1 (0.01)	1 (0.08)	2 (0.02)
Yellow Warbler	V		1 (0.08)	1 (0.01)
Red-winged Blackbird	V	1 (0.01)		1 (0.01)
Dusky Flycatcher	T		1 (0.08)	1 (0.01)
Dusky/Gray Flycatcher*		1 (0.01)		1 (0.01)
Townsend's/Hermit Warbler*	T	1 (0.01)		1 (0.01)
unidentified warbler		1 (0.01)	3 (0.25)	4 (0.05)
Individuals/Station		**0.50**	**1.92**	**0.69**
Species/Station		**0.20**	**1.42**	**0.36**

[1] Represented as the total number of individual birds per species (mean number of individuals detected per station for each vegetation community)
[2] Mean number of individuals detected per station in parentheses
[3] Status code in Project site
W = winter only
T = transient
V = visitor (breeds nearby)
* Could not differentiate to species

The following bird species were broken down into categories based on the type of interaction and they have with the vegetation communities within the Project site and their length of stay. Five species are pure transients (T), meaning that they simply pass through the Project site on migration to their wintering and breeding locations: the Wilson's warbler (*Wilsonia pusilla*), Nashville warbler (*Vermivora ruficapilla*), black-headed grosbeak, dusky flycatcher (*Empidonax oberholseri*), and dusky/gray flycatcher (*Empidonax* species). Three species spend the winter on or near the site and are known as winter residents (W). Tree swallow (*Tachycineta bicolor*), orange-crowned warbler (*Vermivora celata*), and yellow-rumped warbler (*Dendroica coronata*)

are winter residents on or near the site but breed elsewhere (tree swallow winters elsewhere in the Colorado Desert not near the site). The third group of birds (composed of six species) are considered nonbreeding visitors (V). This group will occasionally forage within the Project site, but there is no suitable habitat on site to breed. Barn swallow (*Hirundo rustica*), western kingbird, northern rough-winged swallow (*Stelgidopteryx serripennis*), cliff swallow (*Petrochelidon pyrrhonota*), yellow warbler (*Dendroica petechia*), and red-winged blackbird are permanent or summer residents in the Colorado Desert but are nonbreeding visitors to the site because of the absence of suitable habitat.

Although mean use by habitat is less significant for transients (especially swallows) than for residents, it should be noted that the mean use of mixed CBS/DDWW by non-residents (across all species) was nearly 384 percent greater than it was for CBS (1.92 birds/count vs. 0.50 birds/count) (Table 2). While these numbers show that birds in general are more common in CBS/DDWW, a species by species examination helps to explain the bird community changes between habitat types. Most of the species either don't show a trend or the sample numbers are too small to determine if a trend exists. It does appear that tree swallow, barn swallow, and Wilson's warbler are more abundant in CBS/DDWW. The average number of non-resident species detected per point count station was approximately seven times greater for CBS/DDWW than CBS (1.42 species/point count station vs. 0.20, respectively).

C. Raptors

No raptor species were recorded during surveys within the 328-foot radius point counts. However, the turkey vulture (*Cathartes aura*) and osprey (P*andion haliaetus*) were recorded incidentally next to point count stations. A turkey vulture, a species that may breed in the nearby hills but not on site, was recorded on May 4, 2009, on the western edge of the site near point count station G7. An osprey was observed perched on a snag of a small tree near point count station E4 on April 21, 2009. This species migrates over open desert but does not typically stop to rest in the middle of the desert. No other raptors were observed on the site.

D. Special Status Species

Special status or sensitive biological resources include species that have been afforded special recognition by Federal, State, or local conservation agencies and organizations as endangered, threatened, rare, or otherwise of concern, principally due to the species' declining or limited population size, usually resulting from habitat loss. In addition to species with legal status as threatened or endangered, either at the Federal or State level, various "watch lists" that do not

have legal bearing per se are maintained by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), and groups such as the National Audubon Society and various local agencies.

The loggerhead shrike is the only species detected on the Project site that is designated as a special status species by one or more governmental agencies. The loggerhead shrike is discussed below and locations are depicted in Figure 3.

Loggerhead shrike was not listed as a California species of special concern by Remsen (1978); however, as a result of continuous and rapid declines in many areas, it was added to the list by CDFG in 1992, and all mainland populations were retained as a species of special concern, 2nd Priority, by Shuford and Gardali (2008). While this species has been in steady decline throughout much of its range, beginning in the northeast in the 1930s and in the southeast and midwest by the 1960s, it was still fairly common in California as late as 1970. It showed significant declines in most of California beginning around 1968 (Sauer et al. 2005); however, in the southern California deserts, it has shown no marked decline.

Loggerhead shrike was the second most frequently recorded species on the point count surveys. It was the most common species in CBS, which dominates most of the site, and the fifth most frequently recorded species in CBS/DDWW. Fledglings were seen on a number of occasions, and at least one active nest was found on April 11, 2009, one day before the commencement of this study. Several recently used nests were also found, mostly in desert ironwood (*Olneya tesota*). Loggerhead shrike locations are depicted in Figure 3.

The following four species found on site are not considered to be special status species in the Colorado Desert: osprey, horned lark, Le Conte's thrasher, and yellow warbler. Locations of these species are depicted in Figure 3.

V. DISCUSSION

Except for mature DDWW in the southern and southwestern portions of the Site, the entire Project site is comprised of one habitat type, CBS, a vegetation community that is sparsely vegetated and rather uniform. Among terrestrial habitats in North America, CBS is noted for its low avian diversity, and such is the case on this site. It is dominant over vast regions of the deserts of eastern California. No endangered or threatened species were observed on site, and only one currently listed California species of special concern, the loggerhead shrike, was detected on site. Although declining over most of its range, which includes most of the 48

contiguous states, the loggerhead shrike is still common in the California deserts, perhaps one of its last strongholds.

Raptor use of the site is notably low considering the abundance of mammalian prey such as the diurnal round-tailed ground squirrel (*Spermophilus tereticaudus*), two species of rabbit, and nocturnal Heteromyid rodents. The only diurnal raptors observed once during the point count surveys were turkey vulture and osprey.

Most birdlife on site is confined to the DDWW, but even this area has relatively low avian diversity compared with other, less xeric habitats. For a brief period in spring, blooming desert ironwoods attracted large numbers of insects, which in turn attracted insectivorous migrants, primarily warblers. The numbers of warblers and other migrants observed were still quite low compared with desert oases in the general area.

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ATTACHMENT 1

FIGURES

Map Location

1 inch = 40 miles

0 40 80 Miles

Blythe Solar Power Project
Avian Point Count Survey
Technical Report

Figure 1
Regional Map

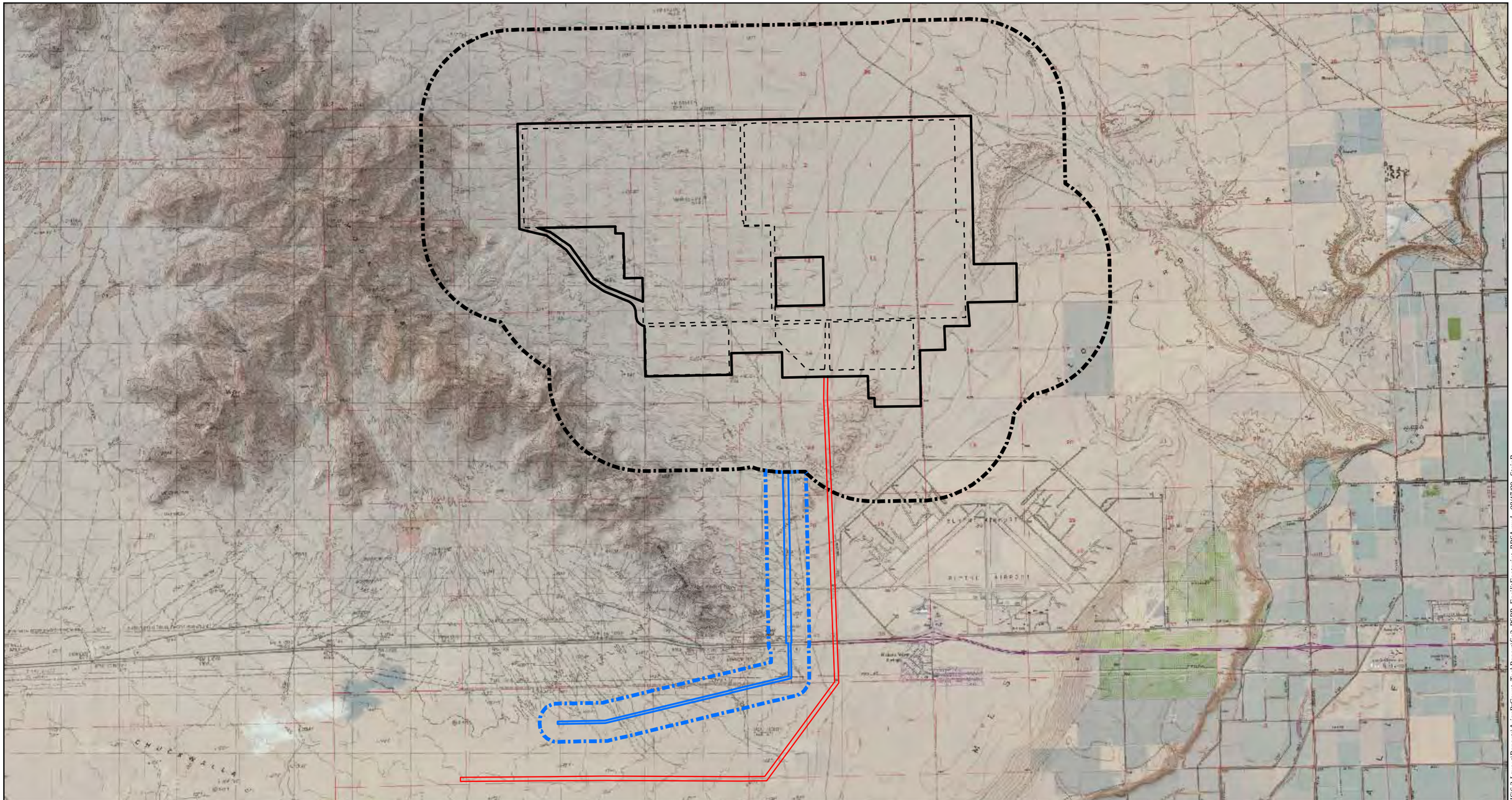
Source: ESRI; AECOM 2009

Solar Millennium

AECOM

Date: August 2009

Path: P:\2009\09080082 Sol Mil Blythe\6.0 GIS\6.3 Layout\Reports\AvianPtCount_TechReport\Fig1_BSPP_RegionalLocation.mxd, 08/13/09, LeeJ



Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Biological Resource Survey Area (BRSA)
- Buffer Survey Area (Surveyed No Longer a Part)
- Disturbance Area (Surveyed - No Longer a Part)

Source: NAIP 2005; NECO; AECOM 2009

N W E S

1 inch = 5,280 feet

0 5,000 10,000 Feet

Blythe Solar Power Project
Avian Point Count Survey
Technical Report

Figure 2
Facility Footprint and Biological Resources Survey Area

Solar Millennium

AECOM

Date: August 2009

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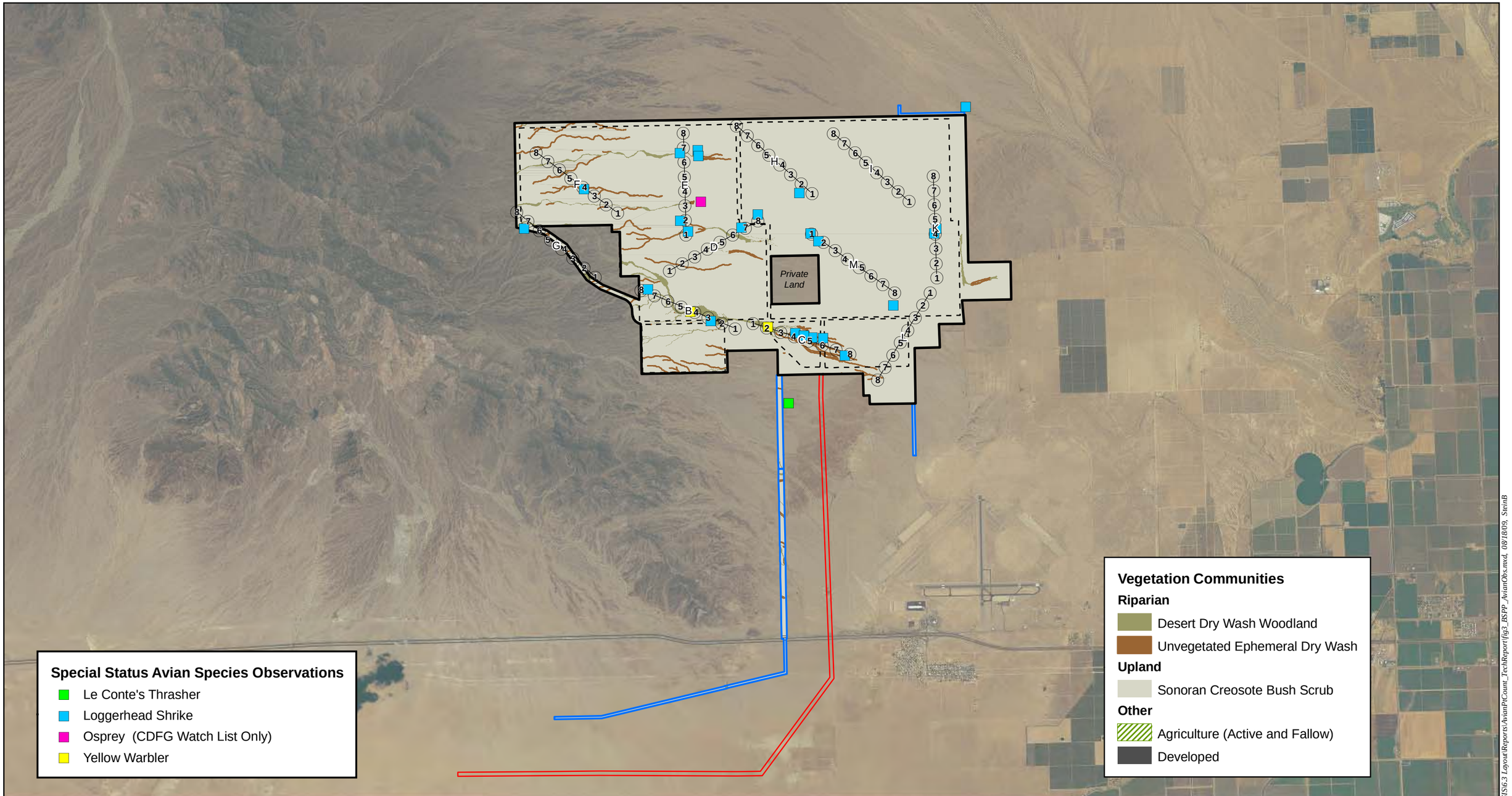

Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Disturbance Area (Surveyed - No Longer a Part)
- Avian Point Count Transect
- Point Count Location Identifier and Buffer (Radius 328 feet)

Source: NAIP 2005; AECOM 2009; EDAW 2009

N W E S

1 in = 1 miles

0 5,000 10,000 Feet

Blythe Solar Power Project
Avian Point Count Survey
Technical Report

Figure 3
Avian Species Observations

Solar Millennium

AECOM

Date: August 2009

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ATTACHMENT 2

AVIAN POINT COUNT SURVEY DATA FORM

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: I5

DATE: 17 Apr 05 VISIT #: 1 OBSERVER: [illegible] START TIME: 05:49 END TIME: 05:59 GPS: _____ PAGE 1 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 50

WIND DIRECTION: N SPEED (MPH) Low: 3 High: 7 Avg: 4.1

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
4															
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16															
17															
18															
19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: I6

DATE: 17 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 6:03 END TIME: 6:13 GPS: _____ PAGE 2 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 50

WIND DIRECTION: N SPEED (MPH) Low: 1.3 High: 7.9 Avg: 5.6

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
4															
5															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: I7

DATE: 17 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 6:17 END TIME: 6:27 GPS: _____ PAGE 3 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 55

WIND DIRECTION: N SPEED (MPH) Low: 2.1 High: 9.8 Avg: 6

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: I 8

DATE: 17 Apr 08 VISIT #: 1 OBSERVER: [illegible] START TIME: 06:31 END TIME: 6:41 GPS: _____ PAGE 4 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 58

WIND DIRECTION: N SPEED (MPH) Low: 1.3 High: 6.1 Avg: 4

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: K1

DATE: 17 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 7:14 END TIME: 7:24 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 60

WIND DIRECTION: H SPEED (MPH) Low: 1.4 High: 4.2 Avg: 3.9

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
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17															
18															
19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: K2

DATE: 17 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 7:28 END TIME: 7:38 GPS: PAGE 2 OF 2

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 60

WIND DIRECTION: N SPEED (MPH) Low: 0.8 High: 5.2 Avg: 3.6

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments:

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: K3

DATE: 17 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 7:42 END TIME: 7:52 GPS: PAGE 3 OF 3

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 60

WIND DIRECTION: N SPEED (MPH) Low: 1.1 High: 4.2 Avg: 2.1

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments:

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: [illegible] POINT COUNT ID: K4

DATE: 17 Apr 06 VISIT #: 1 OBSERVER: [illegible] START TIME: 7:56 END TIME: 8:06 GPS: _____ PAGE 4 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 62

WIND DIRECTION: N SPEED (MPH) Low: 0.2 High: 5.2 Avg: 3.6

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: K5

DATE: 17 Apr 08 VISIT #: 1 OBSERVER: JZ START TIME: 8:10 END TIME: 8:20 GPS: _____ PAGE 5 OF 5

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) _____

WIND DIRECTION: N SPEED (MPH) Low: 0.6 High: 4.8 Avg: 3.1

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: K6

DATE: 17 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 8:24 END TIME: 8:34 GPS: PAGE 6 OF 6

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 62

WIND DIRECTION: N SPEED (MPH) Low: 0.5 High: 5.1 Avg: 3.2

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments:

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: K7

DATE: 17 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 8:38 END TIME: 8:48 GPS: _____ PAGE 7 OF 7

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 65

WIND DIRECTION: N SPEED (MPH) Low: 0.2 High: 4.3 Avg: 2.1

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: K8

DATE: 17 Apr 06 VISIT #: 1 OBSERVER: JV START TIME: 8:51 END TIME: 9:01 GPS: PAGE 8 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 65

WIND DIRECTION: N SPEED (MPH) Low: 0.6 High: 4.8 Avg: 3.7

PRECIPITATION: None OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments:

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: H 1

DATE: 16 APR VISIT #: 1 OBSERVER: [illegible] START TIME: 5:50 END TIME: 6:00 GPS: _____ PAGE 1 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 45

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: H 2

DATE: 16 Apr 09 VISIT #: 1 OBSERVER: J L START TIME: 6:04 END TIME: 6:14 GPS: _____ PAGE 2 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 45

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: H3

DATE: 16 Apr 2009 VISIT #: 1 OBSERVER: [illegible] START TIME: 6:18 END TIME: 6:28 GPS: _____ PAGE 3 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 45

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: H4

DATE: 16 Apr 09 VISIT #: 1 OBSERVER: JV START TIME: 6:32 END TIME: 6:42 GPS: _____ PAGE 4 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 45

WIND DIRECTION: D SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: H5

DATE: 16 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 6:46 END TIME: 6:52 GPS: _____ PAGE 5 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) _____

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: H 6

DATE: 16 Apr 09 SIT #: 1 OBSERVER: JJ START TIME: 7:00 END TIME: 7:10 GPS: _____ PAGE 6 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 45

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: H7

DATE: 16 Apr 08 VISIT #: 1 OBSERVER: [illegible] START TIME: 7:14 END TIME: 7:24 GPS: _____ PAGE 7 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 48

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: H 8

DATE: 16 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 7:27 END TIME: 7:37 GPS: _____ PAGE 8 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) _____

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: I 1

DATE: 16 Apr VISIT #: 1 OBSERVER: [illegible] START TIME: 8:24 END TIME: 8:34 GPS: _____ PAGE 1 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 69

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: I2

DATE: 16 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 8:37 END TIME: 8:47 GPS: _____ PAGE 2 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 70

WIND DIRECTION: D SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: I3

DATE: 16 Apr 08 VISIT #: 1 OBSERVER: [illegible] START TIME: 8:51 END TIME: 9:01 GPS: _____ PAGE 3 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 70

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: I 4

DATE: 16 Apr VISIT #: 1 OBSERVER: JB START TIME: 9:03 END TIME: 9:13 GPS: _____ PAGE 4 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 72

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: D8

DATE: 15 Apr 09 VISIT #: 1 OBSERVER: JF START TIME: 8:56 END TIME: 9:06 GPS: _____ PAGE 8 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 75 TEMP (°F) 66

WIND DIRECTION: SE SPEED (MPH) Low: 2.4 High: 6.1 Avg: 2.8

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: D7

DATE: 15 Apr 09 VISIT #: 1 OBSERVER: JL START TIME: 8:42 END TIME: 8:52 GPS: PAGE 7 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 75 TEMP (°F) 66

WIND DIRECTION: SE SPEED (MPH) Low: 0.1 High: 4 Avg: 1.4

PRECIPITATION: None OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments:

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: D6

DATE: 15 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 8:28 END TIME: 8:38 GPS: _____ PAGE 6 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 75 TEMP (°F) 68

WIND DIRECTION: SE SPEED (MPH) Low: 0.2 High: 8 Avg: 5

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT: COUNT ID: D5

DATE: 15 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 8:14 END TIME: 8:24 GPS: _____ PAGE 5 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 75 TEMP (°F) 68

WIND DIRECTION: SE SPEED (MPH) Low: 0.6 High: 6.8 Avg: 5

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
4															
5															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: [illegible] POINT: COUNT ID: D4

DATE: 15 Mar 05 VISIT #: 1 OBSERVER: [illegible] START TIME: [illegible] END TIME: [illegible] GPS: _____ PAGE 4 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 75 TEMP (°F) 65

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: Hour OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
4															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT: COUNT ID: D 3

DATE: 15 Apr 06 VISIT #: 1 OBSERVER: JH START TIME: 7:46 END TIME: 7:56 GPS: _____ PAGE 3 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 75 TEMP (°F) 65

WIND DIRECTION: O SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
4															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: D2

DATE: 15 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 7:32 END TIME: 7:42 GPS: _____ PAGE 2 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 75 TEMP (°F) 65

WIND DIRECTION: D SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time increment 0-3 min.	Time increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Horn Lark	U	A	3	40	N	FL	N		CRS		✓			N
2															
3															
4															
5															
6															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: D1

DATE: 15 Apr VISIT #: 1 OBSERVER: [illegible] START TIME: 7:18 END TIME: 7:28 GPS: _____ PAGE 1 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 75 TEMP (°F) 62

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	CORAVA	U	A	1	40	W	FL	Y	SE	CBS		✓			N
2															
3															
4															
5															
6															
7															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: E8

DATE: 15 Apr. 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 6:53 END TIME: 6:43 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 75 TEMP (°F) 60

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time increment 0-3 min.	Time increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: [illegible] POINT COUNT ID: E7

DATE: 15 [illegible] VISIT #: 1 OBSERVER: [illegible] START TIME: [illegible] END TIME: [illegible] GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 50 TEMP (°F) 55

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: E6

DATE: 15 Apr VISIT #: 1 OBSERVER: [illegible] START TIME: 6:05 END TIME: 6:15 GPS: _____ PAGE 2 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 80 TEMP (°F) 55

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Bl[illegible] POINT: COUNT ID: E5

DATE: 15 Apr VISIT #: _____ OBSERVER: [illegible] START TIME: 5:51 END TIME: [illegible] GPS: _____ PAGE 5 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 80 TEMP (°F) 55

WIND DIRECTION: O SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	BT Sp	U	A	1	20	E	P-FL	N		CBS		✓			NP
2															
3															
4															
5															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Rio Vista POINT COUNT ID: F1

DATE: 14 Ap VISIT #: 1 OBSERVER: JS START TIME: 05:52 END TIME: 06:02 GPS: PAGE 1 OF 5

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 75 TEMP (°F) 60

WIND DIRECTION: O SPEED (MPH) Low: High: Avg:

PRECIPITATION: None OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	RTSD	U	A	2	6	N	P-FI	N		CBS		✓			
2	Lo Nice	U	A	1	60	N	P/ Visual on ground	N		CBS			✓		
3															
4															
5															
6															
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*Check if Auditory only

Comments:

F1-8 E1-4

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: F2

DATE: 14 Ap 09 VISIT #: 1 OBSERVER: JS START TIME: 6:06 END TIME: 6:16 GPS: _____ PAGE 2 OF 2

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 80 TEMP (°F) 60

WIND DIRECTION: SE SPEED (MPH) Low: 0 High: 4 Avg: 2

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: F3

DATE: 14 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 06:19 END TIME: 06:29 GPS: _____ PAGE 3 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 100 TEMP (°F) 65

WIND DIRECTION: SE SPEED (MPH) Low: _____ High: _____ Avg: 4

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	BTSP	U	A	1	30	E	Vocal	N		CBS		✓			N
2															
3															
4															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: F4

DATE: 14 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 06:33 END TIME: 06:43 GPS: _____ PAGE 4 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 100 TEMP (°F) 65

WIND DIRECTION: SE SPEED (MPH) Low: _____ High: _____ Avg: 5

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	BTSP	U	A	1	40	E	P-FL	N		CBS		✓			N
2	BTSP	U	A	1	80	SE	P-FL	N		CBS			✓		N
3															
4															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT: COUNT ID: F5

DATE: 14 Apr 08 VISIT #: 1 OBSERVER: [illegible] START TIME: 06:47 END TIME: 06:57 GPS: _____ PAGE 5 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 100 TEMP (°F) 70

WIND DIRECTION: SE SPEED (MPH) Low: _____ High: _____ Avg: 6

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: F6

DATE: 14 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 07:01 END TIME: 07:11 GPS: _____ PAGE 6 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 100 TEMP (°F) 70

WIND DIRECTION: SE SPEED (MPH) Low: _____ High: _____ Avg: 5

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: F7

DATE: 14 Apr 09 VISIT #: 1 OBSERVER: JB START TIME: 07:15 END TIME: 07:25 GPS: _____ PAGE 7 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 100 TEMP (°F) 72

WIND DIRECTION: SE SPEED (MPH) Low: _____ High: _____ Avg: 5

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
4															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: F8

DATE: 14 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 07:29 END TIME: 07:39 GPS: _____ PAGE 8 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 100 TEMP (°F) 72

WIND DIRECTION: SE SPEED (MPH) Low: _____ High: _____ Avg: 4

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
4															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: E 1

DATE: 14 Apr 06 VISIT #: 1 OBSERVER: [illegible] START TIME: 08:15 END TIME: 08:25 GPS: _____ PAGE 1 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 100 TEMP (°F) 74

WIND DIRECTION: SE SPEED (MPH) Low: 0.3 High: 7.1 Avg: 5.2

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Blk Throat Sparrow	U	A	1	20	E	FL-P-FL	N		CBS		✓			No
2															
3															
4															
5															
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Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT: COUNT ID: E2

DATE: 14 Apr 09 VISIT #: 1 OBSERVER: JL START TIME: 0829 END TIME: 0839 GPS: PAGE 2 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 100 TEMP (°F) 74

WIND DIRECTION: SE SPEED (MPH) Low: 0.4 High: 10.2 Avg: 8.1

PRECIPITATION: None OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
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Check if Auditory only

Comments:

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: E3

DATE: 14 Apr 09 SIT #: 1 OBSERVER: [illegible] START TIME: 08:43 END TIME: 08:53 GPS: _____ PAGE 3 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 100 TEMP (°F) 74

WIND DIRECTION: SE SPEED (MPH) Low: 0.9 High: 12.6 Avg: 7.8

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	BThrasher SP	U	A	1	40	E	Vocal	No		CRS		✓			No
2															
3															
4															
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Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT: COUNT ID: E4

DATE: 14 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 08:56 END TIME: 09:06 GPS: _____ PAGE 4 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 100 TEMP (°F) 74

WIND DIRECTION: SE SPEED (MPH) Low: 1.3 High: 6.4 Avg: 4.2

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: B8

DATE: 13 Apr VISIT #: 1 OBSERVER: [illegible] START TIME: 06:36 END TIME: 06:46 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 68

WIND DIRECTION: D SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT: COUNT ID: B7

DATE: 13 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 06:22 END TIME: 06:32 GPS: _____ PAGE 3 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 62

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
4															
5															
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7															
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16															
17															
18															
19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: B6

DATE: 13 Apr VISIT #: 1 OBSERVER: [illegible] START TIME: 6:08 END TIME: 6:18 GPS: PAGE 2 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 58

WIND DIRECTION: O SPEED (MPH) Low: High: Avg:

PRECIPITATION: None OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Ash Fly	U	A	1	80	W	Vocal	N		MDWS			✓		N
2	Mourn Dove	U	A	1	60	E	Vocal	N		CBS		✓			N
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

*Check if Auditory only

Comments:

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: BS

DATE: 13 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 5:54 END TIME: 6:04 GPS: _____ PAGE 1 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 55

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	WS King	U	A	1	15	S	P	N		MDWS		✓			N
2	Ash-T Fly	U	A	1	60	S	Vocal	N		MDWS			✓		
3	Verdin	♂	A	1	30	E	P-FL-P	N		MDWS					
4															
5															
6															
7															
8															
9															
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11															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: G1

DATE: 13 Apr VISIT #: 1 OBSERVER: JL START TIME: 7:14 END TIME: 7:24 GPS: _____ PAGE 1 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 68

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
4															
5															
6															
7															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: G 2

DATE: 13 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 07:29 END TIME: 07:39 GPS: _____ PAGE 2 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 69

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
4															
5															
6															
7															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: G-3

DATE: 13 Apr 09 VISIT #: 1 OBSERVER: JV START TIME: 7:43 END TIME: 7:53 GPS: _____ PAGE 3 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 69

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
4															
5															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: G4

DATE: 13 Apr 04 VISIT #: 1 OBSERVER: [illegible] START TIME: 7:57 END TIME: 8:07 GPS: _____ PAGE 4 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 70

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	BTSP	U	A	1	50	NE	Vocal	N		CBS		✓			N
2															
3															
4															
5															
6															
7															
8															
9															
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18															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: G-5

DATE: 13 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 08:10 END TIME: 08:20 GPS: _____ PAGE 5 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 70

WIND DIRECTION: D SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: 66

DATE: 13 Apr VISIT #: 1 OBSERVER: [illegible] START TIME: 08:24 END TIME: 08:34 GPS: _____ PAGE 6 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 70

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
4															
5															
6															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: 67

DATE: 13 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 08:38 END TIME: 08:48 GPS: _____ PAGE 7 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 70

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
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20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: G8

DATE: 13 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 08:53 END TIME: 09:03 GPS: _____ PAGE 8 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 71

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
4															
5															
6															
7															
8															
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16															
17															
18															
19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: C1

DATE: 12 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 05:30 END TIME: 05:40 GPS: _____ PAGE 1 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 50

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Wed King	U	A	1	25	W	Vocal	N		CBS			✓		N
2	Verdin		A	1	10	SW	P-FL-P	N		CBS					
3															
4															
5															
6															
7															
8															
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20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: C2

DATE: 12 Apr 09 VISIT #: 1 OBSERVER: JL START TIME: 05:45 END TIME: 05:55 GPS: _____ PAGE 2 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 48

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Yellow Warbler	♂	A	1	20	N	FL	N		CBS		✓			N
2															
3															
4															
5															
6															
7															
8															
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18															
19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: _____ POINT COUNT ID: C 3

DATE: 12 Apr 09 VISIT #: 1 OBSERVER: JJ START TIME: 06:00 END TIME: 06:10 GPS: _____ PAGE 3 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 45

WIND DIRECTION: O SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
4															
5															
6															
7															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: C4

DATE: 12 Apr 09 VISIT #: 1 OBSERVER: JL START TIME: 06:15 END TIME: 06:25 GPS: _____ PAGE 4 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 45

WIND DIRECTION: None SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
4															
5															
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20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: CS

DATE: 12 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 06:30 END TIME: 06:40 GPS: _____ PAGE 5 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 45

WIND DIRECTION: G SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Ash Throat Flycatcher	U	A	1	30	SW	P	N		CBS		✓			N
2															
3															
4															
5															
6															
7															
8															
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20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: C6

DATE: 12 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 06:45 END TIME: 06:55 GPS: _____ PAGE 6 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 46

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	YR Warbler	♂ ♀	A	5	10-25	N→NE	FL	N		CBSC		✓		Aud	NA
2	Ash Thr Fly	U	A	1	10-20	NW	PE-FL	N		CBSC		✓			
3															
4															
5															
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20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: C7

DATE: 12 Apr 09 VISIT #: 1 OBSERVER: JL START TIME: 07:00 END TIME: 07:10 GPS: _____ PAGE 7 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) _____ TEMP (°F) _____

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
4															
5															
6															
7															
8															
9															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: C8

DATE: 12 Apr 09 VISIT #: 1 OBSERVER: JL START TIME: 07:15 END TIME: 07:25 GPS: _____ PAGE 8 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) _____

WIND DIRECTION: NA SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	West King Bird	U	A		20	E	Vocal	N		MDWS			✓		
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
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14															
15															
16															
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18															
19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: B1

DATE: 12 Apr 09 VISIT #: 1 OBSERVER: [illegible] START TIME: 8:05 END TIME: 8:15 GPS: _____ PAGE 1 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 67

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	RW Swall	U	A	1	90	NW	FL	Y		CBS		✓			N
2															
3															
4															
5															
6															
7															
8															
9															
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11															
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18															
19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: BS

DATE: 12 Apr VISIT #: 1 OBSERVER: JL START TIME: 08:20 END TIME: 08:30 GPS: _____ PAGE 2 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 65

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Barn Swallow	♂	A	1	80	W	FL	Y	W	MDWS		✓			
2	Ash Throat Fly	U	A	1	90	W	Vocal	N		MDWS			✓		
3															
4															
5															
6															
7															
8															
9															
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20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: B3

DATE: 12 Apr 09 VISIT #: 1 OBSERVER: JL START TIME: 08:35 END TIME: 08:45 GPS: _____ PAGE 3 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 64

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: B4

DATE: 12 April 07 VISIT #: 1 OBSERVER: [illegible] START TIME: 08:50 END TIME: 9:00 GPS: _____ PAGE 4 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 63

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Mourn Dove	U	A	1	30	W	FP	Y	W	CBSC		✓			N
2	Blk Tail Gnat	♂	A	1	20	NW	P	N		CBS		✓		Scolding	Y
3	" " "	♀	A	1											
4															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M8

DATE: 4/12/09 VISIT #: 1 OBSERVER: LJ START TIME: 0600 END TIME: 0610 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 52°

WIND DIRECTION: 0 SPEED (MPH) Low: 0 High: _____ Avg: _____

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M7

DATE: 4/12/09 VISIT #: 1 OBSERVER: HLJ START TIME: 0615 END TIME: 0625 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 52

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M6

DATE: 4/12/09 VISIT #: 1 OBSERVER: HLJ START TIME: 0628 END TIME: 0638 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 54

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	LOSH	U	A	1	320	SSE	PE	N		CBS	6:30	✓		deer	N
2															
3															
4															
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*Check if Auditory only

Comments: see Incidental Observations sheet

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M5

DATE: 4/12/09 VISIT #: 1 OBSERVER: HLJ START TIME: 0641 END TIME: 0651 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 54

WIND DIRECTION: 0 SPEED (MPH) Low: 0 High: _____ Avg: _____

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	D/G FL			1	SW	60	PE			CBS	✓	✓		heard calling	Migrant
2															
3															
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5															
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*Check if Auditory only

Comments: D/GFL = Dusk/Gray type Flycatcher. IDed by "whit" call note. Too early by 1 month for Willow Flycatcher.

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M4

DATE: 4/12/09 VISIT #: 1 OBSERVER: HLJ START TIME: 0654 END TIME: 0704 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 56

WIND DIRECTION: 0 SPEED (MPH) Low: 0 High: _____ Avg: _____

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M3

DATE: 4/12/09 VISIT #: 1 OBSERVER: HLJ START TIME: 0707 END TIME: 0717 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 58

WIND DIRECTION: W SPEED (MPH) Low: 2mph High: _____ Avg: _____

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M2

DATE: 4/12/09 VISIT #: 1 OBSERVER: HLJ START TIME: 0720 END TIME: 0730 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 60

WIND DIRECTION: NW SPEED (MPH) Low: 1 High: 4 Avg: 3

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: M1

DATE: 4/12/09 VISIT #: 1 OBSERVER: HLJ START TIME: 0733 END TIME: 0743 GPS: PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 61

WIND DIRECTION: NW SPEED (MPH) Low: 1mph High: 4 Avg: 3

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[HOFI]	U	A	2	120	SE	FL	Y	N	CBS	0741	✓		heard	N
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*Check if Auditory only

Comments: outside PC limit

[signature]

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: L8

DATE: 4/12/09 VISIT #: 1 OBSERVER: HLJ START TIME: 0822 END TIME: 0832 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 62

WIND DIRECTION: NW SPEED (MPH) Low: 2 High: 4 Avg: 3

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: 2 Friendly white dogs here Husky + ? + lab

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: L7

DATE: 4/12/09 VISIT #: 1 OBSERVER: HLJ START TIME: 0836 END TIME: 0846 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 63

WIND DIRECTION: NW SPEED (MPH) Low: 3 mph High: 5 Avg: 4

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	HOLA	U	A	2	90	NNW	FL	Y	E	CBS	08/10	✓		±30m up	N
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: L6

DATE: 4/12/09 VISIT #: 1 OBSERVER: HLJ START TIME: 0850 END TIME: 0900 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 65

WIND DIRECTION: NW SPEED (MPH) Low: 3mph High: 5 Avg: 4

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: Photo view W

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: L5

DATE: 4/12/09 VISIT #: 1 OBSERVER: HLJ START TIME: 0903 END TIME: 0913 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 69

WIND DIRECTION: N SPEED (MPH) Low: 3 High: 5 Avg: 4

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: L4

DATE: 4/13/09 VISIT #: 1 OBSERVER: HLT START TIME: 0555 END TIME: 0605 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 50

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: LENI at 05:50 seen at 100 m SE

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: L3

DATE: 4/13/09 VISIT #: 1 OBSERVER: HLJ START TIME: 0608 END TIME: 0618 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 51

WIND DIRECTION: N SPEED (MPH) Low: ~ High: 3 Avg: _____

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: L2

DATE: 4/13/09 VISIT #: 1 OBSERVER: HLJ START TIME: 0621 END TIME: 0631 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 51

WIND DIRECTION: N SPEED (MPH) Low: — High: 3 Avg: _____

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: L1

DATE: 4/13/09 VISIT #: 1 OBSERVER: HLJ START TIME: 0634 END TIME: 0644 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 54

WIND DIRECTION: ~~N~~ 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: M 1

DATE: 19 Apr 09 VISIT #: 2 OBSERVER: JL START TIME: 05:46 END TIME: 05:56 GPS: PAGE 1 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 58

WIND DIRECTION: N SPEED (MPH) Low: 1.4 High: 8.7 Avg: 6.2

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	L Shrike	U	A	1	3	NW	P	N		CBS		✓			
2															
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*Check if Auditory only

Comments:

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: M2

DATE: 19 Apr 07 VISIT #: 2 OBSERVER: JL START TIME: 06:00 END TIME: 06:10 GPS: PAGE 2 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 68

WIND DIRECTION: N SPEED (MPH) Low: 2.1 High: 8.1 Avg: 4.9

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	L Shrike	U	A	1	10	NW	P	N		CBS		✓		Same Bird as M1	
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Check if Auditory only

Comments:

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M-3

DATE: 19 Apr 09 VISIT #: 2 OBSERVER: [illegible] START TIME: 6:13 END TIME: 6:23 GPS: _____ PAGE 3 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 72

WIND DIRECTION: N SPEED (MPH) Low: 1.4 High: 8.0 Avg: 6.1

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: M4

DATE: 19 Apr 09 VISIT #: 2 OBSERVER: [illegible] START TIME: 6:26 END TIME: 6:36 GPS: _____ PAGE 4 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 71

WIND DIRECTION: H SPEED (MPH) Low: 2.1 High: 6.2 Avg: 4.1

PRECIPITATION: D OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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19															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M5

DATE: 19 Apr 09 VISIT #: 2 OBSERVER: [illegible] START TIME: 6:39 END TIME: 6:49 GPS: _____ PAGE 5 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 72

WIND DIRECTION: N SPEED (MPH) Low: 0.4 High: 7.8 Avg: 4.3

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M 6

DATE: 19 Apr 09 VISIT #: 2 OBSERVER: [illegible] START TIME: 6:53 END TIME: 7:03 GPS: _____ PAGE 6 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 78

WIND DIRECTION: N SPEED (MPH) Low: 1.8 High: 8.7 Avg: 6.9

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
4															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M7

DATE: 19 Apr 09 VISIT #: 2 OBSERVER: H START TIME: 07:06 END TIME: 07:16 GPS: PAGE 7 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 78

WIND DIRECTION: N SPEED (MPH) Low: 1.1 High: 8.4 Avg: 6.8

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
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*Check if Auditory only

Comments:

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M8

DATE: 19 Apr 09 VISIT #: 2 OBSERVER: [illegible] START TIME: 07:20 END TIME: 07:30 GPS: _____ PAGE 8 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 80

WIND DIRECTION: N SPEED (MPH) Low: 2.1 High: 9.3 Avg: 7.2

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: L1

DATE: 4 April VISIT #: 2 OBSERVER: [illegible] START TIME: 07:35 END TIME: 07:45 GPS: _____ PAGE 1 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 80

WIND DIRECTION: N SPEED (MPH) Low: 1.4 High: 8.6 Avg: 6.6

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
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20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: L2

DATE: 9 Apr 09 VISIT #: 2 OBSERVER: [illegible] START TIME: 07:48 END TIME: 07:58 GPS: PAGE 2 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 80

WIND DIRECTION: N SPEED (MPH) Low: 0.4 High: 8.1 Avg: 4.9

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
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*Check if Auditory only

Comments:

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: L3

DATE: 19 Apr 09 VISIT #: 2 OBSERVER: JL START TIME: 08:02 END TIME: 08:12 GPS: _____ PAGE 5 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 81

WIND DIRECTION: N SPEED (MPH) Low: 1.8 High: 8.6 Avg: 7.1

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: L4

DATE: 19 Nov 09 VISIT #: 2 OBSERVER: [illegible] START TIME: 08:15 END TIME: 08:25 GPS: _____ PAGE 4 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 82

WIND DIRECTION: N SPEED (MPH) Low: 2.1 High: 7.8 Avg: 5.7

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: C8

DATE: 4/19/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0545 END TIME: 0555 GPS: PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 74

WIND DIRECTION: NW SPEED (MPH) Low: 5 High: 8 Avg: 6

PRECIPITATION: U OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	L0511	M	A	1	100	WSW	PE/Si	N		CBS		✓		waypoint taken singing	
2															
3															
4															
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18															
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20															

*Check if Auditory only

Comments: Photo WNW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: C7

DATE: 4/19/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0559 END TIME: 0609 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 75

WIND DIRECTION: NW SPEED (MPH) Low: 4 High: 9 Avg: 6

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
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19															
20															

*Check if Auditory only

Comments: Photo WNW (CBS)

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: C6

DATE: 4/19/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0612 END TIME: 0622 GPS: PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 74

WIND DIRECTION: NW SPEED (MPH) Low: 5 High: 10 Avg: 7

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[LOSH]	U	A	1	125	N	FL→PE→FL	N		CBS		✓		waypoint taken seen, heard	N
2															
3															
4															
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20															

*Check if Auditory only

Comments: PhotoWNW (CBS)

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: C5

DATE: 4/19/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0626 END TIME: 0636 GPS: PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 76

WIND DIRECTION: NW SPEED (MPH) Low: 5 High: 9 Avg: 7

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	LOSH	U	J	1	25	NNE	PE	N		CBS			✓		Y
2	"	U	J	1	45	SSE	PE	N		CBS			✓		Y
3	"	U	A+J	2	45	WNW	PE	N		CBS			✓		Y
4	"	U	A	1	80	N	PE	N		CBS			✓		Y
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18															
19															
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*Check if Auditory only

Comments: Photo WNW (CBS)

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: C4

DATE: 4/19/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0640 END TIME: 0650 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 75

WIND DIRECTION: NW SPEED (MPH) Low: 3 High: 7 Avg: 4

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
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18															
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20															

*Check if Auditory only

Comments: Photo WNW (DDWW)

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: C3

DATE: 4/19/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0654 END TIME: 0704 GPS: PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 77

WIND DIRECTION: NW SPEED (MPH) Low: 2 High: 6 Avg: 3

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	BTGN	♂ ?+	A	2	20	WSW	PE→FL→PE	N	etc	DDWW			✓	[illegible] scolding	N
2															
3															
4															
5															
6															
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17															
18															
19															
20															

*Check if Auditory only

Comments: Photo WNW (DDWW)

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: C2

DATE: 4/19/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0707 END TIME: 0717 GPS: PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 77

WIND DIRECTION: NW SPEED (MPH) Low: 3 High: 5 Avg: 4

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	VERD	U	A	1	10	ESE	PE→PE→PE			DDWW		✓		calling	N
2	BTGN	U	A	1	35	W	PE			"		✓		calling	N
3	TRSW	U	A	2	20	W	FL	Y	N	"		✓		called	N
4															
5															
6															
7															
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*Check if Auditory only

Comments: Photo WNW (DDWW)

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: C1

DATE: 4/9/09 VISIT #: 2 OBSERVER: HLT START TIME: 0720 END TIME: 0730 GPS: PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 78

WIND DIRECTION: NW SPEED (MPH) Low: 5 High: 9 Avg: 7

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	TRSW	U	A	1	35	WNW	FL	Y	NE	DDWW		✓		silent	maybe
2															
3															
4															
5															
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17															
18															
19															
20															

*Check if Auditory only

Comments: Photo WNW (DDWW)

ATFL heard prior to survey

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: B8

DATE: 4/19/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0756 END TIME: 0806 GPS: PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 80

WIND DIRECTION: NW SPEED (MPH) Low: 5 High: 11 Avg: 8

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[LOSH]	U	A	1	115	ENE	PE	N		CBS			✓	Waypoint calling	N
2	[ATFL]	U	A	1	120	ESE	PE→FL→PE			"		r		calling	N
3							SSW								
4															
5															
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17															
18															
19															
20															

*Check if Auditory only

Comments: Photo WNW (CBS)

ATFL, HOFI, TRSW, BGN recorded between surveys

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: B7

DATE: 4/19/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0811 END TIME: 0821 GPS: PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 81

WIND DIRECTION: NW SPEED (MPH) Low: 5 High: 14 Avg: 7

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	BTGN	U	A	1	50	W	PE	N		CBS		✓		called once	N
2	~~Bewick's Horse~~														
3	BTGN	U	A	1	30	SE	FL→PE	N	NE	CBS		✓		seen called	N
4															
5															
6															
7															
8															
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10															
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13															
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16															
17															
18															
19															
20															

*Check if Auditory only

Comments: Photo WNW (mixed CBS/DDWW)

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: B6

DATE: 4/9/09 VISIT #: 2 OBSERVER: HLT START TIME: 0825 END TIME: 0835 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 82

WIND DIRECTION: _____ SPEED (MPH) Low: 3 High: 10 Avg: 5

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	ATFL	U	A	1	160	ESE	PE	N		CBS/DDWW		✓		calling	N
2															
3															
4															
5															
6															
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18															
19															
20															

*Check if Auditory only

Comments: Photo view - WNW (CBS/DDWW)

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: B5

DATE: 4/17/09 VISIT #: 2 OBSERVER: HLT START TIME: 0838 END TIME: 0848 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 82

WIND DIRECTION: _____ SPEED (MPH) Low: 4 High: 9 Avg: 7

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[HOFI]	U	U	1	140	WSW	PE	N		DDWW		✓		called	N
2	BTSP	U	U	2	100	S	PE	N		DDWW				called	N
3															
4															
5															
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19															
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*Check if Auditory only

Comments: Photo WNW (CBS/DDWW)

ATFL 2 seen between surveys

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: B4

DATE: 4/20/09 VISIT #: 2 OBSERVER: NKJ START TIME: 0545 END TIME: 0555 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 59

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	LENI	♂	A	3	5-100	various	Chasing calling	N		DDWW			✓		Y
2	[ATFL]			1	200	E	PE	N		"			✓	calling	N
3	[ATFL]			1	120	ENE	PE	N		"			✓	"	N
4	[ATFL]			1	180	NNE	PE	N		"			✓	"	N
5	[ATFL]			1	200	N	PE	N		"			✓	"	N
6	warbler			1	35	S	PE	N		"		✓		called once	N
7	BTGN			1	100	SE	PE	N		"		✓		calling	N
8															
9															
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*Check if Auditory only

Comments: Photo view WNW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: B3

DATE: 4/20/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0600 END TIME: 0610 GPS: PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 64

WIND DIRECTION: — SPEED (MPH) Low: High: Avg: 0

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[ATFL]	♂	A	1	110	NNE	PE	N		DDWW			✓	calling	N
2	warbler	U	A	1	50	SSW	PE	N		"		✓		"pip" note	N
3	[ATFL]	U	U	1	200	S	PE	N		CBS		✓		call	N
4															
5															
6															
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*Check if Auditory only

Comments: Photo view WNW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: B2

DATE: 4/20/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0613 END TIME: 0623 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 65

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	VERD	♂	A	2	0	various	PE+FL	N		DDWW			✓	chasing	N
2	BTGN	U	U	1	15	E	PE	N		"		✓		calling	N
3	LEAI	♂	A	1	10	NE	FL	N		"		✓		fly through (flushed)	N
4	DUFL	U	A	1	10	W	PE+FL	N		"		✓		calling	N
5	[ATFL]	U	A	2	150	NNE	PE	N		"		✓		"	N
6															
7															
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*Check if Auditory only

Comments: Photo view WNW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: B1

DATE: 4/20/09 VISIT #: 2 OBSERVER: HLT START TIME: 0627 END TIME: 0637 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 67

WIND DIRECTION: _____ SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[ATFL]	U	A	2	250	NNW	PE	N		DPWW			✓	calling	N
2	[MOUD]	♂	A	1	300	~~E~~/SW	PE/SI	N		CBS		✓		singing	N
3															
4															
5															
6															
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*Check if Auditory only

Comments: Photo view WNW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: G8

DATE: 4/20/09 VISIT #: 2 OBSERVER: HLT START TIME: 0705 END TIME: 0715 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 82

WIND DIRECTION: N SPEED (MPH) Low: 4 High: 7 Avg: 5

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[LOSH]	U	U	1	300	WSW	PE			CP			✓	calling	N
2	[HOLA]	U	U	1	300	SW	PE/Si			CDS		✓		singing	N
3															
4															
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*Check if Auditory only

Comments: Photo view WNW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: G7

DATE: 4/20/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0720 END TIME: 0730 GPS: PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 83

WIND DIRECTION: N SPEED (MPH) Low: 6 High: 8 Avg: 7

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	TRSW	U	A	1	5	SW	FL	Y	NE	CB		✓		flyby	Migrant
2	ATFL	♂	A	1	60	W	FE	N		"			✓		N
3	COMM	♀	A	1	0	-	HY	N		"				came in to orange flagging	N
4	BTSP	♂	A	1	80	SW	PE/Si	N		"				[illegible]	N
5	"	♂	A	1	110	S	PE/Si	N		"				"	N
6															
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*Check if Auditory only

Comments: Photo view WNW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: 66

DATE: 4/20/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0734 END TIME: 0744 GPS: PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 84

WIND DIRECTION: N SPEED (MPH) Low: 2 High: 5 Avg: 3

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	TRSW	U	A	15	15-80	Various	FL	Y	N	CBS		✓		flyby	Migr
2	~~TRSW~~														
3															
4															
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*Check if Auditory only

Comments: photo view WNW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: G5

DATE: 4/20/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0748 END TIME: 0758 GPS: PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 82

WIND DIRECTION: N SPEED (MPH) Low: 4 High: 8 Avg: 6

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: Photo view WNW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: 54

DATE: 4/20/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0801 END TIME: 0811 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) ?

WIND DIRECTION: N SPEED (MPH) Low: 7 High: 10 Avg: _____

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	LENI	[illegible]	A	1	30	SE	FL→PE	N		CBS			✓	flyover from NE	N
2	BTSP	U	J	1	20	SE	PE	N		"				silent	Y
3	"	U	A	1	35	ESE	PE	N		"				silent	Y
4															
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*Check if Auditory only

Comments: Photo view WNW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: G3

DATE: 4/20/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0815 END TIME: 0825 GPS: PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 76

WIND DIRECTION: N SPEED (MPH) Low: 6 High: 10 Avg: 8

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[CORA]	U	U	1	500	SE	FL	N		CBS		✓			N
2															
3															
4															
5															
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*Check if Auditory only

Comments: Photo view WNW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: G2

DATE: 4/20/09 VISIT #: 2 OBSERVER: HLT START TIME: 0820 END TIME: [illegible] GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) [illegible]

WIND DIRECTION: N SPEED (MPH) Low: 5 High: 9 Avg: 7

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
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*Check if Auditory only

Comments: Photo view WNW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: 61

DATE: 4/20/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0841 END TIME: 0851 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 88

WIND DIRECTION: N SPEED (MPH) Low: 4 High: 8 Avg: 6

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: Photo view WNW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: F8

DATE: 4/21/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0545 END TIME: 0555 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 20 TEMP (°F) 75

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	LENI	♂	A	1	100	SW	PE/SI	N		CBS			✓	calling	N
2	[LENI]	♂	A	1	200	SSW	PE/SI	N		CBS			✓	calling	N
3	GAQU	U	A	1	45	NE	PE	N		CBS		✓		calling	N
4	[LENI]	♂	A	1	300	ENE	PE/SI	N		CBS			✓	calling	N
5															
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*Check if Auditory only

Comments: Photo view NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: F7

DATE: 4/21/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0539 END TIME: 0609 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 20 TEMP (°F) 74

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[LENI]					N	PE/SI	N		CBS			✓	calling	N
2	BTSP	♂	A	1	50	NNE	PE/SI	N		CBS		✓		singing	N
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*Check if Auditory only

Comments: Photo view NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: F6

DATE: 4/21/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0612 END TIME: 0622 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 20 TEMP (°F) 73

WIND DIRECTION: _____ SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: Photo view NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: F5

DATE: 4/2/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0625 END TIME: 0635 GPS: PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 30 TEMP (°F) 74

WIND DIRECTION: NNW SPEED (MPH) Low: 2 High: 3 Avg: 2

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: Photo view NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: F1

DATE: 4/21/09 VISIT #: 2 OBSERVER: HCJ START TIME: 0638 END TIME: 0648 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 74

WIND DIRECTION: NNW SPEED (MPH) Low: 2 High: 2 Avg: 2

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	LOSH	U	U	1	35	SSE	PE→FL			CBS		✓		silent	N
2	HOLA	U	A		25-90	various	FL→PE	N		CBS			✓	calling	N
3															
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*Check if Auditory only

Comments: Photo view NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: F3

DATE: 4/21/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0651 END TIME: 0701 GPS: PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 30 TEMP (°F) 75

WIND DIRECTION: NNW SPEED (MPH) Low: 2 High: 3 Avg: 2

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: Photo drawn NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: F2

DATE: 4/21/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0704 END TIME: 0714 GPS: PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 77

WIND DIRECTION: NNW SPEED (MPH) Low: 2 High: 3 Avg: 2

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: Photo view NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: F1

DATE: 4/21/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0717 END TIME: 0727 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 30 TEMP (°F) 79

WIND DIRECTION: NNW SPEED (MPH) Low: 2 High: 3 Avg: 2

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: Photo view NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: E8

DATE: 4/21/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0751 END TIME: 0801 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 40 TEMP (°F) 80

WIND DIRECTION: NNW SPEED (MPH) Low: 3 High: 5 Avg: 4

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	NOMO	U	A	1	25	SE	FL	Y	N	CBS		✓			N
2															
3															
4															
5															
6															
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*Check if Auditory only

Comments: Photo view NW

Osprey seen + photo'd between sites

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: E7

DATE: 4/21/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0804 END TIME: 0814 GPS: PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 30 TEMP (°F) 82

WIND DIRECTION: N SPEED (MPH) Low: 2 High: 4 Avg: 3

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
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*Check if Auditory only

Comments: Photo view NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: E6

DATE: 4/21/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0817 END TIME: 0827 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 35 TEMP (°F) 83

WIND DIRECTION: N SPEED (MPH) Low: 2 High: 4 Avg: 3

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
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4															
5															
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18															
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20															

*Check if Auditory only

Comments: Photo view NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: E5

DATE: 4/21/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0830 END TIME: 0840 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 30 TEMP (°F) 85

WIND DIRECTION: N SPEED (MPH) Low: 2 High: 4 Avg: 3

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
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17															
18															
19															
20															

*Check if Auditory only

Comments: Photo view NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: E4

DATE: 4/22/09 VISIT #: 2 OBSERVER: HEJ START TIME: 0545 END TIME: 0555 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 67

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: Photo NW
LENIs far in the distance

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: E3

DATE: 4/22/09 VISIT #: _____ OBSERVER: HLJ START TIME: 0558 END TIME: 0608 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 66

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	LOSH	U	U	1	330	SSE	PE	N		DDWW			✓		N
2															
3															
4															
5															
6															
7															
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19															
20															

*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: E2

DATE: 4/22/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0611 END TIME: 0621 GPS: _____ PAGE 1 OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 68

WIND DIRECTION: ~ SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	BRBL	♂	A	1	0	5	FL	Y	N	DDWW/CBS		✓		flew directly overhead	N
2															
3															
4															
5															
6															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: E1

DATE: 4/22/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0624 END TIME: 0634 GPS: PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 68

WIND DIRECTION: SPEED (MPH) Low: High: Avg: 0

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	LOSH	U	Fledg	1	70	ENE	PE	N		DDWW			✓	silent	Y
2	"	U	A	1	61	NE	FL PE	N		"			✓	called	Y
3	"	U	Fledg	2	61	NE	PE	N		"			✓	begged	Y
4															
5															
6															
7															
8															
9															
10															
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18															
19															
20															

*Check if Auditory only

Comments: Juvenile probably same as the one from E3

Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: D8

DATE: 4/22/09 VISIT #: 2 OBSERVER: HET START TIME: 0650 END TIME: 0700 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 72

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[LOSH]	U	A	1	106	N	PE	N		CBS			✓	silent	N
2															
3															
4															
5															
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16															
17															
18															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: D7

DATE: 4/22/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0703 END TIME: 0713 GPS: 73 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) _____

WIND DIRECTION: – SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[LOSH]	U	A	1	140	SSE	PE→FL→PE			DDWW			✓		N
2	flew NW to 70m W & caught food item, then flew back														
3	to original perch														
4							waypoint			BLSLJ011					
5															
6															
7															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: DC

DATE: 4/22/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0716 END TIME: 0726 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 73

WIND DIRECTION: N SPEED (MPH) Low: 2 High: 3 Avg: 2

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[ATFL]	♂	A	1	200	WNW	PE/Si	N		DDWW		✓			N
2	VERD	U	U	1	14	ENE	PE→FL	N		DDWW		✓			N
3	BTGN	♂	A	1	13	WSW	PE	N		"		✓			N
4	ATFL	Pair	A	2	17	S	FL→PE→FL→PE		WtoE	"		✓		vocalizing	N
5	BTGN	♀	A	1	7	N	"		WtoE to SW	"		✓			N
6															
7															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: D5

DATE: 4/22/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0729 END TIME: 0739 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 73

WIND DIRECTION: N SPEED (MPH) Low: 4 High: 5 Avg: 4

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[NOMO]	U	U	1	250	ENE	PE→FL→PE	N		DDWW		✓			N
2	ATFL	U	A	1	100	NNE	PE/Si	N		"		✓		Same as one at D6?	
3								FL→PE							
4															
5															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: D4

DATE: 4/22/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0742 END TIME: 0752 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 76

WIND DIRECTION: _____ SPEED (MPH) Low: _____ High: 3 Avg: 2

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: D3

DATE: 4/22/09 VISIT #: 2 OBSERVER: HLT START TIME: 0755 END TIME: 0805 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 76

WIND DIRECTION: N SPEED (MPH) Low: 2 High: 4 Avg: 2

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: 02

DATE: 4/22/09 VISIT #: 2 OBSERVER: MLJ START TIME: 0808 END TIME: 0811 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 78

WIND DIRECTION: N SPEED (MPH) Low: 1 High: 3 Avg: 2

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: D1

DATE: 4/22/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0821 END TIME: 0831 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 79

WIND DIRECTION: N SPEED (MPH) Low: 2 High: 5 Avg: 3

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	HOLA	U	U	1	100	?	FL	?	?	CBS		✓		calls/song	N
2															
3															
4															
5															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: H8

DATE: 4/23/09 VISIT #: 2 OBSERVER: NJ START TIME: 0540 END TIME: 0550 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 63

WIND DIRECTION: N SPEED (MPH) Low: 1 High: 2 Avg: 1.5

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: H7

DATE: 4/23/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0553 END TIME: 0603 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 62

WIND DIRECTION: N SPEED (MPH) Low: 1.5 High: 2.5 Avg: 2.0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: H6

DATE: 4/23/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0606 END TIME: 0616 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 62

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: H5

DATE: 4/23/09 VISIT #: 2 OBSERVER: HLT START TIME: 0619 END TIME: 0629 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 63

WIND DIRECTION: N SPEED (MPH) Low: _____ High: _____ Avg: 2

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: H4

DATE: 4/23/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0632 END TIME: 0642 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 64

WIND DIRECTION: N SPEED (MPH) Low: _____ High: 3 Avg: 2.5

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
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20															

*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: H3

DATE: 4/23/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0645 END TIME: 0655 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 66

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: H2

DATE: 4/23/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0658 END TIME: 0708 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 67

WIND DIRECTION: N SPEED (MPH) Low: 2 High: 25 Avg: 2

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[HOLA]	U	U	1	110	N	FL	Y	SW	CBS		✓		calling	N
2															
3															
4															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: H1

DATE: 4/23/09 VISIT #: 2 OBSERVER: NLJ START TIME: 0711 END TIME: 0721 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 69

WIND DIRECTION: N SPEED (MPH) Low: 2 High: 3 Avg: 2

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[LOSH]	U	A	1	223	W	PE	N		CBS				called BLSJ 0/2	
2															
3															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: I8

DATE: 4/23/09 VISIT #: 2 OBSERVER: HLT START TIME: 0739 END TIME: 0749 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 70

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: I7

DATE: 4/23/09 VISIT #: 2 OBSERVER: HLT START TIME: 0752 END TIME: 0802 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 72

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: IG

DATE: 4/23/09 VISIT #: 2 OBSERVER: HLT START TIME: 0805 END TIME: 0815 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 72

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[BASW]	U	A	1	350	NW	FL	Y	W	CBS		✓			Migrant
2															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: I5

DATE: 4/23/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0818 END TIME: 0828 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 73

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: I4

DATE: 4/24/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0540 END TIME: 0550 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 30 TEMP (°F) 62

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: I3

DATE: 4/24/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0554 END TIME: 0604 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 62

WIND DIRECTION: NE SPEED (MPH) Low: _____ High: 25 Avg: 2

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: I2

DATE: 4/24/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0607 END TIME: 0617 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 40 TEMP (°F) 62

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: I1

DATE: 4/24/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0620 END TIME: 0630 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 50 TEMP (°F) 61

WIND DIRECTION: S SPEED (MPH) Low: _____ High: 2 Avg: 1.5

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: K8

DATE: 4/24/09 VISIT #: 2 OBSERVER: HLT START TIME: 0645 END TIME: 0655 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 80 (high) TEMP (°F) 65

WIND DIRECTION: – SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
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*Check if Auditory only

Comments: photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: K7

DATE: 4/24/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0659 END TIME: 0709 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 50 (high) TEMP (°F) 65

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[WWDO]	♂	A	1	800?	SSE	Si	N		DDWW		✓		Heard only	N
2															
3															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: K6

DATE: 4/24/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0712 END TIME: 0722 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 80 (high) TEMP (°F) 66

WIND DIRECTION: ~ SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[WNDO]	♂	A	1	550	SSE	SI	N		DDWW		✓		heard only	N
2															
3															
4															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: K5

DATE: 4/24/09 VISIT #: 2 OBSERVER: NLJ START TIME: 0725 END TIME: 0735 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 70 TEMP (°F) 66

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	HOLA	U	U	1	90.	S	FL	Y	E	CBS		✓			N
2															
3															
4															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: K4

DATE: 4/24/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0736 END TIME: 0748 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 70 TEMP (°F) 67

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	LOSH	U	A	1	21	W	PE	N		CBS			✓	BLSLJ013	N
2	LOSH	U	A	1	90	N	PE	N		CBS			✓	BLSLJ014	N
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: K3

DATE: 4/24/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0800 END TIME: 0810 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 60 TEMP (°F) 69

WIND DIRECTION: N SPEED (MPH) Low: _____ High: 2.5 Avg: 2

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: K2

DATE: 4/24/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0813 END TIME: 0823 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 50 TEMP (°F) 71

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: PhotoNW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: K1

DATE: 4/24/09 VISIT #: 2 OBSERVER: HLJ START TIME: 0826 END TIME: 0836 GPS: PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 50 TEMP (°F) 73

WIND DIRECTION: — SPEED (MPH) Low: High: Avg: 0

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M1

DATE: 4/26/15 VISIT #: 3 OBSERVER: NLJ START TIME: 0540 END TIME: 0550 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 56

WIND DIRECTION: NW SPEED (MPH) Low: 2 High: 3 Avg: 2.5

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M2

DATE: 4/26/09 VISIT #: 3 OBSERVER: HLT START TIME: 0553 END TIME: 0603 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 58

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M3

DATE: 4/26/09 VISIT #: 3 OBSERVER: HLJ START TIME: 0606 END TIME: 0616 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 57

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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2															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M4

DATE: 4/26/09 VISIT #: 3 OBSERVER: HLJ START TIME: 0619 END TIME: 0629 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 56

WIND DIRECTION: _____ SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
4															
5															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M5

DATE: 4/26/09 VISIT #: 3 OBSERVER: HEJ START TIME: 0632 END TIME: 0642 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 56

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[LOSH]	U	U	1	450	SW	PE→FL	N		CBS		✓			N
2															
3															
4															
5															
6															
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*Check if Auditory only

Comments: Photo N/W

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M6

DATE: 4/26/09 VISIT #: 3 OBSERVER: HLJ START TIME: 0645 END TIME: 0655 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 59

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[LOSH]	U	U	1	500	WSW	PE	N		CBS			✓	same bird same tree	N
2	[BRBL]	U	U	3	150	NNE	FL	Y	SSE	CBS		✓			N
3															
4															
5															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M7

DATE: 4/26/09 VISIT #: 3 OBSERVER: HLJ START TIME: 0658 END TIME: 0708 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 61

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[LOSH]	U	U	1	600	W	PE	N		CBS			✓	name bird?	N
2															
3															
4															
5															
6															
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8															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M8

DATE: 4/26/09 VISIT #: 3 OBSERVER: HLJ START TIME: 0711 END TIME: 0721 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 64

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
4															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: L1

DATE: 4/26/05 VISIT #: 3 OBSERVER: HLJ START TIME: 0731 END TIME: 0741 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 65

WIND DIRECTION: W SPEED (MPH) Low: 2.5 High: 3.5 Avg: 3

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: L2

DATE: 4/26/09 VISIT #: 3 OBSERVER: HLJ START TIME: 0744 END TIME: 0754 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 65

WIND DIRECTION: W SPEED (MPH) Low: _____ High: 35 Avg: 2

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: L3

DATE: 4/26/05 VISIT #: 3 OBSERVER: HLJ START TIME: 0757 END TIME: 0807 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 67

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	warbler	U	U	1	10	NNW	FL	Y	SSW	CBS		✓		seen briefly metallic chip	Migrant
2															
3															
4															
5															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: L4

DATE: 4/26/09 VISIT #: 3 OBSERVER: HLT START TIME: 0810 END TIME: 0820 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 69

WIND DIRECTION: W SPEED (MPH) Low: _____ High: 3 Avg: 2.5

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
4															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: L5

DATE: 4/27/09 VISIT #: 3 OBSERVER: HLJ START TIME: 0535 END TIME: 0545 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 5 TEMP (°F) 56

WIND DIRECTION: NW SPEED (MPH) Low: _____ High: 2 Avg: 1.5

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
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3															
4															
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*Check if Auditory only

Comments: Photo NW
3 migrant passerines heard prior to start of survey.

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: L6

DATE: 4/27/09 VISIT #: 3 OBSERVER: HLJ START TIME: 0548 END TIME: 0558 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 5 TEMP (°F) 58

WIND DIRECTION: W SPEED (MPH) Low: _____ High: 3.5 Avg: 3

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: L7

DATE: 4/27/09 VISIT #: 3 OBSERVER: HLJ START TIME: 0601 END TIME: 0611 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 10 TEMP (°F) 57

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[HOLA]	U	U	2	130	E	FL	Y	SW	CBS		✓			N
2															
3															
4															
5															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: L8

DATE: 4/27/09 VISIT #: 3 OBSERVER: HZJ START TIME: 0614 END TIME: 0624 GPS: _____ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 10 TEMP (°F) 58

WIND DIRECTION: – SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
4															
5															
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*Check if Auditory only

Comments: Photo NW

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe Right POINT COUNT ID: C8

DATE: 26 APR VISIT #: 3 OBSERVER: [illegible] START TIME: 05:38 END TIME: 05:48 GPS: _____ PAGE 1 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 50

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
4															
5															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: C7

DATE: 26 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 05:57 END TIME: 06:01 GPS: _____ PAGE 2 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 52

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Barn Swall	♀	A	1	90	S	FL	Y	N	CBS		✓			N
2															
3															
4															
5															
6															
7															
8															
9															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: C6

DATE: 26 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 06:04 END TIME: 06:14 GPS: _____ PAGE 3 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 60

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Ash Throated Fly	U	A	1	60	E	FL-P	N		CBS		✓			N
2															
3															
4															
5															
6															
7															
8															
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10															
11															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: C5

DATE: 26 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 06:17 END TIME: 06:27 GPS: _____ PAGE 4 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 65

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	LS	U	A	1	50	N	FL-P	N		CBS			✓	Pair ♂♀	Y
2	LS	U	A	1	40	N	FL-P	N		CBS			✓		Y
3															
4															
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*Check if Auditory only

Comments: Shrike Most Found

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: C4

DATE: 26 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 06:30 END TIME: 06:40 GPS: _____ PAGE 5 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 68

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time increment 0-3 min.	Time increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Ash-Th Fly	U	A	1	20	E	FL-P	N		CBS/Wash			✓		N
2															
3															
4															
5															
6															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: C3

DATE: 26 Apr 08 VISIT #: 3 OBSERVER: [illegible] START TIME: 06:44 END TIME: 06:54 GPS: _____ PAGE 6 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 68

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Verdin	♂	A	1	20	N	FL-P	N		CBS			✓		Y
2	"	♀	A	1	20	N	FL-P	N		CBS			✓		Y
3	Blk T Gnat	♂	A	1	20	S	FL-P	N		"			✓		Y
4	"	♀	A	1	20	S	FL-P	N		"			✓		Y
5	Nash Warb	♀	A	1	20	N	FL-P	N		"			✓		N
6															
7															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: C2

DATE: 26 Apr 07 VISIT #: 3 OBSERVER: JL START TIME: 06:57 END TIME: 07:07 GPS: _____ PAGE 7 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 70

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Blk Tail Gnat	♂	A	1	20	N	FL-P-FL	N		Palo Verde Catclaw Wash			✓		Y
2	"	♀	"	"	"	"	"	"		"			✓		"
3	Ash Th Fly	U	A	1	3	N	"	"		"			✓		"
4	Wht Wing Dove	U	A	1	80	N	FL	Y	S	"		✓			N
5															
6															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: C1

DATE: 26 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 07:10 END TIME: 07:20 GPS: _____ PAGE 8 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 72

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Lesser Nighthawk	U	A	2	20	W	FL	N		Palo Verde Catclaw wash		✓			N
2															
3															
4															
5															
6															
7															
8															
9															
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17															
18															
19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: B8

DATE: 26 Apr 06 VISIT #: 3 OBSERVER: [illegible] START TIME: 07:53 END TIME: 08:05 GPS: _____ PAGE 1 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 76

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
4															
5															
6															
7															
8															
9															
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16															
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18															
19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT: COUNT ID: B7

DATE: 26 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 08:13 END TIME: 08:23 GPS: _____ PAGE 2 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 76

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	BKT Gnat	♂	A	1	40	S	FL-P-FL	N		CBS			✓		Y
2	" " "	♀	A	1	40	S	FL-P-FL	N		CBS			✓		Y
3	LS	U	A	1	40	S	FL-P	N		CBS		✓			N
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: B6

DATE: 26 Apr 05 VISIT #: 3 OBSERVER: [illegible] START TIME: 08:27 END TIME: 08:37 GPS: _____ PAGE 3 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 78

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: NONE OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Verdin	♂	A	1	30	S	FL-P	N		CRS			✓		N
2	Verdin	♀	A	1	30	S	FL-P	N		CBS			✓		N
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
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15															
16															
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18															
19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT: COUNT ID: BS

DATE: 26 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 08:40 END TIME: 08:50 GPS: _____ PAGE 4 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 80

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Blk Head Gull	?	A	1	20	S	FL-P	N		CTRS		✓			N
2															
3															
4															
5															
6															
7															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT: COUNT ID: B4

DATE: 27 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 05:37 END TIME: 05:47 GPS: _____ PAGE 1 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 55

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time increment 0-3 min.	Time increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	BlkT Gnat	♂	A	1	20	E	FL→P	N		Palo verde Cat claw wash			✓		N
2		♀	A	1	10	W	FL→P	H		"			✓		
3	Ash Thr Fly	U	A	1	30	W	FL→?	N		"			✓	w/Food	Y
4															
5															
6															
7															
8															
9															
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11															
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17															
18															
19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT: COUNT ID: B3

DATE: 27 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 05:49 END TIME: 05:59 GPS: _____ PAGE 2 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 60

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Ash Th Fly	U	A	1	30	S	FL>P	N		Palo Verde Catclaw wash		✓			N
2	Blk Head Gros	♂	A	1	20	S	FL>P	N		" "		✓			
3															
4															
5															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: B2

DATE: 27 Apr 06 VISIT #: 5 OBSERVER: [illegible] START TIME: 06:02 END TIME: 06:12 GPS: _____ PAGE 3 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 60

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Verdin	♂	A	1	40	E	FL-P	N		CBS		✓			N
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
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14															
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16															
17															
18															
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20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT: COUNT ID: B1

DATE: 27 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 06:15 END TIME: 06:25 GPS: _____ PAGE 4 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) _____ TEMP (°F) _____

WIND DIRECTION: _____ SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: _____ OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	TBKT Gnat	♂	A	1	30	S	FL-P	N		CBS		✓			N
2															
3															
4															
5															
6															
7															
8															
9															
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11															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: 68

DATE: 27 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 07:08 END TIME: 07:18 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 72

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Lesser Nighthawk	U	U	2	50	N	FL→P	N		CBS		✓			N
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: G7

DATE: 27 Apr 09 VISIT #: 3 OBSERVER: JL START TIME: 07:21 END TIME: 07:31 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 76

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Ash Th Fly	U	A	1	40	S	FL→P	N		Palo Catclaw Wash		✓			N
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
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16															
17															
18															
19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: G6

DATE: 27 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 07:34 END TIME: 07:44 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 76

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Black Throat	♂	A	1	20	W	FL→P	N		Palo Catclaw Wash			✓		Y
2		♀	U	1	10	W	"	"		"					
3		U	U	2	10	W	"	"		"					
4	Orange C warbler	♂	A	1	10	W	"	"		"		✓			N
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: 65

DATE: 27 April 09 VISIT #: 3 OBSERVER: JV START TIME: 07:47 END TIME: 07:57 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 76

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Ash Th Fly	U	A	1	40	S	FL→P	N		CBS		✓			N
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
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16															
17															
18															
19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT: COUNT ID: G4

DATE: 27 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 08:00 END TIME: 08:10 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 78

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Mourn Dove	U	U	1	90	S	FL	Y	N	CBS		✓			N
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
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15															
16															
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18															
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20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: G-3

DATE: 27 Apr 09 VISIT #: 3 OBSERVER: JL START TIME: 08:14 END TIME: 08:24 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 78

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Wilsons Warb	♀	A	1	40	S	FL→?	N		CRS		✓			N
2															
3															
4															
5															
6															
7															
8															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: G2

DATE: 27 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 08:30 END TIME: 08:40 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 80

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Ash Th Flyc	U	A	1	40	E	FL→P	N		CBS		✓			X
2															
3															
4															
5															
6															
7															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: G1

DATE: 27 Apr 09 VISIT #: 3 OBSERVER: JL START TIME: 08:45 END TIME: 09:45 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 80

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Blk T Gnat	u	A	1	80		Vocal	N		CBS		✓			N
2															
3															
4															
5															
6															
7															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: 78

DATE: 28 May 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 05:36 END TIME: _____ GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 40 TEMP (°F) 55

WIND DIRECTION: D SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
4															
5															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT: COUNT ID: F7

DATE: 28 Apr 06 VISIT #: 3 OBSERVER: [illegible] START TIME: 05:46 END TIME: _____ GPS: _____ PAGE 2 OF 5

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 40 TEMP (°F) 60

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
4															
5															
6															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: F6

DATE: 25 Apr VISIT #: 3 OBSERVER: [illegible] START TIME: 05:50 END TIME: 06:00 GPS: _____ PAGE 3 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 40 TEMP (°F) 62

WIND DIRECTION: D SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
4															
5															
6															
7															
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15															
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18															
19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT: COUNT ID: F5

DATE: 28 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 06:03 END TIME: 06:13 GPS: _____ PAGE 4 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 35 TEMP (°F) 62

WIND DIRECTION: D SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Ash Th Fly	U	A	1	60	W	FL-P	N		CBS		✓			N
2															
3															
4															
5															
6															
7															
8															
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16															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Rio POINT COUNT ID: F4

DATE: 28 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 06:16 END TIME: 06:26 GPS: _____ PAGE 5 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 65

WIND DIRECTION: D SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: F3

DATE: 28 Apr 06 VISIT #: 3 OBSERVER: [illegible] START TIME: 06:30 END TIME: 06:40 GPS: _____ PAGE 6 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 70

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	BKT Gnat	♂	A	1	50	E	FI-P-FL	H		CBS		✓			N
2															
3															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: F2

DATE: 26 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 06:43 END TIME: 06:53 GPS: _____ PAGE 7 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 70

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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2															
3															
4															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT: COUNT ID: F1

DATE: 28 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 06:56 END TIME: 07:06 GPS: _____ PAGE 8 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 72

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: E8

DATE: 28 Apr VISIT #: 3 OBSERVER: [illegible] START TIME: 07:53 END TIME: 08:03 GPS: _____ PAGE 1 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 20 TEMP (°F) 76

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: E7

DATE: 28 Apr VISIT #: 3 OBSERVER: [illegible] START TIME: 08:06 END TIME: 08:16 GPS: _____ PAGE 2 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 78

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: EG

DATE: 28 May 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 08:20 END TIME: 08:30 GPS: _____ PAGE 3 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 76

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Mourn Dove	U	A	1	80	S	FL	Y		CBS		✓			N
2															
3															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: ES

DATE: 28 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 08:33 END TIME: 08:43 GPS: _____ PAGE 4 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 76

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Cac Wren	U	U	1	300	W	Vocal	N		Palo Verde Wash			✓	Vocal only, off point	N
2															
3															
4															
5															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: E4

DATE: 29 Apr VISIT #: 3 OBSERVER: JR START TIME: 05:35 END TIME: 05:45 GPS: _____ PAGE 1 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 55

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: N OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Cac Wren	U	U	1	300	W	Vocal	N		Palo Iron wash			✓		N
2															
3															
4															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: E3

DATE: 25 Apr 08 VISIT #: 3 OBSERVER: VL START TIME: 05:48 END TIME: 05:58 GPS: _____ PAGE 2 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 60

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: NONE OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: E2

DATE: 29 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 06:01 END TIME: 06:11 GPS: _____ PAGE 3 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 60

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: E1

DATE: 29 Apr 01 VISIT #: 3 OBSERVER: [illegible] START TIME: 06:14 END TIME: 06:24 GPS: _____ PAGE 4 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 65

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT: COUNT ID: D8

DATE: 29 Apr 09 VISIT #: 3 OBSERVER: JV START TIME: 06:47 END TIME: 06:52 GPS: _____ PAGE 1 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 62

WIND DIRECTION: D SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: D7

DATE: 29 Apr 08 VISIT #: 3 OBSERVER: JK START TIME: 06:55 END TIME: 07:05 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 62

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: NONE OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Barn Swallow	U	A	1	80	N	FL	Y	NW	CBS		✓		Vocal	N
2															
3															
4															
5															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: D6

DATE: 29 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 07:08 END TIME: 07:18 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 62

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	BLK T Gnat	♂	A	1	20	S	FL-P	N		CBS		✓			N
2															
3															
4															
5															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: D5

DATE: 29 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 07:21 END TIME: 07:31 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 68

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Ash Th Fly	U	A	1	30	E	FL-P	N		CRS			✓		N
2															
3															
4															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: D4

DATE: 29 Apr 08 VISIT #: 3 OBSERVER: JK START TIME: 07:35 END TIME: 07:45 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 70

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: D3

DATE: 29 Apr 09 VISIT #: 3 OBSERVER: JL START TIME: 07:48 END TIME: 07:58 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 70

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: D2

DATE: 29 Apr VISIT #: 3 OBSERVER: [illegible] START TIME: 08:01 END TIME: 08:11 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 70

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: D1

DATE: 29 Apr 09 VISIT #: 3 OBSERVER: JL START TIME: 08:15 END TIME: 08:25 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 72

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: H8

DATE: 30 Apr 09 VISIT #: 3 OBSERVER: JL START TIME: 05:34 END TIME: 05:44 GPS: _____ PAGE 1 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 10 TEMP (°F) 55

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: H7

DATE: 30 Apr 08 VISIT #: 3 OBSERVER: JK START TIME: 05:47 END TIME: 05:57 GPS: _____ PAGE 2 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 10 TEMP (°F) 58

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT: COUNT ID: H6

DATE: 30 Apr 09 VISIT #: 3 OBSERVER: NR START TIME: 06:00 END TIME: 06:10 GPS: _____ PAGE 3 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 10 TEMP (°F) 58

WIND DIRECTION: _____ SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: _____ OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: H5

DATE: 30 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 06:13 END TIME: 06:23 GPS: _____ PAGE 4 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 10 TEMP (°F) 60

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: H4

DATE: 30 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 06:26 END TIME: 06:36 GPS: _____ PAGE 5 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 10 TEMP (°F) 60

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Sidewinder														
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: 3

DATE: 30 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 06:39 END TIME: 06:49 GPS: _____ PAGE 6 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 10 TEMP (°F) 70

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: H 2

DATE: 30 Apr 09 VISIT #: 3 OBSERVER: JL START TIME: 06:53 END TIME: 07:03 GPS: _____ PAGE 7 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 10 TEMP (°F) 70

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: H1

DATE: 30 Apr VISIT #: 3 OBSERVER: [illegible] START TIME: 7:07 END TIME: 7:17 GPS: _____ PAGE 8 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 10 TEMP (°F) 70

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: I8

DATE: 30 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 07:40 END TIME: 07:50 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 10 TEMP (°F) 72

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: D

DATE: 30 Apr 09 VISIT #: 3 OBSERVER: JV START TIME: 07:53 END TIME: 08:03 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 10 TEMP (°F) 72

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: I 6

DATE: 30 Apr 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 08:06 END TIME: 08:16 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 10 TEMP (°F) 72

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: B5

DATE: 30 Apr 09 VISIT #: 3 OBSERVER: JB START TIME: 08:19 END TIME: 08:29 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 10 TEMP (°F) 72

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time increment		Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: I4

DATE: ~~30 Apr~~ 1 May VISIT #: 3 OBSERVER: [illegible] START TIME: 05:32 END TIME: 05:42 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 10 TEMP (°F) 58

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: I3

DATE: 1 May 09 VISIT #: 3 OBSERVER: JL START TIME: 05:45 END TIME: 05:55 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 30 TEMP (°F) 65

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: I2

DATE: 1 May 09 VISIT #: 03 OBSERVER: [illegible] START TIME: 05:58 END TIME: 06:08 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 70

WIND DIRECTION: None SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: I1

DATE: 1 May 09 VISIT #: _____ OBSERVER: JL START TIME: 06:11 END TIME: 06:21 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 70

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: K8

DATE: 1 May 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 06:45 END TIME: 06:55 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 72

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: K7

DATE: 1 May 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 06:58 END TIME: 07:08 GPS: _____ PAGE___OF___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 72

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: MDT OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: K6

DATE: 1 May 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 07:11 END TIME: 07:21 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 74

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: K5

DATE: 1 May VISIT #: 09 OBSERVER: [illegible] START TIME: 07:24 END TIME: 07:34 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 30 TEMP (°F) 78

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: K4

DATE: 1 May 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 07:27 END TIME: 07:47 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 78

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: K3

DATE: 1 May 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 07:50 END TIME: 08:00 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 80

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: KZ

DATE: 1 May 09 VISIT #: 3 OBSERVER: [illegible] START TIME: 08:03 END TIME: 08:13 GPS: _____ PAGE ___ OF ___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 80

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: K1

DATE: 1 May 09 VISIT #: 3 OBSERVER: JJ START TIME: 08:16 END TIME: 08:46 GPS: _____ PAGE___OF___

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) _____ TEMP (°F) _____

WIND DIRECTION: _____ SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: _____ OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
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Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: M8

DATE: 3 May 09 VISIT #: 4 OBSERVER: [illegible] START TIME: 05:31 END TIME: 05:41 GPS: _____ PAGE 1 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 52

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: none OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	LShrik	UN	UN	2	200	S	Vocal					✓		previous breeding pair	Y
2														off point	
3															
4															
5															
6															
7															
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9															
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20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M7

DATE: 3 May 09 VISIT #: 4 OBSERVER: [illegible] START TIME: 05:44 END TIME: 05:54 GPS: _____ PAGE 2 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 52

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: none OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Mourn Dove	U	A	1	100	S	FL	Y		CBS		✓			N
2															
3															
4															
5															
6															
7															
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9															
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16															
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19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: MG

DATE: 3 May 09 VISIT #: 4 OBSERVER: [illegible] START TIME: 05:57 END TIME: 06:07 GPS: _____ PAGE 3 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 65

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
4															
5															
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20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: M5

DATE: 3 May 09 VISIT #: 4 OBSERVER: [illegible] START TIME: 06:10 END TIME: 06:20 GPS: _____ PAGE 4 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 68

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
4															
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18															
19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M4

DATE: 3 May 09 VISIT #: 4 OBSERVER: [illegible] START TIME: 06:22 END TIME: 06:32 GPS: _____ PAGE 5 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 68

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	LShrike	U	A	1	200	SE	FL-P-FL	N		CBS		✓		Off Point	Y
2	"	U	J	3	200	SE	FL-P-FL	N		CBS		✓		" "	
3	Bonn Sparrow	♂	A	1	80	SE	FL	Y	N	CBS		✓			N
4															
5															
6															
7															
8															
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12															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: M3

DATE: 3 May 08 VISIT #: 4 OBSERVER: [illegible] START TIME: 06:35 END TIME: 06:45 GPS: _____ PAGE 6 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 70

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
4															
5															
6															
7															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: M2

DATE: 3 May 09 VISIT #: 4 OBSERVER: [illegible] START TIME: 06:49 END TIME: 06:59 GPS: _____ PAGE 7 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 70

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Shrike	U	A	1	200	M	FL-P-FL	N		CBS		✓		off point	Y
2	"	U	J	1	200	M	FL-P-FL	N		CBS		✓		" "	
3															
4															
5															
6															
7															
8															
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19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: M1

DATE: 3 May 09 VISIT #: 4 OBSERVER: [illegible] START TIME: 07:02 END TIME: 07:12 GPS: _____ PAGE 8 OF 8

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 70

WIND DIRECTION: D SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	LShrike	U	A	1	200-300	W	FL-P-FL	N		CBS		✓		Moving toward transect D	
2														Off Point	
3															
4															
5															
6															
7															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT: COUNT ID: L8

DATE: 3 May 09 VISIT #: 4 OBSERVER: [illegible] START TIME: 07:40 END TIME: 07:50 GPS: _____ PAGE 1 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 74

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	RW Swallow	U	A	1	60	W	FL	Y	H	CBS		✓			N
2	Shrike	U	A	1	150	S	FL-P-FL	N		CBS		✓		off Point	
3															
4															
5															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: L7

DATE: 3 May 09 VISIT #: 4 OBSERVER: [illegible] START TIME: 07:53 END TIME: 08:03 GPS: _____ PAGE 2 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 74

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: none OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
4															
5															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: L6

DATE: 3 May 09 VISIT #: 4 OBSERVER: JK START TIME: 08:14 END TIME: 08:24 GPS: _____ PAGE 3 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 74

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
4															
5															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: LS

DATE: 2 May 09 VISIT #: 4 OBSERVER: JL START TIME: 08:27 END TIME: 08:37 GPS: _____ PAGE 4 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 30 TEMP (°F) 74

WIND DIRECTION: D SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	L Shrike	U	A	1	2-300	W	Vocal	H		CRS		✓		off point	
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: C1

DATE: 5/3/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0530 END TIME: 0540 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 10 TEMP (°F) 68

WIND DIRECTION: — SPEED (MPH) Low: ____ High: ____ Avg: 0

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[LENI]	♂	A	1	130	N	Si	N		CBS			✓		N
2	[ATTL]	♂	A	1	140	ESE	Si	N		DDNW			✓		N
3	[LOSH]	U	U	1	200	NE	PE	N		CBS		✓		calling	N
4	warbler	U	A	1	30	ENE	PE	N		DDNW		✓		calls/force	N
5															
6															
7															
8															
9															
10															
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12															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: C2

DATE: 5/3/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0544 END TIME: 0554 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 10 TEMP (°F) 68

WIND DIRECTION: — SPEED (MPH) Low: ____ High: ____ Avg: 0

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	ATFL	~~♂~~ ♀	A	2	60	SW	FSi/PE	N		DDWW			✓		N
2	WWDO	♂	A	1	100	E	Si	N		"			✓		N
3	BTGN	U	U	1	30	SSW	PE	N		"			✓	Verdin-like call	N
4	WINA	U	A	1	20	SE	PE	N		"			✓		Migrant
5	BTGN	♀	A	1	20	SW	PE	N		"			✓	scold chatter	N
6	[LENI]	♂	A	1	250	WNW	PE/Si	N		CBS			✓		N
7	VERD	U	A	1	90	ENE	PE	N		DDWW		✓			N
8															
9															
10															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: C3

DATE: 5/3/09 VISIT #: 4 OBSERVER: HEJ START TIME: 0558 END TIME: 0608 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 40 (high) TEMP (°F) 64

WIND DIRECTION: — SPEED (MPH) Low: ____ High: ____ Avg: 0

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[WWOO]	♂	A	1	150	WNW	SI	N		DDWW			✓	same as previous	N
2	BTGN	U	A	1	100	NNW	PE	N		CBS		✓			N
3	[ATFL]	U	A	1	250	W	PE	N		DDWW			✓	same as previous.	N
4	BASW	U	A	1	0	E	FL	Y	W	DDWW		✓		high overhead	Mig
5	"	U	A	1	80	E	FL	Y	W	CBS		✓		"	"
6	CLSW	U	A	1	50	SE	FL	Y	W	CBS		✓		"	Mig
7															
8															
9															
10															
11															
12															
13															
14															
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16															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: C4

DATE: 5/3/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0611 END TIME: 0621 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 50 TEMP (°F) 67

WIND DIRECTION: — SPEED (MPH) Low: ____ High: ____ Avg: 0

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	LOSH	U	A/J	3	55/100	N	Calling, foraging	N		CBS			✓		Y
2	[WWDO]	U	A	1	150	W	PE	N		DDWW		✓			N
3	ATFL	U	A	1	20	W	PE→FL→PE	N		"		✓			N
4															
5															
6															
7															
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9															
10															
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20															

*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: C5

DATE: 5/3/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0624 END TIME: 0634 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 40 TEMP (°F) 69

WIND DIRECTION: — SPEED (MPH) Low: ____ High: ____ Avg: 0

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[LOSH]	U	A	2+	115	NW	PE	N		CBS			✓	same as previous	Y
2	[ATFL]	U	A	1	250	ESE	PE	N		"			✓		N
3	[WMDO]	♂	A	1	180	ESE	PE/Si	N		"		✓			N
4	[MODO]	U	U	1	110	NNW	PE	N		"		✓			N
5															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: C6

DATE: 5/3/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0638 END TIME: 0648 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 40 TEMP (°F) 70

WIND DIRECTION: — SPEED (MPH) Low: ____ High: ____ Avg: 0

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[WWDO]	♂	A	1	400	WNW	SI	N		DDWN		✓			N
2	[ATFL]	U	A	1	180	N	PE	N		CBS		✓		calling	N
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
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18															
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20															

*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: C7

DATE: 5/3/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0651 END TIME: 0701 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 40 TEMP (°F) 71

WIND DIRECTION: W SPEED (MPH) Low: ____ High: 25 Avg: 2

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[ATFL]	3	A	2	250	ENE	SI/FL→PE	N		CBS			✓		N
2															
3															
4															
5															
6															
7															
8															
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10															
11															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: C8

DATE: 5/3/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0704 END TIME: 0714 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 40 TEMP (°F) 72

WIND DIRECTION: _____ SPEED (MPH) Low: _____ High: 2.5 Avg: 1.5

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[ATFL]	♂	A	1	150	N	Si	N		CBS			✓		N
2	"	♂	A	1	180	NE	Si	N		"			✓		N
3															
4															
5															
6															
7															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: B1

DATE: 5/3/09 VISIT #: 4 OBSERVER: NLJ START TIME: 0737 END TIME: 0749 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 50 TEMP (°F) 78

WIND DIRECTION: WNW SPEED (MPH) Low: _____ High: 3.5 Avg: 2.5

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[ATFL]	♂	A	1	250	NNW	Si	N		DDWW			✓		N
2															
3															
4															
5															
6															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: B2

DATE: 5/3/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0752 END TIME: 0802 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 50 TEMP (°F) _____

WIND DIRECTION: _____ SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	VERD	U	U	1	50	NNE	PE	N		DDWW			✓		N
2	[ATFL]	U	A	1	200	ENE	PE	N		"		✓			N
3	BTGN	U	A	1	40	N	PE	N		"			✓		N
4	VERD	U	A	1	100	N	PE	N		"			✓		N
5															
6															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: B3

DATE: 5/3/09 VISIT #: 4 OBSERVER: NEJ START TIME: 0806 END TIME: 0816 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 50 TEMP (°F) 80

WIND DIRECTION: _____ SPEED (MPH) Low: _____ High: 2.5 Avg: 1.5

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[ATFL]	U	A	2	120	W	PE	N		DPWW			✓		N
2	VERD	U	U	1	50	SSE	PE	N		"		✓			N
3	LOSH	U	U	1	80	WNW	PE	N		"		✓			N
4	WAWA	U	A	1	15	SW	PE	N		"		✓			Marginal
5	BTGN	♂	A	1	15	SW	PE	N		"			✓		N
6	[ATFL]	U	A	1	170	NNW	PE	N		"		✓			N
7	VERD	U	A	1	100	NW	PE	N		"		✓			N
8															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: B4

DATE: 5/3/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0819 END TIME: 0829 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 50 TEMP (°F) 81

WIND DIRECTION: — SPEED (MPH) Low: ____ High: ____ Avg: 0

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	VERD	U	A	1	95	W	Hu	N		DDWW			✓		N
2	WIWA	♂	A	1	95	W	Hu	N		"			✓		Migrant
3	NAWA	♂	A	1	95	W	Si/Hu	N		"			✓		
4	ATFL	U	A	1	95	W	Hu	N		"			✓		N
5	OCWA	U	A	1	95	W	Hu	N		"			✓		Migrant
6															
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*Check if Auditory only

Comments: birds feeding in flowering acacia with lots of honeybees

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT: COUNT ID: L4

DATE: 4 May 09 VISIT #: 4 OBSERVER: [illegible] START TIME: 05:30 END TIME: 05:40 GPS: _____ PAGE 1 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 80 TEMP (°F) 68

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Morn Dove	U	A	1	60	S	FL	Y	N	CRS		✓			N
2															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT: COUNT ID: L3

DATE: 4 May 09 VISIT #: 4 OBSERVER: JL START TIME: 05:43 END TIME: 05:53 GPS: _____ PAGE 2 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 80 TEMP (°F) 70

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT COUNT ID: L2

DATE: 4 May 08 VISIT #: 4 OBSERVER: [illegible] START TIME: 05:56 END TIME: 06:06 GPS: _____ PAGE 3 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 80 TEMP (°F) 72

WIND DIRECTION: Ø SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: none OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: L1

DATE: 4 May 09 VISIT #: 4 OBSERVER: [illegible] START TIME: 06:04 END TIME: 06:19 GPS: _____ PAGE 4 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 50 TEMP (°F) 72

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: none OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: B5

DATE: 5/4/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0530 END TIME: 0540 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 70 TEMP (°F) 76

WIND DIRECTION: NW SPEED (MPH) Low: ____ High: 7.5 Avg: 6.5

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	ATFL	♂	A	1	90	S	Si	N		DDWW			✓		N
2	[ATFL]	♂	A	1	130	SW	Si	N		"		✓			N
3	GAQU	♂	A	1	50	ESE	Walking	N		CBS			✓		N
4	BTSP	U	U	1	60	ESE	PE	N		"		✓			N
5	[BTGN]	U	U	1	110	S	PE	N		DDWW		✓			N
6	VERD	U	U	1	110	SW	PE	N		"		✓			N
7	"	U	U	1	100	SSE	PE	N		"		✓			N
8	[LEN1]	U	U	1	150	E	PE	N		"		✓			N
9	[LEN1]	♂	A	1	300	W	PE	N		"		✓			N
10															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: B6

DATE: 5/4/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0543 END TIME: 0553 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 80 TEMP (°F) 75

WIND DIRECTION: NW SPEED (MPH) Low: ____ High: 4.5 Avg: 2

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[LENI]	♂	A	1	200	W	Si	N		DDWW		✓			N
2	[ATFL]	♂	A	1	250	ESE	Si	N		"			✓		N
3	["]	U	A	1	180	WSW	PE	N		"		✓			N
4	[CORA]	U	U	1	400	NNW	FL	Y		CBS		✓			N
5	GAWU	♂	A	1	70	E	walking	N		DDWW			✓		N
6	BTGN	U	U	1	100	NE	PE	N		"		✓			N
7	BASW	U	A	2	90	SE	FL	Y	W	"		✓			migrant
8															
9															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: B7

DATE: 5/4/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0557 END TIME: 0607 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 80 TEMP (°F) 76

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[ATFL]	U	A	1	300	N	PE	N		DDWW			✓		N
2	"	U	A	1	140	NW	PE	N		"		✓			N
3															
4															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: B8

DATE: 5/4/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0611 END TIME: 0621 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 80 TEMP (°F) 76

WIND DIRECTION: variable SPEED (MPH) Low: ____ High: 3 Avg: 2

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[ATFL]	U	A	1	300	E	PE	N		DDWW			✓		N
2															
3															
4															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: G1

DATE: 5/4/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0633 END TIME: 0643 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 90 TEMP (°F) 76

WIND DIRECTION: NW SPEED (MPH) Low: ____ High: 4 Avg: 3

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[ATFL]	U	A	1	250	W	PE	N		DDWW		✓			N
2															
3															
4															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: G2

DATE: 5/4/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0647 END TIME: 0657 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 95 TEMP (°F) 76

WIND DIRECTION: W SPEED (MPH) Low: ____ High: 3.5 Avg: 2.5

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	ATFL	♂	A	1	55	N	PE/Si	N		CBS			✓		N
2	BASW	U	A	2	20	S	FL	Y	N	"		✓			Migrant
3	[ATFL]	U	A	1	200	W	PE	N		"			✓		N
4															
5															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: G3

DATE: 5/4/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0700 END TIME: 0710 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 90 TEMP (°F) 77

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: 6 4

DATE: 5/4/09 VISIT #: 4 OBSERVER: HCJ START TIME: 0714 END TIME: 0724 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 90 TEMP (°F) 77

WIND DIRECTION: E SPEED (MPH) Low: _____ High: 3.5 Avg: 2.5

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: G5

DATE: 5/4/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0727 END TIME: 0737 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 70 TEMP (°F) 77

WIND DIRECTION: – SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	ATFL	U	U	1	110	E	PE	N		CBS	✓	✓			N
2															
3															
4															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: G6

DATE: 5/4/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0741 END TIME: 0751 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 70 TEMP (°F) 78

WIND DIRECTION: ~ SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time increment 0-3 min.	Time increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	ATFL	♂	A	1	100	E to N	PE→FL→PE			CBS			✓		N
2	BTGN	U	U	1	90	N	PE	N		"		✓			N
3	RCHEWA	U	A	1	60	E	PE	N		"	✓	✓			Migrant
4															
5															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: G7

DATE: 5/4/09 VISIT #: 4 OBSERVER: NLJ START TIME: 0756 END TIME: 0806 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 75 TEMP (°F) 79

WIND DIRECTION: _____ SPEED (MPH) Low: _____ High: 3.5 Avg: 2

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[ATFL]	U	A	1	150	?	PE	N		CBS		✓			N
2	[TUVU]	U	A	1	160	SW	PE	N		"			✓		N
3															
4															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: B8

DATE: 5/4/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0809 END TIME: 0819 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 90 TEMP (°F) 80

WIND DIRECTION: SW SPEED (MPH) Low: 0 High: 4.5 Avg: 2

PRECIPITATION: 0 OTHER:

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
4															
5															
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*Check if Auditory only

Comments:

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: F1

DATE: 5/5/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0530 END TIME: 0540 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 60 TEMP (°F) 75

WIND DIRECTION: ENE SPEED (MPH) Low: ____ High: 3.5 Avg: 2.5

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	LENI	♂ ♀	A	2	20	NE	FL	Y		CBS		✓			N
2	[LENI]	♂	A	1	170	ENE	PE/Si	N		"			✓		N
3															
4															
5															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: F2

DATE: 5/5/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0544 END TIME: 0554 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 60 TEMP (°F) 74

WIND DIRECTION: ~ SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	LENI	♂	A	1	15	NW	FL	N		CBS		✓		nearground	N
2	[LOSH]	U	U	1	250	WSW	PE	N		"		✓		called	N
3	[LENI]	U	U	1	280	NW	FL	N		"		✓		nearground	N
4															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: F3

DATE: 5/5/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0557 END TIME: 0607 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 60 TEMP (°F) 76

WIND DIRECTION: – SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Unidentified Calf	U	U	1	70	ENE	PE	N		CBS	✓	✓			N
2															
3															
4															
5															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: F4

DATE: 5/5/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0611 END TIME: 0621 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 70 TEMP (°F) 76

WIND DIRECTION: N SPEED (MPH) Low: _____ High: 25 Avg: 2

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	LENI	♂	A	1	95	SE	PE	N		CBS		✓		flushed on the way to F4	N
2															
3															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: F5

DATE: 5/5/09 VISIT #: 4 OBSERVER: HCJ START TIME: 0624 END TIME: 0634 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 80 TEMP (°F) 77

WIND DIRECTION: SSW SPEED (MPH) Low: _____ High: 3.5 Avg: 3

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1	[LOSH]	U	U	1	200	WSW	PE	N		CBS		✓			N
2															
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4															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: FC

DATE: 5/5/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0637 END TIME: 0647 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 90 TEMP (°F) 78

WIND DIRECTION: SE SPEED (MPH) Low: ____ High: 6 Avg: 5

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[LOSH]	U	U	1	400	S	PE	N		CBS		✓			N
2															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: F7

DATE: 5/5/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0651 END TIME: 0701 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 85 TEMP (°F) 77

WIND DIRECTION: SSE SPEED (MPH) Low: _____ High: 6.5 Avg: 6

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: F8

DATE: 5/5/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0704 END TIME: 0714 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 80 TEMP (°F) 78

WIND DIRECTION: E SPEED (MPH) Low: _____ High: 5 Avg: 3.5

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[LOSH]	U	U	1	120	ENE	PE	N		CBS	✓	✓			N
2															
3															
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5															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: E1

DATE: 5/5/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0749 END TIME: 0759 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 50 TEMP (°F) 81

WIND DIRECTION: E SPEED (MPH) Low: _____ High: 3.5 Avg: 3

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	LOSH	U	A	1	90	NW	PE→FL→PE	N	WSW	DDNW					N
2															
3															
4															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: E2

DATE: 5/5/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0802 END TIME: 0815 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 60 (Mod) TEMP (°F) 81

WIND DIRECTION: E SPEED (MPH) Low: _____ High: 3.5 Avg: 2.5

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	LOSH	U	U	1	95	W	PE	N		CBS		✓		BLSLT018	N
2															
3															
4															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: E3

DATE: 5/5/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0815 END TIME: 0825 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 50 TEMP (°F) 82

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: E4

DATE: 5/5/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0828 END TIME: 0838 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 60 (high clouds) TEMP (°F) 84

WIND DIRECTION: E SPEED (MPH) Low: _____ High: 2.5 Avg: 2

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: E5

DATE: 5/6/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0530 END TIME: 0540 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 74

WIND DIRECTION: ✓ SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	HOFI	U	U	1	90	NW	FL	Y	?	CBS		✓			N
2															
3															
4															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: E6

DATE: 5/6/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0543 END TIME: 0553 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 75

WIND DIRECTION: NW SPEED (MPH) Low: ____ High: 4.5 Avg: 3.5

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	HOFI	U	U	1	40	S	FL	Y	NNW	CBS		✓			N
2	[CORA]	U	U	2	200	NW	FL	Y	E	CBS		✓			N
3	[LOSH]	U	U	1	165	NW	PE	N		"		✓		BLSLJ019	N
4															
5															
6															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: E7

DATE: 5/6/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0600 END TIME: 0610 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 74

WIND DIRECTION: NW SPEED (MPH) Low: ____ High: 4 Avg: 3

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	CLSW	U	A	1	25	SE	FL	Y	NW	CBS		✓		calling	N
2															
3															
4															
5															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: E8

DATE: 5/6/09 VISIT #: 4 OBSERVER: NLJ START TIME: 0614 END TIME: 0624 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 74

WIND DIRECTION: NNW SPEED (MPH) Low: ____ High: 4.5 Avg: 4

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	TRSW	U	A	1	5	SSE	FL	Y	NNW	CBS		✓			Megiard
2	HOFI	U	U	2	80	S	FL	Y	N	"	✓	✓			N
3															
4															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: D1

DATE: 5/6/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0706 END TIME: 0716 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 79

WIND DIRECTION: NW SPEED (MPH) Low: ____ High: 4.5 Avg: 4

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: D2

DATE: 5/6/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0719 END TIME: 0729 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 80

WIND DIRECTION: NW SPEED (MPH) Low: ____ High: 4.5 Avg: 3.5

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: 103

DATE: 5/6/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0732 END TIME: 0742 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 81

WIND DIRECTION: NW SPEED (MPH) Low: _____ High: 6 Avg: 4.5

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: D4

DATE: 5/4/09 VISIT #: 4 OBSERVER: HLT START TIME: 0745 END TIME: 0755 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 81

WIND DIRECTION: N SPEED (MPH) Low: _____ High: 5 Avg: 4

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: D5

DATE: 5/6/09 VISIT #: 4 OBSERVER: NCJ START TIME: 0758 END TIME: 0808 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 82

WIND DIRECTION: NE SPEED (MPH) Low: _____ High: 5.5 Avg: 5

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	HOLA	U	U	1	85	W	FL	Y	varied	CBS		✓			N
2	[LOSH]	U	U	3	240	SE	PE	N		CBS/DDWW		✓			N
3															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: D6

DATE: 5/6/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0812 END TIME: 0822 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 85

WIND DIRECTION: NE SPEED (MPH) Low: _____ High: 6.5 Avg: 4

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	BTGN	U	U	1	13	SSW	PE	N		DJWW					N
2	ATFL	U	U	1	15	N	HU	N		"					N
3															
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*Check if Auditory only

Comments: _____

inactive nest cavity at 707541, 3727987 ~80m SE of D6
ATFL

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: D7

DATE: 5/6/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0825 END TIME: 0835 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 83

WIND DIRECTION: NE SPEED (MPH) Low: ____ High: 13 Avg: 10

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	ATFL	U	U	1	40	SW	PE→FL→PE	N		CBS			✓		N
2															
3															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: 08

DATE: 5/6/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0838 END TIME: 0848 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 85

WIND DIRECTION: NE SPEED (MPH) Low: _____ High: 7.5 Avg: 5.5

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: H1

DATE: 5/7/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0528 END TIME: 0538 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 73

WIND DIRECTION: — SPEED (MPH) Low: ____ High: ____ Avg: 0

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[LENI]	♂	A	1	500	N	PE	N		CBS		✓			N
2	HOLA	U	U	1	20	WNW	FL	Y	E	"		✓			N
3	LENI	♂	A	1	5	SW	FL	Y	NNW	"		✓			N
4															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: H2

DATE: 5/7/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0542 END TIME: 0552 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 73

WIND DIRECTION: — SPEED (MPH) Low: ____ High: ____ Avg: 0

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: H3

DATE: 5/7/09 VISIT #: 4 OBSERVER: HLT START TIME: 0556 END TIME: 0606 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 72

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: H4

DATE: 5/7/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0610 END TIME: 0620 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 73

WIND DIRECTION: ~ SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	HOLA	U	U	1	100	W	FL	Y	ESE	CBS		✓			N
2	[HOLA]	U	U	1	150	NW	FL	Y	?	"		✓			N
3															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: H5

DATE: 5/7/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0624 END TIME: 0634 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 73

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: H6

DATE: 5/7/09 VISIT #: 4 OBSERVER: HLT START TIME: 0635 END TIME: 0649 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 73

WIND DIRECTION: — SPEED (MPH) Low: ____ High: ____ Avg: 0

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: H7

DATE: 5/7/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0652 END TIME: 0702 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 75

WIND DIRECTION: \ SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: H8

DATE: 5/7/09 VISIT #: 4 OBSERVER: NLJ START TIME: 0706 END TIME: 0716 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 79

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: I1

DATE: 5/7/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0759 END TIME: 0809 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 87

WIND DIRECTION: NNW SPEED (MPH) Low: _____ High: 5.5 Avg: 4

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: I2

DATE: 5/7/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0814 END TIME: 0824 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 87

WIND DIRECTION: N SPEED (MPH) Low: ____ High: 3 Avg: 2

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	CORA	U	U	1	100	E	FL	Y	NW	CBS		✓			N
2															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: I3

DATE: 5/7/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0828 END TIME: 0838 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 87

WIND DIRECTION: — SPEED (MPH) Low: _____ High: 3 Avg: 2

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: I4

DATE: 5/7/09 VISIT #: 4 OBSERVER: HLT START TIME: 0842 END TIME: 0852 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 90

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: I5

DATE: 5/8/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0525 END TIME: 0535 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 75

WIND DIRECTION: NW SPEED (MPH) Low: ____ High: 6 Avg: 5.5

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time increment 0-3 min.	Time increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	LENI	♀	A	1	10	E	FL	Y	NW	CBS		✓			N
2															
3															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: I6

DATE: 5/8/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0538 END TIME: 0548 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 72

WIND DIRECTION: NW SPEED (MPH) Low: _____ High: 3 Avg: 2.5

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
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*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: I7

DATE: 5/8/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0551 END TIME: 0601 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 74

WIND DIRECTION: NW SPEED (MPH) Low: ____ High: 4 Avg: 3

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: I8

DATE: 5/8/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0604 END TIME: 0614 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 71

WIND DIRECTION: — SPEED (MPH) Low: ____ High: ____ Avg: 0

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[ATFL]	U	U	1	150	N	PE/Hu	N		CBS		✓			N
2															
3															
4															
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*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: K1

DATE: 5/8/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0645 END TIME: 0655 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 79

WIND DIRECTION: NW SPEED (MPH) Low: _____ High: 6.5 Avg: 5

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	CORA	U	U	1	200 to 10	WSW	Hu → R	Y	E	CBS		✓			N
2	HOLA	U	U	1	80	N	FL	Y	SSE	"	–	✓			N
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: K2

DATE: 5/8/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0658 END TIME: 0708 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 80

WIND DIRECTION: NW SPEED (MPH) Low: _____ High: 5.5 Avg: 3.5

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: K3

DATE: 5/8/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0711 END TIME: 0721 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 80

WIND DIRECTION: NW SPEED (MPH) Low: _____ High: 6 Avg: 55

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: K4

DATE: 5/8/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0724 END TIME: 0734 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 82

WIND DIRECTION: NW SPEED (MPH) Low: ____ High: 3 Avg: 2.5

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	[054]	U	U	1	250	NNW	PE	N		CBS		✓			N
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: K5

DATE: 5/8/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0737 END TIME: 0747 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 83

WIND DIRECTION: — SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	COHU	♀	A	1	0	–	Hu	N		CBS		✓		came to [illegible]	N
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

*Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT: COUNT ID: KC

DATE: 5/8/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0750 END TIME: 0800 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 83

WIND DIRECTION: — SPEED (MPH) Low: ____ High: ____ Avg: 0

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer		Activity	Flyover?		Habitat	A*	Time Increment		Notes	Breeding Confirmed? (Y/N)
					Dist. (m)	Dir.		Y/N	Dir.			0-3 min.	3-10 min.		
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: K7

DATE: 5/8/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0803 END TIME: 0815 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 86

WIND DIRECTION: NNE SPEED (MPH) Low: ____ High: 8.5 Avg: 6.5

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

Check if Auditory only

omments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: K8

DATE: 5/8/09 VISIT #: 4 OBSERVER: HLJ START TIME: 0816 END TIME: 0826 GPS: 12 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 87

WIND DIRECTION: N SPEED (MPH) Low: ____ High: 11 Avg: 7

PRECIPITATION: 0 OTHER: ____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

*Check if Auditory only

Comments: ____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: L5

DATE: 20 Apr 08 VISIT #: 2 OBSERVER: [illegible] START TIME: 05:45 END TIME: 05:55 GPS: _____ PAGE 1 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER (%) 0 TEMP (°F) 65

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: 0

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	Horn Lark	U	A	4	60	E	FL P FL	N		CBS		✓			N
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: L6

DATE: 20 April VISIT #: 2 OBSERVER: [illegible] START TIME: 05:58 END TIME: 6:08 GPS: _____ PAGE 2 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 65

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: 0 OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	House Finch	U	A	1	20	S	P-FL	N		CBS		✓			N
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

Check if Auditory only

Comments: _____

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blyth POINT: COUNT ID: L7

DATE: 20 Apr 09 VISIT #: 2 OBSERVER: JL START TIME: 06:11 END TIME: 06:21 GPS: _____ PAGE 3 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 70

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	BT Sparrow	U	A	1	50	S	P-FL	N		CBS		✓			N
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

Check if Auditory only

Comments: Morn Dove – off Sample unit

AVIAN FIXED POINT OBSERVATION DATA SHEET: **SOLAR MILLENIUM** SITE: Blythe POINT COUNT ID: L8

DATE: 20 Apr 07 VISIT #: 2 OBSERVER: JL START TIME: 06:25 END TIME: 06:35 GPS: _____ PAGE 4 OF 4

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER (%) 0 TEMP (°F) 78

WIND DIRECTION: 0 SPEED (MPH) Low: _____ High: _____ Avg: _____

PRECIPITATION: None OTHER: _____

Obs No.	Species	Sex	Age	# Inds.	Observer Dist. (m)	Observer Dir.	Activity	Flyover? Y/N	Flyover? Dir.	Habitat	A*	Time Increment 0-3 min.	Time Increment 3-10 min.	Notes	Breeding Confirmed? (Y/N)
1	L Shrike	U	A	1	20	W	P-FL-	N		CBS			✓	Adult W / 2 Juv	Y
2	L Shrike	U	J	2	20	W	P	N		CBS			✓		
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

Check if Auditory only

Comments: _____

AVIAN INCIDENTAL OBSERVATIONS SOLAR MILLENIUM SITE Blythe OBSERVER JL PAGE 1 OF 1

DATE: 19 Apr 09 WEATHER: VISIBILITY Clear PRECIP: None

CLOUD COVER 0 TEMP 58 WIND DIRECTION N WIND SPEED 6.2 OTHER

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	05:50	L Shrike	U	A	1	3	P	CBS	No		M1
1	06:00	L Shrike	U	A	1	10	P-FL	CBS	No		M2

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments
05:50	BLSLC001	AS	above				11S 0708850 utm 3728040
06:00	BLSLC002	AS	above				11S 984 7902

General Comments:

AVIAN INCIDENTAL OBSERVATIONS SOLAR MILLENIUM SITE Blythe OBSERVER HLJ PAGE 1 OF 1

DATE: 4/12/09 WEATHER: VISIBILITY good PRECIP: 0

CLOUD COVER 0 TEMP 54° WIND DIRECTION _____ WIND SPEED 0 OTHER _____

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	0630	LOSH	u	A	1	320m	PE/dropped to ground	CBS	N	—	BLSLJ001

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments

General Comments: _____

AVIAN INCIDENTAL OBSERVATIONS **SOLAR MILLENIUM** SITE Blythe OBSERVER HLJ PAGE 1 OF 1

DATE: 4/19/09 WEATHER: VISIBILITY 6 PRECIP: 0

CLOUD COVER 0 TEMP 74-80 WIND DIRECTION NW WIND SPEED 6-8 OTHER

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	0550	LOSH	M	A	1	100	PE	CBS	N		singing BLSLJ002
2	0615	LOSH	U	A	1	125	PE	CBS	N		calling BLSLJ003
3	0626	LOSH	Family group		5	25-80	PE+FL	CBS	N		3 juv, 2 ad. B 45 PC wayp
4	0757	LOSH	U	A	1	115	PE	CBS	N		calling BLSLJ005

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments

General Comments:

AVIAN INCIDENTAL OBSERVATIONS SOLAR MILLENIUM SITE Blythe G OBSERVER HLJ PAGE 1 OF 1

DATE: 4/20/09 WEATHER: VISIBILITY 6 PRECIP: 0

CLOUD COVER 0 TEMP 88 WIND DIRECTION N WIND SPEED 5-7 OTHER

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	0858	LOSH	U	U	1	—	PE→FL	CBS/CDWS	N	S	after runway completed BLSLJ006

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments

General Comments:

AVIAN INCIDENTAL OBSERVATIONS **SOLAR MILLENIUM** SITE Blythe OBSERVER HLJ PAGE 1 OF 1

DATE: 4/21/09 WEATHER: VISIBILITY G PRECIP: 0

CLOUD COVER 30% TEMP _____ WIND DIRECTION _____ WIND SPEED _____ OTHER _____

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	0638	LOSH	U	U	1	35	PE	CBS	N		on PC F4 BLSLJ007
2	0745	OSPR	U	A	1	25	PE	CBS	N		beside road (photed) BOSLJ 001
3	0843	LOSH	U	U	1	180	PE	CBS/CDWS	N		BLSLJ008

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments

General Comments: _____

AVIAN INCIDENTAL OBSERVATIONS SOLAR MILLENIUM SITE Blythe OBSERVER HLJ PAGE 1 OF 1

DATE: 4/22/09 WEATHER: VISIBILITY 6 PRECIP: 0

CLOUD COVER 0 TEMP 66-79 WIND DIRECTION N WIND SPEED 0-5 OTHER

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	0625	LOSH	Fledg/Ad		4	60-70m	Young begging	DDWW	N		family group BLSLJ009
2	0650	"	U	A	1	106m	PE	CBS	N		silent BLSLJ010
3	0705	"	U	A	1	140→70→140	PE→HU→PE	DDWW	N	NW, then SE	caught small mammal on ground & flew back to perch BLSLJ011

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments

General Comments:

AVIAN INCIDENTAL OBSERVATIONS SOLAR MILLENIUM SITE Blythe OBSERVER HLJ PAGE 1 OF 1

DATE: 4/23/09 WEATHER: VISIBILITY 6 PRECIP: 0

CLOUD COVER 0 TEMP 69 WIND DIRECTION — WIND SPEED 0 OTHER

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	0711	LOSH	U	U	1	223m	PE	CBS	N	—	BLSLJ012 from PC H1

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments

General Comments:

AVIAN INCIDENTAL OBSERVATIONS **SOLAR MILLENIUM** SITE Blyth OBSERVER [illegible] PAGE 1 OF [illegible]

DATE: 20 Apr 09 WEATHER: VISIBILITY Clear PRECIP: None

CLOUD COVER 0 TEMP 78 WIND DIRECTION _____ WIND SPEED 0 OTHER _____

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	06:28	L Shrike	U	A	1	20	P-FL	CBS	No		L8
	"	L Shrike	U	J	2	20	P-FL	CBS	No		L8

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments
06:28	PLSJL001	U	A	1	As Above	"	NS 070 9984
			J	2	" "		UTM 37325596

General Comments: _____

AVIAN INCIDENTAL OBSERVATIONS **SOLAR MILLENIUM** SITE Blythe OBSERVER HLJ PAGE 1 OF 1

DATE: 4/12/09 WEATHER: VISIBILITY good PRECIP: 0

CLOUD COVER 0 TEMP 54° WIND DIRECTION _____ WIND SPEED 0 OTHER _____

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	0630	LOSH	U	A	1	320m	PE/dropped to ground	CBS	N	—	BLSLJ001

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments

General Comments: _____

AVIAN INCIDENTAL OBSERVATIONS SOLAR MILLENIUM SITE Blythe OBSERVER HLJ PAGE 1 OF 1

DATE: 4/19/09 WEATHER: VISIBILITY 6 PRECIP: 0

CLOUD COVER 0 TEMP 74-80 WIND DIRECTION NW WIND SPEED 6-8 OTHER

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	0550	LOSH	M	A	1	100	PE	CBS	N		singing BLSLJ002
2	0615	LOSH	U	A	1	125	PE	CBS	N		calling BLSLJ003
3	0626	LOSH	Family group		5	25-80	PE+FL	CBS	N		3 juv, 2 ad. B 45 PC waypoint
4	0757	LOSH	U	A	1	115	PE	CBS	N		calling BLSLJ005

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments

General Comments:

AVIAN INCIDENTAL OBSERVATIONS SOLAR MILLENIUM SITE Blythe OBSERVER JL PAGE 1 OF 1

DATE: 19 Apr 09 WEATHER: VISIBILITY Clear PRECIP: None

CLOUD COVER 0 TEMP 58 WIND DIRECTION N WIND SPEED 6.2 OTHER

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	05:50	L Shrike	U	A	1	3	P	CBS	No		M1
1	06:00	L Shrike	U	A	1	10	P-FL	CBS	No		M2

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments
05:50	BLSJC002	As	above				11S 0708850 utm 3728040
06:00	BLSJC003	As	above				11S 984 7902

General Comments:

AVIAN INCIDENTAL OBSERVATIONS **SOLAR MILLENIUM** SITE Blythe G OBSERVER JLJ PAGE 1 OF 1

DATE: 4/20/09 WEATHER: VISIBILITY 6 PRECIP: 0

CLOUD COVER 0 TEMP 88 WIND DIRECTION N WIND SPEED 5-7 OTHER

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	0858	LOSH	U	U	1	—	PE→FL	CBS/CDWS	N	S	after runway completed BLSLJ006

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments

General Comments:

AVIAN INCIDENTAL OBSERVATIONS SOLAR MILLENIUM SITE Blyth OBSERVER [illegible] PAGE 1 OF 1

DATE: 20 Apr 09 WEATHER: VISIBILITY Clear PRECIP: none

CLOUD COVER 0 TEMP 78 WIND DIRECTION _____ WIND SPEED 0 OTHER _____

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	06:28	L Shrike	U	A	1	20	P-FL	CBS	No		L8
	"	L Shrike	U	J	2	20	P-FL	CBS	No		L8

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments
06:28	PLSLOO1	U	A	1	As Above	"	11S 070 9984
			J	2	" "		UTM 3732559

General Comments: _____

AVIAN INCIDENTAL OBSERVATIONS SOLAR MILLENIUM SITE Blythe OBSERVER HLJ PAGE 1 OF 1

DATE: 4/21/09 WEATHER: VISIBILITY G PRECIP: 0

CLOUD COVER 30% TEMP _____ WIND DIRECTION _____ WIND SPEED _____ OTHER _____

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	0638	LOSH	U	U	1	35	PE	CBS	N		on PC F4 BLSLJ007
2	0745	OSPR	U	A	1	25	PE	CBS	N		beside road (photed) BOSLJ 001
3	0843	LOSH	U	U	1	180	PE	CBS/CDWS	N		BLSLJ008

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments

General Comments: _____

AVIAN INCIDENTAL OBSERVATIONS SOLAR MILLENIUM SITE Blythe OBSERVER HLJ PAGE 1 OF 1

DATE: 4/22/09 WEATHER: VISIBILITY G PRECIP: 0

CLOUD COVER 0 TEMP 66-79 WIND DIRECTION N WIND SPEED 0-5 OTHER

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	0625	LOSH	Fledg	+Ad	4	60-70m	Young begging	DDWW	N		family group BLSLJ009
2	0650	"	U	A	1	106m	PE	CBS	N		silent BLSLJ010
3	0705	"	U	A	1	140→70→140	PE→HU→PE	DDWW	N	NW, then SE	caught small prey item on ground & flew back to perch BLSLJ011

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments

General Comments:

AVIAN INCIDENTAL OBSERVATIONS SOLAR MILLENIUM SITE Blythe OBSERVER HLJ PAGE 1 OF 1

DATE: 4/23/09 WEATHER: VISIBILITY 6 PRECIP: 0

CLOUD COVER 0 TEMP 69 WIND DIRECTION — WIND SPEED 0 OTHER

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	0711	LOSH	U	U	1	223m	PE	CBS	N	~	BLSLJ012 from PC H1

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments

General Comments:

AVIAN INCIDENTAL OBSERVATIONS **SOLAR MILLENIUM** SITE Blythe OBSERVER HLJ PAGE 1 OF 1

DATE: 4/24/09 WEATHER: VISIBILITY G PRECIP: 0

CLOUD COVER 70% TEMP 67° WIND DIRECTION — WIND SPEED — OTHER

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	0740	LOSH	U	A	2	21+90m	PE→HU	CBS	N	—	BLSLJ013+014

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments

General Comments:

AVIAN INCIDENTAL OBSERVATIONS SOLAR MILLENIUM SITE Blythe OBSERVER JL PAGE 1 OF 1

DATE: 26 Apr WEATHER: VISIBILITY Clear PRECIP: None

CLOUD COVER 0 TEMP 76 WIND DIRECTION 0 WIND SPEED _____ OTHER _____

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	06:20	LS	♂	A	1	50	FL-P	CBS	N		Pair w/Nest
	"	"	♀	A	1	50	FL-P	CBS			

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments
06:20	BLS1L004	♂	A	1	FL-P	CBS	Pair IIS 0708881
	005	♀	A	1	FL-P	CBS	UTM 3726250
							Nest Local
							IIS 0708738
							UTM 3726258
08:55	BLS1L006	U	A	1	FL-P	Palo Verde/Catclaw wash	IIS 0707134
							UTM 3726536

General Comments: _____

AVIAN INCIDENTAL OBSERVATIONS SOLAR MILLENIUM SITE Blythe OBSERVER HLJ PAGE 1 OF 1

DATE: 4/29/09 WEATHER: VISIBILITY G PRECIP: 0

CLOUD COVER 0 TEMP 85-83 WIND DIRECTION E WIND SPEED 4 OTHER

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	1830	LOSH	A+	Fledg.	2	10m	young begging	DDWW	N		BLSLJ015 (photo)
2	1850	LCTH	U	U	2	15m	pair	CBS	N		BLTLJ001 "

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments

General Comments:

AVIAN INCIDENTAL OBSERVATIONS SOLAR MILLENIUM SITE Blythe OBSERVER HLJ PAGE 1 OF 1

DATE: 5/3/09 WEATHER: VISIBILITY 6 PRECIP: 0

CLOUD COVER 50% TEMP 67-69 WIND DIRECTION — WIND SPEED 0 OTHER

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	0610	LOSH	U	A/J	3	55-100m	calling, young begging	CBS	N		BLSLJ015
2	0625	LOSH	U	A	2+	115	periodic calling	CBS	N		BLSLJ016

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments

General Comments:

AVIAN INCIDENTAL OBSERVATIONS **SOLAR MILLENIUM** SITE Blythe OBSERVER HLJ PAGE 1 OF 1

DATE: 5/4/09 WEATHER: VISIBILITY 6 PRECIP: 0

CLOUD COVER 90 TEMP 80 WIND DIRECTION variable WIND SPEED 3 OTHER

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	0825	LOSH	U	U	1	300	PE	CBS	N		BLSLJ017

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments

General Comments:

AVIAN INCIDENTAL OBSERVATIONS SOLAR MILLENIUM SITE Blythe (E2) OBSERVER HLJ PAGE 1 OF 1

DATE: 5/5/09 WEATHER: VISIBILITY G PRECIP: 0

CLOUD COVER 60% TEMP 81° WIND DIRECTION E WIND SPEED 2.5mph OTHER

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	0810	LOSH	U	U	1	95	PE	CBS/DDWW	N		BLSLJ018

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments

General Comments:

AVIAN INCIDENTAL OBSERVATIONS SOLAR MILLENIUM SITE Blythe OBSERVER HLJ PAGE 1 OF 1

DATE: 5/6/09 WEATHER: VISIBILITY G PRECIP: 0

CLOUD COVER 0 TEMP 75° WIND DIRECTION NW WIND SPEED 4mph OTHER

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	0550	BLSLJ019	U	U	1	165	PE	CBS/DDWW	N		
2	0630	BLSLJ020	U	A/FL	3	5	PE	"	N		ad. & 2 bobtailed fledglers; prob. included in BLSLJ019
3	0815	BCAVLJ01	–	–	–	0	–	DDWW	–	–	Tree cavity, inactive, but reported as active earlier; Ash-throated Flycatcher family seen nearby

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments

General Comments:

AVIAN INCIDENTAL OBSERVATIONS SOLAR MILLENIUM SITE Blythe OBSERVER HLJ PAGE 1 OF 1

DATE: 5/6/09 WEATHER: VISIBILITY 6 PRECIP: 0

CLOUD COVER 0 TEMP 101 WIND DIRECTION W WIND SPEED 7mph OTHER

Obs. No.	Time	Species	Sex	Age	No. of Inds.	Dist from obsr (m)	Activity	Habitat	Flyover? (Y/N)	Dir of Flight	Location/Other Notes
1	1540	LOSH	U	U	1	50	PE	DDWW	N		BLSLJ021

OTHER SENSITIVE WILDLIFE INCIDENTAL OBSERVATIONS – USE GPS AND FIELD NOTE NOMENCLATURE

Time	GPS Code (Use Nomenclature from back page)	Sex	Age	No. of Inds.	Activity	Habitat	Comments
1750	KB & Kit Fox	U	A	1	In burrow	CBS	Peering out of burrow; walked off when I stopped

General Comments:

ATTACHMENT I

DESERT TORTOISE TECHNICAL REPORT

BLYTHE SOLAR POWER PROJECT
DESERT TORTOISE TECHNICAL REPORT
RIVERSIDE COUNTY, CALIFORNIA

Prepared for:

Solar Millennium, LLC
1625 Shattuck Avenue
Berkeley, California 94709

Chevron Energy Solutions
A Division of Chevron U.S.A. Inc.
345 California St., 18th Floor
San Francisco, California 94104

Prepared by:

EDAW AECOM
1420 Kettner Boulevard, Suite 500
San Diego, California 92101
Phone: (619) 233-1454
Fax: (619) 233-0952
Contact: Cecilia Meyer Lovell

August 2009

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SUMMARY

EDAW AECOM (EDAW) performed biological resources studies for Solar Millennium, LLC and Chevron Energy Solutions, who are the Applicants for the proposed Blythe Solar Power Project (Project or BSPP). The Project is proposed on public lands managed by the Bureau of Land Management (BLM) in Riverside County, California, and the Applicants have submitted an application to BLM for a Right of Way grant. The BSSP will be a 1,000-megawatt (MW) solar thermal electric generating facility using parabolic trough technology. The Project would be located in the southern California inland desert, approximately 1 mile northwest of the Blythe Airport, in Riverside County, California (Figures 1 and 2 [all figures referred to herein are included in Attachment 1]). The primary solar energy facilities and associated construction and operations footprint are located within an approximate 7,030-acre disturbance area (Figure 2).

As a component of the needed biological resources work, presence/absence surveys for the federally and State endangered desert tortoise (*Gopherus agassizii*; DT) within the disturbance area were conducted in 2009.

PROJECT DESCRIPTION

Solar Millennium LLC (the Applicant) is proposing to construct a commercial solar thermal electric power generating project, herein referred to as the Blythe Solar Power Project (BSPP or Project). The BSPP would be located in the southern California inland desert, approximately 7 miles west of the City of Blythe, in Riverside County, California. The Project would be located on a 9,405-acre right-of-way (ROW) owned by the Federal government and leased by the Applicant from the Bureau of Land Management (BLM). The Project facilities themselves would occupy approximately 5,950 acres of the ROW (referred to as the facility footprint). The Project would use solar parabolic trough technology to generate electricity. With this technology, arrays of parabolic mirrors collect heat energy from the sun and refocus the radiation on a receiver tube located at the focal point of the parabola. A heat transfer fluid (HTF) is heated to high temperature (750°F) as it circulates through the receiver tubes. The heated HTF is then piped through a series of heat exchangers where it releases its stored heat to generate high-pressure steam. The steam is then fed to a traditional steam turbine generator where electricity is produced.

The Project would have a nominal output of 1,000 MW, consisting of four identical and independent 250 MW power plants (Units #1 and #2). The units would be developed in phases

with construction scheduled to begin in late 2010 on the first unit; that unit would come on line in mid-2013 and subsequent units would come on line in each of the following three years.

Each power unit would have its own solar field, comprised of piping loops arranged in parallel groups, and its own power block, centrally located within the solar field. Each power block would have its own HTF pumping and freeze protection system; solar steam generator; steam turbine generator; an air-cooled condenser (ACC) for cooling; transmission lines and related electrical system; and auxiliary equipment (e.g., water treatment system, emergency generators). The Project would require a new transmission line, which is in a preliminary design stage.

Access to the BSPP would be via an existing public road heading north from the frontage road along Interstate 10 (I-10). Improvements to portions of the public road would be required. Only a small portion of the overall facility footprint would be paved, primarily the site access road, the service roads to the power blocks, and six acres of each of the 18-acre power blocks. The solar fields would remain unpaved and without a gravel surface in order to prevent mirror damage. The Project solar fields and support facilities perimeter would be secured with chain link metal-fabric security fencing and controlled access gates.

Following completion of spring 2009 surveys, several changes were made to the disturbance area limits. First, a conceptual footprint of a possible transmission line was identified (Figure 2). The final Project transmission line route has not yet been selected. The possible transmission line footprint has not yet been surveyed and, therefore, is not discussed in this report. Surveys for the possible transmission line will be conducted following selection of the final transmission line route (anticipated spring 2010).

In addition, several portions of the disturbance area, totaling approximately 180 acres, are no longer a part of the proposed Project and have been removed from the disturbance area (Figure 2). For example, an approximately 6.2-mile-long linear feature was surveyed that was subsequently removed from the disturbance area. However, because the 180 acres were included in the spring 2009 surveys, in the interest of contributing to the body of scientific information, survey results for these areas are included in this document.

SITE DESCRIPTION

The primary solar energy facilities and associated construction and operations for the proposed Project are located within the approximately 7,030-acre disturbance area. The BSPP site is nearly

completely vacant and undisturbed and is entirely owned by BLM. There are no existing structures that would need to be demolished.

During WWII, the site was part of the General George S. Patton Desert Training Center, officially the California-Arizona Maneuver Area (DTC-CAMA), a simulated theater of operations. The site area was heavily used by tanks and other military vehicles.

The proposed BSPP is located in the Palo Verde Mesa east of the McCoy Mountains in eastern Riverside County, California, approximately 8 miles west of Blythe, California, and approximately 1 mile northwest of the Blythe Airport. Elevation ranges from approximately 670 feet above sea level at the southwestern limits to a low of about 420 feet above sea level near the southeastern side boundary (USGS 1983). The existing topographic conditions of the proposed disturbance area show an average slope of approximately 1.25 percent toward the east on the west side of the disturbance area and approximately 0.50 percent toward the southeast on the east side of the disturbance area. The general stormwater flow pattern is from the higher elevations in the McCoy Mountains, located approximately 3 miles west of the site, to the lower elevations in McCoy Wash, located east of the site. Runoff from the mountains discharges into shallow moderately defined channels at the base of the mountains and passes through the disturbance area in a southeasterly direction and is intercepted offsite by irrigation canals before reaching McCoy Wash.

Five vegetation communities and other cover types were identified within the BRSA during the surveys, including upland, riparian, and other cover types. These vegetation communities are dry desert wash woodland, unvegetated ephemeral dry wash, Sonoran creosote bush scrub, agricultural land, and developed areas. The majority of the BRSA is composed of Sonoran creosote bush scrub. Plants indicative of desert dry wash woodlands follow the drainages that flow from the west to the east. Agricultural areas exist in the buffer area and consist of palm tree cultivation and fallow fields. Vegetation communities are based on a classification system by R. Holland (1986). When appropriate, vegetation classification by J.O. Sawyer and T. Keeler-Wolf (1995) are also considered.

SPECIES BACKGROUND INFORMATION

The desert tortoise (DT) is federally listed as threatened under the Federal Endangered Species Act, with critical habitat designated by the U.S. Fish and Wildlife Service (USFWS 1994a). The listing was initially made on August 4, 1989, by emergency rule (USFWS 1989) and by final rule on April 2, 1990 (USFWS 1990). This listing status applies to the entire population of DT,

except in Arizona south and east of the Colorado River, and in Mexico. An approved recovery plan has been published by USFWS (1994b). The DT was listed as threatened under the California Endangered Species Act on June 22, 1989 (CFGC 1989). No federally designated critical habitat for the DT occurs within the BRSA. The DT is widely distributed in the deserts of California, southern Nevada, extreme southwestern Utah, western and southern Arizona, and throughout most of Sonora, Mexico. However, populations over approximately 50 percent of its U.S. range (30 percent of its overall range) began declining in the late 1960s and early 1970s (USFWS 1990, 1994b). These declines have been attributed to several factors, paramount of which are an upper respiratory tract disease, habitat loss and fragmentation due to urbanization and off-road vehicular use, illegal collecting and vandalism by humans, and predation on young DTs, especially by ravens. Raven populations, for example, have exploded with the increasing use of the deserts by humans and their discarded garbage, a prime food source for ravens.

DT home range varies with locality, year, resource availability, and social interactions (Berry 1986, O'Connor et al. 1994). Male DT home range (0.04–0.31 square mile) is estimated to be twice the size of females (Burge 1977, Berry 1986). DTs use multiple dens throughout individual home ranges and appear to migrate to steeper, rockier slopes in the winter (Barrett 1990).

SURVEY METHODOLOGY

Prior to beginning field surveys, EDAW biologists consulted the California Department of Fish and Game (CDFG) California Natural Diversity Database (CNDDB) (RareFind Version 3.1.0; CDFG 2009). In addition the the Special Animals list (CDFG 2009), range maps were consulted to determine historic occurrence of special status plant and wildlife species and other natural resources within the BRSA. Additionally, USFWS provided a letter detailing special status species that it requires to be considered.

Surveys for biological resources were conducted within the proposed disturbance area (area inside and outside the facility fenceline that will be disturbed by the Project) and solar facility footprint (area inside the facility fenceline: solar fields, office and maintenance buildings, lay down area, drainage channels, bioremediation area, leach fields, a corridor for the transmission line, and roads), as well as a 1,000-foot buffer survey area around the proposed Project linear features and a 1-mile buffer around the disturbance area, as required by CEC (hereafter collectively defined as the "buffer"). The entire 12,510-acre survey area, consisting of the disturbance area plus the buffer, is referred to as the BRSA.

A habitat assessment was conducted in spring 2009 to determine which wildlife species identified through the CNDDB search and a review of the Special Animals list had the potential to occur within the BRSA. Project biologists Arthur Davenport, Shelly Dayman, Charles German, Katie Hall, Gregg Lukasek, and Milo Rivera conducted wildlife species habitat assessments on February 15 and 16, 2009. Habitat assessments consisted of walking and driving throughout the BRSA. Topographic maps and aerial photographs were used to aid in determining if there were any special habitat types that should be assessed.

Spring 2009 surveys followed the guidelines published in the USFWS *Field Survey Protocol for any Non-Federal Action That May Occur within the Range of the Desert Tortoise* (protocol) (USFWS 1992), with the following exception: no surveys of the five zone of influence (ZOI) transects that are typically required outside of and parallel to the disturbance area at 100, 300, 600, 1,200, and 2,400 feet were conducted. This modification to the DT survey protocol was agreed upon by USFWS, CDFG, BLM and the California Energy Commission (CEC) prior to survey initiation per an email communication dated March 10, 2009, from Julie Vance (refer to Section 2.2.1 of the Application for Certification [AFC]). To comply with the recommendations of the CEC Draft Guidelines, transects outside of and parallel to the disturbance area were surveyed for DT at 3,960-foot (3/4-mile) and 5,280-foot (1-mile) intervals from and parallel to the edge of the disturbance area (see Section 2.2 of the AFC). These transects are more broadly focused than the DT protocol transects and are not a formal part of the DT survey. However, they provide information on DT presence/absence and habitat suitability as well as other biological resources in the area surrounding the BRSA. Presence/absence surveys for DT were completed between March 11 and June 4, 2009. Project biologists included Scott Cameron, Arthur Davenport, Shelly Dayman, Kim Duncan, Elias Elias, Andrew Forde, Michael Gallagher, Charles German, Katie Hall, James Huelsman, James Jennings, Ed LaRue, Gregg Lukasek, James Luttrell, Milo Rivera, Ellen Schafhauser, Patricia Seamount, Nicole Stephens, Brent Vickers, and Rob Wolfson.

The disturbance area (with the exception of the transmission line route and the additional disturbance area was surveyed according to protocol by spacing transects 32.8 feet apart along north-to-south-oriented transects. The survey was conducted by slowly and systematically walking linear transects while surveyors visually searched for DT and sign. Particular emphasis was placed on searching around the bases of shrubs and along the banks of shallow washes. All types of DT sign were recorded using GPS. Surveys were conducted throughout the day. On days when temperatures were above 95°F, surveys were conducted closer to dawn and dusk hours. DTs were measured at middle carapace length (MCL) and evaluated for health.

Photographs of DT observations were taken when possible (i.e., animal not deep in burrow). Photographs of large carcasses and/or unusual sign were also taken.

Burrows, scat, and shell remains were classed using the Information Index for Desert Tortoise Sign: Burrows and Dens, Scats and Shell Remains as in the USFWS *Field Survey Protocol for any Non-Federal Action That May Occur within the Range of the Desert Tortoise* (protocol) (USFWS 1992) (Attachment 2).

Generally, under this classification system, burrows and pallets coded by the observer as Class 1, 2, or 3 were identified as DT burrows/pallets with greater confidence than burrows or pallets coded as Class 4 or 5, which have the potential to be DT burrows/pallets but cannot be confirmed as DT. The DT burrow classification system requires that observers determine if the burrows/pallets have been recently used and are therefore active burrows (there is DT sign present such as scat, tracks, etc.); if the burrows/pallets can be classed as definitely or possibly DT; and if the burrows are in good condition (i.e., could be used by a DT in the current condition) or deteriorated condition (i.e., would need modification by a DT to be used). Height, width, and depth (estimated) measurements of DT burrows/pallets were taken.

DT scat was classified based on qualitative observations of variables that change over time. Fresh DT scat is wet, has odor, is tightly packed, and is dark brown with a glaze. As DT scat ages, it becomes dry; the odor disappears; the color becomes bleached; and the fibers become loosely packed. Qualitative observations (whether or not the scat was wet; if it had obvious odor or was odorless; if it was glazed or had no glaze; if it was dark brown, light brown or bleached; if the scats were loose or tightly packed) were used to classify scats according to the Information Index in Attachment 2. Scat measurements (length and width) were taken whenever possible.

DT shell remains were classed based on qualitative observations regarding the condition of the shell remains. Fresh or putrid shell remains were classified as Class 1, and disarticulated/scattered pieces of DT bone were classified as Class 5. The following characteristics were used to determine the class of shell remains: color of the shell remains; location of scutes (adhering to bone or peeling off); condition of scutes (if scutes were peeling off bone, if growth rings on scutes were peeling); and condition of shell bones (intact or falling apart, if bone fragments are disarticulated and scattered). If bone fragments were observed, notes were taken as to whether the bones had begun to mineralize, since mineralization was observed on DT bones within this BRSA. Bones were assessed to determine whether they were becoming chalky as part of the aging process or if it appeared that the bone was being replaced by minerals and was therefore becoming more rock like. Several bones showing mineralization were shown

to paleontological crew members, and it was confirmed that some of the DT bones within the BRSA had begun to mineralize. MCL measurements were taken or estimated on DT shell remains whenever possible.

As described in the Preparing for Any Action That May Occur Within the Range of the Mojave Desert Tortoise (*Gopherus agassizii*) survey methodology (USFWS 2009), the estimated abundance of adult DTs within the action area can be calculated using the formula provided within this protocol. The total number of DTs observed within the Project disturbance area was one, so it was determined that this calculation is not appropriate, since a minimum of 20 DTs is necessary to implement the 2009 methodology calculation.

Survey Limitations

Rainfall patterns in this area are typically bimodal, with a peak in the summer monsoon season (July through September) and a second peak, typically longer and with more variation that occurs in the winter/spring months (November through March). At the Blythe Airport weather station, the total precipitation for the previous year's rainfall is 1.85 inches compared to the historical average of 3.56 inches. In the year preceding the survey, the precipitation during the monsoon season was less than would be expected based on the historical average. Similarly, the rainfall observed in January and the spring months (March to May) was also less than the historical average. The lack of rainfall could have influenced the amount of above ground DT activity (limited to the observation of live DTs and fresh DT scat) observed during the 2009 season. DTs are long-lived species and the detection of other DT sign including DT burrows and shell remains may not be as heavily influenced by rainfall patterns.

Subterranean termite (*Reticulitermes* sp.*)* activity was noted on DT scat, so scat observations may have been reduced due to this activity.

Within the drainages, the density of the vegetation (grasses, shrubs, and trees) may have lowered the detection rate of DT and/or DT sign. Additional effort for DT observation was expended in thickly vegetated areas, but the density of vegetation in some areas made visual inspection difficult.

Due to the design of the survey protocol, it is possible that active DTs could be missed because they are walking in areas that are outside the surveyor's line of sight. Active DT burrows may be observed (with or without recent sign), but due to DT activity or the depth of the burrow, the DT may not be observed.

Results

Through a review of the CNDDB search and the Special Status animal list (CDFG 2009), a draft list of special status wildlife species with the potential to occur within the BRSA was drafted. During the habitat assessment, habitat conditions for special status species were evaluated with respect to the conditions of the BRSA, and the site conditions precluded the presence of some species. After the habitat assessments, it was determined that habitat for the following wildlife species was present within the BRSA:

Federal or State Listed (ESA or CESA)

- Desert tortoise (*Gopherus agassizii*) – ESA and CESA threatened
- Gila woodpecker (*Melanerpes uropygialis)* – CESA endangered
- Gilded flicker (*Colaptes chrysoides)* – CESA endangered
- Swainson's hawk (*Buteo swainsoni)* – CESA threatened – however, migratory only onsite

CDFG Species of Special Concern (SSC), California Code of Regulations, BLM Sensitive or CNPS List 1A, 1B, or 2

- Ferruginous hawk (*Buteo regalis*) – CDFG Watch List (WL), BLM Sensitive, NECO - however, wintering only onsite
- Northern harrier (*Circus cyaneus*) – CDFG SSC – however, migratory or wintering only onsite
- Western burrowing owl (*Athene cunicularia hypugaea*) – CDFG SSC, BLM Sensitive
- Crissal thrasher (*Toxostoma crissale)* – CDFG SSC
- Loggerhead shrike (*Lanius ludovicianus*) – CDFG SSC
- Yellow warbler (*Dendroica petechia sonorana*) – CDFG SSC, Northern and Eastern Colorado Desert Coordinated Management Plan (NECO) – however, only migratory onsite
- American badger (*Taxidea taxus*) – CDFG SSC
- Desert kit fox (*Vulpes macrotis arsipus*) – State Protected Furbearing Mammal (PFM) (per. Calif. Code of Regulations 460)
- Nelson's bighorn sheep (*Ovis canadensis nelsoni*) – BLM Sensitive, NECO
- Pallid bat (*Antrozous pallidus)* – CDFG SSC, BLM Sensitive, NECO

During habitat assessments in spring 2009, it was determined that the entirety of the disturbance area and the majority of the BRSA contains suitable habitat for DT. Suitable habitat for DT is mapped in Figure 4.

Focused DT surveys were initiated in March 2009 and a summary of the observations of DT sign and DT occurrences is below and in Table 1. Three adult DTs were encountered during surveys of the BRSA. One adult DT was observed within the disturbance area and two additional adult DTs were observed outside of the disturbance area, but within the buffer. The single adult male DT observed within the disturbance area on April 13, 2009, was seen walking on desert pavement toward the east. No active burrow was noted to be associated with this DT during this observation. During botanical surveys on March 26, 2009, an adult DT was observed within a caliche burrow (a cavity eroded or excavated into a hard calcium carbonate [caliche] soils) about 600 feet to the west of the disturbance area. This burrow had been previously observed (February 16, 2009) and was noted as a tortoise burrow with no recent sign. The burrow was visible to the end and the tortoise was not present within the burrow on this date. On June 4, 2009, a single adult male DT was observed about 4000 feet to the southwest of the disturbance area during buffer zone surveys. This DT was observed both inside and outside of his caliche burrow.

Numerous DT burrows (77 total, eight active, 24 definitely DT) and pallets (more than 150 total, three active, 15 definitely DT) were observed throughout the BRSA and are mapped in Figure 9. Forty-nine observations of DT scat were made within the BRSA. Scat of class 1 and 2 is relatively recent and could be considered fresh. Eleven observations of fresh scat were made, 10 of those observations were within the disturbance area, mainly on the northwestern and southwestern areas (Figure 4). DT carcasses (relatively intact) and bone fragments were observed throughout the BRSA. In Figure 4, Class 2, 3, and 4 DT shell remains are shown. These are considered carcasses here, rather than disarticulated bone fragments. Five relatively intact carcasses (Class 2) were present in the northwestern and southwestern portion of the disturbance area. Six Class 3 carcasses were found, also in the western areas of the BRSA, one outside the disturbance area in the buffer. Twenty-one Class 4 carcasses were found within the BRSA. These are relatively intact carcasses. The majority of these were found on the western side of the BRSA, but one observation was in the northeastern corner, near McCoy Wash. Bone fragments (Class 5) were prevalent throughout the BRSA, but were much more common on the east side. Of the more than 360 bone fragments observed, approximately 75 were considered mineralized.

Table 1
DT and DT Sign Observed within Disturbance Area and BRSA during Spring 2009 Surveys

Sign	Class*	Description	Number of Observations		
			Disturbance Area	Buffer	BRSA
Tortoises		Adult	1	2	3
Tortoise Burrows	1		6	2	8
	2		10	4	14
	3		4		4
	4		27	2	29
	5		18	4	22
Tortoise Pallets	1		2	1	3
	2		2		2
	3		14	1	15
	4		76		76
	5		53	2	55
Tortoise Scat	1		3	1	4
	2		7		7
	3		14	3	17
	4		8		8
	5		13		13
Tortoise Shell Remains	2	Carcass	5		5
	3	Carcass	5	1	6
	4	Carcass	16	5	21
	5	Bone Fragments - Not Mineralized	283	7	290
		Bone Fragments - Mineralized	74	1	75
Tortoise Tracks				1	1
Tortoise Drinking Depression			1		1

* Classified using the Information Index for Desert Tortoise Sign: Burrows and Dens, Scats and Shell Remains as in the USFWS Protocol (USFWS 1992) (Appendix A).

Species observed during protocol DT and other wildlife surveys are included in Appendix D. Other special status wildlife observed in 2009 surveys include the American badger (*Taxidea taxus*), western burrowing owl (*Athene cunicularia*), Mojave fringe-toed lizard (*Uma scoparia*), loggerhead shrike (*Lanus ludovicianus*), Vaux's swift (*Chaetura vauxi)*, purple martin (*Progne subis*) and northern harrier (*Circus cyaneus*), all CDFG Species of Special Concern. The Mojave fringe-toed lizard and burrowing owl are also considered BLM sensitive. Desert kit fox (*Vulpes macrotis arsipus*) was observed and is a California Code of Regulations (460) Protected Fur-bearing Mammal.

It was not possible to calculate a DT abundance estimate using the 2009 (USFWS 2009) protocol since 20 DTs must be observed for this calculation to be valid and only one DT was observed during the 2009 survey season.

Discussion

During habitat assessments in spring 2009, it was determined that the entirety of the disturbance area and the majority of the buffer contains suitable habitat for DT. Three adult tortoises were observed within the BRSA, including one within the disturbance area. Six active (Class 1) DT burrows were observed within the disturbance area and two more within the buffer. DTs were not observed within these burrows, but it is highly probable that these are occupied burrows and DTs were not observed due to survey limitations (the DT may have been active and in another area or it was not possible to see the animal in a deep burrow). One of the active burrows was observed within the vicinity of the DT observed walking not within the area of an active burrow. Also, DTs are often observed in burrows and areas that have no definitive DT sign present, so it is also probable the DTs are present in areas within the footprint with fresh sign (i.e., fresh scat) as well as in areas with no fresh sign that was noted. Fresh scat was observed in the northwest and southwest areas of the BRSA, and it is likely that these areas are both used and occupied by DTs. This is supported by the relatively intact DT carcasses also found in these areas. Bone fragments become much more common on the eastern side of the BRSA, which is also downstream. This suggests that DTs are present and foraging on the western side of the BRSA and that, as the DTs die and the carcasses become disarticulated and scattered bone fragments, these fragments are washed downstream into the eastern area. However, it should be noted that, in some cases on the eastern side of the BRSA, it was evident that disarticulated and scattered bone fragments contained the majority of the pieces of DT carcass. This suggests that either the DT died there or that the intact carcass was brought there by other means (predator activity or large flood events). Approximately 75 of the 365 observations of DT bone fragments were considered mineralized. These bones were considered modern by paleontological standards (i.e., within the past 100 years). Bone fragments that were considered fossils were removed from the dataset for confidentiality reasons.

Habitat quality within the disturbance area is moderate on the western portion of the disturbance area and lower quality on the eastern side. Habitat quality for DT is better closer to the mountain areas or near large drainages (which are also usually associated with the mountainous areas). The dry desert wash woodlands and the drainages that flow from the west from the mountains onto the western areas of the BRSA provide areas with higher productivity for forage for DT as

compared to the eastern portion of the BRSA. The eastern portion of the BRSA is generally drier and annual cover dries up earlier in the season than in the west.

CNDDB records show DT occurrences surrounding but not within the BRSA. The closest documented DT based on the CNDDB occurs approximately 0.2 mile from the BRSA (CDFG 2009). CNDDB record data is largely incomplete and may not provide an accurate depiction of the actual population size and distribution within the area, but can provide some insight into the distribution of DT. An additional DT observation occurred in 2009 approximately 35 miles to the west of the BRSA, during biological investigations for the Palen Solar Power Project (proposed by the same Applicants as for the BSPP).

Habitat suitability for the DT is determined by examining vegetation, soils, landscape (topography, terrain, and elevation), and climate. A complex interaction of these variables determines site preference by the species (Nussear et al. 2009). It is likely that the most limiting factor in the distribution of DT within the BRSA site is water. Within this area, the amount of water available is related to both elevation and the orographic effects of the mountains on rainfall patterns.

Suitable landscapes for DT are generally defined as alluvial fans and plains and rocky slopes at elevations of 1,969 to 3,937 feet above sea level (USFWS 2008). While there have been studies regarding slope and aspect preference for DT (Weinstein 1989 and Anderson et al. 2000), DT choose sites based on surface conditions, which are influenced by a complex interaction between climate and topography (Nussear et al. 2009).

DTs require soils that can support burrows, but also allow for excavation (Anderson et al. 2000). In some cases, DTs take advantage of existing natural shelters such as rock formations or exposed calcic soils horizons (Nussear et al. 2009). The soils within the disturbance area are suitable for burrowing. Therefore, there are no soils onsite that would limit the distribution of DT.

Presence of ephemeral plant species is an indicator of habitat suitability for the DT because ephemeral plants are the primary components of the DT diet (Esque 1994, Jennings 1997, Avery 1998). Generally DTs prefer creosote bush scrub habitat with a high diversity and cover of perennial plant species and high productivity of ephemeral plants. Less commonly, DT will occur in blackbrush (*Coleogyne ramosissima*), Joshua tree (*Yucca brevifolia*), and juniper (*Juniperus* sp.) at higher elevations, and saltbush (*Atriplex* sp.) at lower elevations (Nussear et al. 2009). The vegetation within the disturbance area consists primarily of Sonoran creosote bush

scrub. In spring 2009, high ephemeral plant productivity was observed within the drainages on the western side of the BRSA. Ephemeral plant productivity was lower within the desert pavement areas, but there were often pockets of vegetation within the pavement that contained plants. DT scat was observed within these pockets in several areas, and these are likely important foraging spots. Within the eastern portion of the BRSA, in the spring of 2009, ephemeral plant production ended much sooner than on the western side. The deep drainages on the west have more water because of the proximity to the McCoy Mountains. Flow from the mountains is not as far to the east. It is likely that the ephemeral plant production is higher just east of the BRSA, closer to McCoy wash, and the water is associated with this drainage.

Rainfall in late 2008 and early 2009 within the region was lower than average. The rains that typically occur in the late summer/early fall were lower than the historical average for this area. The high ephemeral plant productivity within the western portion of the BRSA is probably typical for this site, but the lack of rains in February and March caused annual plants to dry up more quickly than normal. This effect was more pronounced on the eastern portion of the BRSA in spring 2009.

The climate and vegetation within the BRSA are consistent with the Sonoran Desert rather than the Mojave Desert. This is important for explaining the distribution of DT in this area, as detailed below. Precipitation and temperature correlate to elevation, aspect, and geographical location in the desert. Precipitation events such as the monsoon, which are important for DTs in the Sonoran Desert, are highly dependent on local orographic effects from topographic features such as mountains and vary significantly from one area to another (Nussear et al. 2009). Within the Mojave Desert, the rainfall is Mediterranean winter-rainfall, as opposed to a bimodal rainfall pattern with important summer monsoon rains in the Sonoran. It is important to understand that there is increased precipitation in this area at higher elevations. Also, as elevation increases, temperature decreases, and so does the evapotranspiration rate. The increased rainfall and reduced evapotranspiration rates associated with increases in elevation work in concert to allow for a higher availability of water (for drinking) and increased plant production as elevation increases. The higher temperatures at the Blythe site magnify the effect of the evapotranspiration rate when compared to Mojave Desert areas. So, DTs should be more abundant in the mountains and alluvial fans and drainages associated with the mountains compared to the valleys (and is more common in the Mojave Desert). This is supported by the distribution of DT and DT sign within the BRSA. Ephemeral plant production was noted to be higher and longer lasting both within the drainages and at higher elevations during the spring 2009 survey season, which supports the supposition that water is more available here as elevation increases.

Also, other factors that may contribute to lower density/use levels of DT on the eastern (lower elevation) side of the disturbance area include the constraints to movement on the eastern and southeastern sides of the BRSA due to residential, commercial (airport), and agricultural use, and the constraint of the I-10 freeway to the south. It should be noted that the entirety of the BRSA is important for foraging and dispersal, with the western areas and the northeastern areas near McCoy Wash (a drainage associated with mountainous areas to the north) used more frequently by DT than the eastern areas.

CERTIFICATION STATEMENT

Qualified EDAW biologists who conducted DT surveys for the Solar Millennium Palen project certify that the information in this survey report fully and accurately represents the work performed by EDAW biologists. The results of focused surveys for listed species are typically considered valid for 1 year by the resource agencies.

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ATTACHMENT 1

FIGURES

Map Location

1 inch = 40 miles

0 40 80 Miles

Blythe Solar Power Project
Desert Tortoise Technical Report

Figure 1
Regional Map

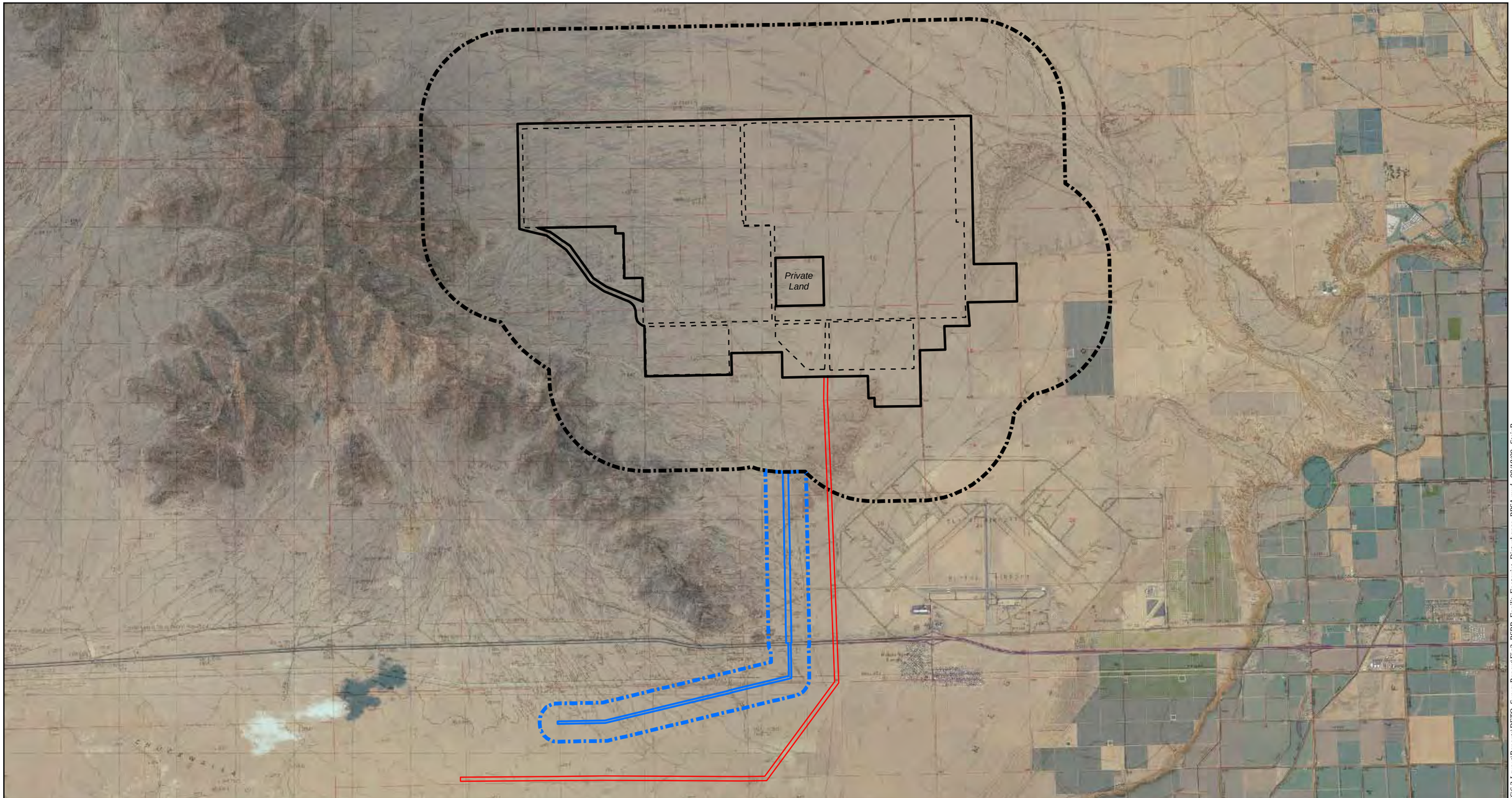
Source: ESRI; AECOM 2009

Solar Millennium

AECOM

Date: August 2009

Path: P:\2009\09080082 Sol Mil Blythe\6.0 GIS\6.3 Layout\Reports\DETO_SurveyReport\Fig1_BSPP_RegionalLocation.mxd, 08/13/09, LeeJ



Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Biological Resource Survey Area (BRSA)
- Buffer Survey Area (Surveyed No Longer a Part)
- Disturbance Area (Surveyed - No Longer a Part)

Source: NAIP 2005; AECOM 2009

N
W E
S

1 in = 1 miles

0 1 2 Miles

Blythe Solar Power Project
Desert Tortoise Technical Report

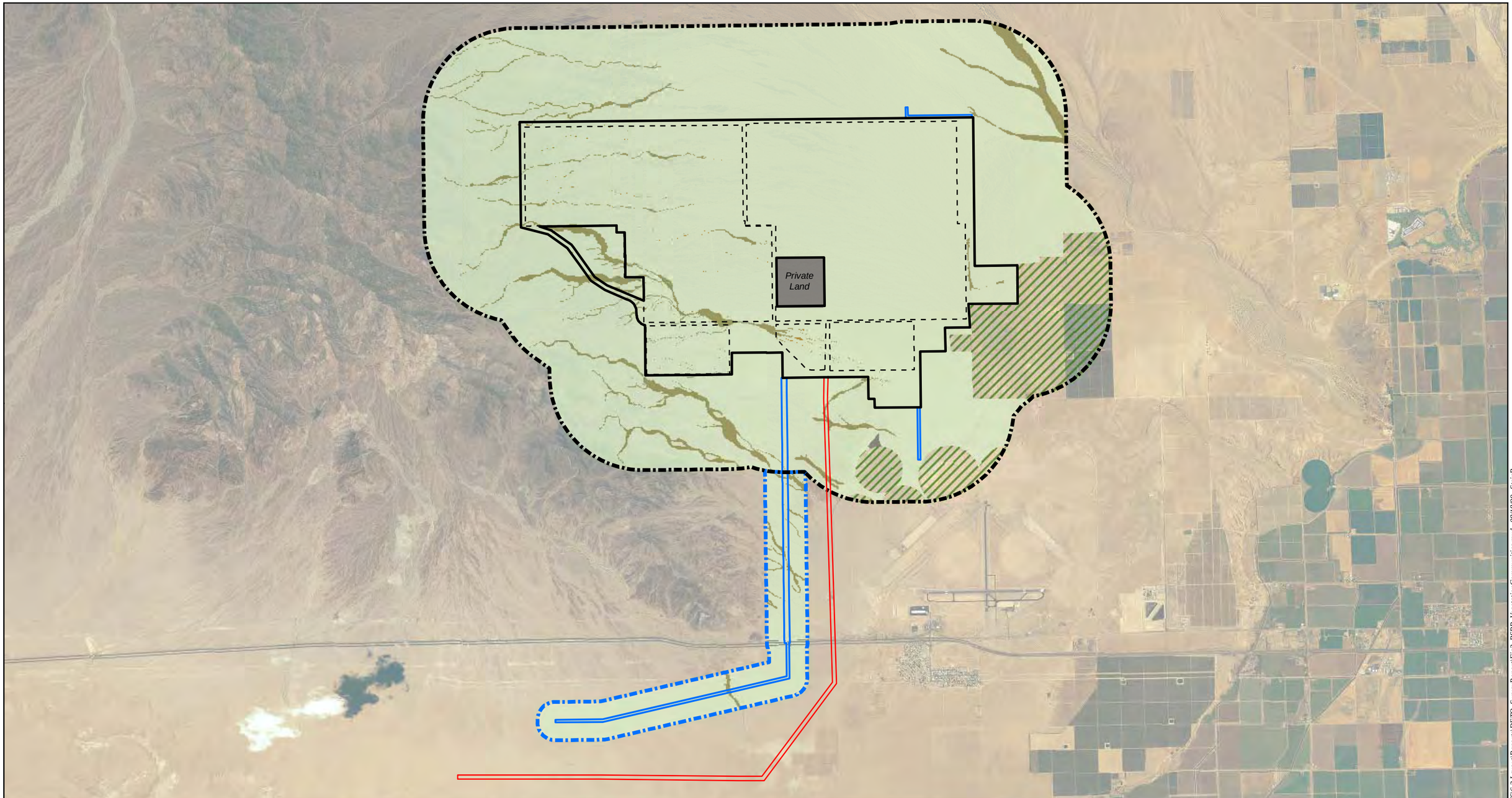
Figure 2
Facility Footprint, Disturbance Area, and Biological Resources Survey

Solar Millennium

AECOM

Date: August 2009

Path: P:\2009\0980082 Sol Mil Blythe\6.0 GIS\6.3 Layout\Reports\DETO_SurveyReport\Fig2_BSPP_FacilityFootprint_Disturbance_BRSA.mxd, 08/18/09, SteinB



Map Location

Legend

- Facility Footprint
- Disturbance Area
- Possible Transmission Line Route
- Biological Resource Survey Area (BRSA)
- Buffer Survey Area (Surveyed No Longer a Part)
- Disturbance Area (Surveyed - No Longer a Part)

Source: NAIP 2005; AECOM 2009; EDAW 2009

Vegetation Communities

Riparian

- Desert Dry Wash Woodland
- Unvegetated Ephemeral Dry Wash

Upland

- Sonoran Creosote Bush Scrub

Other

- Agriculture (Active and Fallow)
- Developed

N W E S

1 in = 1 miles

0 1 2 Miles

Blythe Solar Power Project
Desert Tortoise
Technical Report

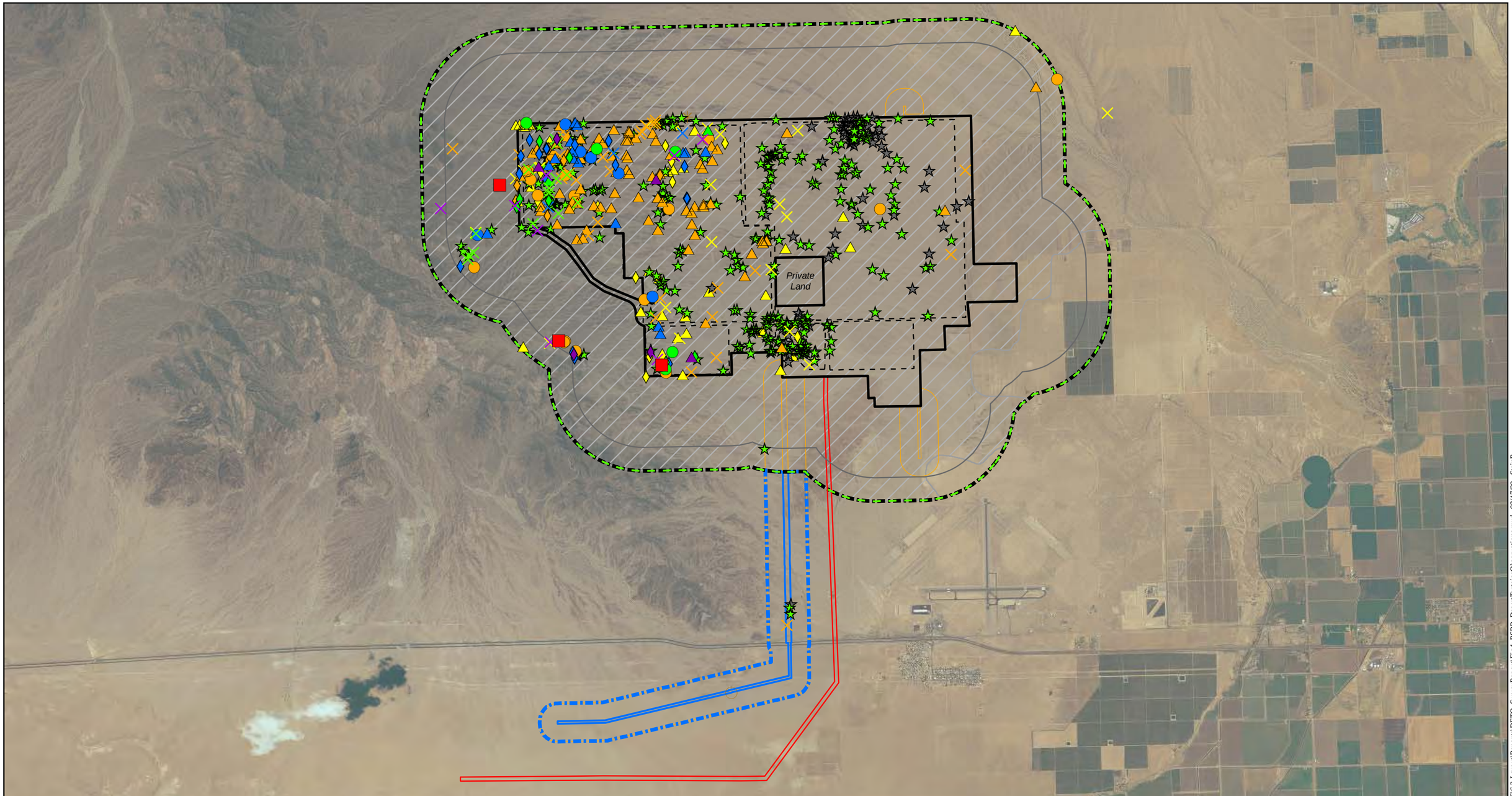
Figure 3
Vegetation Communities

Solar Millennium

AECOM

Date: August 2009

Path: P:\2009\09\80082 Sol Mil Blythe\6.0 GIS\6.3 Layout\Reports\DETO_SurveyReport\Fig3_BSPP_VegetationCommunities.mxd, 08/18/09, SteinB



Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Biological Resource Survey Area (BRSA)
- Buffer Survey Area - No Longer a Part
- Former Disturbance - No Longer Proposed
- Tortoise Suitable Habitat

Desert Tortoise and CEC Buffer Transects

- 1-mile Transect
- 0.75-mile Transect
- 1,000-foot Transect

Desert Tortoise Observations

- Tortoise
- Bone Fragments - Class 5
- Bone Fragments - Class 5, Mineralized
- Burrow - Class 1
- Burrow - Class 2
- Burrow - Class 3
- Burrow - Class 4
- Burrow - Class 5
- Carcass - Class 2
- Carcass - Class 3
- Carcass - Class 4
- Drinking Depression
- Pallet - Class 1
- Pallet - Class 2
- Pallet - Class 3
- Pallet - Class 4
- Pallet - Class 5
- Scat - Class 1
- Scat - Class 2
- Scat - Class 3
- Scat - Class 4
- Scat - Class 5
- Tracks

Source: NAIP 2005; AECOM 2009; EDAW 2009

N W E S

1 in = 1 miles

0 1 2 Miles

Blythe Solar Power Project
Desert Tortoise
Technical Report

Figure 4
Desert Tortoise Observations

Solar Millennium

AECOM

Date: August 2009

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ATTACHMENT 2

INFORMATION INDEX FOR DESERT TORTOISE SIGN

ATTACHMENT 2

INFORMATION INDEX FOR DESERT TORTOISE SIGN
Burrows and Dens, Scats, and Shell Remains

From: USFWS *Field Survey Protocol for any Non-Federal Action That May Occur within the Range of the Desert Tortoise* (USFWS 1992)

1. Burrows and Dens:
   1. currently active, with tortoise or recent tortoise sign
   2. good condition, definitely tortoise; no evidence of recent use
   3. deteriorated condition (please describe); definitely tortoise
   4. deteriorated condition; possibly tortoise (please describe)
      good condition; possibly tortoise (please describe)

2. Scats:
   1. wet (not from rain or dew) or freshly dried; obvious odor
   2. dried with glaze; some odor; dark brown
   3. dried; no glaze or odor; signs of bleaching (light brown), tightly packed material
   4. dried; light brown to pale yellow, loose material; scaly appearance
   5. bleached, or consisting only of plant fiber

3. Shell Remains:
   1. fresh or putrid
   2. normal color; scutes adhere to bone
   3. scutes peeling off bone
   4. shell bone is falling apart; growth rings on scutes are peeling
   5. disarticulated and scattered

ATTACHMENT 3

FIELD DATA SHEETS

6970 930
960 920
950 910
940 900

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/11/2009

Page 1 of 1

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,3,4 6	F8 F9	SDA, GLU,	ADA, KHA

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	5:11 PM	75°F	1.5mph	40% cc
Mid-day				
End	6:29PM	74°F	2mph	21% hum., 40% cc

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAKH001	0706938 3128~~147~~ 176		A J U	M F U	Y N	- mammal burrow, 10"x10", some white wash.			
			A J U	M F U	Y N	no other sign			
			A J U	M F U	Y N				
BCACT	0706938 3128162		A J U	M F U	Y N	small mammalaria Cactus			
			A J U	M F U	Y N	fishhook?			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAGL001	0706911 3128066		A J U	M F U	Y N	* mammal burrow 8"x8" re-check for Burrow			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BCACT2	0706934 3128069		A J U	M F U	Y N	Mammalaria Cactus			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

6800 770 6740 710
790 760 730 700
780 750 720 690

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/12/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
~~ES~~, focused	1,4,6	F5 (F4 to Row) F6, F7	SDA GLU ADA	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	10:14AM	72°F	1mph	25% hum. 0% cc
Mid-day	1:03 PM	77°F	2mph	20% hum 0% cc
End	4:26pm	76°F	2mph	17% hum 0% cc
	6:27PM	~~76°F~~ 75°F	2mph	21% hum 0% cc

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAAD001	0706786		A J U	M F U	Y N	mammal burrow, 10"x12", no owl sign & to			
	3729879		A J U	M F U	Y N	be rechecked for BUOW, probable badger activity			
BDPGL001	0706788		A J U	M F U	Y N	-possible DETO pellet, no sign, 10"x6" depth 8"			
	3729832		A J U	M F U	Y N				
BMAGL002	0706789		A J U	M F U	Y N	-mammal burrow, 12x10", no owl sign, recheck for BUOW			
	3729361		A J U	M F U	Y N				
BKBGL004	0706781		A J U	M F U	Y N	-kit fox burrow, kit fox scat (old), coyote scat (old)			
	3729229		A J U	M F U	Y N	possible use by BUOW, 18"x14", narrows ~2' in			
BMAGL003	0706791		A J U	M F U	Y N	- mammal burrow, likely dug out by badger			
	3728892		A J U	M F U	Y N				
BMASD001	0706806		A J U	M F U	Y N	-mammal burrow, likely dug out by badger			
	3728872		A J U	M F U	Y N	& badger claw marks			
BDPGL002	0706787		A J U	M F U	Y N	-possible DETO pellet, 8"x6", narrows very quickly			
	3729532		A J U	M F U	Y N	1(4)			
BMAAD002	0706740		A J U	M F U	Y N	-freshly dug out burrow, badger recently dug out squirrel			
	3729142		A J U	M F U	Y N	burrow, VERY RECENTLY DUG OUT			
BMAAD003	0706725		A J U	M F U	Y N	- mammal burrow dug out by badger			
	3729419		A J U	M F U	Y N				
BKBAD005	0706717		A J U	M F U	Y N	-kit fox burrow (one) 10"x10", can't see bend,			
	3729268		A J U	M F U	Y N	kit fox scat			
BCACT3	0706741		A J U	M F U	Y N	-gram's nipple cactus (3)			
	3728548								

*See Reverse

BUXOSD001 0706746
3729864

2985 186 bb6
Mt Tamalpais

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/12/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,4,6	F5 (E4 to Row) F6, F7	SDA GLU ADA	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAGL004	0706706		A J U	M F U	Y N	- badger dug burrow, not large			
	3728581		A J U	M F U	Y N	enough for BLOW use			
BMAGL005	0706701		A J U	M F U	Y N	- badger dug burrow, possible use			
	3729460		A J U	M F U	Y N	by BLOW			
BMASD002	0706690		A J U	M F U	Y N	- badger dug burrow, possible BLOW use			
	3729506		A J U	M F U	Y N				
			A J U	M F U	Y N				
BMASD003	0707748		A J U	M F U	Y N	- mammal burrow, possible use by BLOW			
(on drive out)	3725891		A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

6680 640 600 560
670 630 590 550
660 620 580 540
650 610 570 530

(+) F4 ROW to F5
6830 70 910 50
40 80 20 60
50 890 30 70
60 900 40 80

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/13/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
DETO focused surveys	1, 3, 4, 6	F4 to ROW F5, F6 ~~5~~ F7	SDA, GLW,	ADA, MRI

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	9:32 AM	69.3°F	4 to 6 mph	0%
Mid-day	3:48 PM	80.5°F		
End	7:11 PM	70°F	3 mph	11% hum.

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
	0706825	loggerhead	A J U	M F U	Y N	loggerhead shrike nest, active			
BLNAD001	3730142	shrike	A J U	M F U	Y N	with nestlings, in Palo verde			
		GPS #4	A J U	M F U	Y N				
			A J U	M F U	Y N				
BKBAD006	0706663	GPS #1	A J U	M F U	Y N	30cm x 25cm x 30cm - 2 burrows		Class 4	
	3730063	kit fox	A J U	M F U	Y N	15cm x 15cm, too deep to see tracks			
			A J U	M F U	Y N	-recheck for BUOW			
BDOMR001	0706658	DETO	A J U	M F U	Y N	-deto drinking depression			
	3730059		A J U	M F U	Y N				
			A J U	M F U	Y N				
BMASD004	0706681	mammal	A J U	M F U	Y N	-burrow dug out by badger	4		
	3729396		A J U	M F U	Y N	filled in over time, too small for			
			A J U	M F U	Y N	DETO except as pallet			
BKBAD007	0706658	kit fox	A J U	M F U	Y N	-old kit fox complex, 4+ burrows			
	3729226		A J U	M F U	Y N				
BKBMR001	0706647	kit fox	A J U	M F U	Y N	-9 burrows, lots of kfox scat,			
	3729039	complex	A J U	M F U	Y N	active complex, no owl or DETO sign ~~class 3~~			
			A J U	M F U	Y N	(+) one burrow w/ badger activity			
BDSMR001	0706646	DETO	A J U	M F U	Y N	desert tort. scat		3	
	3728664		A J U	M F U	Y N	70mm long, 40mm width			
			A J U	M F U	Y N	grey, tightly packed			

*See Reverse

640
630
620
610

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/13/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDSAD001	0706661 3728661	desert tort	A J U	M F U	Y N	40mm x 20mm, grey tightly packed		#3	
			A J U	M F U	Y N				
BMAAD004	0706660 3728591	mammal badger use	A J U	M F U	Y N				
			A J U	M F U	Y N	30 cm x 25cm, can see to end, burrow dug out by badger possible use by DETO & BUOW			
			A J U	M F U	Y N		5		
			A J U	M F U	Y N				
BDPMR001	0706648 3728465	DETO	A J U	M F U	Y N	- pallett, DETO	5		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BUBMR001	0706628 3728807	American badger burrow	A J U	M F U	Y N	- badger burrow			
			A J U	M F U	Y N				
			A J U	M F U	Y N	40 cm x 40cm, second burrow nearby			
			A J U	M F U	Y N	check for BUOW			
			A J U	M F U	Y N				
BDSGL001	0706613 3729220	DETO	A J U	M F U	Y N	45 mm x 15mm 2 pieces		2	
			A J U	M F U	Y N	65 mm x 15 mm			
			A J U	M F U	Y N	flowers			
			A J U	M F U	Y N				
BDPAD001	0706631 3729462	DETO	A J U	M F U	Y N	Deto pallet 150 x 70 mm full of creosote leaves 30 mm deep	3		

*See Reverse

640 630 620 610 600 590 580 570 560 550 540 530 ~~680~~ 6830 40 50 60

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe Date: 3/13/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day	3:50	80.6	3.6 mi Avg	0% cc
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAGL006	0706614 3729878	mammal	A J U	M F U	Y N	dug out burrow, Kfox scat, not large enough for Kfox but possible for BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAGL007	0706624 3730040	mammal	A J U	M F U	Y N	badger dug ~~bur~~ out mammal burrow too shallow for BUOW/DETO			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAD005	0706856 3729568	mammal	A J U	M F U	Y N	- badger dug out mammal burrow 4 possible use by DETO/BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAGL008	0706893 3729843	mammal	A J U	M F U	Y N	burrow, possible KFox, but claw marks on side of burrow, so may have been badger activity, fresh digging 30x25cm can't see to end, could be use by BUOW/DETO			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAGL009	0706595 3729854	mammal	A J U	M F U	Y N	- mammal burrow, badger dug quite narrow further back, possible DETO, BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

a lot of desert horned lizards, sideblotch, zebra tails, some desert iguana

600
590
580
570

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/13/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDBA~~SD~~002	0706579 3729783	DETO	A J U	M F U	Y N	desert tort burrow w/ plug 9cm x 9cm, can't see to end possibly active	3		
BMAGL010	0706590 3729542	mammal	A J U	M F U	Y N	-mammal burrow, (3), possible use by one for BUOW, DETO could use as pallets, evidence of Badger predation			
BKBMR002	0706566 3729513	Kit fox	A J U	M F U	Y N	Kit fox 20cm x 20cm, possible use by BUOW/DETO			
BDPAD002	0706590 3729452	DETO	A J U	M F U	Y N	13x 6cm, 20cm deep desert tort pallet	3		
BMAAD006	0706572 3729220	mammal badger	A J U	M F U	Y N	badger dug out burrows (2) possible use by BUOW/DETO			
BGB~~AD001~~ GL001	0706583 3729222	badger	A J U	M F U	Y N	badger den, active, tracks (badger)			
BOPGL003	0706594 3729196	DETO	A J U	M F U	Y N	DETO pallet, ~~4~~ 10cm x 8cm no sign	5		
BBCSD001	0706595 3728457	~~barrel~~ barrel cactus				-central spine curved strongly			

*See Reverse

600 560
590 550
580 540
570 530

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/13/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
			A J U	M F U	Y N	- burrow dug out by badger,			
BMAMR001	0706553		A J U	M F U	Y N	could be used by DETO as			
	3128535		A J U	M F U	Y N	pallet, too shallow for BUOW			
			A J U	M F U	Y N				
BMAGL011	0706545		A J U	M F U	Y N	- mammal burrow, likely dug out			
	3129317		A J U	M F U	Y N	by badger, not recently used			
			A J U	M F U	Y N	could be used as pallet for ~~BUO~~ DETO,			
			A J U	M F U	Y N	too small for BUOW			
BMAAD007	0706933	mammal	A J U	M F U	Y N	- badger dug mammal burrows (2)			
	3130084		A J U	M F U	Y N	now large enough for DETO pallet,			
			A J U	M F U	Y N				
BXBMR003	0706946	Kit fox	A J U	M F U	Y N	- old kit fox burrow complex,			
	3130029		A J U	M F U	Y N	only one burrow not filled in			
			A J U	M F U	Y N	possible use by BUOW/DETO, no sign			
BDBGL005	0706922	DETO	A J U	M F U	Y N				
	3129673		A J U	M F U	Y N	Active DETO burrow, ~~but~~ DETO	1	2,3	
			A J U	M F U	Y N	scat,			
~~BBBMR01~~	0706923	burrowing	A J U	M F U	Y N	- burrowing owl pellet			
BBPMR001	3129672	owl	A J U	M F U	Y N	~~below~~, next to active DETO burrow			
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

desert lavender

arizona lupin

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/13/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDPA0003	0706976 3729471	Deto	A J U	M F U	Y N	desert tort pallet ~~15~~ 15cm x 10cm	3		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMA~~AD~~	GL012 0706971 3729895	Mammal	A J U	M F U	Y N	-could be used as shelter for DETO, possible BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Start @ 6520 in F4 & go west

↓ 6520 6510 6500	↑ 6490 6480 6470	↓ 6460 6450 6440	↑ 6430 6420 6410	↓ 6400 6390 ok 6380	↑ 6370 6360 6350
✓	✓	✓	✓	✓	✓

DONE?

completed

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 3/14/09

Page 1 of 2

Type of Survey	GPS Unit	Map #	Surveyors	Additional Surveyors
DT Focused	~~SM4~~ SM5	~~SM4~~	AD, CG, MR	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	0800	61'	2.0 SW	5%
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BBCAD001	0706498, 3729493	BC	A J U	M F U	Y N	at base of creosote bush			
~~BMBAD008~~	~~0706505, 3728977~~		A J U	M F U	Y N	~~Badger Burrow - Short~~			
~~BCBAD008~~	~~0706505, 3728977~~	Am. Badger	A J U	M F U	Y N	Forag. Burrow - Short	✓		
~~BMB~~			A J U	M F U	Y N				
BMBAD008	0706505, 3728977		A J U	M F U	Y N	Forag. Burrow - short	✓		
BMBMR002	0706520, 3728972	Am. Badger	A J U	M F U	Y N	Badger Den -			
BMBAD009	0706498, 3728504	?	A J U	M F U	Y N	mammal - Fox or badger forag. burrow			
BMBMR003	0706473, 3728757	Am. Badger	A J U	M F U	Y N	Forag. Burrow			
• BMBCG001	0706477, 3729402	?	A J U	M F U	Y N	Mammal Burrow			
•* BDCCG001	0706455, 3729468	DT	(A) J U	M (F) U	Y (N)	DT skeleton - ≈ 5-7 yrs old - ♀	- Adult		✓
BDPCG001	0706470, 3729912	DT	A J U	M F U	Y N	H 10cm W 22cm - Pallet	✓		
BKBAD005	0706452, 3729789	Kit Fox	A J U	M F U	Y N	Kit fox burrow - two openings			
BDBAD004	0706441, 3729403	DT	A J U	M F U	Y N	Class 1 - Fresh Tracks in Burrow	✓		
			A J U	M F U	Y N	H 20cm W 29cm			
BDCAD001 • BMBCG002	0706464, 3729418	Am. Badger	A J U	M F U	Y N	Forag. burrow			
~~BMADCG001~~ ~~BMDCG001~~	0706450, 3729411	DT	A J U	M F U	Y N	Piece Plastron: 3.5 X 4.5			
BDBAD002 ~~BMDAD002~~	0706458, 3729396	DT	A J U	M F U	Y N				
~~BMDPCG002~~			~~A J U~~	~~M F U~~	~~Y N~~				
BMBAD010	0706451, 3728967	Am. Badger	A J U	M F U	Y N	Badger foraging burrow			
BMBCG003	0706461, 3728851	Am. Badger	A J U	M F U	Y N	Forag. burrow			
BMBMR004	0706443, 3728775	Am. Badger	A J U	M F U	Y N	Forag. burrow			

*See Reverse

BC - Barrel Cactus

GB - Am. Badger

~~BDSAD001~~

~~BDSMR001~~

~~BDBAD003~~ ~~B 001~~

BKBMR003

Next

BDPAD004

BMBAD008

BDBAD003

BDSAD002

BBBAD001

Next

BKBMR004

BMBMR002

BDSMR002

BBBMR002

BDBCL005

0706922

3729673

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/14/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
DT Focused	SMS	E4, E5, E6	AD, CG, MR	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day	1440	81	1.5 SW	10%
End	1910	73	0.5 W	5%

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMBMR005	0706454, 3728743	Coyote	A J U	M F U	Y N	Coyote Burrow			
BMBMR006	0706425, 3728510	Am. Badger	A J U	M F U	Y N	Foraging Burrow			
BDSAD001	0706408, 3728942	DT	A J U	M F U	Y N	Scat w 2yrs old		✓	
BMBAD011	0706415, 3729059	Kit Fox	A J U	M F U	Y N	Kit fox burrow - old			
BMBCG004	0706415, 3729138	Am. Badger	A J U	M F U	Y N	Badger foraging burrow			
BMBAD012	0706402, 3729161	Kit Fox	A J U	M F U	Y N	Kit fox burrow - 2 burrows			
BDPMR001	0706421, 3729162	DT	A J U	M F U	Y N	8cm X 20 - Pellet	✓		
BDCAD002	0706409, 3729908	DT	A J U	M F U	Y N	Bone fragment from margin			✓
BDCAD003	0706413, 3730052	DT	A J U	M F U	Y N	Bone fragment - marginal	✓		
BDCAD004	0706560, 3730055	DT	A J U	M F U	Y N	Bone fragment - marginal			
~~BDB~~			A J U	M F U	Y N				
BDPCG005	0706379, 3729422	DT	A J U	M F U	Y N	Class 4 Pellet, 15 X 27 cm	✓		
BDSMR002	0706392, 3729301	DT	A J U	M F U	Y N	13 X 30 - 3+ yrs old			
BMBCG005	0706375, 3729125	Am. Badger	A J U	M F U	Y N	Foraging Burrow			
BKBCG002	0706379, 3728879	Kit Fox	A J U	M F U	Y N	Old Kit fox - Caving in.			
BMBCG006	0706384, 3728722	unk.	A J U	M F U	Y N	Foraging burrow - species unk. (3 burrows)			
BDCMR001	0706343, 3728485	DT	(A) J U	M F U	Y N	Partial Plastron - > 10yrs old			
BDCCG002	0706367, 3728686	DT	(A) J U	M F U	Y N	Skeleton - Disart > 10yrs old	12.5 X 19 (½ Plast)		
BMBCG007	0706362, 3728696	unk.	A J U	M F U	Y N				
BKBAD006	0706353, 3729375	Kit Fox	A J U	M F U	Y N	Active - 2			
			A J U	M F U	Y N				

*See Reverse

6340	6310	~~6280~~
6330	6300	6270
6320	6290	6260

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/15/09

Page 1 of 1

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
DT Focused	SM5	E4 E5 E6	AD, EG, MR	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	0848	64°	1.5 / E	0% / 15% Haze
Mid-day	1200	76°	2.5 / W	0% / 10% Haze
End				

	GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
	BDCMR002	0706328, 3730014	DT	A J U	M F U	Y N	Bone fragment - marginal			✓
BDC →	BDCMR001	0706330, 3729553	BC	A J U	M F U	Y N	Barrel Cactus			
	BDPMP002	0706331, 3729127	DT	A J U	M F U	Y N	7x19 Pallet 29cm deep	✓		
	BDMBEG008	0706375, 3728953	Am. Badger	A J U	M F U	Y N	Probable den			
	BDCAD005	0706322, 3728480	DT	A J U	M F U	Y N	shell fragments >10yrs old			✓
	BDCAD006	0706322, 3728468	DT	A J U	M F U	Y N	~~Scat~~ Plastron frag >10yrs old + shell frag			✓
	BDCCG003	0706300, 3728473	DT	A J U	M F U	Y N	6 to 8 shell frags - within 10m			✓
	BDCAD007	0706307, 3728704	DT	A J U	M F U	Y N	Appears to be old tortoise shell >10yrs old			✓
	BMBAD007	0706306, 3728788	Unk. Mam	A J U	M F U	Y N	Could be used as pallet.			
009 →	BMBCG009	0706304, 3729130	Am. Badger	A J U	M F U	Y N	Feces, Burrow			
	~~BDBCMR00~~			A J U	M F U	Y N				
	BDCMR003	0706290, 3729144	DT	A J U	M F U	Y N	old shell fragments >15yrs			✓
	BDSMR003	0706288, 3729566	DT	A J U	M F U	Y N	Scat >3yrs old		✓	
	BDCCG004	0706299, 3730004	DT	A J U	M F U	Y N	Plastron Fragment - >10yrs old			✓
				A J U	M F U	Y N				
				A J U	M F U	Y N				
				A J U	M F U	Y N				
				A J U	M F U	Y N				
				A J U	M F U	Y N				
				A J U	M F U	Y N				
				A J U	M F U	Y N				

*See Reverse

BC - barrel cactus

Ditaxis neomexicana - 0706314, 3728845

F4 SD 6280 6230 CG
F5 GL 6270 6220 MR
F6 AD 6260 6210 SD
F7 MR 6250 6200 GL
F8 CG 6240 6190 AD

New on 3/15/09 two other data sheets for separate groups

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/15/09

Page 1A of 3A

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,3,4,5 6	F4, F5 F6 F7 F8	SDA, GLL,	ADA, MRI, CGE

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

208' x 209' = 1 acre

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BGBADO01	0706251 3728472	badger	A J U	M F U	Y N	active badger den, claw marks			
			A J U	M F U	Y N	(+) one burrow 8 meters to north			
			A J U	M F U	Y N	possible use Buow			
			A J U	M F U	Y N	(+) another burrow ~ 12 meter to north			
			A J U	M F U	Y N				
BDPCG006	0706244 3729687	DETO?	A J U	M F U	Y N	desert tort pellet under palo verde, apron >24 cm width & height	5		
			A J U	M F U	Y N				
			A J U	M F U	Y N	no sign			
			A J U	M F U	Y N				
BDCMR004	0706246 3728766	DETO	A J U	M F U	Y N	- desert tort carcass - bone fragments very small pieces, scattered down wash - less than 1"			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCMR005	0706243 3728885	DETO	A J U	M F U	Y N	- desert tort carcass - bone fragments very small piece, less than 4" (one piece)			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCMR006	0706246 3729927	DETO	A J U	M F U	Y N	- desert tort carcass - one bone fragment, 1" split into 3 pieces when touched			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAGL013	0706200 3729983	mammal	A J U	M F U	Y N	- mammal burrow, badger activity, possible use by Buow, DETO			

*See Reverse

10

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/15/04

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
		F4, F5 F6, F7 F8*		

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCAD008	0706183 3729943	DETO	A J U	M F U	Y N	DETO bone fragments (~7 pieces) ~15 yrs old, white disarticulated			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAGL014	0706193 3729094	mammal	A J U	M F U	Y N				
			A J U	M F U	Y N	16" x 16" turns corner, possible use by BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPAD004	0706187 3729098	DETO	A J U	M F U	Y N	- desert tort pellet	4		
			A J U	M F U	Y N	11cm x 15cm			
			A J U	M F U	Y N				
~~BDPCG~~			A J U	M F U	Y N	~~desert~~ - possible DETO pellet	4		
BKBCG003	0706224 3729072	kit fox	A J U	M F U	Y N	within kit fox complex, 3 burrows			
			A J U	M F U	Y N	4½" x 8"			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDSAD003	0706191 3729062	DETO	A J U	M F U	Y N	deto scat, grey, becoming loose	4		
			A J U	M F U	Y N	4cm long x 1.5cm			
			A J U	M F U	Y N				
BMASD005	0706206 3728686	mammal	A J U	M F U	Y N	- possible use by BUOW, dug out recently			
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/15/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
focused	1,3,4,5 6	F4 to Row F5, F6, F7, F8*	SDA	GLU, ADA, MRI CGE

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End	4:08PM	83°F	5 to 12 mph	clear, 0% cc

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAGL015	0706200 3728682	mammal	A J U	M F U	Y N	badger foraging burrow can see to end, possible BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPCG007	0706234 3728606	DETO?	A J U	M F U	Y N	desert tort pallet (possible)	4		
			A J U	M F U	Y N	~~15cm x~~ 20cm x 15cm			
			A J U	M F U	Y N	depth ~ 15cm			
BKBGL006	0706197 3728237	kit fox	A J U	M F U	Y N	~~kit fox burrow~~ no scat			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

F4 to F5 - done to 6980

6990 7010
7000 7020

new data sheet started when entire crew surveying together

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/15/09

Page 1B of 2B

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
focused	1, 6	F4 to row F5	SDA, GLU	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	10:35	70.5	5.4 any mph	Sunny 0% CC
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDBGL006	0707005 3729875	DETO?	A J U	M F U	Y N	burrow under grass clump,	5		
			A J U	M F U	Y N	can't see to end, possibly			
			A J U	M F U	Y N	tortoise, no scat			
checked	BDBGL005 - sticks in place @ 11:11AM		A J U	M F U	Y N				
			A J U	M F U	Y N				
	old DETO, Kfox scat,		A J U	M F U	Y N				
			A J U	M F U	Y N				
BKBGL005	0706999 3729464	kitfox	A J U	M F U	Y N	3 burrows, (small) -> small Kfox scat			
			A J U	M F U	Y N	possible use by BKow, one burrow			
			A J U	M F U	Y N	may have badger activity			
Oct 1	0707019 3729420	ocotillo	A J U	M F U	Y N	-two ocotillos			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BKBSD003	0707018 3729531	Kfox	A J U	M F U	Y N	kit fox burrow (1), possible use			
			A J U	M F U	Y N	by BUNN, some evidence of badger			
			A J U	M F U	Y N	activity, Kfox scat present			
			A J U	M F U	Y N				
BDCSD005	0707023 3729684	DETO	A J U	M F U	Y N	desert tort carcass, bones fragmented,			
			A J U	M F U	Y N	some detached scutes present			
			A J U	M F U	Y N	adult, Kit fox scat present			
			A J U	M F U	Y N				

*See Reverse

Width 7", MCL ~10"

~~6280~~

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/15/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
	1,6		SDA, GLM	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDPSD001	0707016 3729835	DETO	A J U	M F U	Y N	DETO pallet, 12"x 20" deep x 6" high	2		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N	no DETO scat or tracks			
BKBSD004	0707015 3729931	kit fox	A J U	M F U	Y N	kit fox burrow, round ~16" x 16"			
			A J U	M F U	Y N	kit fox scat			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

SM4 - Andy
SM5 - Jim
SM6 - Gregs
SM1 - Shelly
SM8 - James

~~0707000~~
0707010 060
020 070
030 080
040 090
050 0100

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/16/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,4,5 6,8	F1, F8, ~~[illegible]~~	SDA	AFO, JJT, JHU, GLU

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	12:33PM	82°F	5mph	0% cc
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMASD006	0707030	mammal	A J U	M F U	Y N	- mammal burrows possible			
	372881		A J U	M F U	Y N	use by burrowing owl (low			
			A J U	M F U	Y N	quality)			
BDBAF001	0707062	DETO	A J U	M F U	Y N	-burrow 7"x 6" high,	4		
	372890		A J U	M F U	Y N	no sign 18" deep			
			A J U	M F U	Y N				
BDCGL003	0707061	DETO	A J U	M F U	Y N	-one piece of DETO carcass			5
	3728600		A J U	M F U	Y N	marginal scute			
			A J U	M F U	Y N				
BDPAF001	0707061	DETO	A J U	M F U	Y N	-desert tort pallet, ~ 2' deep	4		
	3728584		A J U	M F U	Y N	12"x 10", no scat, no tracks			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

F7 ↑↓	0709110	50	070190	230	270	290	340
	20	60	200	240	280	300	350
F8 ↑↓	30	70	210	250		310	360
	40	80	220	260		320	370
						330	380

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/16/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAJH001	707164		A J U	M F U	Y N	mammal burrow, possible DUOW	4		
	3728561		A J U	M F U	Y N	no scat 17cm X 11 cm ¾ in			
			A J U	M F U	Y N				
BMAGL014	0707161		A J U	M F U	Y N	mammal burrow, kit fox going after scat	4		
	3728542		A J U	M F U	Y N	10in X 12in 1 ft back			
			A J U	M F U	Y N				
BKBJJ001	0707178	kit fox	A J U	M F U	Y N	kit fox complex, no sign recently	4		
	3728448		A J U	M F U	Y N	3 collapsed burrows, 1 open			
			A J U	M F U	Y N				
BMAJJ001	0707174		A J U	M F U	Y N	4 open burrows, mammal	4		
	3728384		A J U	M F U	Y N	no scat			
			A J U	M F U	Y N				
BMAAF001	0707197		A J U	M F U	Y N	mammal burrow under Krameria	4		
	3728864		A J U	M F U	Y N	grey eye			
			A J U	M F U	Y N				
BMAJJ002	0707237		A J U	M F U	Y N	mammal burrow, can see back			
	3728787		A J U	M F U	Y N	inaction			
			A J U	M F U	Y N				
BKBJH001	0707391	kit fox	A J U	M F U	Y N	kit fox burrow, kit fox			
	3728444		A J U	M F U	Y N	scat, one entrance			
			A J U	M F U	Y N				

*See Reverse

BKBJJ002 0707328 kit fox
3728464

kit fox complex, 2 burrows

Katie - 9
Shelly - 1
Kim - 6
Rob - 8

F9-F13: 0707060, 70, 80 ✓, 90 - No GPS, 7100, 7110, 7120, 7130 ✓, 7140, 7150, 7160, 7170, 7180, 7190, 7200, 7210 F9, F10

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe Date: 3/18/09 Page 1 of 3

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused DETO		F9 F10 F11 F12 F13	KHL RWO SDA GLU KDU	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	9:12 AM	75°F	2.6 mph	0% CC
Mid-day	12:04 PM	85°F	2.3 mph	0% CC
End	1:30 PM	95°F	2.0 mph	0% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDBSD005	0707079 3727928	Deto?	A J U	M F U	Y N	- Possible desert tort burrow, entrance very big 13"x 10" right shape @ end, can see to end, no tort sign	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BBBRW001	0707093 3727225	BUOW	A J U	M F U	Y N	7"x6", burrowing owl burrow in kit fox burrow, adjacent to another buow burrow w sign lots of white wash & pellet with insect parts		Occupied BUOW seen flying from burrow to southwest of burrow	
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BBBGL001	0707084 3727231	BUOW	A J U	M F U	Y N	kit fox burrow w BUOW sign, whitewash, old pellet	occupied		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCSD006	0707083 3727154	DETO?	A J U	M F U	Y N	- 6 pieces of very old bone possible tortoise, might have piece of marginal, could also be sheep bones, picture on Kim's camera			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Confirm# 18665743US5
760-778-6300

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/18/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDBRW001	0707092	deto?	A J U	M F U	Y N	-burrow under palo verde,	4		
	3726642		A J U	M F U	Y N	can see to end, difficult to			
			A J U	M F U	Y N	get close to 12" x 10"?			
BKBKD001	0707070	kit fox	A J U	M F U	Y N	kit fox burrow,			
	3726332		A J U	M F U	Y N				
			A J U	M F U	Y N				
BKBKH001	0707143	kit fox	A J U	M F U	Y N	very short burrow, could be			
	3727357		A J U	M F U	Y N	modified by BUOW			
			A J U	M F U	Y N				
BKB[illegible]RW001	0707128	kit fox	A J U	M F U	Y N	kit fox burrow, 7"x5", one			
	3727436		A J U	M F U	Y N	burrow			
			A J U	M F U	Y N				
BKBKD002	0707132	kit fox	A J U	M F U	Y N	kit fox burrow, recent activity			
	3727807		A J U	M F U	Y N	can't see to end			
			A J U	M F U	Y N				
BKBGL007	0707117	kit fox	A J U	M F U	Y N	-kit fox scat, can't see to end			
	3727922		A J U	M F U	Y N				
			A J U	M F U	Y N				
BKBKD003	0707130	kit fox	A J U	M F U	Y N	-old scat in front, kit fox			
	3727932		A J U	M F U	Y N	burrow, can't see to end			
			A J U	M F U	Y N				

*See Reverse

Robb 8
Katie 9

7160 7190
7170 7200
7180 7210

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blytho Date: 3/18/09 Page 3 of 3

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
	~~8,9~~			

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBRW002	0707178	kitfox	A J U	M F U	Y N	one kit fox burrow, no scat			
	3727585		A J U	M F U	Y N	observed			
			A J U	M F U	Y N				
~~BDPRW~~			A J U	M F U	Y N	2 burrows			
BDBRW002	0707180	DETO?	A J U	M F U	Y N	possible DETO burrow, has	4		
	3727144		A J U	M F U	Y N	partial plug @ entrance may			
			A J U	M F U	Y N	turn right -			
			A J U	M F U	Y N	- second burrow turns, no plug			
			A J U	M F U	Y N	~8"x6" (both)			
BKBSD005	0707202	kitfox	A J U	M F U	Y N	- kitfox burrow, no scat			
	3727589		A J U	M F U	Y N	12"x12"			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Rob-8
Katie-9

F11
F12
F13 { 7160 7180 ~~7200~~
7170 7190 ~~7210~~

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/18/09

Page 1A of 1A

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
DETO FSurvey	8,9	F11 F12 F13	KHL, RWO	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	1400	~90	3 MPH	0% CLOUDS
Mid-day				
End				

GPS Ident Code*	GPS Coordinates ↙ BKBKH001_1	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBKH001	0707178, 3726617	KIT FOX	A J U	M F U	Y N	OLD SCAT. POSS. KIT FOX BURROW			
BKBKH002	0707183, 3726613	KIT FOX	A J U	M F U	Y N	LARGE OPENING. NO SCAT			
BDBKH001	0707157, 3725950	TORTOISE	A J U	M F U	Y N	OLD POSS. TORT. BURROW	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

MAP PAGES

F10
F11
F12
F13

Lines

707050	✓	010	✓	6970		6930	
40	✓	7000	✓	6960		6920	
30	✓	6990	✓	6950		6910	
20	✓	6980	✓	6940		6900	

↑ Check off lines finished

KH GPS9
KD GPS6

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 3/19/09

Page 1 of 1

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
DET	6+9	F10, 11 12, 13	KH + KD	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	9:30 AM	79.4 °F	1.5 (max 3.5)	hazy w/ 30-40 % cloudcover
Mid-day	3:00 PM	89.8 °F	3.2 (max 11.8)	partly cloudy / 20 %
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDPKH001	0707035	DT	A J U	M F U	Y N	possible tortoise pallet			
	3727074		A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAKH002	0707040	—	A J U	M F U	Y N	possible kitfox or jack rabbit useage			
	3727075		A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAKH003	0707030	—	A J U	M F U	Y N	possible use by burrowing owl			
	3726889		A J U	M F U	Y N				
			A J U	M F U	Y N				
~~BKFBH~~		~~KFox~~	A J U	M F U	Y N				
BKBKH003	0707021	KFox	A J U	M F U	Y N	Kitfox burrows; 2 entrances			
	3726910		A J U	M F U	Y N	lots of scat			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Points on #9

7200	✗	7240	✗
7210	✗	7250	✗
7220	✗	7260	✗
7230	✗	7270	✗

SM 7 (Kim Duncan)
SM 9 (Katie Hall)

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/20/09

Page 1 of 1

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
DETO Focused	SM 7+9	F11 F12 F13	KD & KH	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	7:30 AM	63.7°F	avg. 1.1 (max 1.8)	partly cloudy/hazy 5%
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
SMAKH004	0707261	—	A J U	M F U	Y N	couldn't find this in GPS			
	3726664		A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N	is in GPS			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Katie & Kim doing F10, 11, 12, 13

0706180	✓	~~6140~~
6170	✓	~~6130~~
6160	✓	~~6120~~
6150	✓	~~6110~~

+ F8 ~~[illegible]~~
F9 ~~[illegible]~~ IZ5R8939425150 3589 → ~~[illegible]~~
With ADA (no GPS) ~~[illegible]~~
~~7030~~
~~7040~~
6980
6990 ← no GPS
7000

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: Blythe Mar 20/09

Page 1 of 2

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,6	F4 F5 F6 F7 F8	SDA	GLU

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	9:43AM	78.4°F	0.8mph	30% cc, calm
Mid-day				
End	2:20PM	98°F	1 to 2mph	

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBGL008	0706164 3728690	kfox?	A J U	M F U	Y N	possible kit fox burrow, under thick grasses, recent digging, no scat			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCSD007	0706177 3728695	DETO	A J U	M F U	Y N	one piece of DETO bone, very old, confirmed tortoise			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCSD008	0706183 3729943	DETO	A J U	M F U	Y N	7 pieces of disarticulated scattered bone, confirmed tortoise, juvenile			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPGL004	0706168 3729956	DETO?	A J U	M F U	Y N	pallet, likely tortoise, no scat or tracks observed 10"×8", can see to end	5		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BKBGL009	0706165 3729958	Kitfox	A J U	M F U	Y N	- two kit fox burrows, could be used by Burrow, kit fox scat present			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCGL004	0706167 3729968	DETO	A J U	M F U	Y N	desert tort bone, marginal adult, one piece			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

- coachwhip

F8
~~5~~

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/20/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,6	F4 to ROW F5 F6 F7 F8	SDA	GLU

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBGL010	0706164	kfox	A J U	M F U	Y N	kit fox burrow, recent digging			
	3729974		A J U	M F U	Y N	scat not observed			
			A J U	M F U	Y N				
BMASD007	0706152	~~BUOW~~	A J U	M F U	Y N	open area under wood rat nest /			
	3729359	mammal	A J U	M F U	Y N	snag in drainage, possible use			
			A J U	M F U	Y N	by BUOW			
BDPSD002	0706157	deto	A J U	M F U	Y N	-desert tortoise pallet, no	4		
	3728684		A J U	M F U	Y N	trades, no scat			
			A J U	M F U	Y N				
BGBSD001	0706153	badger	A J U	M F U	Y N	large (wide) deep burrow			
	3728452		A J U	M F U	Y N	under ~~gor~~ grass in drainage			
			A J U	M F U	Y N	20" x 20", likely badger			
BDCGL005	0706161	DETO	A J U	M F U	Y N	-desert tortoise bone			5
	3728440		A J U	M F U	Y N	1.5" x 1.5"			
			A J U	M F U	Y N	one piece, confirmed DETO			
BDPGL005	0706160	DETO?	A J U	M F U	Y N	-potential DETO pallet, full of	4		
	3728131		A J U	M F U	Y N	leaves/sticks			
			A J U	M F U	Y N				
BKBSD006	0706177	kitfox	A J U	M F U	Y N	2 burrows, under creosote bush,			
	3728126		A J U	M F U	Y N	possible kitfox, no scat			
			A J U	M F U	Y N				

*See Reverse

6810 6840
6820 6850
6830 6860

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/20/09

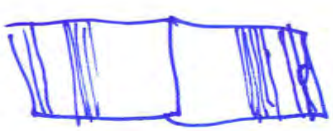
Page 1A of 1A

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,6	~~[illegible]~~ ROW F6 F7	SDA	GLU, ADA

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	5:38PM	91°F	2.4mph/SW	0% CC
Mid-day				
End	7:00pm	84.2°F	1.6mph	0% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMASD008	0706834	mammal	A J U	M F U	Y N	badger feeding burrow			
	3728541		A J U	M F U	Y N	large enough for BUOW/			
			A J U	M F U	Y N	DETO use			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse



re-check line, already done

6150	✓	6120	✓	6090	✓	6060	✓	6030		6000	
6140	✓	6110	✓	6080	✓	6050	✓	6020		5990	
6130	✓	6100	✓	6070	✓	6040	✓	6010		5980	

Recorded on GPS #1

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe Date: Blythe 03/21/09 Page 1 of 4

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
DETO FS	1,6,7	FA to RW to FB	SDA	ADA, GLU

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	8:19AM	70°F	0	20% hum, 5% CC
Mid-day	12:06pm	85.6°F	2.6 mph any	5% ce
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAAD006	0706124 3728448	badger	A J U	M F U	Y N	badger forage site, could be used as DETO pallet			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BGBGL002	0706136 3728702	badger	A J U	M F U	Y N	badger den, scat in area 12"x14"			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPAD005	0706128 3728997	DETO	A J U	M F U	Y N	desert tort pallet, ~~plastic~~ bottom flattened by plastic (smoothed), recent use by tortoise, likely old badger feeding burrow, may have plug & DETO may be behind it 6" high x 8" wide	1		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BCACT#4			A J U	M F U	Y N	corky seeded nipple cactus (2) mammalaria			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAAD007	0706127 3729506	mammal (badger foraging)	A J U	M F U	Y N	mammal burrow, dug out by badger, could be used by DETO / Blow			
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

whiptail, desert spiny lizard, cactus wren, roadrunner, desert horned lizard, sideblotch zebra-tailed, leopard lizard, jackrabbit, cottontail, horned lark, ~~[illegible]~~ big horned sheep scat coachwhip, ground snake, painted lady, dainty sulphur, funeral duskywing, red-tailed hawk, kit fox, american badger, coyote, mockingbird, black-tailed gnatcatcher, turkey vulture botta's pocket gopher

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/21/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
DETO FS	1,6,7	F4 to ROW to F8	SDA	ADA, GLM

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBGL011	0706139 3729967	kitfox	A J U	M F U	Y N	possible kitfox burrow, no scat observed, could be use by BUOW/DETO			
BDBGL007	0706112 3730004	DETO?	A J U	M F U	Y N	-potential DETO burrow 10"x6"	4		
BDBGL008	0706114 3729953	DETO	A J U	M F U	Y N	potential DETO burrow 8"x 6"	4		
BNEAD001	0706090 3729939	cactus wren	A J U	M F U	Y N	no scat but burrow bottom, can't see to end flat ↳ Neotoma scat present -two cactus wren nests, both in Palo Verde, occupied			
BDPAD006	0706120 3729660	DETO?	A J U	M F U	Y N	-could be used as DETO pallet 8"x6"	4		
BBCAD001	0706120 3729435	barrel cactus	A J U	M F U	Y N	-barrel cactus, single head Picture, central spine slightly hooked			
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

desert sunflower

desert lavender, popcorn flower, Plantago ovata, brittle bush, desert pincushion - Chaenactis spp. ~~fremon~~ fremonti & stephani

desert dandelion, Eriogonum inflatum, Amsinckia, Lepidium spp. (peppergrass) → often present in swales in pavement

purple bean Marina spp. Pectocaria spp., Ambrosia dumosa, desert star, Monnottilon bellioides (sp.)

Sahara mustard, desert chicory, galeta grass, Krameria grayi, Ditaxis (straight leaf) ⊕ neomexicana & crenulita

⊕ Odora (common name) woodystem, Phacelia ~~spp.~~

tiny purple Geoste bark

Phacelia laevis

Chrizanthe ~~spp.~~ ~~species~~ compacta: spinyflower

[redacted] 6090 6060
6080 6050
6070 6040

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe Date: 3/21/09 Page 3 of 4

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
	1,6,7		SDA	GLH, ADA

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day	(3:31PM)	88°F	6mph - 12mph	69% hum - 10%
End	6:16PM	83°F	10mph	15%

PART II

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCAD009	0706122	DETO	A J U	M F U	Y N	desert tortoise plaston bone,			5
	3728991		A J U	M F U	Y N	~~one piece~~ two pieces			
			A J U	M F U	Y N				
BKBSD007	0706091	kit fox	A J U	M F U	Y N	kit fox burrow, 18" high x 12" wide			
	3728449		A J U	M F U	Y N	Cant see to end, possible use			
			A J U	M F U	Y N	by DETO/BUON, no scat but			
			A J U	M F U	Y N	burrow has recent use			
			A J U	M F U	Y N				
BDPAD007	0706064	DETO?	A J U	M F U	Y N	- desert tortoise (possible)	4		
	3729048		A J U	M F U	Y N	Pallet ~~8"x6"~~ 6"x6"			
			A J U	M F U	Y N				
BDPAD008	0706067	DETO?	A J U	M F U	Y N	possible DETO pallet	4		
	3729784		A J U	M F U	Y N	6"x6"			
			A J U	M F U	Y N				
			A J U	M F U	Y N		4		
BDBAD003	0706066	DETO	A J U	M F U	Y N	possible DETO burrow			
	3729951		A J U	M F U	Y N	8"x6"			
			A J U	M F U	Y N				
BMAAD008	0706059	badger foraging	A J U	M F U	Y N	- badger foraging burrow, could			
	3729425		A J U	M F U	Y N	be used as DETO pallet			
			A J U	M F U	Y N				

*See Reverse

Lotus strigosa, Nama demissum, Chorizanthe rigida (spiny herb), Oligomerus linearophalia bottlebrush, (Oenothera), Aristida spp., Lupinus arizonicus (forage), catclaw acacia, Costa's hummingbird, sweetbush,

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/21/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments)		
							Burr	Scat	Shell
BMASD009	0706041 3729025	Mammal	A J U	M F U	Y N	old mammal burrow, shallow, could be used by DETO at time shelter, too shallow for BLOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BOOAD001	0706065 3727972	big horn sheep scat	A J U	M F U	Y N	- scat with nipples, most likely big horn sheep scat			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMACL017	0706087 3727969	mammal	A J U	M F U	Y N	old mammal burrow, dead bee hive (european honey bee) inside possible use by BLOW / DETO			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

0704~~8~~770	✓	750	✓
760	✓	740	✓

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/22/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	~~DA~~ CB ~~9~~ ~~CC7~~ ~~Northeast~~ CC9	1,6	SDA	GLU

C4 to Row to C8, north end of C9

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	11:45AM	73.2°F	13-18mph	1%CC
Mid-day				
End	4:23PM	73.2°F	9-15mph	50%CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBSD008	0704878 3727843	kit fox	A J U	M F U	Y N	kit fox complex w/ kit fox scat, 4 burrows, active suitable for use by BUOW/DETO			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPSD003	0704769 3727974	DETO?	A J U	M F U	Y N	-old kit fox burrow w/ kit fox scat, but rear is tortoise shaped (~4" high x 7" wide) so possible DETO use	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BBBSD001	0704773 3728594	BUOW	A J U	M F U	Y N	-active BUOW burrow, white wash @entrance, pellet outside (BUOW) and 2 pellets inside very windy, old kit fox burrow -2 burrows, one adjacent kit fox w/ kit fox scat, both burrows could be used for DETO			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPGL006	0704781 3728596	DETO?	A J U	M F U	Y N	possible DETO pellet, or burrow w/ plug, no scat	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCGL006	0704768 3728596	DETO	A J U	M F U	Y N	desert tortoise scute, midline 3"x2" wide, adult → size of one scute, picture	→ likely piece of BDCGL007		
			A J U	M F U	Y N				

*See Reverse

blue sharpie

Delineation carcasses - 2 704804.6652 50' N of other carcass ↘
3729482.9730 ↖ bones (+) 9" complete shell

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/22/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
focused	1,6	C4 to R4W to C8, N part of C9	SDA	GLL

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BBBGL002	0704764 3728976	BUOW	A J U	M F U	Y N	Kit fox complex, kit fox scat (12) ← 12 burrows!			
			A J U	M F U	Y N	////BUOW burrow, whole wash,			
			A J U	M F U	Y N	feathers, pellets (3 with sign)			
			A J U	M F U	Y N				
BDBGL009	0704761 3728979	DETO?	A J U	M F U	Y N	//// 200mm 5"x15" 7"x11", no deto sign	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BKBGL012	0704758 3728977	KFOX	A J U	M F U	Y N	//// 7 burrows with kit fox sign			
			A J U	M F U	Y N				
			A J U	M F U	Y N	8 scat			
			A J U	M F U	Y N				
BDSSD001	0704768 3729136	DETO	A J U	M F U	Y N	desert tortoise scat, juvenile 8mm wide, 15mm long, dark	likely not DETO	2	
			A J U	M F U	Y N	stuff - one piece, grey - other piece		3	
			A J U	M F U	Y N				
BDPSD004	0704780 3729925	DETO	A J U	M F U	Y N	desert tortoise pellet 6"x4"x4" high, no scat, in hollow	~~4~~ 3		
			A J U	M F U	Y N	fairly certain DETO			
BDPGL007	0704743 3729970	DETO	A J U	M F U	Y N	- deto pellet, 8"x5" no scat	4/3		
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/22/01

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
			SDA	GLH

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCGL007	0704750 3728606	DETO	A J U	M F U	Y N	MCL = 12.5", dehy carcass			4
			A J U	M F U	Y N	PLN = 9.5", likely ad			
			A J U	M F U	Y N	Scutes peeling off bone, shell in			
			A J U	M F U	Y N	two large pieces, adult,	BDCGL006 piece		
			A J U	M F U	Y N		likely from this carcass		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

6030	X	5990	X	5950	X	5910	X	5870	X	5830	X	5790		5750		
6020	X	5980	X	5940	X	5900	X	5860	X	5820	X	5780		5740		
6010	X	5970	X	5930	X	5890	X	5850	X	5810	X	5770		5730		
6000	X	5960	X	5920	X	5880	X	5840	X	5800	X	5760		5720		

GPS

Art-4
Eric-5
Milo-3
Andy-7

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/22/09

Page 1 of 3

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focus Survey	F4 to F8		Charles Germain	Arthur Davenport Andy Forde Milo Rivera

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	8:30	67° RH 34%	1.7 / NW	Clear 10%
Mid-day	1:50	75° 24%	14 / SW	Cumulous 45%
End	4:30	71°	.8 / NNW	Cumulous 40% Virgoin Distance

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BBCAD003	0706016/3729387	Cactus	A J U	M F U	Y N	Rose colored spines - on head			
			A J U	M F U	Y N	Spines slightly recurved Ferocactus			
BMAAD009	0706014/3729380		A J U	M F U	Y N	Large mammal den under lavern			
			A J U	M F U	Y N				
No Utah Milkweed	No point in GPS	0706018/3729119	A J U	M F U	Y N	No GPS point - Group of ≤20			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BBPMR003	0706000/3728296		A J U	M F U	Y N	#4			
			A J U	M F U	Y N				
BMACG001	0705928/3728705		A J U	M F U	Y N	Rodent feces - Woodrat?			
	3 Burrows ±/0M		A J U	M F U	Y N	2nd Burrow - Bigger mammal			
			A J U	M F U	Y N	3rd Burrow - Larger mammal w/ badger	Marks		
BBCAD010	0705915/3728898		A J U	M F U	Y N	Marginal fragment (1)			
			A J U	M F U	Y N	5+ years			
BMAAD010	0705910/3729026		A J U	M F U	Y N	Coyote? 2 entrances active			
			A J U	M F U	Y N				
BMAAF002	0705949/3729913		A J U	M F U	Y N	#4 / Some whitewash			
			A J U	M F U	Y N	18cm / 13cm ⇒ in about 0.5M			
BMACG002	0705881/3729048		A J U	M F U	Y N	under creosote			
			A J U	M F U	Y N				
BMACG003	0705878/3728146		A J U	M F U	Y N	Badger foraging?			

*See Reverse

5870 ~~X~~
5860 X
5850 X
5840 X

5830 X ← END 3/22
5820 X
5810 X ←
5800 X ← END 3/22

5790
5780
5770

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 3/22/09

Page 2 of 3

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
FOCUS SURVEY	P.1/3 →		C. GERMAN	A. DAVENPORT A. FORDE M RIVERA

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	P.1			
Mid-day	P.1			
End	P.3			

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAAD001	0705854/3729019	BADGER? FORAGING BURROW	A J U	M F U	Y N				
			A J U	M F U	Y N				
~~BMAAE~~			A J U	M F U	Y N				
BMACG004	0705873/3729041		A J U	M F U	Y N				
			A J U	M F U	Y N				
BMACG005	0705873/3729156		A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAAD012	0705851/3729773		A J U	M F U	Y N	#4 - TORTOISE SHAPE - 4' DEEP			
			A J U	M F U	Y N				
BMACG006	0705883/3729818		A J U	M F U	Y N	#4 UNDER PALO VERDE			
			A J U	M F U	Y N				
BMACG007	0705827/3729867		A J U	M F U	Y N	BADGER FORAGING BURROW			
			A J U	M F U	Y N	COULD BE USED BY TORT IN FUTURE			
BMAAF003	0705804/3729756		A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAAD013	0705812/3729733		A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAAF004	0705800/3729705		A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAAD014	0705813/3729389		A J U	M F U	Y N	BADGER - LARGE OPENING			
			A J U	M F U	Y N	UNDER PALOVERDE			

*See Reverse

UTAH MILKWEED ↓ 0705861/3728704 3 PLANTS
0705856/3729913 3 PLANTS

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/22/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
FOCUS SURVEY	P.1/3		GERMAN	A. DAVENPORT A. FORDE M. RIVERA

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	P.1			
Mid-day	P.1			
End	4:30	71°	8/NNW	CUMULUS / 40% W/VIRGO IN DISTANCE

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMTMR004	0705831/3728694		A J U	M F U	Y N	- OLD -			
BMAAD005	0705817/3728696		A J U	M F U	Y N	- CRYMERIA - ACACIA = 2 BURROWS (10M-EAST)			
BMAE			A J U	M F U	Y N	← 1 BURROW			
BMACG008	0705876/3728036		A J U	M F U	Y N	BADGER FORAGING BURROW ?			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

UTAH MILKWEED 0705810/3728690 ~~4~~ 7 PLANTS

0707050		7010	done?
40		7000	
30		6990	
20		6980	

F9 6970-6900 DONE already

3000' x 1500'

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: ~~02~~ 3/23/09

Page 1A of 1A

372800 to 3725600

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,6	F9-F13	SDA	GLU

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	12:56pm	66.3°F	6.8-9mph	0% cc
Mid-day				
End	6:19pm	70°F	7-9mph	0% cc

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
	note: BMAKH002 already recorded		A J U	M F U	Y N	4 burrowing owl pellets observed here 0707040, 3727075			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
	redid 7050, 7040 for F9		A J U	M F U	Y N				
		F10	A J U	M F U	Y N				
		F11	A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

3728000 = divider F8/F9

F8, F9

6960 6950 6940 6930

6920 6910 6900 6890

6890	✓	6850	✓	6810	✓	6770	✓	6730		6690	
6880	✓	6840	✓	6800	✓	6760	✓	6720		6680	
6870	✓	6830	✓	6790	✓	6750	✓	6710		6670	
6860	✓	6820	✓	6780	✓	6740	✓	6700		6660	

~~to 6690~~ to 6790

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/23/09

Page 1B of 2B

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1.6	F8 F9	SOA	GLU

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	see 1A sheet			
Mid-day				
End				

7.96 km
10 mins
8.49 km
15 mins
9.10 km

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBGL013	0706858	KFOX	A J U	M F U	Y N	kit fox complex, kit fox scat			
	3728402		A J U	M F U	Y N	(some fresh kfox scat), one burrow			
			A J U	M F U	Y N	with whitewash			
BBBGL003	0706858	BUOW?	A J U	M F U	Y N	-same kit fox complex, but one			
	3728402		A J U	M F U	Y N	burrow w/ whitewash, possible use			
			A J U	M F U	Y N	of all burrows by DETO/BUOW, 8 burrows			
			A J U	M F U	Y N	coyote scat present			
			A J U	M F U	Y N				
BDCGL008	0706889	DETO	A J U	M F U	Y N	-desert tortoise bone, 2 pieces			5
	3728105		A J U	M F U	Y N	confirmed tortoise, ~1" each			
			A J U	M F U	Y N				
BMAGL018	0706853	mammal	A J U	M F U	Y N	-burrow @ end of eroded area,			
	3727872		A J U	M F U	Y N	unable to tell how deep so it's			
			A J U	M F U	Y N	possible for DETO/BUOW, kit fox & coyote scat in area			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BKBGL014	0706849	kitfox	A J U	M F U	Y N	old kit fox complex, most	4		
	3728121		A J U	M F U	Y N	holes filled, two burrows could			
			A J U	M F U	Y N	be used as DETO pallets			
			A J U	M F U	Y N				
BDPSD005	0706792	DETO?	A J U	M F U	Y N	possible DETO pallet ~8"x6"	4		
	3728048					depth ~12", narrows to			
						small mammal entrance,			
						no sign			

*See Reverse

total
11.88 km
1.2
13.0 km

6770
60
50
40

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: B Blythe

Date: 3/23/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1, 6	F8 F9	SDA	GLU

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBSD009	0706759 3728146	kit fox	A J U	M F U	Y N	kit fox burrow, freshly dug active, ~~[illegible]~~ could be used by BKW/DETO			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
~~BDPS3~~		~~DETO?~~	A J U	M F U	Y N				
BMAGL019	0706734 3728427	mammal	A J U	M F U	Y N	- mammal burrow (predation badger) could be used by DETO as a pallet			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPGL008	0706738 3728229	DETO?	A J U	M F U	Y N	-possible DETO pallet, 10"x8" 14" deep, no sign	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

5:37pm
981
5:54pm
10:51 km
6:04pm
11.06 km
6:14pm
11.6 km

*See Reverse

Art-4
Eric-5

F4	5790	x	5750	~~x~~	5710	31/35	5670
↓	5780	x	5740	x	5700		5660
F8	5770	x	5730	x	5690		5650
	5760	x	5720	x	5680		5640

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe Date: 3/23/09 Page 1 of 2

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused survey	4,5	F4 to F8	ADA, CGE	

	Time	Temp	RH	Wind Sp/Dir	Weather & % Cloud
Start	8:35 am	56°	24%	4/~~8~~ NW	~~A~~ CLEAR 0%
Mid-day	11:40 am	64°	12%	9-19 NW	CLEAR 0%
End	3:00 pm	70°	10%	5-10/NNW	CLEAR %

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
~~CTCLIFICIOUS THORN~~	0705940/3728699		A J U	M F U	Y N	≈8 PLANTS			
	CASTILLA ENDERI (sp?)	NO	A J U	M F U	Y N				
BDPCG008	0705778/3729713		A J U	M F U	Y N	UNDER SMALL CREOSOTE NEAR SMALL ARROYO	#4		
			A J U	M F U	Y N				
BMACG009	0705761/3728231		A J U	M F U	Y N	EAST FACING			
			A J U	M F U	Y N				
BMAAD016	0705792/3728195		A J U	M F U	Y N	SOUTHEAST FACING · BADGER FORAGING	#4		
			A J U	M F U	Y N	BURROW			
BMAAD017	0705676/3728247		A J U	M F U	Y N	EAST FACING			
			A J U	M F U	Y N				
BMAAD018	0705675/3728286		A J U	M F U	Y N	SOUTH FACING			
			A J U	M F U	Y N				
BMACG010	0705741/3728483		A J U	M F U	Y N	SOUTHWEST FACING			
			A J U	M F U	Y N				
BMAAD019	0705749/3728479		A J U	M F U	Y N	SOUTH FACING · COULD BE USED AS PALLET			
			A J U	M F U	Y N				
BMAAD020	0705745/3729092		A J U	M F U	Y N	EAST FACING - COULD BE USED AS PALLET			
			A J U	M F U	Y N				
BMACG011	0705739/3729704		A J U	M F U	Y N	EAST FACING			
			A J U	M F U	Y N				
BDCAD011	0705749/3729763		A J U	M F U	Y N	(1) ONE BONE FRAGMENT - shell SHELL ≤5 years			

*See Reverse

~~NO~~ UTAH MILKWEED NO GPS POINT 0705794/3730004
UTAH MILKWEED " " " 0705676/3728247

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 3/~~22~~/09 23

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
FOCUS SURVEY	#5 #4		GERMAN	DAVENPORT

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	SEE PAGE 1 of 2			
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAAD021	0705720/3729144		A J U	M F U	Y N	FECES WEST UNDER CREOSOTE			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

UTAH MILKWEED 0705711/3729935 - NO GPS POINT
↳ 4 PLANTS

5710	✓	5670	✓	5630		5590	
5700	✓	5660	✓	5620		5580	
5690	✓	5650	✓	5610		5570	
5680	✓	5640	✓	5600		5560	

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/24/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
DT Focused	4, 6	E4 to E8	AED, GL	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	0830	62	5.9x/NE	0% j
Mid-day	11:33 am	72°F	8mph avg 11max	0% cc 12%hum
End	2:38 pm	80°F	11mph avg 14max	0% cc 8%hum

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BBCGL001	0705692		A J U	M F U	Y N	Barrel cactus 21 gibs, single head			
	3729649		A J U	M F U	Y N	center spine hooked			
			A J U	M F U	Y N	spines are rose colored			
BMAGL020	0705696		A J U	M F U	Y N	mammal burrow badger foraging			
	3729691		A J U	M F U	Y N	burrow, could be used as tortoise pallet			
			A J U	M F U	Y N				
BMAGL021	0705699		A J U	M F U	Y N	badger foraging burrow, could be			
	3729693		A J U	M F U	Y N	used by tortoise or BUOW			
			A J U	M F U	Y N				
BMAAD022	0705664		A J U	M F U	Y N	badger foraging burrow, large,			
	3728485		A J U	M F U	Y N	could be used by tortoise & BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPAD009	0705666		A J U	M F U	Y N	burrow underneath acacia gregii	4		
	3729095		A J U	M F U	Y N	9"w x 7"h			
			A J U	M F U	Y N				
BMAGL022	0705661		A J U	M F U	Y N	mammal foraging burrow underneath			
	3729685		A J U	M F U	Y N	palo verde. could be used by			
			A J U	M F U	Y N	tortoise			
BDPAD010	0705663		A J U	M F U	Y N	pallet, could be used by tortoise	4		
	3729795		A J U	M F U	Y N	7"w x 5"h			

*See Reverse

utah milkweed 0705677 0705685 0705661
3729836, 3728629, 3729819

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/24/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focus Survey	6, 4		ADAquilera	GLU

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDPGL[redacted]	0705659		A J U	M F U	Y N	old tortoise pellet, poor	4		
009	3729827		A J U	M F U	Y N	condition, 7"L x 5"W			
			A J U	M F U	Y N				
BDCGL[redacted]	0705648		A J U	M F U	Y N	marginal tortoise bone. 1 piece	5		
009	3721758		A J U	M F U	Y N	some small bones in area, may			
			A J U	M F U	Y N	be tortoise			
			A J U	M F U	Y N				
BDPGL[redacted]	0705649		A J U	M F U	Y N	tortoise pellet 5.5"W x 4"h	4		
010	3729671		A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPAD04	0705640		A J U	M F U	Y N	pellet under creosote.	4		
	3729368		A J U	M F U	Y N	10"W x 8"h			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

F8, F9

6730	✓	6690	
720	✓	6680	
710	✓	6670	
700	✓	6660	

6697
8234

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/25/09

Page 1A of 1A

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	4,6	~~SDA~~ F8, F9	GLH	SDA

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	12:49PM	76°F	2.3 mph	2% CC
Mid-day	2:05PM	81°F	3.3 mph	5% CC
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBSD010	0706726 3727965	kit fox	A J U	M F U	Y N	kit fox burrow, turns to right, can't see to end, suitable for BURW/DETO, no scat observed.			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPSD006	0706732 3729424	deto?	A J U	M F U	Y N	possible deto pellet, poor condition, but flattened bottom & right shape, kit fox scat present 6"high x 7" wide, 8" deep	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

desert woodrat – dead on road
Dipodomys merriami

5630	✓	5590		5550		5510	
5620	✓	5580		5540		5500	
5610	✓	5570		5530		5490	
5600	✓	5560		5520		5480	

S&A 10.5
7-5pm + travel home

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/25/09

Page 1B of 1B

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,6	E4/D4 to E8/D8	SDA	GLU

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	4:25PM	81°F	2-4mph	7% cc
Mid-day				
End	6:52PM	78°F	1.2mph	20% cc

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
~~BMASD~~			A J U	M F U	Y N				
BKBSD011	0705634 3729074	kit fox	A J U	M F U	Y N	-can't see to end, turns left			
			A J U	M F U	Y N	kit fox, no scat or recent			
			A J U	M F U	Y N	digging, suitable for BUOW/DETO use			
			A J U	M F U	Y N				
BDPSD007	0705631 3729163	DETO?	A J U	M F U	Y N	-possible DETO pallet, narrows	4		
			A J U	M F U	Y N	~~6"x 4"x 8"~~ deep to small			
			A J U	M F U	Y N	no sign 6"x4"x8" deep mammal burrow			
BDPGL011	0705620 3729410	DETO?	A J U	M F U	Y N	-possible DETO pallet	4		
			A J U	M F U	Y N	6"x 4"x 6" deep			
			A J U	M F U	Y N				
BDPGL012	0705615 3729666	DETO?	A J U	M F U	Y N	-possible DETO pallet	4		
			A J U	M F U	Y N	7"x 5" 4" deep			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Utah milkweed 0705628, 3728621
Western diamondback

5590	✓	5550	
5580	✓	5540	
5570	✓	5530	
5560	✓	5520	

619-764-6822
Vanessa

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/26/09

Page 1 of _____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,6	E4/D4 to EB/D8	SDA	GLU

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	10:44AM	77°F	5.8-7.2mph	5% cc
Mid-day	1:48PM	86°F	10-18mph	5% cc
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAGL023	0705586 3728513	mammal	A J U	M F U	Y N	mammal burrow that could function as a deto burrow			
			A J U	M F U	Y N				
			A J U	M F U	Y N	no sign, deteriorated condition			
BKBGL015	0705570 3728571	kit fox	A J U	M F U	Y N	kit fox burrow, one burrow			
			A J U	M F U	Y N	no scat, some recent use			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

														5370	✓	5340	✓
5556	✓	5520	✓	5490	✓	5460	✓	5430		5400							
5540	✓	5510	✓	5480	✓	5450	✓	5420		5390		5360	✓	5330	✓		
5530	✓	5500	✓	5470	✓	5440	✓	5410		5380		5350	✓	5320	✓		

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/27/09

Page 1 of 3

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	6,4,5	D4 to Row to D8	ADA	GLU, MRI

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	7:06 am	57°F	12 mph avg	5% cc
Mid-day	12:09 pm	66°F	7 mph avg	0% cc
End	6:12 pm	74°F	6 mph avg	0% cc

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAGL024	0705545		A J U	M F U	Y N	badger foraging burrow			
	3729123		A J U	M F U	Y N	2 ft. deep			
			A J U	M F U	Y N				
BMAGL025	0705546		A J U	M F U	Y N	badger foraging burrow. deep			
	3729676		A J U	M F U	Y N	enough for DETO			
			A J U	M F U	Y N				
BGBGL003	0705501		A J U	M F U	Y N	badger den. Beehive present.			
	3729656		A J U	M F U	Y N	Western Diamondback Rattlesnake			
			A J U	M F U	Y N	skin in burrow. Could be			
			A J U	M F U	Y N	rattlesnakes' home!!			
			A J U	M F U	Y N				
BMAGL026	0705563		A J U	M F U	Y N	1 small mammal burrow. could be			
	3728415		A J U	M F U	Y N	used by DETO/BUOW. Also 1 possible			
			A J U	M F U	Y N	tortoise pellet in same area			
			A J U	M F U	Y N				
BDCMR007	0705485		A J U	M F U	Y N	DETO carcass. 18cm(w) x 22cm(l)			3
	3729092		A J U	M F U	Y N	shot with pellet gun or 22mm.			
			A J U	M F U	Y N	shell was also chewed on.			
			A J U	M F U	Y N	female.			
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Utah Milkweed: 0705514 (10+ plants) 3729965; 0705465 (2 plants) 3729125; 0705359 (2 plants) 3728509; 0705346 (10+ plants) 3729127; 0705344 (5 plants) 3729658; 0705346 (5 plants) 3729859; 0705336 (2 plants) 3729960; 0705325 3729654; 0705332 (5 plants) 3729122

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/27/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	6,4,5	D4 to D8	ADA	GLW, MRI

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDPAD012	0705451		A J U	M F U	Y N	tortoise pellet in drainage	4		
	3729127		A J U	M F U	Y N	14 cm (w) x 6 cm (h)			
			A J U	M F U	Y N				
BDPGL013	0705437		A J U	M F U	Y N	tortoise pellet 15cm x 21cm.	3		
	3728255		A J U	M F U	Y N	possible recent use by DETO			
			A J U	M F U	Y N				
BGBGL004	0705374		A J U	M F U	Y N	badger den. could be used			
	3728222		A J U	M F U	Y N	by DETO/BUOW.			
			A J U	M F U	Y N	Potential BUOW activity near.			
			A J U	M F U	Y N	White wash under dead iron wood +			
			A J U	M F U	Y N	owl pellets			
			A J U	M F U	Y N				
BDPMR005	0705359		A J U	M F U	Y N	tortoise pellet under Krameria	4		
	3728509		A J U	M F U	Y N	grayi (11x17 cm)			
			A J U	M F U	Y N				
BYAMR002	0705356		A J U	M F U	Y N	mammal foraging burrow			
	3729014		A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPAD005	0705346		A J U	M F U	Y N	tortoise burrow under galleta grass	4		
	3729128		A J U	M F U	Y N	30 x 20 cm. Needs to be scoped.			
			A J U	M F U	Y N	Too large + extensive. May have multiple animals			

*See Reverse

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/27/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	6,4,5	D4 to D8	ADA	GLU, MRI

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments)		
							Burr	Scat	Shell
BDPGL014	0705367		A J U	M F U	Y N	tortoise pellet w/ apron.	4		
	3729389		A J U	M F U	Y N	under creosote bush.			
			A J U	M F U	Y N	10 x 21 cm			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

5310	X	5280	X	5250	X	5220	X
5300	X	5270	X	5240	X	5210	X
5290	X	5260	X	5230	X	5200	X

tracks erased by accident

5130	X	5090	X
5120	X	5080	X
5110	X	5070	X
5100	X	5060	X

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe Date: 3/28/09 Page 1 of 2

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	3, 4, 5	D4 (to ROW) to D8	CGE -4	MRI, SCA + ADA

Recorded on #5 5 3 personal

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	8:19AM	61°F	.8 mph	0% CC
Mid-day	1200	79.1	5.6 mPH	0% CC
End	630 p	74.5	0-7 mph	0% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMACG012	0705306/3728529		A J U	M F U	Y N	Faces north-east			
BMACG013	0705313/3728536		A J U	M F U	Y N	opening faces west			
BMASC001	0705289/3729661		A J U	M F U	Y N	opening faces north			
BDSCG001	0705311/3729654	Tortoise	A J U	M F U	Y N	Year old From Adult Tort. with		✓	
↓ ↓	↓ ↓	↓	A J U	M F U	Y N	Pallet created by water under Bush			
BMACG014	0705274/3729657		A J U	M F U	Y N	2 Burrows, Opening facing west.			
BMAMR003	0705256/3728959		A J U	M F U	Y N	Burrow complex, coyote & kit fox scat. 8 openings			
BMAMR004	0705254/3728823		A J U	M F U	Y N	BUOW scat pellet & white wash			
BMACG015	0705231/3728837		A J U	M F U	Y N	3 Burrows, opening facing south/southwest, useable by tortoise			
BMASC002	0705234/3729379		A J U	M F U	Y N	Burrow complex opening facing			
BMASC003	0705236/3729894		A J U	M F U	Y N	1 Burrow opening facing south			
BDPMR006	0705215/3729616		A J U	M F U	Y N	Class 4 opening facing northwest	✓		
↓	↓ ↓ ↓ ↓		A J U	M F U	Y N	no scat Present 35C Wide X 11cm Tall			
BMACG016	0705220/3729478		A J U	M F U	Y N	opening facing north			
BDBCG001	0705218/3729375		A J U	M F U	Y N	Opening facing south. Class 4	✓		
BMACG017	0705213/3729374		A J U	M F U	Y N	opening facing south.			
BMAMR005	0705216/3728956		A J U	M F U	Y N	Opening facing North. no SCAT			
BDCMR008	0705203/3728837		A J U	M F U	Y N	+5 years, Plastron Fragment.			Fragment
BMASC004	0705204/3728532		A J U	M F U	Y N	opening facing North			
BMAMR006	0705118/3728540		A J U	M F U	Y N	opening facing northeast, could be used as Pallet ✓ Burrow			
BDPSC001	0705129/3728549		A J U	M F U	Y N	open facing South	✓		

*See Reverse

UTAH Milk weed

0705263/3729896 > 10 plants
0705243/3729384 > 3 plants
0705209/3729907 > 13 plants
0705213/3728955 > 6 plants

Desert Horned
Whip Tail
UTA
Zebra Tail

* GPS Unit #3 90 & 80 completed but deleted from GPS *

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/28/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End	6:25pm		0 mph	0% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BRMAD001	0705115/3728545	The Rhanmoid shrub	A J U	M F U	Y N	Talk to Art. List 2 plant (CNPS)			
BMASL005	0705129/3729081		A J U	M F U	Y N	Opening facing South			
BMAMR007	0705117/3729336		A J U	M F U	Y N	opening northeast, could be used by either	Burrow	or	Tort
BDPMR007	0705117/3729496		A J U	M F U	Y N	Opening northwest Class 4	✓		✓
BDCAD013 BDCAD013_1	0705111/3729521		(A) J U	(M) F U	Y N	2-3 years			✓
BMAMR008	0705078/3729633		A J U	M F U	Y N	Facing north Badger?			
BDPMR008	0705061/3729566		A J U	M F U	Y N	Class 4 opening northwest	✓		
BMAMR009	0705060/3728817		A J U	M F U	Y N	west facing			
BDCMR009	0705055/3728810		A J U	M F U	Y N	small fragment of scute less than 1"			Fragment
BRMAD002	0705074/3728540	Rhanmoid shrub	A J U	M F U	Y N	5 plants			
BDPMR009	0705061/3729546		A J U	M F U	Y N	Class 4 facing east	✓		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

UTAH Milkweed 0705058/3729983 > 20 plus
0705062/3728536 > 5 plants

5430	✓	5400	✓
5420	✓	5390	✓
5410	✓	5380	✓

5190	✓	5160	✓
5180	✓	5150	✓
5170	✓	5140	✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/28/09

Page 1 of 3

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1, ~~3~~, ~~5~~, 6 & Ad's (Mammal)	DA to BDD to DB	ADA, SDA, ~~[illegible]~~, GLU, ~~[illegible]~~	

Recorded on #1

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	8:19 am	61°F	.8 mph any	0% cc
Mid-day	2:33pm	82°F	7mph	0% cc
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
~~BBADO05~~ BDPADO13	0705421 3728767	DETO?	A J U	M F U	Y N	-possible juvenile DETO pellet, 6" wide x 3" tall x 4" deep	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDSGL002	0705430 3729238	DETO	A J U	M F U	Y N	-desert tortoise scat 1 3/4" x 1/2", bleached picture w/ ID tag	3		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDBADO06	0705401 3729444	DETO	A J U	M F U	Y N	-desert tortoise burrow under dead palo verde 7"x5", can't see to end	3		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BKBGL016	0705432 3729851	Kit fox	A J U	M F U	Y N	kit fox burrow, can't see to end, possible use by DETO/BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPADO14	0705403 3729853	DETO?	A J U	M F U	Y N	-possible deto pellet, 8"x 3"x 6" deep, some digging by badger	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAADO23	0705398 3729652	mammal	A J U	M F U	Y N	-badger foraging burrow, could be used for tortoise, not deep enough for BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCGL010	0705386 3729434	DETO	A J U	M F U	Y N	-one piece of marginal,	5		

*See Reverse

Utah milk weed (7) 0705410, 3729026 / 0705409, 3729226 / (12) + all through drainage

black-tailed gnatcatcher observed nesting, nest site will be gone

5190	5160
5180	5150
5170	5140

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/28/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
			SDA, ADA, GLH	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDPSD008	0705177 3728527	DETO?	A J U	M F U	Y N	-possible DETO pallet 8"x6"x6" deep, no sign	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCAD012	0705168 3728818	DETO	A J U	M F U	Y N	-desert tortoise carcass, one piece, white, adult			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAGL027	0705193 3729490	mammal-badger foraging	A J U	M F U	Y N	-badger foraging burrow (2) deep enough for DETO to use as pallet, not deep enough for BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAGL028	0705199 3729718	mammal	A J U	M F U	Y N	-mammal foraging burrow, could be used by DETO, not deep enough for BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BGBAD002	0705180 3729721	badger den	A J U	M F U	Y N	-badger den, carnivore scat in area, could be used by DETO & BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPSD009	0705150 3729710	DETO?	A J U	M F U	Y N	-possible DETO pallet 7"x5"x6" deep no sign	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Utah milkvetch 0705187, 3728393 / (2) | 0705183, 3728941 (2) | 0705176 / 3729713 (2)
0705168, 3729926 (4), 0705155 3729932 (2)

Krameria erecta ~~0705168, 3728388~~

Rhamnoid shrub (List 2) 0705169, 3728527 (10) | 0705158, 3729864 (6)

190 160
180 150
170 140

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/28/04

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAGL029	0705145	mammal	A J U	M F U	Y N	badger foraging burrow (2),			
	3729372		A J U	M F U	Y N	are forms to the right, possibly			
			A J U	M F U	Y N	could be used by BUCW/DETO			
			A J U	M F U	Y N				
BMAAD024	0705154	mammal	A J U	M F U	Y N	- badger foraging burrow,			
	3728442		A J U	M F U	Y N	possible use by DETO			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCSD009	0705151	DETO	A J U	M F U	Y N	- deto carcass, carapace fragment			5
	3728434		A J U	M F U	Y N	1 1/2" x 1"			
			A J U	M F U	Y N				
BDBGL010	0705132	DETO?	A J U	M F U	Y N	possible DETO pellet, may turn	4		
	3728256		A J U	M F U	Y N	to the right 9"x6"x ?" deep			
			A J U	M F U	Y N				
BDCAD013	0705162	DETO	A J U	M F U	Y N	- deto carcass, plastron piece			5
	3728012		A J U	M F U	Y N	1 1/4" x 1"			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Utah milkweed 0705158/3729084 (1)

5050	X	5020	X	4930	✓	900	X
5040	X	5010	X	920	✓	890	X
5030	X	5000	X	910	✓	880	X

skip lines

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 03/29/09

Page 1A of ~~4~~ 1A

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused		D4 to Rm to D8	MRI-~~1~~ 9 CGE-~~1~~ 5	SCA-3

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	8:33 am	64°F	3:3 mph avg	90% overcast
Mid-day	11:53A	80.5 F	14.5 m pH avg	70% overcast
End	1510	82 F	5-10 MPH	10 CC

~~Recorded~~ Recorded on #5

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCSC001	0705090/3728833	Tortoise	A J U	M F U	Y N	Bone fragment, small in wash			Fragment
BMASC006	0705025/3729266		A J U	M F U	Y N	Facing north, species unknown large			
BDCMR010	0705040/3729337	Tortoise	A J U	M F U	Y N	concentrated in a 2meter Area. predated		5years+	Dis-articulate
BDCCG005	0705008/3729408	Tortoise	A J U	M F U	Y N	Bone frags small 5 meter ~~[illegible]~~ Area	10years+		~~[illegible]~~
BDCCG006	0705011/3729400	Tortoise	A J U	M F U	Y N	3 bone fragments 10years +			Disarticulate
BDCCG007	0705012/3729364	Tortoise	A J U	M F U	Y N	Large Female Carcass under Creosote Bush. 5+ since death.			
BMACG018	0704894/3729691	~~0704891/3729691~~	A J U	M F U	Y N	no scat, Facing South. Under Tree			
BMACG019	0704894/3729692	0704891	A J U	M F U	Y N	no scat, Facing East under Bush			
BDCCG008	0704885/3729962		A J U	M F U	Y N	Small ~~[illegible]~~ frag of bone over 5 years old			
BDPMR010	0704879/3727991	Tortoise	A J U	M F U	Y N	3 pallets, 2 comp 23cm x 15, 23cm x 10cm, 1 collapsed			
			A J U	M F U	Y N	southwest facing wet slope of wash			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

4990	✓	960	✓	48~~60~~70 ✓	48~~30~~40 ✓	~~4800~~
980	✓	950	✓	8~~50~~60 ✓	48~~20~~30 ✓	
970	✓	940	✓	8~~40~~50 ✓	48~~10~~20 ✓	

Skip

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/29/09

Page 1 of 4

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused		DA to Row to DB	SDA-1 GLU-6	ADA-4

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	8:33am	64°F	3.3 mph avg	80% cc
Mid-day				
End	3:44pm	86°F	9-20 mph.	0% cc

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAGL030	0704973	~~DETO~~	A J U	M F U	Y N	-two small burrows, badger			
	3729016	mammal	A J U	M F U	Y N	foraging, can see to end			
			A J U	M F U	Y N				
BMASD010	0704950	mammal	A J U	M F U	Y N	-mammal burrow, likely			
	3729454		A J U	M F U	Y N	dug out by predator, can't			
			A J U	M F U	Y N	see to end, could be used by			
			A J U	M F U	Y N	DETO/possibly BUOW, no sign			
BDC~~GE~~SD010	0704948	DETO	A J U	M F U	Y N	desert tortoise ~~carcass~~ bone, several			5
	3729394		A J U	M F U	Y N	old croded fragments, marginal			
			A J U	M F U	Y N	w/ costal areas on one side, anterior			
			A J U	M F U	Y N	Art - picture			
BDPAD015	0704939	DETO?	A J U	M F U	Y N	-possible deto pallet, bottom			
	3728136		A J U	M F U	Y N	filled in w/ sand from drainage	4		
			A J U	M F U	Y N	should be scoped w/ clearance			
			A J U	M F U	Y N	survey 5"x7" wide			
			A J U	M F U	Y N				
BDBGL011	0704964	DETO?	A J U	M F U	Y N	-not typical tortoise shape, but	4		
	3728031		A J U	M F U	Y N	bottom flattened, no scat,			
			A J U	M F U	Y N	could be occupied by DETO/			
			A J U	M F U	Y N	BUOW			
			A J U	M F U	Y N				

*See Reverse

milkweed 0704988/3729226 (3), ash-throated flycatcher, sharp-shinned hawk poorwill, roadrunner, rock wren → 0704982, 3729858 (4), 0704938/3729687 (2)

BCAD013_1 MCL = 11½", width = 11"
PLN = 11"

fossil - marine - 0704944/3728124

~~840~~ ~~850~~ ~~840~~ ~~830~~ ~~820~~ ~~810~~ 4870 4860 850 840 830 820

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/29/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
			SOA, GLU, ADA	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMASD011	0704983	mammal	A J U	M F U	Y N	mammal burrow, could be used			
	3728156		A J U	M F U	Y N	as shelter for DETO, can see			
			A J U	M F U	Y N	to end, not deep enough for BUOW			
BKBSD012	0704980	Kit fox	A J U	M F U	Y N	kit fox burrow w scat @			
	3728166		A J U	M F U	Y N	entrance, could be used by			
			A J U	M F U	Y N	DETO / BUOW, turns to left, can't			
			A J U	M F U	Y N	see to end (2 burrows)			
			A J U	M F U	Y N	(+) 1 burrow on hillside that			
			A J U	M F U	Y N	could be modified by BUOW			
			A J U	M F U	Y N				
BMASD012	0704863	mammal	A J U	M F U	Y N	badger / canid foraging			
	3728664		A J U	M F U	Y N	burrowing in, wood rat nest,			
			A J U	M F U	Y N	could be used for DETO, not			
			A J U	M F U	Y N	deep enough for BUOW			
			A J U	M F U	Y N				
BDCAD014	0704873	DETO	A J U	M F U	Y N	desert tortoise bone, appears			5
	3728808		A J U	M F U	Y N	to be piece of nuchal, one			
			A J U	M F U	Y N	piece, adult			
			A J U	M F U	Y N				
BDCSD011	0704854	DETO	A J U	M F U	Y N	desert tortoise bone, one			5
	3729330		A J U	M F U	Y N	piece			

*See Reverse

70 40
60 30
50 20

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/29/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
				SDA, GLU, ADA

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDBADO16	0704868 3729464	DETO	A J U	M F U	Y N	desert tort pallet, under bush 8"x6"	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAGL031	0704845 3729700	mammal	A J U	M F U	Y N	-large burrow, turns to left, can't see to end, looks like predator fraying burrow, coyote scat! could be used by DETO/BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
~~BDCADO15~~		~~DETO~~	A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
~~BDCADO15~~ BDCADO15)	0704867 3729709	DETO	A J U	M F U	Y N	-deto bone, one piece of marginal			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPGL015	0704835 3729692	Deto	A J U	M F U	Y N	-one possible DETO pallet, with 2 small mammal burrows ~~that~~ possible DETO/BUOW use 9"x 6"x 6"	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCADO16	0704815 3729660	DETO	A J U	M F U	Y N	joint bone from DETO			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

~~fix one called BDCADO16~~

*See Reverse

milkweed 0704867/3729707 (4) & 0704871/3729965 (8)
0704832/3729668 (4)

70 40 ✓
60 30 ✓
50 20 ✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/29/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCSD012	0704829	DETO	A J U	M F U	Y N	~~one~~ (two) piece of marginal			5
	3729482		A J U	M F U	Y N	scute, likely			
			A J U	M F U	Y N	from carcass upstream			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCAD017	0704822	DETO	A J U	M F U	Y N	-one plastron piece (bone), likely			5
	3729478		A J U	M F U	Y N	from carcass upstream			
			A J U	M F U	Y N				
BMAGL032	0704831	mammal	A J U	M F U	Y N	badger foraging burrow, can't			
	3729473	badger	A J U	M F U	Y N	see to end, could be used			
			A J U	M F U	Y N	by BUOW / DETO in thick			
			A J U	M F U	Y N	grasses			
			A J U	M F U	Y N				
BDPGL016	0704834	DETO?	A J U	M F U	Y N	-possible DETO pallet 7"x5"x	4		
	3729359		A J U	M F U	Y N	4" deep			
			A J U	M F U	Y N				
BMASD013	0704831	mammal	A J U	M F U	Y N	-badger foraging burrow, turns			
	3729217	badger	A J U	M F U	Y N	to right, DETO/BUOW suitable			
			A J U	M F U	Y N	(2) ~~and~~ to east ~~(+ one~~			
			A J U	M F U	Y N	two in drainage			
BDPSD010	0704835	DETO?	A J U	M F U	Y N	possible DETO pallet under palo	4		
	3728836					verde, 7"x5"x5" deep			

*See Reverse

Milkweed 0704831/3729215 (3)

black-throated sparrow, raven

Rhamnoid 0704818/378566 (1)

6870	✓	6900	✓	30	✓	60	✓	90	
80	✓	10	✓	40	✓	70	✓	100	
90	✓	20	✓	50	✓	80	✓		

F6 Continue until 7100

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: MAR 30/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,4,6	~~F7~~, F6, ~~F8~~ F7	SDA, GLU, ADA	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	9:41AM	64°F	12-17mph	0% CC
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAAD025	0706894	~~B~~ mammal	A J U	M F U	Y N	-mammal burrow, turns to right,			
	3729056		A J U	M F U	Y N	likely carnivore (badger?) foraging			
			A J U	M F U	Y N	burrow, could be used by BLOW/DETO			
			A J U	M F U	Y N				
BDPGL017	0706885	DETO?	A J U	M F U	Y N	possible DETO pallet, recent	4		
	3729266		A J U	M F U	Y N	digging but full of veg 8"x6"x8" deep			
			A J U	M F U	Y N				
BMASD014	0706909	mammal	A J U	M F U	Y N	-mammal burrow in drainage			
	3729266		A J U	M F U	Y N	under galeta grass, could be			
			A J U	M F U	Y N	used by DETO			
BDPGL018	0706922	DETO?	A J U	M F U	Y N	-pallet (possible badger digging	4		
	3729189		A J U	M F U	Y N	8"x5"x8" into Krat deep			
			A J U	M F U	Y N				
BMAAD026	0706904	mammal	A J U	M F U	Y N	-mammal burrow, likely badger			
	3728591		A J U	M F U	Y N	foraging burrow, could be used by			
			A J U	M F U	Y N	~~burr~~ BLOW/DETO/Kfox			
			A J U	M F U	Y N				
BDPSD011	0706939	DETO?	A J U	M F U	Y N	-possible DETO pallet, likely	4		
	3728532		A J U	M F U	Y N	badger foraging burrow (claw			
			A J U	M F U	Y N	marks) 9"x6"			
BDPSD012	0706937	DETO?	A J U	M F U	Y N	-possible DETO pallet, likely	4		
	3728570					badger foraging 9"x7"			

*See Reverse

piece of tank tread 0706901/3729254

6830 ✓ 60 90
40 ✓ 70 100
50 ✓ 80

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: MAR 30/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAAD027	0706954	mammal	A J U	M F U	Y N	-mammal burrow, could be			
	3729022		A J U	M F U	Y N	modified for BUOW use, not DETO			
			A J U	M F U	Y N				
BDCAD018	0706958	DETO	A J U	M F U	Y N	- desert tort bone, one			5
	3729362		A J U	M F U	Y N	piece 1/2" x 1/2"			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

~~4810~~
~~4820~~

4810	✓	4790	✓
4800	✓	4780	✓

Southern Boundary
3728200

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: MARCH 30/07

Page 1A of 1A

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	4,6	DA/CA to Row to DB/CO	GLU, ADA	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day	4:05 pm	72°F	3mph avg	0% cc
End	6:50 pm	70°F	3mph avg	0% cc

Points recorded on GPS Unit # 4

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
[illegible]	0704800	DETO	A J U	M F U	Y N	(Having problems w/ GPS accuracy) Tortoise pallet in ~~[illegible]~~ clay	3		
BDPAD016	3729286 (±44ft)		A J U	M F U	Y N	bank. 12"x6"			
			A J U	M F U	Y N				
BDCGL011	0704772	DETO	A J U	M F U	Y N	tortoise bones. 2 scutes. leg			5
	3728615		A J U	M F U	Y N	bone, & few other pieces. Probably from			
			A J U	M F U	Y N	same animal as BDCGL007			
			A J U	M F U	Y N				
BDBGL012	0704796	Deto	A J U	M F U	Y N	tortoise burrow, possible tracks	2		
	3728597		A J U	M F U	Y N	inside. recent use by something			
			A J U	M F U	Y N	7x6"			
BDCAD019	0704796	Deto	A J U	M F U	Y N	1 piece of scute			5
	3728597		A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Utah Milkweed 0704801 (3 plants).
3729656

Species:
Virden

0704760
0704770

4730	✓	4710	✓	4690	✓	4670	✓
4720	✓	4700	✓	4680	✓	4660	✓

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DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 3/31/09

Page 1 of 4

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused Survey	6,4	D4/CR to Rows to D8/C8	GLV	ADA

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	8:20 am	58°F	2mph avg	0% cc
Mid-day	2:15 pm	86°F	1mph avg	0% cc
End	5:40 pm	81°F	1mph avg	0% cc

Recorded on GPS # 4

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCGL012	0704724	DETO	A J U	M F U	Y N	Female tortoise carcass. in			4
	3728712		A J U	M F U	Y N	half. 9"x1"			
			A J U	M F U	Y N	most scutes have fallen off shell.			
			A J U	M F U	Y N	Beginning to disarticulate.			
			A J U	M F U	Y N	Found in shoot wrayo			
BBCAD002	0704734	Barrel	A J U	M F U	Y N	barrel cactus under the			
	3729144	cactus	A J U	M F U	Y N	ambrosia dumosa. curved spines.			
			A J U	M F U	Y N	13 ribs			
			A J U	M F U	Y N				
BMAAD028	0704731	mammal	A J U	M F U	Y N	badger foraging burrow. Could be			
	3729464		A J U	M F U	Y N	used by BUOW or DETO			
			A J U	M F U	Y N				
BMAGL033	0704713	mammal	A J U	M F U	Y N	mammal burrow under			
	3729467		A J U	M F U	Y N	Krameria grayi. cant see			
			A J U	M F U	Y N	the end of burrow.			
			A J U	M F U	Y N				
BDCAD020	0704727	DETO	A J U	M F U	Y N	1 piece of tortoise bone. Shell fragment			5
	3729476		A J U	M F U	Y N				
			A J U	M F U	Y N				
BDSAD004	0704732	DETO	A J U	M F U	Y N	large tortoise scat. About 1 year		3	
	3729581		A J U	M F U	Y N	old 2"x1". Picture on ADA's camera			

*See Reverse

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/31/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused Survey	6,4		GLU	ADA

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

Recorded on GPS #4

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCAD021	0704732	Deto	A J U	M F U	Y N	1 piece of marginal Tone. looks			5
	3729657		A J U	M F U	Y N	very old.			
			A J U	M F U	Y N				
BMAAD029	0704746	mammal	A J U	M F U	Y N	Mammal burrow. could be			
	3729700		A J U	M F U	Y N	used by BUOW.			
			A J U	M F U	Y N	between Kromomyia gravi			
			A J U	M F U	Y N	badger foraging burrow			
			A J U	M F U	Y N				
BDCGL013	0704720	DETO	A J U	M F U	Y N	tiny tortoise bone fragment (1)			5
	3729948		A J U	M F U	Y N				
			A J U	M F U	Y N				
BDSAD005	0704698	DETO	A J U	M F U	Y N	very old tortoise scat. partially		5	
	3729564		A J U	M F U	Y N	consumed by termites			
			A J U	M F U	Y N	2" x 1/2"			
			A J U	M F U	Y N				
BDPAD017	0704698	DETO	A J U	M F U	Y N	tortoise pellet under brittle	3		
	3729469		A J U	M F U	Y N	bush. 7" x 5"			
			A J U	M F U	Y N				
BDCAD004	0704638	Barrel	A J U	M F U	Y N	Barrel cactus. Ferro cactus			
	3729340	cactus	A J U	M F U	Y N	20 ribs. 18" tall			
			A J U	M F U	Y N				

*See Reverse

Utah Milkweed 0704732 3729710 (6 plants); 0704702 3728859 (4 plants);

butterfly species: painted lady, striated queen, dainty sulphur

Site: Blyth

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/31/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused survey	6,4		GLU	ADA

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

Recorded on GPS #4

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDPGL019	0704704	DETO	A J U	M F U	Y N	small tortoise pellet near top	3		
	3729359		A J U	M F U	Y N	of clay bank. 3" x 4"			
			A J U	M F U	Y N				
BDCGL014	0704706	DETO	A J U	M F U	Y N	3 small pieces of tortoise bone			5
	3729117		A J U	M F U	Y N				
			A J U	M F U	Y N				
BDSAD006	0704705	Deto	A J U	M F U	Y N	tortoise scat. 1" x .5"		5	
	3728531		A J U	M F U	Y N	old scat			
			A J U	M F U	Y N				
BDPAD018	0704695	DETO	A J U	M F U	Y N	badger foraging burrow that	4		
	3728610		A J U	M F U	Y N	turned into a possible DETO pellet			
			A J U	M F U	Y N	approx 4" x 3"			
			A J U	M F U	Y N				
BDCAD022	0704703	DETO	A J U	M F U	Y N	1 small piece of tortoise bone			5
	3728609		A J U	M F U	Y N	(fragment)			
			A J U	M F U	Y N				
BDBGL013	0704684	DETO	A J U	M F U	Y N	tortoise burrow possibly	4		
	3729913		A J U	M F U	Y N	damaged by badger. Signs			
			A J U	M F U	Y N	of badger actively going in.			
			A J U	M F U	Y N	could be used by juv			
			A J U	M F U	Y N	11" x 9"			

*See Reverse

Rhamnoid: 0704713 (6 plants)
3728533

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 3/31/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused Survey	6, 4		GLW	ADA

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

Recorded on GPS #4

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAAD030	0704693	mammal	A J U	M F U	Y N	mammal burrow could be used			
	3729975		A J U	M F U	Y N	as a pallet			
			A J U	M F U	Y N				
BMBAD031 ~~BMAAD031~~	0704658	mammal	A J U	M F U	Y N	badger foraging burrow. could be			
~~BMAAD031~~	3729903		A J U	M F U	Y N	used by a DETO or DUOW			
			A J U	M F U	Y N				
BDPAD019	0704666	DETO	A J U	M F U	Y N	tortoise pallet under brittle	3		
	3729641		A J U	M F U	Y N	bushes 12" x 8"			
			A J U	M F U	Y N				
BBCAD005	0704664	Barrel cactus	A J U	M F U	Y N	barrel cactus under Krameria			
	3729128		A J U	M F U	Y N	grayi. 4" tall. ferro cactus?			
			A J U	M F U	Y N				
BMAAD032	0704663	mammal	A J U	M F U	Y N	badger foraging burrow.			
	3728855		A J U	M F U	Y N	could be used as a tortoise			
			A J U	M F U	Y N	pallet. 2 openings			
			A J U	M F U	Y N				
BMAAD033	0704679	Mammal	A J U	M F U	Y N	badger foraging burrow,			
	3728206		A J U	M F U	Y N	could be used by DETO or BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

GL	6690	✓	JH	6660	✓	JL	30	✓	GL	600	✓	SD	570	✓	540	SC	✓	590	✓	480		450		420	
JJ	80	✓	SC	50	✓	SD	20	✓	GL	590	✓	JJ	60	✓	30	JH	✓	500	GL	✓	70		40		10	
SD	70	✓	SC	40	✓	JJ	10	✓	JJ	580	✓	SC	50	✓	20	SD	✓	490		60		30		400	

(Stop @ 6190)

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/1/09

Page 1 of 3

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	3,5,9	F8 F9	Jim-5 James-9	Scott-3 Shelly-1 Gregg-6

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	8:10 am	62°F	1mph avg	15% cc
Mid-day				
End				

DATA RECORDED ON GPS UNIT # 1,3

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDPJJ001	0706681	DETO?	A J U	M F U	Y N	-possible deto pallet,	4		
	3727794		A J U	M F U	Y N	190mm x 100mm x 330mm			
			A J U	M F U	Y N	no evidence of activity, no scat			
BMAJJ003	0706678	Mammal	A J U	M F U	Y N	-could be used as a pallet			
	3727783		A J U	M F U	Y N	for DETO, not suitable for BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAJJ004	0706612	mammal	A J U	M F U	Y N	-could be used by DETO &			
	3728419		A J U	M F U	Y N	BUOW, likely badger foraging			
			A J U	M F U	Y N	burrow, claw marks in adjacent			
			A J U	M F U	Y N	burrow, can't see to the end,			
			A J U	M F U	Y N	no sign			
			A J U	M F U	Y N				
BDPSC002	0706648	DETO?	A J U	M F U	Y N	- could be used as a pallet	4	duplicate	
	3728466		A J U	M F U	Y N	by DETO, 180mm x 100mm x			
			A J U	M F U	Y N	200mm deep	of BDPMA001		
			A J U	M F U	Y N				
BDCGL015	0706583	DETO?	A J U	M F U	Y N	-possible DETO bone fragment			5
	3727789		A J U	M F U	Y N	1" x 1/2", very old, very flat			
			A J U	M F U	Y N				
			A J U	M F U	Y N	could be tortoise			

*See Reverse

540	✓
530	✓
520	✓
510	✓
500	✓

stop @ 6190

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4/1/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
		~~Follow TT~~		

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
~~BDR1H~~	0706561	Mammal	A J U	M F U	Y N	could be used as a pallet			
BMAJH002	3727730		A J U	M F U	Y N	by DETO, no sign			
			A J U	M F U	Y N				
BDCGL016	0706502	DETO	A J U	M F U	Y N	- desert tort bone fragments,			5
	3727531		A J U	M F U	Y N	2 pieces likely marginal			
			A J U	M F U	Y N	scutes from plastron, cracking			
			A J U	M F U	Y N				
BDCSD013	0706522	DETO	A J U	M F U	Y N	- desert tort bone fragment			5
	3727734		A J U	M F U	Y N	- disarticulated, not cracking			
			A J U	M F U	Y N	into pieces, piece of costal / ~~marginal~~			
			A J U	M F U	Y N	on carapace 2" x 1", broke			
			A J U	M F U	Y N	into two pieces			
BDCSC002	0706543	DETO	A J U	M F U	Y N	- deto bone fragment, one piece			5
	3727801		A J U	M F U	Y N	starting to crack / erode			
			A J U	M F U	Y N	likely marginal 1" x 1"			
			A J U	M F U	Y N				
BMAJH003	0706532	Mammal	A J U	M F U	Y N	- could be used as a pallet for			
	3728034		A J U	M F U	Y N	DETO, too short for BUOW			
			A J U	M F U	Y N				
BMASD015	0706525	Mammal	A J U	M F U	Y N	- mammal burrow, narrows but			
	3728402		A J U	M F U	Y N	could be modified for BUOW / DETO			

*See Reverse

use, likely badger foraging burrow

Stop @ 6190

~~6490~~ ~~460~~ ~~430~~ ~~400~~ ~~370~~ ~~340~~ ~~10~~ ~~80~~
~~90~~ ~~450~~ ~~20~~ ~~390~~ ~~60~~ ~~30~~ ~~40~~ ~~70~~
~~70~~ ~~440~~ ~~10~~ ~~380~~ ~~50~~ ~~20~~ ~~90~~ ~~60~~

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe Date: 4/1/09 Page 3 of 3

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End	1700	86°F	6-8 mph NW	10% high thin

GPS # 3

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAJH005	0706417,		A J U	M F U	Y N	Small mammal (Class 4 possible DETO pellet)			
	3727946		A J U	M F U	Y N				
BMAJJ005	0706398		A J U	M F U	Y N	Large mammal probably Canis latr.			
	3727537		A J U	M F U	Y N				
BLSSC001	0706385		A J U	M F U	Y N	Single individual perched in Mesquite tree			
	3727547		A J U	M F U	Y N				
BMAJH006	0706389		A J U	M F U	Y N	Small mammal (potential for DETO)			
	3727959		A J U	M F U	Y N				
~~BDCJH001~~			A J U	M F U	Y N				
BMASC010	0706297		A J U	M F U	Y N	Small mammal (potential for DETO)			
	3728005		A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

6810 ✓
6820 ✓ (fill-in)

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/1/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,6	F4 to Row F5	SDA	GLH

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCGL017	0706808 3729495	DETO	A J U	M F U	Y N	desert tort bone, 1/4" x 1/2" piece of marginal			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCGL020	0706808 3729920	DETO?	A J U	M F U	Y N	possible use by deto, likely badger foraging, no sign	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCGL018	0706812 3730007	DETO	A J U	M F U	Y N	one small piece of flat bone, possible DETO bone 1/4" x 1/4"			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

3729909, 704648
3729938, 704576
3729968, 703904
3729980, 703944
> Archeo DETO carcasses

4650	✓	4630	✓
40	✓	4620	✓

619
937 1126
Lance

FA Row to
3728200 end

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/2/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
focused	1,6		SDA	GLU

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	12:07pm	85°F	8-17mph	0% CC
Mid-day	~~4:24pm~~			
End	4:24pm	84°F	7-22mph	0% CC, hazy

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDPSD013	0704641 3728492	DETO?	A J U	M F U	Y N	tort pallet 7"x4"x8" deep	4		
			A J U	M F U	Y N	no sign, good shape in desert			
			A J U	M F U	Y N	pavement			
			A J U	M F U	Y N				
BMASD016	0704637 3729101	mammal/ DETO!	A J U	M F U	Y N	- large mammal burrow, only	4?		
			A J U	M F U	Y N	Neotoma scat, bottom flattened,			
			A J U	M F U	Y N	not tortoise shape but could			
			A J U	M F U	Y N	be used by DETO/BUOW, in wash			
			A J U	M F U	Y N	under Galleta grass			
			A J U	M F U	Y N	12"x12", can't see to end			
			A J U	M F U	Y N				
~~BSD~~ BDSSD002	0704643 3729304	DETO	A J U	M F U	Y N	6" long, 3/4" wide		2/3	
			A J U	M F U	Y N	shiny, medium brown			
			A J U	M F U	Y N				
			A J U	M F U	Y N	very large (length)			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPGL021	0704653 3729423	DETO?	A J U	M F U	Y N	- could be used as a	4		
			A J U	M F U	Y N	pallet for DETO, round			
			A J U	M F U	Y N	10"x10"x18" deep			
			A J U	M F U	Y N				

*See Reverse

Utah milkweed 0704642/3729710

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4/2/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCGL019	0704658	DETO	A J U	M F U	Y N	desert tort bone fragment,			5
	3729714		A J U	M F U	Y N	one piece, marginal			
			A J U	M F U	Y N	3/4"x3/4", bone			
			A J U	M F U	Y N				
			A J U	M F U	Y N	starting to erode			
			A J U	M F U	Y N				
BDCGL020	0704648	DETO	A J U	M F U	Y N	-4 pieces, large ~3"x1 1/2"			5
	3729910		A J U	M F U	Y N	one piece of scuts still on			
			A J U	M F U	Y N	bone, adult DETO			
			A J U	M F U	Y N				
BDCGL021	0704660	DETO	A J U	M F U	Y N	-2 scutes, downstream from			5
	3729918		A J U	M F U	Y N	pieces of BDCGL020			
			A J U	M F U	Y N				
BDPGL022	0704613	DETO	A J U	M F U	Y N	-pallet, likely tortoise	4		
	3729735		A J U	M F U	Y N	7"x5"x10"			
			A J U	M F U	Y N				
B~~MA~~GL0~~[illegible]~~17 KB	0704616	~~[illegible]~~	A J U	M F U	Y N	-possible kit fox burrow			
	3729079	kit fox	A J U	M F U	Y N	turns left, coyote scat			
			A J U	M F U	Y N	present			
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Utah milkweed 0704634/3729723 (numerous)

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4/2/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments)		
							Burr	Scat	Shell
BMAGL034	0704622 3728854	mammal	A J U	M F U	Y N	- badger foraging burrow, could be used by DETO / less likely for BUBW, can see to end			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Utah milkweed 0704631 / 3728692 (?)

~~F8/F9~~ ~~480~~ ~~70~~ ~~60~~ F8, F9 6250 | X | ~~450~~ ~~40~~ ~~30~~ 6220 | X | ~~then continue on F9~~ ~~180~~ ~~190~~ ~~160~~ ~~150~~ F9 F10 F11 F12 6970 | ✓ | 940 | ✓ | 910 | ✓ | 880 | ✓ 60 | ✓ | 930 | ✓ | 900 | ✓ | 870 | ✓ 50 | ✓ | 920 | ✓ | 890 | ✓ | 860 | ✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/2/09

Page 1 of ____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	3, ~~4~~, ~~5~~ 9 5	F8 F9	SCA - 3 JJI - 5	JHU - ~~4~~ 9

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Recorded on Unit# 3

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
~~BMASJ~~			A J U	M F U	Y N	Large mammal dig (potential for DETO)			
BMASC011	0706203		A J U	M F U	Y N				
	3727542		A J U	M F U	Y N				
BMAJH007	0706216		A J U	M F U	Y N	Mammal burrow (potential for DETO pallet)			
	3727878		A J U	M F U	Y N				
BMAJH008	0706209		A J U	M F U	Y N	Small mammal burrow (potential for DETO pallet)			
	3727887		A J U	M F U	Y N				
BMASC012	0706203		A J U	M F U	Y N	Large mammal burrow (potential for DETO)			
	3728233		A J U	M F U	Y N	Small bone frag. (potential DETO carcass)			
BMAJJ006	0706221		A J U	M F U	Y N	mammal burrow complex 2 burrows (potential for DETO)			
	3728228		A J U	M F U	Y N				
BMAJJ007	0706973		A J U	M F U	Y N	mammal burrow (potential for DETO pallet)			
	3727360		A J U	M F U	Y N				
BMAJH009	0706959		A J U	M F U	Y N	mammal burrow (potential for DETO pallet)			
	3726918		A J U	M F U	Y N				
BMAJJ008	0706967		A J U	M F U	Y N	mammal burrow (potential for DETO pallet)			
	3726814		A J U	M F U	Y N				
BMAJJ009	0706968		A J U	M F U	Y N	Mammal burrow (potential for DETO)			
	3726717		A J U	M F U	Y N	Complex (2) entrances			
BMAJH010	0706952		A J U	M F U	Y N	Small burrow (potential for JUV. DETO pallet)			
	~~362~~ 3726632		A J U	M F U	Y N				

*See Reverse

F-9	6970	X	6940	X	6910	X	6880	X
F-10	60	X	30	X	6900	X	870	X
F-11	50	X	20	X	6890	X	860	X
F-12								

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 2 ~~March~~ April 09

Page 2 of _____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
			SCA - 3 JJI - 5	JHU - 9

Data on GPS #3

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End		98° F	16-18 mph SW	Clear

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDRJJ002	0706977		A J U	M F U	Y N	Class 4 some deterioration 180 mm wide 80 mm tall			
	3726542		A J U	M F U	Y N	~300 mm deep (other mammals are using it currently)			
BMAJJ010	0706972		A J U	M F U	Y N	burrow (potential DETO pellet)			
	3726132		A J U	M F U	Y N				
BMAJH011	0706931		A J U	M F U	Y N	mammal burrow (potential DETO)			
	3726225		A J U	M F U	Y N				
BMAJJ011	0706939		A J U	M F U	Y N	mammal/burrow (potential DETO)			
	3726785		A J U	M F U	Y N				
BKBSC001	0706918		A J U	M F U	Y N	Kit fox complex scat outside of burrows			
	3726894		A J U	M F U	Y N	2 burrow entrances			
BMASC013	0706890		A J U	M F U	Y N	Mammal burrow (potential DETO)			
	3727154		A J U	M F U	Y N				
BMAJH012	0706897		A J U	M F U	Y N	Mammal burrow (potential DETO pellet)			
	3726574		A J U	M F U	Y N				
BKBSC002	0706861		A J U	M F U	Y N	Kit fox burrow w/scat at entrance (potential for DETO)			
	3726525		A J U	M F U	Y N				
BMAJH013	0706872		A J U	M F U	Y N	Mammal burrow (Potential DETO)			
	3726665		A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

707030		70		110		150		190	
40		80		120		160		200	
50		090		130		170		210	
60		100		140		180		220	

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe Date: 4/3/09 Page 1 of 1

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	3,	F4 to Row F5, F6	MRI, SCA	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	0900	72.0	7.7mph/W	0% cc
Mid-day	1219	78.2	10.1mph/W	0% cc
End	1530	76.0	15mph/N	100% cc

Data recorded on GPS Unit # 3

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBSC ~~[illegible]~~ 003	0707035/3729669		A J U	M F U	Y N	Kit Fox Burrows, no SCAT			
BKBSC ~~[illegible]~~ 004	~~[illegible]~~ 707088/3729448 ← BKB004		A J U	M F U	Y N	potential BLOW. no SCAT.			
BUXOMR001	707061/3728698		A J U	M F U	Y N	50 cal Round. Area marked with orange Flagging.			
BMAMR010	707064/3728904		A J U	M F U	Y N	no SCAT.			
BMASC014	707082/3729889		A J U	M F U	Y N	Kit Fox SCAT Present. Potential PB,			
BKBSC001	707078/3729565	Tortoise	A J U	M F U	Y N	no SCAT Present. Class 4 180CM X 110CM Pellet	NO		
BKBSC005	707079/3729147		A J U	M F U	Y N	~~[illegible]~~ Den Multiple openings, SCAT Present from KF			
BKBSC ~~[illegible]~~	707094/3729168		A J U	M F U	Y N	SCAT present from KF, Fresh.			
BKBSC ~~[illegible]~~	707091/3729327	Tortoise	A J U	M F U	Y N	no SCAT. opening facing North.	Pellet	150CM W X 260CM L	
BMASC015	707019/3729827		A J U	M F U	Y N	potential PB. no SCAT sign.			
BKBSC007	707181/3729916		A J U	M F U	Y N	7 openings, fresh Tracks, SCAT, KF DEN			
BBCMR002	707142/3729626		A J U	M F U	Y N	2 Barrel Cactus @ this location.			
BDESC003	707156/3728571		A J U	M F U	Y N	Bone frag from Tortoise			Frag.
BMASC016	707162/3729543		A J U	M F U	Y N	no SCAT present			
DPBSC004	707174/3729515		A J U	M F U	Y N	no SCAT 160CM W X 80CM T	Pellet		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N	DUST STORM !!			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

BKBSC

BKBSC

BKB004

BDPSC003

*See Reverse

whiptail

uTA

Zebra Tail

Horned lizard

C. atrox on 4-2-09 - west of current survey area

0710500	✓	540	✓	580	✓	620	✓	660	✓	700	✓	740	✓	780	✓	820	✓	860	✓	900	940✓
510	✓	550	✓	590	✓	630	✓	670	✓	710	✓	750	✓	790	✓	830	✓	870	✓	910	950✓
520	✓	560	✓	600	✓	640	✓	680	✓	720	✓	760	✓	800	✓	840	✓	880	✓	920✓	960✓
530	✓	570	✓	610	✓	650	✓	690	✓	730	✓	770	✓	810	✓	850	✓	890	✓	930✓	970✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe Date: 04/05/09 Page 1A of _____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,4,6,9	K4, K5	SDA-1 ADA-4	PBR-9 GLU-6

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	8:45AM	68°F	5 to 6 mph	0% CC
Mid-day	12:23PM	77°F	3 to 4 mph	0% CC
End				

0710970 ↑ 710000 709990 709980

↓ numerous round-tailed ground squirrel burrows, too small for BUOW

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMASD017	~~0170~~ 0710586 3729524	mammal	A J U	M F U	Y N	badger foraging burrow, could be used by BUOW / DETO			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
~~BMASD018~~	~~0710639 3729541~~	~~mammal~~	A J U	M F U	Y N	~~badger foraging burrow, could be used by BUOW~~			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAGL035	0710626 3729622	mammal	A J U	M F U	Y N	- badger foraging burrow, could be used as shelter for DETO, would need modifications for BUOW use			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAGL036	0710632 3729815	mammal	A J U	M F U	Y N	- foraging burrow (badger?) could be used as shelter for DETO (narrows to small mammal burrow quickly)			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCAD023	0710822 3730007	DETO	A J U	M F U	Y N	- bone fragment, desert tortoise, ~~[illegible]~~ 2cm x 2.5cm starting to peel, old			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

barn swallow (migrating)

annuals dried up

490	X	460	X	430	X	400	X	370	✓	340	✓
480	X	450	X	420	X	390	X	360	✓	330	✓
470	X	440	X	410	X	380	X	350	✓	320	✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 04/05/09

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Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	7,5,3	K4 K5	SC CG MR	GPS #3 Data

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	0846	68°	5mph max	0% CC
Mid-day	1230	80°	4.1 avg - 11.5 max	0% CC
End	1607	79.5	2.2 avg - 8.0 max	0% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMACG020	0710485/3729834		A J U	M F U	Y N	coyote scat. Potential Pallet			
			A J U	M F U	Y N				
BMACG021	0710482/3729634		A J U	M F U	Y N	no scat Present			
			A J U	M F U	Y N				
BMAMR011	0710446/3729547		A J U	M F U	Y N	no scat Present, Potential Pallet			
			A J U	M F U	Y N				
BMASC017	0710412/3729894		A J U	M F U	Y N	no scat Present.			
			A J U	M F U	Y N				
BMAMR012 → BMAMR012	0710419/3729638		A J U	M F U	Y N	no scat present. Potential Pallet			
			A J U	M F U	Y N				
BMACG022	0710383/3729548		A J U	M F U	Y N	coyote, kit Fox Scat. Potential BUOW			
			A J U	M F U	Y N				
BMACG023	0710369/3729485		A J U	M F U	Y N	coyote, kit Fox scat. White wash present from BUOW @ entrance			
			A J U	M F U	Y N				
BKBCG004	0710320/3729588		A J U	M F U	Y N	scat, Freshly Dug			
			A J U	M F U	Y N				
BMACG024	0710317/3729840		A J U	M F U	Y N	no scat			
			A J U	M F U	Y N				
BKBCG005	0710263/3729731		A J U	M F U	Y N	scat Present			
			A J U	M F U	Y N				
BPOT Drop MR 001	0710270/3729858		A J U	M F U	Y N	Artifact			

*See Reverse

370	X	340	X	310	X	280	X	~~250~~		~~220~~			
360	X	330	X	300	X	270	X	~~240~~		~~210~~			
350	X	320	X	290	X	260	X	230		~~200~~			

UTA
Zebra Tail
Whip Tail
Iguana
Horned Lizard

310	✓	280	250		220		190		160		130		100		070			
300	✓	270	240		210		180		150		120		090		060			
290	✓	260	230		200		170		140		110		080		050			
															040			
															030			

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/5/09

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Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,5 B	K4 K5		

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAC9 025	0710257/3729965		A J U	M F U	Y N	no scat. Badge foraging			
			A J U	M F U	Y N				
BDCMR011	0710269/3730051	Tort	A J U	M F U	Y N	2 small Bone Fragments			C-4
			A J U	M F U	Y N				
BMASC012	0710214/3729867		A J U	M F U	Y N	Kit fox scat present, Badger claw marks			
			A J U	M F U	Y N				
BMAMR013	0710210/3729873		A J U	M F U	Y N	no scat, fresh dig, Badger claw Marks			
			A J U	M F U	Y N				
BMASC019	0710177/3729934		A J U	M F U	Y N	no scat present			
			A J U	M F U	Y N				
BMAMR014	0710128/3729857		A J U	M F U	Y N	no scat present.			
			A J U	M F U	Y N				
BMAC6026	0710042/3730084		A J U	M F U	Y N	white wash, SCAT Present			
			A J U	M F U	Y N				
BDCAD 024	0710072/3729484	Tort	A J U	M F U	Y N	Fragment > size 2.5 CM X 4 CM	mineralized		C-5
			A J U	M F U	Y N				
BDCAD 025	[redacted]	Tort	A J U	M F U	Y N	Fragment > size 2.5 X 3.5 CM	mineralized		C-5
✓ ✓	0709986/3729575	✓	A J U	M F U	Y N		✓		
			A J U	M F U	Y N				
BMASC020	0710002/3729631		A J U	M F U	Y N	2 openings			
			A J U	M F U	Y N				

*See Reverse

020	020	✓
010	010	✓
000	000	✓
990	990	✓
980	980	✓

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4/5/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments)		
							Burr	Scat	Shell
[illegible]		[illegible]	A J U	M F U	Y N		[illegible]		[illegible]
BDCMROR	0709983/3729748	Tort	A J U	M F U	Y N	Fragment winterclimed 3.5 cm x 4 cm			C-S
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

~~0710~~ ~~070~~	0709	970	✓	940	✓	910	✓	880	✓	850	✓	820	✓	790	✓	760	✓	730	✓	700	✓	670	✓	640	✓
		960	✓	930	✓	900	✓	870	✓	840	✓	810	✓	780	✓	750	✓	720	✓	690	✓	660	✓	630	✓
		950	✓	920	✓	890	✓	860	✓	830	✓	800	✓	770	✓	740	✓	710	✓	680	✓	650	✓	620	✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE Date: BLYTHE 4/6/09 Page 1 of 3

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused		~~#~~ K4 ADA-4 ~~#~~ K5 CGE-3		PBR-9

Data recorded on GPS # 3

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	0820	67/13%	4 9/N. max 12	<1% cloud
Mid-day	1345	81	2 N	0% clouds
End	1647	90/5% Humidity	3 - 4 max	0% clouds

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCAD026	0709947		A J U	M F U	Y N	bone fragment 1.5x1.5 cm			x5
	3729875		A J U	M F U	Y N	slightly mineralized			
			A J U	M F U	Y N				
BMAP003	0709931		A J U	M F U	Y N	mammal foraging burrow			
	3729411		A J U	M F U	Y N	potential BT pallet			
BDCAD027	0709940		A J U	M F U	Y N	bone fragment 2x2.5 cm			x5
	3729971		A J U	M F U	Y N	highly mineralized			
~~BMACG027~~	0709883		A J U	M F U	Y N				
BMACG0027	3729392		A J U	M F U	Y N	mammal foraging burrow			
~~BMAD034~~			A J U	M F U	Y N	potential BT pallet.			
BMAD034	0709884		A J U	M F U	Y N	"			
	3729463		A J U	M F U	Y N	"			
~~BDCAD028~~	0709880		A J U	M F U	Y N	bone fragment 3x4 cm			x5
BDCAAD028	3729761		A J U	M F U	Y N	slightly mineralized plastron			
BDCAD029	0709825		A J U	M F U	Y N	bone fragment 1.5x2 cm			x
	3730061		A J U	M F U	Y N	fully mineralized			
BDCAD030	0709832		A J U	M F U	Y N	" 0.5x0.5 cm			x
	3729638		A J U	M F U	Y N	"			
~~BMAD035~~	0709819		A J U	M F U	Y N	mammal foraging burrow			
BMAAD035	3729504		A J U	M F U	Y N	potential burrowing owl use			
~~BMAD036~~	0709822		A J U	M F U	Y N	"			
BMAAD036	3729679					"			

*See Reverse

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4/6/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused			CG AD ~~PB~~	PB

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCCG009 ~~BDCG9~~	0709790		A J U	M F U	Y N	bone fragment 2.5 x 1 cm			X
	3729756		A J U	M F U	Y N	moderately mineralized			
BDCAD031	0709758		A J U	M F U	Y N	" 1.5 x 2 cm			X
	3729787		A J U	M F U	Y N	lightly mineralized			
			A J U	M F U	Y N				
BDCCG010	0709744		A J U	M F U	Y N	Bone fragment from carapace			
	3729910		A J U	M F U	Y N	fully mineralized 4x1 cm			X
BDCCG011	0709741		A J U	M F U	Y N	Bone fragment 1x2 cm			X
	3730036		A J U	M F U	Y N	not mineralized			
BMACG028	0709736		A J U	M F U	Y N	Potential Burrowing out			
	3729751		A J U	M F U	Y N	(no sign however), DT pallet.			
BDCAD032	0709712		A J U	M F U	Y N	2 DT bone fragments			X
	3729739		A J U	M F U	Y N	1.5x2 cm, 1x1 cm			
BDCCG012	0709727		A J U	M F U	Y N	not mineralized			
	3729683		A J U	M F U	Y N	1x1 cm bone fragment; + 2x2cm			X
~~BDCAD034~~			A J U	M F U	Y N	not mineralized. fragment			
~~BMAPB004~~	0709713		A J U	M F U	Y N	Potential burrowing out, DT pallet			
BMAPB004	3729565		A J U	M F U	Y N				
BDCCG013	0709672		A J U	M F U	Y N	bone fragment 2x3 cm.			X
	3729791		A J U	M F U	Y N				
BDCAD033	0709653		A J U	M F U	Y N	bone fragment 1x2 cm.			X
	3729718					+ fragment 1x2 cm.			

*See Reverse

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4/6/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
			AD CG ~~RC~~	PB.

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMACG029	0709624		A J U	M F U	Y N	~~[illegible]~~ ground squirrel			
	3729826		A J U	M F U	Y N	complex in large burrows			
BDCAD034			A J U	M F U	Y N	potential burrowing owl			
	0709639		A J U	M F U	Y N	DT bone 2x2.5 cm			x
	3729905		A J U	M F U	Y N				
BDCAD035	0709642		A J U	M F U	Y N	DT bone 1x2 cm			x
	3729991		A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

0709610	X/X	570	X	530	X	490	X	450	X	410	X	370	/	340	X
600	X/X	560	X	520	X	480	X	440	X	400	X	360	/	330	X
590	X/X	550	X	510	X	470	X	430	X	390	X	350	/	320	X
580	X	540	X	500	X	460	X	420	X	380	X				

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE Date: ~~4/6/09~~ 4/7/09 Page 1 of 4

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focus	3,4,9	K4 KS	ADA-4 CGE-3	PBR-9

DATA-GPS-4

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	8:40	68°	3 MPH E	CLEAR 3%
Mid-day	2:46	91°	14 AVE MAX 18/S	CLEAR 2%
End	5:40	89°	9 AVE MAX 10/SW	CLEAR 1%

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTENTIAL BURW DETO
BDCAD036	0709573		A J U	M F U	Y N	BONE FRAG - 2CM x 1CM			5	
	3730083		A J U	M F U	Y N	SLIGHT MINERALIZATION				
			A J U	M F U	Y N					
BDCCG014	0709610		A J U	M F U	Y N	BONE FRAG - 1CM x 0.5CM			5	
	3729994		A J U	M F U	Y N	NOT MINERALIZED				
			A J U	M F U	Y N					
BDCCG015	0709603		A J U	M F U	Y N	4 BONE FRAGS 1CM x 1.5CM			5	
	3729979		A J U	M F U	Y N	NOT MINERALIZED				
			A J U	M F U	Y N					
BDCCG016	0709604		A J U	M F U	Y N	2CM x 1.5CM BONE FRAG			5	
	3729933		A J U	M F U	Y N	MINERALIZED				
			A J U	M F U	Y N					
BDCCG017	0709538		A J U	M F U	Y N	2.5CM x 2CM BONE FRAG			5	
	3729705		A J U	M F U	Y N	MINERALIZED				
			A J U	M F U	Y N					
BMAAD077	0709533		A J U	M F U	Y N	MAMMAL FORAGING - BADGER				X X
	3729565		A J U	M F U	Y N					
			A J U	M F U	Y N					
BBCCG001	0709540		A J U	M F U	Y N	BARREL CACTUS - FERRO - 20CM				
	3729555		A J U	M F U	Y N					
BBCPB001	0709540		A J U	M F U	Y N	BARREL CACTUS - FERRO - 13CM				
	3729516									

*See Reverse

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE Date: 4/7/09 Page 2 of 4

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCPB001	0709511		A J U	M F U	Y N	MINERALIZED SHELL BONE FRAG 1CM x 2CM			5
	3729590		A J U	M F U	Y N	NOT ET			
BDCAD037	0709517		A J U	M F U	Y N	SHELL FRAG - SLIGHT MINERALIZE			5
	3729691		A J U	M F U	Y N	2.5CM x 1.0 CM			
BDCPB002	0709573		A J U	M F U	Y N	SHELL FRAG - SLIGHT MINERALIZATION			5
	3729765		A J U	M F U	Y N	2.0CM x 2.5 CM			
BDCAD038	0709525		A J U	M F U	Y N	3 SHELL FRAG. 1CM x 1CM			5
	3729830		A J U	M F U	Y N	NO MINERALIZATION			
BDCAD039	0709516		A J U	M F U	Y N	1CM x 2.5 CM BONE			5
	3729948		A J U	M F U	Y N	MINERALIZED			
BDCAD040	0709499		A J U	M F U	Y N	1CM x 2 CM LEG BONE			5
	3730073		A J U	M F U	Y N	MINERALIZED			
BDCPB003	0709552		A J U	M F U	Y N	2.5CM 2.0CM			5
	3729977		A J U	M F U	Y N	MINERALIZED			
BDCCG018	0709540		A J U	M F U	Y N	1.5CM x 2.0 CM			5
	3729968		A J U	M F U	Y N	MINERALIZED			
BDCAD041	0709478		A J U	M F U	Y N	1.5CM x 1.0CM			5
	3729726		A J U	M F U	Y N	MINERALIZED			
BDCCG019	0709490		A J U	M F U	Y N	1.0CM x 1.0CM			5
	3729748		A J U	M F U	Y N	MINERALIZED			
BDCCAD042	0709486		A J U	M F U	Y N	1.5CM x 3.0CM			
	3729717					MINERALIZED			

Mislabeled in GPS as BBCAD037

POTENTIAL BLOW DETO

*See Reverse

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE Date: 04/07/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential BUOW	DETO
BDCPB004	0709469		A J U	M F U	Y N	~~3.0cm x 2cm~~ 3cm x 2.5			5		
	3729663		A J U	M F U	Y N	MINERALIZED					
BDCAD043	0709482		A J U	M F U	Y N	3cm x 2cm			5		
	3729652		A J U	M F U	Y N	MINERALIZED					
BMACG030	0709493		A J U	M F U	Y N	FACES NW - POTENTIAL DETO PALLET				X	X
	3729552		A J U	M F U	Y N	+ BUOW					
BDCCG020	0709449		A J U	M F U	Y N	1.5cm x 1.5cm BONE			5		
	3729621		A J U	M F U	Y N	MINERALIZED					
BBCCG002	0709450		A J U	M F U	Y N	BARREL CACTUS - FERRO					
	3729840		A J U	M F U	Y N	20cm					
BMAPB004	0709409		A J U	M F U	Y N	FACES NW				X	X
	3729581		A J U	M F U	Y N	15cm					
BBCCG003	0709390		A J U	M F U	Y N	BARREL CACTUS - FERRO					
	3729478		A J U	M F U	Y N	22 cm					
BDCCG021	0709391		A J U	M F U	Y N	MINERALIZED SHELL					
	3729982		A J U	M F U	Y N	2cm x 1.5 cm					
BDCAD044	0709418		A J U	M F U	Y N	1cm x 2cm					
	3730043		A J U	M F U	Y N	MINERALIZED SHELL					
BDCAD045	0709349		A J U	M F U	Y N	1.5cm x 1cm SHELL					
	3729895		A J U	M F U	Y N	MINERALIZED					
			A J U	M F U	Y N						

*See Reverse

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 04/07/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCCG022	0709371		A J U	M F U	Y N	~~1cm x 0.5~~ 1cm x 0.5cm			5
	3729762		A J U	M F U	Y N	MINERALIZED SHELL FRAG			
BDCCAD04	0709339		A J U	M F U	Y N	SHELL FRAG. 2cm x 2.5cm			5
	3729813		A J U	M F U	Y N	MINERALIZED			
BDCPB005	0709317		A J U	M F U	Y N	SHELL FRAG 2cm x 2.5cm			5
	3729915		A J U	M F U	Y N	NOT MINERALIZED			
BDCPB006	0709359		A J U	M F U	Y N	SHELL FRAG 2cm x 2.5cm			5
	3730047		A J U	M F U	Y N	SLIGHTLY MINERALIZED			
BDCPB007	0709360		A J U	M F U	Y N	SHELL FRAG 1cm x 2cm			5
	3729969		A J U	M F U	Y N	NOT MINERALIZED			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

6210 X 180 X 150 X 120 X 090 060 030
200 X 170 X 140 X 110 X 080 050 020
190 X 160 X 130 X 100 X 070 040 010
~~180~~

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/8/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focus	DATA @ GPS-4	E9-E12	CGE-3 PBR-9 ADA-4	

	Time	Temp RH	Wind Sp/Dir	Weather & % Cloud
Start	8:54	70° 25%	3.5 /E	CLEAR 1%
Mid-day	1:09	76° 16%	6 SW	CLEAR 2%
End	4:51	70°	6 W	CLEAR 5-10%

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential Usage Below Deto
BDCAD047	0706205		A J U	M F U	Y N	6 FRAGS - NOT MINERALIZED			5	
	3727240		A J U	M F U	Y N	FROM ADULT				
BDCPB008	0706209		A J U	M F U	Y N	PLASTRON ~~FRAG~~ FRAG - NOT MINERALIZED			5	
	3727199		A J U	M F U	Y N	FROM ADULT				
BMACG037	0706195		A J U	M F U	Y N	BADGER FORAGING BURROW				X
	3726997		A J U	M F U	Y N	DJ. PALLET POTENTIAL				
~~BDBAD~~ BDBAD007	0706199		A J U	M F U	Y N	POTENTIAL DESERT TORTOISE BURROW			X	X
	3726967		A J U	M F U	Y N	22cm x 15cm GOLETA GRASS				
BDBCG002	0706195		A J U	M F U	Y N	MAMMAL MAY BE MODIFIED / W/KF SCAT			X	X
	3726758		A J U	M F U	Y N	KIT FOX COVER & 6 OPENINGS ← 4				
			A J U	M F U	Y N	30cm x 16cm // 15cm x 10cm				
BDPAD020	0706204		A J U	M F U	Y N	PLUG - GOOD SHAPE	3			X
	3726359		A J U	M F U	Y N	23cm x 11cm				
BMAAD038	0706152		A J U	M F U	Y N	KIT FOX			X	X
	3726413		A J U	M F U	Y N					
BDPPB001	0706173		A J U	M F U	Y N	IN DRAINAGE - CLASSIC SHAPE	3			X
	3726486		A J U	M F U	Y N	28cm x 10cm				
BDPCG002	0706181		A J U	M F U	Y N	UNDER IRONWOOD IN WASH	5			X
	3727306		A J U	M F U	Y N	POTENTIAL PALLET				
BMACG038	0706134		A J U	M F U	Y N	BADGER FORAGING			X	X
	3727488		A J U	M F U	Y N	KIT FOX USAGE				

*See Reverse

5810

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 04/08/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential Usage Below	Deto
BDCPB009	0706132		A J U	M F U	Y N	NOT MINERALIZED BONE			5		
	3727364		A J U	M F U	Y N	2cm x 3cm + 3 FRAGS					
BMAAD039	0706146		A J U	M F U	Y N	BADGER FORAGING				x	x
	3727336		A J U	M F U	Y N						
BKBCG006	0706146		A J U	M F U	Y N	ACTIVE K.B.	5			x	x
	3726646		A J U	M F U	Y N						
BMAPB005	0706120		A J U	M F U	Y N	POTENTIAL D.T - 3 ENTRANCES/BURROWS				x	x
	3726628		A J U	M F U	Y N	IN CELICHE - SCOPE X					
~~BMAPB006~~			~~A J U~~	~~M F U~~	~~Y N~~	~~KIT~~					
~~BK~~ BKBPB001	0706119		A J U	M F U	Y N	KIT FOX = ONE OPENING	5			x	x
	3726831		A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						

*See Reverse

0706115
3726627

UTAH MILKWEED (4 PLANTS)
GROWING ON CRIMERIA

6090	X	6040	X	5990	✓	~~5950~~	✓	~~5910~~	~~5870~~
80	X	30	X	80	✓	5940	✓	~~900~~	~~60~~
70	X	20	X	70	✓	30	✓	5890	5850
60	X	10	X	60	✓	20	✓	5880	40
50	X	6000	X	50	✓	10	✓	5870	30
						5900	✓	5860	20
									10

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 4/9/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	3,4, 9,10,12	E9-E12	CGE-3 PBR-9	Jim-10 James-12

ADA-4 ← Recorded

	Time	Temp RH	Wind Sp/Dir	Weather & % Cloud
Start	8:54	61° 36%	0-1 mph E	CLEAR <1%
Mid-day	2:00	79° 16%	5 mph SW	HIGH CLOUDS/30%
End	5:41	78° 14%	4 mph W	HIGH CLOUDS/80% WISPY

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTENTIAL USAGE BUOW	DETO
BMAJJ012	0706059		A J U	M F U	Y N	BADGER ANIMAL FORAGING MAY BE	5				X
	3727305		A J U	M F U	Y N	USED AS PALLET					
BMAPB006	0706097		A J U	M F U	Y N	BADGER FORAGING	5				X
	3727220		A J U	M F U	Y N	POTENTIAL PALLET					
BMAJJ013	0706058		A J U	M F U	Y N	BADGER FORAGING	5			X	X
	3727150		A J U	M F U	Y N						
BDCJJ001	0706065		A J U	M F U	Y N	BEGINNING TO DISARTICULATE MALE			3		
	3726993		A J U	M F U	Y N	" SCUTES PEELING FROM BONE 20CM					
BDPAD021	0706053		A J U	M F U	Y N	PALLET - POTENTIAL	5				X
	3726981		A J U	M F U	Y N	17cm x 9cm					
BDCAD048	0706048		A J U	M F U	Y N	1x5cm + 1cm x 6.5cm 2 pieces			5		
	3726497		A J U	M F U	Y N	pelvic?					
BDCAD049	0706038		A J U	M F U	Y N	5 FRAGS OLD			5		
	3726711		A J U	M F U	Y N	NEAR POSSIBLE PALLET/BURROW					
BMAJH014	0706005		A J U	M F U	Y N	POSSIBLE BADGER	5			X	X
	3726942		A J U	M F U	Y N	~~X~~ SCOPE					
~~BMAJH015~~			A J U	M F U	Y N						
~~BDPCG~~ BDPJH001	0706009		A J U	M F U	Y N	PALLET 30cm x 25cm x 40cm DEEP	5				X
	3726957		A J U	M F U	Y N	IN WASH UNDER GOLETO,					
BMAPB007 →	SAME LOCATION		A J U	M F U	Y N	8cm x 3 - BONE LOOK HARD	5		5	X	X
BDCPB010 →			A J U	M F U	Y N						

*See Reverse

→ 0706004 3726956

→ 0706006 372954

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 04/09/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTENTIAL USAGE BELOW DETO
BDCADO5D	~~0706~~ 0706026		A J U	M F U	Y N	SCUTE - ADULT			5	
~~BMAC6~~ (050)	3726966		A J U	M F U	Y N					
			A J U	M F U	Y N					
BMAC(031	0706016		A J U	M F U	Y N	BADGER FORAGING, BURROWING,				X X
	3727031		A J U	M F U	Y N	4 OPENINGS				
BKBPB002	0705997		A J U	M F U	Y N	WHITE WASH at apron	5			X X
	3727166		A J U	M F U	Y N					
BMAJJ015	0706030		A J U	M F U	Y N	COULD BE USED AS PALLET	5			X
	3727309		A J U	M F U	Y N	- IN WASH @ BALD VERDE				
BDCJH001	0706013		A J U	M F U	Y N	11CM X 5CM PLASTRON FRAG			5	
	3727417		A J U	M F U	Y N					
BDPJH002	0706009		A J U	M F U	Y N	16CM x 8CM	5			
	3727434		A J U	M F U	Y N					
BMAJJ014	0705963		A J U	M F U	Y N	BADGER FORAGING	5			X X
	3727947		A J U	M F U	Y N					
~~BMAC4~~			A J U	M F U	Y N	POTENTIAL PALLETS - 3	5			X
BMAJJ016	~~0775~~ 0705952		A J U	M F U	Y N	KIT FOX/BADGER				
	3727226		A J U	M F U	Y N	PALLET POTENTIAL				
BMAJH015	0705974		A J U	M F U	Y N	PALLET POTENTIAL	5			X
	~~3727~~ 3727205		A J U	M F U	Y N	BADGE FORAGER				X
			A J U	M F U	Y N					

*See Reverse

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4/09/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential usage below DETO
BDCJH002	0705983		A J U	M F U	Y N	SCUTE - ADULT			5	
	3726957		A J U	M F U	Y N					
BDCJS002	0705924		A J U	M F U	Y N	LARGE TORTOISE ≈ 20CM			5	
	3726946		A J U	M F U	Y N	DISARTICULATED - MOST PIECES				
BDCJH003	0705909		A J U	M F U	Y N	MARGINAL + OTHER BONE			5	
	3726942		A J U	M F U	Y N	6 FROGS - ADULT				
BDCPB011	0705915		A J U	M F U	Y N	IN WOOD RAT MIDDEN			5	
	3726945		A J U	M F U	Y N	2 SCUTES				
BMAJS017	0705925		A J U	M F U	Y N	BADGER FORAGING	5			
	3726968		A J U	M F U	Y N	- POTENTIAL PALLET				
BMAJS018	0705933		A J U	M F U	Y N	KIT FOX	5			X Y
	3727253		A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					

*See Reverse

4610	✓	4590	✓
4600	✓	4580	✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/9/09

Page 1A of 1A

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
focused	1,6	C4-Row ♂7	SDA	GLM

to 3728200)

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	4:05PM	77°F	4 to 6 mph	50% CC
Mid-day	–	–	–	–
End	6:51PM	74°F	7 to 14 mph	80% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDBSD006	Tortoise burrow	DETO	A J U	M F U	Y N	40cm x 25cm, tortoise burrow,	2		
	0704598		A J U	M F U	Y N	turns to right, Neotoma scat			
	3729072		A J U	M F U	Y N	present, could be used by			
			A J U	M F U	Y N	DETO/BUOW, cant see to end,			
~~BDPGL~~		~~DETO?~~	A J U	M F U	Y N	flat bottom			
BDPGL023	0704613	DETO?	A J U	M F U	Y N	- old mammal burrow, abandoned	1		
	3729444		A J U	M F U	Y N	While digging could be used by			
			A J U	M F U	Y N	tortoise after pellet 8" x 7" x 16"			
BDCGL022	0704575	DETO	A J U	M F U	Y N	~~MCL 10~~ missing vertebral bones	3		
	3729936	Carcass	A J U	M F U	Y N	- missing 1/2 plastron, short gular			
			A J U	M F U	Y N	possibly female, adult			
			A J U	M F U	Y N	all vertebrals present, plastron			
			A J U	M F U	Y N	not in area			
			A J U	M F U	Y N	20cm wide x 25cm MCL			
			A J U	M F U	Y N				
BDCGL023	0704571	DETO	A J U	M F U	Y N	28cm MCL x 20cm wide	5		
	3729068	Carcass	A J U	M F U	Y N	plastron, still there, many			
			A J U	M F U	Y N	pieces of bone, no scutes			
			A J U	M F U	Y N	some pieces of carapace			
			A J U	M F U	Y N	♂, adult			
			A J U	M F U	Y N				

*See Reverse

Utah milkweed 0704607/3729435 (10+)
0704576/3729934 (4)
0704585/3728851 (5)

Top 3727520(ish)
Bottom 3725600

6850	6820	790	760	730	700
40	10	780	750	720	690
30	800	770	740	710	680

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/10/09

Page 1 of 1

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Protocol	3,4,9	E/F-10-CGE-3 E/F 13 ~~ADA~~ MRI-4		PBR-9

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	0841	71.0	2.5/W	90% CC
Mid-day	1449	76.5	7.4/W	70% CC
End	1732	73.3	4.4/S/W	30% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential USAGE BUOW	DETO
BNEMR001	0706845/3727161		A J U	M F U	Y N	next to ~~[illegible]~~ Ironwood. Species unk.					
			A J U	M F U	Y N						
[illegible]	[illegible]		A J U	M F U	Y N	[illegible]					
			A J U	M F U	Y N						
BDCPB012	0706833/3725929		A J U	M F U	Y N	Bone fragment 2.5X3 cm			5		
			A J U	M F U	Y N						
BMAMR015	0706761/3726820		A J U	M F U	Y N	no scat present				X	X
			A J U	M F U	Y N						
BDSC6002	0706789/3725958	DT	A J U	M F U	Y N	possible this year from Adult.		2.5			
			A J U	M F U	Y N						
BMAPB008	0706713/3726737		A J U	M F U	Y N						X
			A J U	M F U	Y N						
BDSMR004	0706731/3725956	DT	A J U	M F U	Y N	From Adult DT 8X2.5 cm		3			
			A J U	M F U	Y N	Potential Veg Pallet 0706722/3725930					
BMACG032	0706682/3726690		A J U	M F U	Y N	No scat, under Palo verde					
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						

*See Reverse

UTA
Zebra
Whip

4570	✓
60	✓
50	✓
40	✓

4530	✓
4520	✓
4510	✓
4500	✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/10/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,6	C4 Row to C5 (3728200)	SDA -1	GLH -6

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	10:11AM	72°F	2 to 4 mph	75% CC
Mid-day				
End	16:30PM	77°F	3 to 7 mph	30% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMASD01B	0704553 3728481	mammal	A J U	M F U	Y N	can see to end, could be used by DETO, would need modification to be deep enough for BLOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCGL024	0704575 3728573	tortoise bone fragment	A J U	M F U	Y N	- one piece of DETO bone fragment 4"x1"	5		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMASD019	0704561 3729322	mammal	A J U	M F U	Y N	- burrow, round entrance, turns to right (possibly) could be used by BLOW, possibly DETO, may be kit fox but unsure			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDBGL01A	0704533 3729814	DETO?	A J U	M F U	Y N	possible tortise burrow, flattened bottom, can't see to end 10"x8" narrows	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDBGL015	0704542 3729710	DETO?	A J U	M F U	Y N	12"x10", tortise shaped dome, under palo verde under bushes & ~~in~~ palo verde faces north	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

3 15
4850
-3700
850

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4/10/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBSD013	0704548	kit fox	A J U	M F U	Y N	possible kit fox burrow, turns			
	3729365		A J U	M F U	Y N	to left, could be used by			
			A J U	M F U	Y N	DETO/BUOW			
BDSSD003	0704546	DETO	A J U	M F U	Y N	tortoise scat, very large	4		
	3729317		A J U	M F U	Y N	but cigar shaped, 1" wide x			
			A J U	M F U	Y N	2" long, picture, bleached, eroded			
			A J U	M F U	Y N				
BKBSD014	0704545	kit fox	A J U	M F U	Y N	kit fox burrow, turns left, ~~no~~ old			
	3728482		A J U	M F U	Y N	scat present			
			A J U	M F U	Y N				
BKBGL018	0704516	kit fox	A J U	M F U	Y N	kit fox burrow, in drainage, cant			
	3728593		A J U	M F U	Y N	see to end, could be used by			
			A J U	M F U	Y N	BUOW/DETO, no scat present			
			A J U	M F U	Y N				
BDCSD014	0704489	DETO bone frag	A J U	M F U	Y N	tortoise bone fragments,	5		
	3729215		A J U	M F U	Y N	half of plastron still intact,			
			A J U	M F U	Y N	carapace in fragments,			
			A J U	M F U	Y N	some scutes (fallen off)			
			A J U	M F U	Y N	present, adult pelvic			
			A J U	M F U	Y N	bone present, likely ♀			
			A J U	M F U	Y N	MCL = ~ 9"			
						width = 8"			

*See Reverse

Utah vine milkweed 0704499/3729796

0704498/3729381

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4/10/09

Page 3A of 3A

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day	raining	in Arizona	to the east,	winds cool
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDBGL016	0704507 3729017	DETO?	A J U	M F U	Y N	18"x 8", turns can't see to end, likely tortoise, could be modified for BUOW	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Utah milkweed 0704505/3728775

4490	✓	4450	
80	✓	40	
70	✓	30	did bottom of
60	✓	20	←

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4/11/09

Page 1A of 2A

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
focused	1,6	C4 Row to C7 to 3728200	SDA, GLK	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	9:24AM	67°F	0-2 mph	
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMASD020	0704486 3729824	mammal	A J U	M F U	Y N	burrow wide/tall enough for use by BUOW/DETO, turns to left, appears to be currently occupied by woodrat, under palo verde			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDBGL017	0704484 3729930	DETO?	A J U	M F U	Y N	possible tortoise burrow, flat bottom, turns to right could be used by BUOW, but not likely, 12" x 8"	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPGL024	0704484 3729917		A J U	M F U	Y N	-possible tortoise pallet 12" x 9" x 20" deep	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDSSD004	0704484 3729666	DETO	A J U	M F U	Y N	-tortoise scat, ~~2"x~~ 1" x 1/2"	7	4	
			A J U	M F U	Y N	-scaly, starting to erode			
			A J U	M F U	Y N				
BDPGL025	0704475 3728764	DETO?	A J U	M F U	Y N	-badger foraging in small mammal burrow, could be used as a tortoise pallet 8" x 5" x 8"	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Utah milkweed 0704492/3729016 (4)

0704487/3729532 (4)

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4/11/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day	1:04	66°	0-5	65%
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDBSD007	0704457 3728406	DETO Active?	A J U	M F U	Y N	active tortoise burrow,	2		
			A J U	M F U	Y N	11"x 7" can't see to end			
			A J U	M F U	Y N	tortoise tracks inside burrow (possible)			
			A J U	M F U	Y N	turns to left, could be used by BUOW			
			A J U	M F U	Y N	flat bottom, dome shaped, large apron			
			A J U	M F U	Y N				
BDPGL026	0704431 3728235	DETO?	A J U	M F U	Y N	~~possible tort.~~ mammal dig,	4		
			A J U	M F U	Y N	could be used by tort as pallet			
			A J U	M F U	Y N	8"x6"x15"			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

6670	~~X~~	6630	X	590	X	550	X	510	X	470	
660	~~X~~	620	X	80	X	40	X	500	X	460	
50	~~X~~	610	X	70	X	30	X	490		450	
40	X	600	X	60	X	20	X	480		440	

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/11/09

Page 1 of 2

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	3,4,9	E/F-10 to E/F13	CGE-3 MRI-4 PBR-9	~~SCA-5~~

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	8:49	63°	3 / SW	High Cloud / 95%
Mid-day	12:11	73	3 SW	High Cloud 65%
End	18:31	71	13	Distant High Cloud 2%

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential USAGE SHOW	DETO
BMAPR~~008~~	0706636		A J U	M F U	Y N	2 BURROWS -	5			X	X
010	~~3726~~ 3726740		A J U	M F U	Y N	BADGER SCRAPS					
			A J U	M F U	Y N						
BDPCG009	0706625		A J U	M F U	Y N	~~w/ BADGER~~ 17cm x 9cm	5				X
	3726653		A J U	M F U	Y N	RIVER BANK					
			A J U	M F U	Y N						
BDPMR011	0706646		A J U	M F U	Y N	ACTIVE WOODRAT	5				X
	3726369		A J U	M F U	Y N	30cm x 19cm					
			A J U	M F U	Y N	w/ KIT FOX SCAT					
BMACG039	0706657		A J U	M F U	Y N		5				X
	3725767		A J U	M F U	Y N						
			A J U	M F U	Y N						
BNEMR002	0706654		A J U	M F U	Y N	OLD NOT USED					
	3726671		A J U	M F U	Y N	IN PALO VERDE					
			A J U	M F U	Y N						
BDCPR~~007~~ 013	0706660		A J U	M F U	Y N	1cm x 0.5cm 2 FRAGS			5		
	3726727		A J U	M F U	Y N	NOT MINERALIZED					
BMAMR015-1	0706597		A J U	M F U	Y N	COYOTE MADE	5			X	X
	3726895		A J U	M F U	Y N						
BMAMR016	0706600		A J U	M F U	Y N	BADGER FORAGING				X	X
	3726796		A J U	M F U	Y N	POSSIBLE DETO PALLET					
						4 OPENINGS					

*See Reverse

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4/11/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTENTIAL USAGE BLOW DETO
✓ BNECG001	0706613		A J U	M F U	Y N	BALL NEST IN				
	3726690		A J U	M F U	Y N	~~PALOVERDE~~ IRONWOOD				
✓ BMAPB009	0706597		A J U	M F U	Y N	POSSIBLE PALLET USAGE				X
	3726290		A J U	M F U	Y N	UNKNOWN MAMMAL - NO SCAT				
✓ BDPPB002	0706583		A J U	M F U	Y N	2 PALLETS				X
	3725654		A J U	M F U	Y N	① 30cm x 13cm ② 17cm x 10cm				
✓ BMAMR017	0706556		A J U	M F U	Y N	COYOTE -	5			X
	3726599		A J U	M F U	Y N					
✓ BNECG002	0706523		A J U	M F U	Y N	IRONWOOD - BASKET TYPE				
	3726556		A J U	M F U	Y N					
✓ BDBCG003	0706532		A J U	M F U	Y N	≥ EST. 30cm x 15cm	2-5			X
	3726279		A J U	M F U	Y N					
~~BDPMR011~~			A J U	M F U	Y N					
✓ BDPMR012	0706503		A J U	M F U	Y N	30cm x 10cm	5			
	3726296		A J U	M F U	Y N					
✓ BDCCG023	0706525		A J U	M F U	Y N	6cm x 2cm			5	
	3726781		A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					

*See Reverse

66490	X	450	X	410	X	370	X	330	X	290	X	250	
480	X	440	X	400	X	360	X	320	X	280	X	240	
470	X	430	X	390	X	350	X	310	X	270	X	230	
460	X	420	X	380	X	340	X	300	X	260	X	220	

→ stop @ 6220'.

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/12/09

Page 1 of 3

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	3,4,5,9	E/F-10 to E/F 13	CGE-3 MRI-4	PBR-9 SCA-5

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	8:33	64°	2 NE	Clear 0%
Mid-day	2:17	84°	3 N	Clear 0%
End	5:10	85°	2 W	Clear 1%

Data recorded on GPS # [9] Do NOT Record on #5!!!

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential usage below DETO
BMASC021	0706483		A J U	M F U	Y N	Scat - Coyote @ Burrow mouth	5			X
	3726749		A J U	M F U	Y N					
BMAMR018	0706473		A J U	M F U	Y N	2 Pellet	5			X
	3726749		A J U	M F U	Y N					
BMASC022	0706493		A J U	M F U	Y N	Kit Fox Scat Present	5			X
	3726364		A J U	M F U	Y N					
BMAMR019	0706432		A J U	M F U	Y N	~~No Scat~~ / Woodrat Scat	5			X
	3726138		A J U	M F U	Y N					
BNEMR003	0706438		A J U	M F U	Y N	Bowl shape				
	3726188		A J U	M F U	Y N	In Iron wood				
BNEMR004	0706431		A J U	M F U	Y N	Old Verdin				
	3726997		A J U	M F U	Y N	Ball w/cavity				
BDCCG024	0706449		A J U	M F U	Y N	2.5cm x 3cm / - 1 fragment			5	
	3727103		A J U	M F U	Y N	Marginal				
BDCPB014	0706409		A J U	M F U	Y N	Carapace - whole - female			2	
	3726043		A J U	M F U	Y N	Some flesh				
BDSSC001	0706342		A J U	M F U	Y N	26cm x 19cm				
	3725841		A J U	M F U	Y N					
			A J U	M F U	Y N	On pavement		3		
BMACG040	~~0706~~		A J U	M F U	Y N	Under creosote	5			X
	0706453		A J U	M F U	Y N					
	3727203									

*See Reverse

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4/12/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTENTIAL USEFUL SHOW	DETO
BMAPB011	0706319		A J U	M F U	Y N		5				X
	3727280		A J U	M F U	Y N						
~~BMAPB012~~			A J U	M F U	Y N		5				
~~BMA~~	0706318		A J U	M F U	Y N						
BMASC023	3727236		A J U	M F U	Y N		5				X
			A J U	M F U	Y N						
BDCLG025	0706307		A J U	M F U	Y N	OLD - 1 FRAGMENT			5		
	3727109		A J U	M F U	Y N	2cm x 2cm					
BDBMR003	0706291		A J U	M F U	Y N	ORIGINALLY KR	5			X	X
	3726808		A J U	M F U	Y N	6 OPENINGS					
~~BMASC024~~			A J U	M F U	Y N	9cm x 7cm					
			A J U	M F U	Y N						
BMASC024	0706331		A J U	M F U	Y N	KIT FOX & COYOTE SCATS	5				X
	3726649		A J U	M F U	Y N						
BDCMR013	0706289		A J U	M F U	Y N	FEMALE			2		
	3725749		A J U	M F U	Y N	27.0cm x 18cm					
BDSSC002	0706326		A J U	M F U	Y N	≈ 5cm x 2.5cm		5			
	3725700		A J U	M F U	Y N	NEAR CACTUS @ 50M					
			A J U	M F U	Y N						
BDCMR014	0706294		A J U	M F U	Y N	DISARTICULATED FEMALE			5		
	3725696		A J U	M F U	Y N	EST. 30cm x 20cm					

*See Reverse

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4/12/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential USAGE BLOW, DETO
BMASC025	0706280		A J U	M F U	Y N	NO SCAT - KIT FOX	5			X
	3727140		A J U	M F U	Y N					
3DECG026	0706259		A J U	M F U	Y N	3cm x 3cm 1 FRAG			5	
	3727266		A J U	M F U	Y N					
3MAPB012	0706266		A J U	M F U	Y N	NO SCAT - POSSIBLE COYOTE	5			X
	3727308		A J U	M F U	Y N	PALLET POTENTIAL / MADE				
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					

*See Reverse

E/F-10 to E/F-13

66250	X
240	X
230	X
220	X

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/13/09

Page 1A of 1A

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	3,9		CGE- #3 PBR - #9	

DATA ON #9

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	9:17	68°	4 SE	~~Clear~~ SLIGHT HAZE
Mid-day	12:12	76	4 S	HIGH HAZE W/ CLUSP. CLOUDS 50%
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential USAGE BELOW DET
BMAPB013	0706238 3726017		A J U	M F U	Y N	Potential Pellet 19cm x 15cm	5			X
BDTCG001	0706227 3725821		A J U	M F U	Y N	LIVE TORTOISE! ♂ SEE DATA SHEET				
BDPCG010	0706238 3726670		A J U	M F U	Y N	25cm x 10cm POTENTIAL PELLET	5			X
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					

*See Reverse

Do not abbreviate

Data Sheet for Live Desert Tortoises

Write on this side only

Located by GERMAN
Processed by
Study site name

Township ..... Range .....
Section ..... Quadrat .....

Coordinates (Reference SW corner)
..... meters North ..... meters East

UTM's ..... n ..... e
Elevation ..... m Accuracy ± ..... m
County ..... State .....

O On Plot O Off Plot

Show location of tortoise in quadrat

Tortoise ID # .....
Year first marked .....
Verification of ID ☐
Capture type ..... Sex .....
Date (dd/mm/yy) .....
Time (PST): Start ..... End .....
Frequency ..... Transmitter # .....
Transmitter type .....
Transmitter attached .....
Transmitter to be replaced on .....
PIT # .....

Tortoise Location

Cover site type:
- ☐ burrow
- ☐ pallet
- ☐ shrub
- ☐ caliche cave
- ☐ rock shelter

At cover site:
- ☐ entering
- ☐ exiting
- ☐ on mound
- ☐ inside

Not at cover site:
- ☒ in open
- ☐ other

ON PAVEMENT

Burrow Data

ID # .....
Orientation .....
Length ..... Height .....
Width ..... Soil cover .....
Location .....

Survey Type

- O Radio track
- O Burrow search
- O Coverage 1
- O Coverage 2
- O Incidental
- O Other

Tortoise Activity

- ☐ resting
- ☐ basking
- ☒ walking
- ☐ feeding

- ☐ Interacting with other tortoise
- ☐ Interacting with other animals

ID & sex of other tortoise .....
Species .....
Describe interaction:

Plants/items eaten (specific):

Color (shell & skin)

	HV	Hue	Value	Chroma	Color
V1 (center)					
V4 (center)					
LC1,2&V2 (seam)					
LM5,6 & LC2 (seam)					
Foreleg					
Hindleg					

Are you color blind? O Yes O No
Type of blindness .....

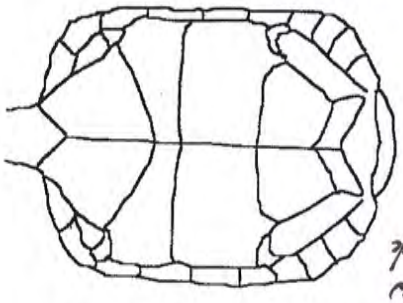
Body Measurements

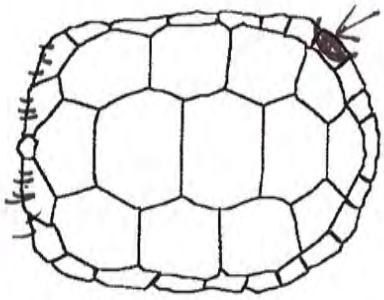
MCL (mm) 28cm x 21cm
PLN (mm) _____
Weight (g) _____
Void (g) _____
Total wt (g) _____

New growth
☐ present ☒ absent

Epoxy #
☐ present ☐ legible

Behavior





Chew Mark Dent

SOME SCARRING DUE TO CHEWING

Other notes

WORN SHELL, SOME SCALES ON FORELEGS MISSING
GROWTH RINGS WORN AWAY
NO SIGNS OF URDS -
STRONG WITHDRAWAL - SOME SIGNS OF EATING AROUND MOUTHE OLDER DRY

Photos; roll ..... frames .....

Draw locations of notches (old and new), chips, and anomalies, etc.
Describe anomalies in numbering of marginals and any identification problems.

Entered by ☐ date ☐☐ on computer ☐
Modified by ☐ on ☐

© Berry 1997

900	✓	940	✓
910	✓	950	✓
920	✓	960	✓
930	✓	970	✓

6990	✓
7000	✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/5/09 4/15/09

Page 1C of 1C

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	3	F6	CGE	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	1:00	79°	2 S	HIGH Clouds Wispy 50%
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments)		
							Burr	Scat	Shell
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

6990	X
7000	X

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/5/04 9/13/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
focused	9	F7	PBR	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments)		
							Burr	Scat	Shell
BDCPB015	0706988		A J U	M F U	Y N	1 FRAG 1cm x 1cm			5
	3728907		A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

~~7010~~ ~~70~~ ~~50~~
~~20~~ ~~60~~ done
~~30~~
~~40~~

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe Date: 4/13/09 Page 1D of 1D

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,6	~~[illegible]~~	SDA GLU	

3/4 mile buffer @ B8

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	2:44PM	89.5°F	0 to 2mph	60% CC
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDBSD008	0703039	DETO?	A J U	M F U	Y N	Deto burrow in caliche's on	5		
	3728079		A J U	M F U	Y N	way to 3/4 mile buffer, can			
			A J U	M F U	Y N	see to end, no tort ~~[illegible]~~			
BDBSD009	0703037	DETO?	A J U	M F U	Y N	caliche ~ 10m to north with of previous	~~[illegible]~~		
	3728071		A J U	M F U	Y N	tortoise shaped entrance on one	2		
			A J U	M F U	Y N	side, couldn't see to end			
			A J U	M F U	Y N				
BDCGL025	0703071	DETO	A J U	M F U	Y N	12" MCL, ♂, 10" wide,			3
	3728041	Carcass	A J U	M F U	Y N	Scutes on plastron fallen off			
			A J U	M F U	Y N	Scutes on carapace still			
			A J U	M F U	Y N	adhering, took pictures of both			
			A J U	M F U	Y N	sides, split gular			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

– nice deep drainages, tall rocky mtns, road not traversable by car, 3/4 mile = 2 ranges over

checking tort

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/13/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused			SDA GLH	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDSSD005	0706226 3725820	DETO	A J U	M F U	Y N	tort scat in place where live tort was seen FRESH some sheen, medium brown, smells, 2" x 3/4", picture		1	
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDSGL003	0706294 3725871	DETO	A J U	M F U	Y N	4 pieces of scat, black, shiny 1/2" wide		2	
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDSGL004	0706299 3725849	DETO	A J U	M F U	Y N	tort scats 2 1/2" x 1/2"		4	
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Utah 0706353 / 3725866

4410	✓	370	✓
400	✓	360	✓
390	✓	350	✓
380	✓	340	✓

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4-14-09

Page 1 of 2

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused		CA ROW to CB (3728200)	ADA-3 PBR-9	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	0820	71	$\bar{x}$=10 SW	100 %
Mid-day	1145	78	11 W	"
End	1450	83	13 W	"

DATA Recorded on GPS # [3]

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAAD040	0704382		A J U	M F U	Y N	mammal foraging burrow			
	3729064		A J U	M F U	Y N	potential for BO & DT use			
BDCAD051	0704381		A J U	M F U	Y N	2 scutes, adult, v. worn			5
	3729349		A J U	M F U	Y N	3x7 cm, in wash			
BDBPB001	0704406		A J U	M F U	Y N	DT burrow, 4 openings	3		
	3729682		A J U	M F U	Y N	BO also present in BO scat at			
BDPPB003	0704402		A J U	M F U	Y N	opening			
	3729358		A J U	M F U	Y N	DT pallet 12x20 (20) cm	3		
BDCAD052	0704404		A J U	M F U	Y N	Plastron piece, adult			5
	3729258		A J U	M F U	Y N	3.5 x 3.5 cm			
BDBAD008	0704415		A J U	M F U	Y N	DT main hibernation burrow	2		
	3729006		A J U	M F U	Y N	in Caliche clay 22x32cm			
BDCAD053	0704411		A J U	M F U	Y N	Plastron piece, not mineralized			5
	3728582		A J U	M F U	Y N	3x4 cm			
			A J U	M F U	Y N				
BDBAD009	0704422		A J U	M F U	Y N	bone 5x10 cm			5
	3728569		A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Utah milkweed

0704386 - 3729490 7 plants (approx.)
0704370 - 3729556 3 " "
0704379 - 3729658 1 plant
0704375 - 3729681 4 plants (approx.)
0704402 - 3729358 3 " "

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4/14/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAPB Ø14	0704404		A J U	M F U	Y N	potential ~~pellets~~ pallet			
	3728552		A J U	M F U	Y N	BO scat @ entrance DT			
BMAAD Ø41	0704367		A J U	M F U	Y N	potential BO, potential ~~pellet~~ ~~pellet~~			
	3729015		A J U	M F U	Y N	pallet			
BDPAD Ø22	0704367		A J U	M F U	Y N	9x11 cm, old ~~pellet~~ pallet	5		
	3729351		A J U	M F U	Y N	under creosote			
			A J U	M F U	Y N				
BDCPB Ø16	0704348		A J U	M F U	Y N	old ♂, plastron 30 cm			4.5
	3729391		A J U	M F U	Y N				
BDPAD Ø23	0704346		A J U	M F U	Y N	2 ~~pellets~~ pallet, caliche clay			
	3728613		A J U	M F U	Y N	12 x 16 cm	5		
BDCPB Ø17	0704356		A J U	M F U	Y N	DT finger/claw bone			5
	3728608		A J U	M F U	Y N	0.5 x 1 cm			
BDCAD Ø54	0704336		A J U	M F U	Y N	plastron bone fragment			5
	3728553		A J U	M F U	Y N	1 x 4 cm			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

utah milk weed 0704371/3729697 1 plant
0704346/3729671 " "

4230 ~~4330~~	✓	4290	✓
4220 ~~20~~	✓	80	✓
4210 ~~10~~	✓	70	✓
4200 ~~00~~	✓	60	✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4-15-09

Page 1 of 3

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
		CA to Row to CB (3728200)	ADA - 3 PBR - 9	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	0830	63	1 W	35%
Mid-day	1500	66	12 W	20%
End				

Data recorded on GPS # 13

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
~~BBCPB002~~			A J U	M F U	Y N				
BDCPB002	0704207		A J U	M F U	Y N	3 plants: 56 cm, 40 cm, 35 cm height			
	3729227		A J U	M F U	Y N				
BDCPB018	0704207		A J U	M F U	Y N	~7 fragments, adult			5
	3729232		A J U	M F U	Y N				
BDCPB019	0704219		A J U	M F U	Y N	1 fragment, adult 4x5 cm			5
	3729237		A J U	M F U	Y N				
BMAAD042	0704255		A J U	M F U	Y N	Badger foraging burrow potential pellet			
	3728612		A J U	M F U	Y N				
BDCAD055	0704257		A J U	M F U	Y N	1 fragment 2x2 cm			5
	3728739		A J U	M F U	Y N	not mineralized			
BDCAD056	0704270		A J U	M F U	Y N	5 fragments, adult 5x4 cm (largest)			5
	3728959		A J U	M F U	Y N				
BDCAD057	0704255		A J U	M F U	Y N	2 fragments, shell edge 1x1 cm			5
	3728965		A J U	M F U	Y N				
BDBAD010	0704253		A J U	M F U	Y N	DT burrow with recent tracks			
	3729067		A J U	M F U	Y N	12x24 cm			1
BDPPB004	0704241		A J U	M F U	Y N	3x7 cm			
	3729225		A J U	M F U	Y N				
BDSAD007	0704256		A J U	M F U	Y N	3.5x2 cm		3	
	3729514		A J U	M F U	Y N				

*See Reverse

Utah milk weed	0704203 - 3729119	4 plants
"	0704200 - 3729524	2 "
"	0704202 - 3729856	7 "
"	0704207 - 3729879	3 "
"	0704225 - 3729417	1 "
"	0704291 - 3728267	4 "
Colubrina	0704244 - 3728618	4

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4-15-09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDSAD008	0704287		A J U	M F U	Y N	3x3 cm scat		4	
	3729514		A J U	M F U	Y N				
BDCAD058	0704296		A J U	M F U	Y N	scute 3.5x4 cm			5
	3729363		A J U	M F U	Y N	heavily worn small hole			
			A J U	M F U	Y N	on margin (pellet? hole)			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPAD024	0704292		A J U	M F U	Y N	pellet 15x30 cm	3		
	3729233		A J U	M F U	Y N	woodrat sign			
BDCPB020	0704279		A J U	M F U	Y N	1 fragment 2x4 cm			5
			A J U	M F U	Y N				
	3728970		A J U	M F U	Y N				
BDPAD025	0704295		A J U	M F U	Y N	8x16 cm	2		
	3728971		A J U	M F U	Y N				
BDBAD026	0704295		A J U	M F U	Y N	12x24 cm, partial plug @	2		
	3728847		A J U	M F U	Y N	approx. 1 foot inside			
			A J U	M F U	Y N	entrance			
BDPAD027	0704287		A J U	M F U	Y N	12x24 cm, 1 bone fragment	2		
	3728768		A J U	M F U	Y N	present also			
BDSAD009	0704290		A J U	M F U	Y N	2 pieces, 6cm x 2 cm,	2		
	3728630		A J U	M F U	Y N				

*See Reverse

Utah milk weed 0704263 - 3729356 4 plants
" 0704265 - 3729421 6 "
" 0704287 - 3729437 20 "
colubrina 0704284 - 3728628 3 "

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4-15-09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments)		
							Burr	Scat	Shell
~~BDBP005~~	~~0704279~~		A J U	M F U	Y N	8x20 cm debris (rocks) in front, on edge of arroyo.	3		
BDBP005	3728524		A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

706
0181

4450	✓
40	✓
30	✓
20	✓

did bottom of alternate →

665900 440 C9-C10 Phone to Bi:

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/15/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,6	C4 Row to C7 (3728200)	SDA - 1 GLU - 6	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	12:31pm	68°F	7 to 18 mph	
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAGL037	0704430 3728406	mammal	A J U	M F U	Y N	- mammal burrow, round, turns to left, could be used by DETO/ Bnow, can't see to end			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCGL026	0704431 3728560	bone fragment DETO	A J U	M F U	Y N	- one piece of bone, tortoise 1¼" x 3/4", eroded			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPGL027	0704437 3729261	DETO?	A J U	M F U	Y N	possible tortoise pallet, under bush, likely used by mammal, not deep enough for Bnow 11" x 7", 18" deep	4/5		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPGL028	0704433 3729605	DETO?	A J U	M F U	Y N	- possible tort pallet, right shape, 450mm x 150mm x 400mm deep, may turn to left, can't tell, adjacent to BDBGL018	5		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

drainages veg:
desert lavender, galleta grass, ironwood, palo verde, Krameria spp, Utah milkweed, brittlebush

Art	Phil
330	290
320	280
310	270
300	260

popcorn flower
Ambrosia
creosote

active DETO burrow - tracks, adult, on pavement
0704254 / 3729067

4450 ✓
40 ✓
30
20

0704254/3729067

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/15/09

Page ~~3~~ 2A of 3A

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDBGL018	0704438	DETO	A J U	M F U	Y N	-adjacent to BDPGL028	2		
	3729608		A J U	M F U	Y N				
			A J U	M F U	Y N	40cm x 25cm x 60cm deep			
			A J U	M F U	Y N	- likely active, not deep enough			
			A J U	M F U	Y N	for BUOW			
			A J U	M F U	Y N	under ironwood, tortoise shaped,			
			A J U	M F U	Y N	flat bottom			
			A J U	M F U	Y N				
BDPGL029	0704432	DETO?	A J U	M F U	Y N	-possible tortoise ~~burrow~~ pallet	4		
	3729618		A J U	M F U	Y N	10" x 9", 2.5' deep			
			A J U	M F U	Y N	creosote was blocking entrance			
			A J U	M F U	Y N				
BDSSD006	0704426	DETO	A J U	M F U	Y N	4 pieces tort scat, 2", 1.5",		1/2	
	3729683		A J U	M F U	Y N	1/2", 1/2" width 1/2"			
			A J U	M F U	Y N				
			A J U	M F U	Y N	lt. brown, some odor, starting to			
			A J U	M F U	Y N	glaze			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDBSD010	0704406	DETO	A J U	M F U	Y N	3 tort burrows, likely old	2		
	3729680		A J U	M F U	Y N	kit fox complex, now active			

point likely taken by Art/Phil

*See Reverse

Utah milkweed 0704443/3729658 (2

tort burrows, one with white wash turkey vulture (BBBSD002)

15"x12", can't see to end
15"x8" "
9"x6" "

Washes
odora
phacelia
pincushion

Numerous wood rat nests, many in palo verdes/ironwoods

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe Date: 4/15/09 Page 3A of 3A

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

Point likely taken by Art/Phil

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BBBSD002	0704408	BHOW	A J U	M F U	Y N	- in old kit fox complex, with			
	3729679		A J U	M F U	Y N	3 ~~of~~ DETO burrows, white			
			A J U	M F U	Y N	wash, likely BHOW			
			A J U	M F U	Y N	occupied			
			A J U	M F U	Y N	pellet, white wash on			
			A J U	M F U	Y N	another of the tort burrows			
			A J U	M F U	Y N	in same complex			
			A J U	M F U	Y N				
BDCSD015	0704421	DETO	A J U	M F U	Y N	- small piece of flat bone, likely			5
	3729603		A J U	M F U	Y N	tortoise, 1/4" x 3/4"			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMASD021	0704413	mammal	A J U	M F U	Y N	- could be used by a			
	3728509		A J U	M F U	Y N	DETO as a pallet 12" x 10" x 18" deep			
			A J U	M F U	Y N	not suitable for oral			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

0704431/3729685 → Utah milkweed → 0704393/3729682 (8+)

0704368/3729673 (3)

0704416/3729606

365/ 674 (1)

0704422/3729511

345 675 (2)

~~0704424/3728573 (lots)~~

305/701 (1) - birds - brown white stripe on face black chin

4190	✓	4160	✓
4180	✓	4150	✓
4170	✓	4140	✓

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: ~~4/5~~ 4/15/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
		CA to KON to CS 3/28200	GLU ADA SDA	PBR

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End	6:30PM	61°F	2 to 5 mph	2% CC

L did round to end, dised personal GPS so no tracks

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BBCGL002	0704185 3729266	barrel cactus	A J U	M F U	Y N	- curved spine, one head 10"			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMASD022	0704156 3729637	mammal	A J U	M F U	Y N	- mammal burrow, but could only be used ~~as~~ by DETO as pallet, not deep enough for BHSH			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMASD023	0704149 3729197	mammal	A J U	M F U	Y N	wood rat nest in caliche, can't see to end, nesting material in front, deep inside enough for DETO use, not likely currently inhabited by BHSH			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPGL030	0704136 3729193	DETO?	A J U	M F U	Y N	possible tortoise pallet, caliche 14" x 7", 28" deep	5		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDSPB001	0704154 3729103	DETO	A J U	M F U	Y N	- bleached, loose, old DETO ~~sc~~ 2 pieces		5	
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

BDPSD014 0704160 3728536 DETO

- possibly plugged tortoise burrow, may be nest, 10" x 7" x 10" deep 4

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 04/15/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments)		
							Burr	Scat	Shell
BDPSD015	0704153 3728459	DETO?	A J U	M F U	Y N	10" x 4" x 10", possible pellet, no sign	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

4130	✓	4090	✓
4120	✓	4080	✓
4110	✓	4070	✓
4100	✓	4060	✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/16/09

Page 1 of 2

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	3,9	C4 to Row to C8 (3728200)	PBR-9 ADA-3 ← DATA	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	0815	56	2 E	0%
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDPPB005	0704089		A J U	M F U	Y N	10x16cm	4		
BDPPG005	3729514		A J U	M F U	Y N				
BMAAD043	0704117		A J U	M F U	Y N	Badger foraging burrow			
	3728456		A J U	M F U	Y N	potential BO use			
BDCAD059	0704117		A J U	M F U	Y N	1x2cm shell fragment			
	3728729		A J U	M F U	Y N	unmineralized			5
BBCAD006	0704119		A J U	M F U	Y N	65cm.			
	3729200		A J U	M F U	Y N				
BDPAD026	0704115		A J U	M F U	Y N	plant pallet w scat in it	2	2	[illegible]
	3729214		A J U	M F U	Y N	10x24 cm 2x4 cm			
BDSPB002	0704125		A J U	M F U	Y N	4x20cm		3	[illegible]
	3729427		A J U	M F U	Y N				
BDCAD060	0704111		A J U	M F U	Y N	shell fragment 2x2cm			5
	3729455		A J U	M F U	Y N				
BDSPB003	0704131		A J U	M F U	Y N	2x4cm		2	
	3729640		A J U	M F U	Y N				
BDCPB021	0704127		A J U	M F U	Y N	Adult fragments embedded in			5
	3729893		A J U	M F U	Y N	pavement in tank track			
BDCAD061			A J U	M F U	Y N	partially mineralized			
	0704110		A J U	M F U	Y N	1 fragment shell 1x1.5cm			5
	3728930		A J U	M F U	Y N				

*See Reverse

Utah milkweed 0704 074 - 3728696 1 plant
" 0704 113 3729783 3 plants

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4/16/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments)		
							Burr	Scat	Shell
BDCAD062	0704105		A J U	M F U	Y N	fragment 0.5 x 2 cm			5
	3728727		A J U	M F U	Y N				
BDCPB022	0704102		A J U	M F U	Y N	adult female partial carapace			5
	3728721		A J U	M F U	Y N	11 x 22 cm			
BDSAD010	0704108		A J U	M F U	Y N	2x6 cm			5
	3728611		A J U	M F U	Y N				
BDCAD063	0704103		A J U	M F U	Y N	2-3 fragments 1.5 x 1 cm			5
	3728518		A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

F9 ~ 7010 20 30 40 50

~1760 M = 1 mile #

~~F6 7010 7020~~

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/16/09

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Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Buffer	1, 6, 3	~~[illegible]~~	PBR, ADA, SDA, GLG	

3/4, 1 mile buffer asses DATA on #6, 3

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	4:01 pm	78°F	2 to 4 mph	0% CC
Mid-day				
End	6:05 PM	75°F	1 to 4 mph	0% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
			A J U	M F U	Y N	picture of 3/4 mile area			
			A J U	M F U	Y N				
BDCGL027	0702824	tort bone	A J U	M F U	Y N	one piece of marginal			5
	3727777	fragment	A J U	M F U	Y N	bone, old			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDBSD011	0702902	DETO	A J U	M F U	Y N	tortoise burrow, caliche,	2		
	3727628		A J U	M F U	Y N	signs of recent use, flattened			
			A J U	M F U	Y N	bottom, likely occupied &			
			A J U	M F U	Y N	tortoise foraging			
			A J U	M F U	Y N	45cm x 30cm x 2m deep			
			A J U	M F U	Y N	added gates			
			A J U	M F U	Y N				
BDBAD011	0703 0000	DETO	A J U	M F U	Y N	- deep burrow in rocks in	2		
	3727738		A J U	M F U	Y N	drainage, pallet 4m to			
			A J U	M F U	Y N	the west, 38cm x 19cm, can't			
			A J U	M F U	Y N	see to end, Buow could use but	burrow is very large		
BDCAD064	0702922	~~carcass~~	A J U	M F U	Y N	- bone fragments, with deto	2		5
	3727708	~~deto~~	A J U	M F U	Y N	burrow nearby, 5 fragments			
		tort bone	A J U	M F U	Y N	adult ↳ rock burrow, opening, can't			
		fragments (+) burrow	A J U	M F U	Y N	see to end, ~~30~~ 45cm x 20cm			

*See Reverse

rockwren

Collarded lizard in rocky area, chuckwalla

Creosote, some brittlebush, possible perch for large raptors = golden eagle?

↳ nesting

Utah milkweed 0702963 | 3727658

Anna's hummingbird

bobcat

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4/16/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments)		
							Burr	Scat	Shell
~~BDCG028~~	0703014		A J U	M F U	Y N				
BDCGL028	3727484	bone fragment	A J U	M F U	Y N	½ half plastron, adult, 7" wide			5
		DETO	A J U	M F U	Y N	broken gular			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
~~BDCPHL~~	BDCPB023	DETO	A J U	M F U	Y N	plastron fragment 5cm x 8cm			
	0702792 /	3727867	A J U	M F U	Y N				
			A J U	M F U	Y N				
~~BDCPHL2~~	BDCPB024	DETO	A J U	M F U	Y N	vertebral bones			
	0703313 /	3728146	A J U	M F U	Y N				
			A J U	M F U	Y N				
~~BDPPHL~~	BDPPB006	pallet	A J U	M F U	Y N	10cm x 10cm* pallet,		3	
	0703237 /	3728077	A J U	M F U	Y N				
			A J U	M F U	Y N			3	
~~BDSPHL~~	BDSPB004	DETO	A J U	M F U	Y N	-scat, bleached, dried			
			A J U	M F U	Y N	2cm x 1cm			
	0702778 /	3727708	A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

4050	✓	4010
4040	✓	4000
30	✓	2990
20	✓	3980

[redacted]

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/17/09

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Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,6	C4 to R20 to C7	SDA	GLU

3728200

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day	3:20pm	79°F	3 to 10 mph	0% CC
End	4:52pm	79°F	3 to 6 mph	0% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDBGL019	0704021 3728236	DETO	A J U	M F U	Y N	tortoise burrow, caliche in	5		
			A J U	M F U	Y N	deep drainage 26" x 12" x 36"			
			A J U	M F U	Y N	can see to end, occupied by			
			A J U	M F U	Y N	wood rat, could be active, not			
			A J U	M F U	Y N	deep enough for BUOW			
BDCGL027	0704022 3728226	bone frag. DETO	A J U	M F U	Y N	3 pieces, one piece is 1/4 of			5
			A J U	M F U	Y N	carapace with marginals, costals			
			A J U	M F U	Y N	& vertebral, one piece vertebral			
			A J U	M F U	Y N	one marginal, adult			
			A J U	M F U	Y N				
BDRGL031	0704018 3729445	DETO?	A J U	M F U	Y N	- mammal pellet, goes back far	4		
			A J U	M F U	Y N	enough that could be used by			
			A J U	M F U	Y N	DETO as a pellet, not suitable			
			A J U	M F U	Y N	for BUOW			
			A J U	M F U	Y N				
BMAGL038	0704024 3730035	mammal? bat roosting?	A J U	M F U	Y N	very large burrow in caliche?			
			A J U	M F U	Y N				
			A J U	M F U	Y N	2m x 1m, dug out about 4m in			
	off-site		A J U	M F U	Y N	can't see to end, could be			
			A J U	M F U	Y N	used by DETO/BUOW			
			A J U	M F U	Y N	white wash, could also be guano			

*See Reverse

black tailed gnatcatcher

Utah milkweed 0704034 | 3729686 (1)

Nightshade

0709310 S	X	270	X	230 M	X	190 C	X	150	X	110 E	X	070	X	030	X	8990	X	8950	X	8910		8870
300 M	X	260	X	220	X	180 S	X	140	X	100	X	060	X	020	X	8980	X	8940	X	8900		8860
290 G	X	250 S	X	210	X	170 M	X	130	X	090	X	050	X	010	X	8970	X	8930		8890		8850
280	X	240 G	X	200	X	160	X	120	X	080	X	040	X	9000	X	8960	X	8920		8880		8840

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/17/09

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Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	3,4,7,9	J/H 4 to J/H 5	ROW CGE - 7 MRI - 4	~~PBR - 9~~ SCA - 3

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	0904	68.0	6.7 mph / N	0% CC
Mid-day	1332	80.4	3.1 / N	0% CC
End	1630	81.9	6.0 / N	0% CC

DATA RECORDED ON GPS # 3

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential Burrow DETO	Burrow
BDCMR015	0709293/3729615		A J U	M F U	Y N	Disarticulated. old. not mineralized. 5cm X 4cm			5		
			A J U	M F U	Y N						
BMACG041	0709282/3729697		A J U	M F U	Y N	Kit Fox scat Present.				✓	
			A J U	M F U	Y N						
BKBCG007	0709274/3729793		A J U	M F U	Y N	Scat Present from KF. 8 openings. Pellet white wash present.					✓
			A J U	M F U	Y N						
BMAMR020	0709272/3729983		A J U	M F U	Y N	KF scat present.					
			A J U	M F U	Y N						
BMAMR028	0709298/3729943		A J U	M F U	Y N	no scat present. no white wash.					✓
			A J U	M F U	Y N						
BDCCG027	0709198/3729526		A J U	M F U	Y N	2 X 2 cm, mineralized			5		
			A J U	M F U	Y N						
BDCCG028	0709200/3730054		A J U	M F U	Y N	2.5 x 1.5cm, not Mineralized.			5		
			A J U	M F U	Y N						
BDCMR016	0709173/3729861		A J U	M F U	Y N	3 X 2 cm. mineralized.			5		
			A J U	M F U	Y N						
BKBSC008	0709184/3729516		A J U	M F U	Y N	Kit fox scat Present.					
			A J U	M F U	Y N						
BMAMR022	0709176/3729402		A J U	M F U	Y N	no Scat Present					
			A J U	M F U	Y N						
BMACS026	0709142/3729783		A J U	M F U	Y N	Kit fox Scat Present					

*See Reverse

Horned Lizard
UTA
Zebra Tail
Whip Tail

M 670	X	050	X	030	X	E 610	X	8990	X	M 8970		8950	X
E 060	X	040	X	020	X	9000 M	X	8980	X	8960 E		8940	X

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/17/09

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Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential Burrow DETO	BUCH
BDCCG029	0709151/3730058		(A) J U	M F U	Y N	1.5 X 1 cm. Fragment			S		
			A J U	M F U	Y N						
BMASC027	0709089/3729458		A J U	M F U	Y N	Coyote scat Present. Two openings, Kit Fox scat					
			A J U	M F U	Y N						
BDCSC004	0709094/3729676		(A) J U	M F U	Y N	40 X 30 cm Fragment			S		
			A J U	M F U	Y N						
BMAMR023	0709077/3729696		A J U	M F U	Y N	scat Present Coyote					
			A J U	M F U	Y N						
BDCMR017	0709117/3730056		(A) J U	M F U	Y N	Fragment 2 x 1.5 cm			S		
			A J U	M F U	Y N						
BMAMR024	0709118/3730065		A J U	M F U	Y N	Kit Fox Scat Present					
			A J U	M F U	Y N						
BMAFG042	0709114/3730031		A J U	M F U	Y N	No scat Present.					
			A J U	M F U	Y N						
BMACG043	0709069/3729705		A J U	M F U	Y N	Coyote Scat Present + Kit Fox					
			A J U	M F U	Y N						
BMAMR025	0708997/3729652		A J U	M F U	Y N	Burrow complex, 5 entrances, Kit fox scat Present					
✓	✓	✓	A J U	M F U	Y N	Coyote scat Present.					
			A J U	M F U	Y N						
BMACG045	0708974/3729555		A J U	M F U	Y N	Coyote scat present					
			A J U	M F U	Y N						

*See Reverse

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4/17/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments)		
							Burr	Scat	Shell
BMAMN026	0709006/3729932		A J U	M F U	Y N	1 kit Fox & coyote scat present			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

8930 X	900 X	870 X	840 X	810 X	780 X	750 X	720 X
8920 X	890 X	860 X	830 X	800 X	770 X	740 X	710 X
910 X	880 X	850 X	820 X	790 X	760 X	730 X	700 X

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE Date: 04/18/09 Page 1 of 2

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
FOCUS	DATA #3-SCA		GPS #4-MRI #7-CGE	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	8:33	76	2.5 N	CLEAR Ø%
Mid-day	12:02	86	6 N	CLEAR Ø%
End	4:54	90	5 N	CLEAR 0%

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential Usage Burrow	Scat
BMACG044	0708901		A J U	M F U	Y N	SINGLE BURROW - OLD KF	5			X	X
	3729978		A J U	M F U	Y N	COMPLEX -					
BMASC028	0708842		A J U	M F U	Y N	FRESH DIG & SCAT KF	5				X
	3729545		A J U	M F U	Y N						
BBCCG044	0708771		A J U	M F U	Y N	UNDER CREOSOTE ≈ 20cm					
	3729449		A J U	M F U	Y N						
			A J U	M F U	Y N	2.5cm x 1cm SINGLE FRAG			5		
BDCMR018	0708792		A J U	M F U	Y N	PARTIALLY MINERALIZED					
	3729915		A J U	M F U	Y N						
BMACG045	0708687		A J U	M F U	Y N	CLUSTER UNKNOWN DEATH	5			?	X
	3729742		A J U	M F U	Y N	NO SCAT					
BMASC029	0708662		A J U	M F U	Y N	NO SCAT	5			X	X
	3729651		A J U	M F U	Y N						
ARCH BPOTSHARDSC	0708620		A J U	M F U	Y N	D x L x W - ONE SHARD	- GIVE TO ARCHS -				
	3729741		A J U	M F U	Y N	7mm x 50mm x 40m FLAGGED					
~~BDCCG045~~			A J U	M F U	Y N	3m NNW of FLAG					
BDCCG045	0708631		A J U	M F U	Y N	3cm x 3cm + MINERALIZED	5				
	3729411		A J U	M F U	Y N	ONE FRAGMENT					
BMAMR027	0708556		A J U	M F U	Y N	POTENTIAL DETO BURROW	5				X
	3729823		A J U	M F U	Y N	NO SCAT					
			A J U	M F U	Y N						

*See Reverse

690 X	660 X	630 X	600 X	570 X	540 X	510 X	480 X
680 X	650 X	620 X	590 X	560 X	530 X	500 X	470 X
670 X	640 X	610 X	580 X	550 X	520 X	490 X	460 X

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 04/18/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments)			Potential usage below DETO
							Burr	Scat	Shell	
BMACG046	0708538 3729528		A J U	M F U	Y N	KF SCAT	5			X
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					

*See Reverse

0708450	X	410	X	370	X	330	X	8290	X	8250	X	8200		8160	
440	X	400	X	360	X	320	X	8280	X	8240	X	8190		8150	
430	X	390	X	350	X	310	X	8270	X	8230	X	8180		8140	
420	X	380	X	340	X	300	X	8260	X	8210	X	8170		8130	

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/19/09

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4 DOWN!

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	3, 4, 7, 9	H4 to H8	3-SCA 4-MRI	7-CGE 9-RWD

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	8:29	81°	9 NNE	CLEAR 0%
Mid-day	1:16	95°	4 NNE	CLEAR 0%
End	3:43	95°	6 NW	CLEAR 1%

DATA RECORDED ON GPS # [3]

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential useful Burrow	DETO
BMACG047	0708452		A J U	M F U	Y N	POTENTIAL DETO PELLET	5				X
	3729782		A J U	M F U	Y N	KF-SCAT COYOTE SCAT					
BMAMR028	0708418		A J U	M F U	Y N	POTENTIAL DETO PELLET	5				X
	3729772		A J U	M F U	Y N	NO SCAT PRESENT					
BMARW001	0708435		A J U	M F U	Y N	COYOTE FORAGE	5				X
	3729774		A J U	M F U	Y N	POTENTIAL DETO PELLET					
BMARW002	0708424		A J U	M F U	Y N	FACING NORTH	5				X
	3729520		A J U	M F U	Y N	POTENTIAL BURROW USAGE					
BMARW003	0708431		A J U	M F U	Y N	NO SIGN				X	X
	3728585		A J U	M F U	Y N						
BMACG048	0708450		A J U	M F U	Y N	NO SCAT				X	X
	3728458		A J U	M F U	Y N						
BMARW004	0708368		A J U	M F U	Y N	KF SCAT	5			X	X
	3728349		A J U	M F U	Y N						
BNESC001	0708394		A J U	M F U	Y N	PALO VERDE - BOWL LANGE					
	3728492		A J U	M F U	Y N	NOT ACTIVE					
BMASC030	0708391		A J U	M F U	Y N	NO SCAT				X	X
	3728650		A J U	M F U	Y N						
BMAMR029	0708414		A J U	M F U	Y N	NO SCAT					X
	3729477		A J U	M F U	Y N						
			A J U	M F U	Y N						

*See Reverse

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 04/19/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTENTIAL USFWS B40W DETO
BDPRW001	0708373		A J U	M F U	Y N	POSSIBLE DETO PALLET	4			X
	3729796		A J U	M F U	Y N	NO SCAT				
BMARW005	0708371		A J U	M F U	Y N	KF SCAT	4			X X
	3728347		A J U	M F U	Y N					
BKBMR006	0708309		A J U	M F U	Y N	KF SCAT PRESENT	4			X X
	3729428		A J U	M F U	Y N					
BDCSC005	0708331		A J U	M F U	Y N	2 FRAGS ≈ 1.5cm x 1.5cm			5	
	3729442		A J U	M F U	Y N					
BMAMR030	0708313		A J U	M F U	Y N	POTENTIAL DETO PALLET	4			X
	3729587		A J U	M F U	Y N					
BDCMR019	0708260		A J U	M F U	Y N	DISARTICULATED ≈ 1/4 TORTOISE			5	
	3729574		A J U	M F U	Y N	≈ 20 PIECES				
BMAMR031	0708254		A J U	M F U	Y N	IN OPEN - EASTERN FACING				X X
	3729420		A J U	M F U	Y N					
BDCSC006	0708279		A J U	M F U	Y N	2CM x 1CM			5	
	3729333		A J U	M F U	Y N	SOME MINERALIZATION				
BMASC031	0708280		A J U	M F U	Y N	POTENTIAL DETO PALLET	4			X
	3728648		A J U	M F U	Y N	NO SCAT				
BMASC032	0708287		A J U	M F U	Y N	DETO PALLET POTENTIAL	4			X
	3728610		A J U	M F U	Y N					
			A J U	M F U	Y N					

*See Reverse

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 04/19/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTENTIAL USAGE BURROW DETO
BDCSC007	0708236		A J U	M F U	Y N	2 FRAGS 2cm x 1.5cm			5	
	3727971		A J U	M F U	Y N					
BMACG049	0708244		A J U	M F U	Y N	DETO TYPE BURROW				X X
	3728570		A J U	M F U	Y N	ONE OPENING				
BBCMR003	0708251		A J U	M F U	Y N	BARREL CACTUS				
	3728771		A J U	M F U	Y N	10cm				
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					

*See Reverse

X	7190	7010	X	230	7050	X	7270	90	X	7310	130	[illegible]	X
X	7200	20	X	240	60	X	280	100	X	7320	140	7360	180	X
X	7210	30	X	250	70	X	290	110	X	7330	150	7370	190	X
X	7220	40	X	260	80	X	300	120	X	7340	160	7380	200	

to F-7

* 270 to 380 to F7 *
* 190 to 260 to F6 *

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 4/20/09

Page 1 of 2

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	3, 9	F6 F5 F4	SCA - 3 RWO - 9	SM-4

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	905am	89°F	10/NW	1% warm/clear
Mid-day				
End	430pm	103°F	5/NW	1% Hot/clear

DATA RECORDED ON GPS # 9

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BBCSC001	0707193		A J U	M F U	Y N	2 cacti - one dead			
	3729636		A J U	M F U	Y N				
			A J U	M F U	Y N				
BMASC033	0707248		A J U	M F U	Y N				
	3730003		A J U	M F U	Y N	Potential WBO/KF - NO sign			
			A J U	M F U	Y N				
BDBRW003	0707228		A J U	M F U	Y N	under shrub - no sign 4 (150mm x 9mm)			
	3729763		A J U	M F U	Y N	NO WBO potential			
			A J U	M F U	Y N				
BDCSC008	0707261		A J U	M F U	Y N	mineralized gular (75mm x 70mm)			
	3729916		A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAMG001	0707294		A J U	M F U	Y N	KFox scat WBO = yes			
	3729930		A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAMG002	0707287		A J U	M F U	Y N				
	3729248		A J U	M F U	Y N	NO sign WBO - yes			
			A J U	M F U	Y N				
BMARW006	0707304		A J U	M F U	Y N				
	3728481		A J U	M F U	Y N	Old KF scat - truncated 2 in			
			A J U	M F U	Y N	No WBO			

*See Reverse

Note: GPS 9 did not have updated info - data pts. based on GPS 3 data #'s

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4-20-09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
DETO	3/9/4	F6 F5 F4 F7	SCA RWO MG	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
RBKBMG001	0707329		A J U	M F U	Y N	K Fox scat - 2 burrows		WBO = yes	
	3729474		A J U	M F U	Y N				
			A J U	M F U	Y N				
BDSSC003	0707306		A J U	M F U	Y N				
	3729612		A J U	M F U	Y N	~~[illegible]~~		5	
			A J U	M F U	Y N	C. Ephemeral wash			
BMAMG003	0707331		A J U	M F U	Y N				
	3729506		A J U	M F U	Y N	possible Deto pellet	No WBO		
			A J U	M F U	Y N				
BBCSC002	0707355		A J U	M F U	Y N				
	3729444		A J U	M F U	Y N	~~[illegible]~~ 4' tall			
			A J U	M F U	Y N				
BMARW007	0707367		A J U	M F U	Y N				
	3728858		A J U	M F U	Y N	No sign Pot WBO			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

4330 ✓
20 ✓
10 ✓
00 ✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 04/20/09

Page 1A of 1A

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,6	CA to Row to 3728200 CB	SDA-1 GLU-6	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	3:42PM	99°F	0 to 2 mph	0% CC
Mid-day				
End	6:40PM	96°F	1 to 4 mph	0% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDPGL032	0704309 3728543	DETO?	A J U	M F U	Y N	rocky pallet, 8"x5"x24" deep in drainage, not suitable for BUOW	5		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCSD016	0704325 3728544	DETO bone fragment	A J U	M F U	Y N	-one piece ~ 1"x 1/2" eroded, old			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
note: BDCSD003 = ♂ carcass			A J U	M F U	Y N				
			A J U	M F U	Y N				5
BDCGL028	0704310 3729365	DETO bone fragment	A J U	M F U	Y N	-one piece ♂ tort bone, eroded, old 3/4 x 1/2"			
			A J U	M F U	Y N				
			A J U	M F U	Y N	⊕ one tiny piece			
			A J U	M F U	Y N	⊕ one large scale 3"x2"			
BDPSD016	0704306 3729661	DETO?	A J U	M F U	Y N	-tort pallet, potential, 10"x8"x 16" deep in drainage under bush, not suitable for BUOW	5		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BKBSD015	0704330 3729248	Kitfox	A J U	M F U	Y N	possible kit fox burrow, ~~turns~~ turns to left, can't see to end could be used by DETO/BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Utah milkweed 0704295/3728269 0704308/3729699

wild burrough scat throughout site

7390	X	7420	X	7450	X	7480	X	7510	X	7540	X
7400	X	7430	X	7460	X	7490	X	7520	X	7550	X
7410	X	7440	X	7470	X	7500	X	7530	X	7560	X

(4 DOWN)

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE Date: 4/24/09 Page 1 of 3

4 DOWN

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	3, 4, 9	F4 DOWN F5 F6 F7 F8	SCA- RWO- MGH-	3 9 4

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	815am	74°F	1/NW	calm/30%
Mid-day		99°F	1-3/NW	clear/20%
End	440	101.5°F	1-3/NW	clear/1%

DATA RECORDED ON GPS # [9] 106 @ 220pm

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAMG004	0707394		A J U	M F U	Y N	Potential KF/WBO			
	3729581		A J U	M F U	Y N	No sign			
			A J U	M F U	Y N				
BKBSC009	0707411		A J U	M F U	Y N	KF scat/potential WBO - No sign			
	3729451		A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAMG005	0707384		A J U	M F U	Y N	Potential KF/WBO - No sign			
	3729060		A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAMG006	0707390		A J U	M F U	Y N	potential WBO - No sign			
	3728447		A J U	M F U	Y N				
			A J U	M F U	Y N				
BMARW008	0707401		A J U	M F U	Y N	No sign - large openings			
	3728059		A J U	M F U	Y N				
			A J U	M F U	Y N				
BMASC034	0707410		A J U	M F U	Y N	No sign potential KF/WBO			
	3728025		A J U	M F U	Y N				
			A J U	M F U	Y N				
BMASC035	0707449		A J U	M F U	Y N	No sign - potential WBO/KF			
	3729513		A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4-21-09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

	GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBRW	003	0707429		A J U	M F U	Y N	KF scat			
		3729843		A J U	M F U	Y N	potential WBO			
				A J U	M F U	Y N				
BMARW	009	0707497		A J U	M F U	Y N	3 entrances			
		3728001		A J U	M F U	Y N	KF/coyote scat - NO WBO			
				A J U	M F U	Y N				
BNESC	002	0707488		A J U	M F U	Y N	Nesting gnatcatcher (black-tailed) ♀ on nest			
		3728004		A J U	M F U	Y N				
				A J U	M F U	Y N				
BMAMG	007	0707474		A J U	M F U	Y N				
		3728694		A J U	M F U	Y N	NO sign - potential WBO			
				A J U	M F U	Y N				
				A J U	M F U	Y N				
BMAMG	008	0707450		A J U	M F U	Y N	KF scat - truncated 2 in			
		3730002		A J U	M F U	Y N	NO WBO			
				A J U	M F U	Y N				
BMARW	010	0707508		A J U	M F U	Y N	Deteriorated burrow			
		3729843		A J U	M F U	Y N	w/ WBO pellets & wash			
				A J U	M F U	Y N				
BMARW	011	0707505		A J U	M F U	Y N	No sign / potential WBO			
		3729782		A J U	M F U	Y N				

*See Reverse

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4-21-09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAMG009	0707524		A J U	M F U	Y N	Kf scat ~~NO sign~~ potential	WBO/KF		
	3729736		A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAMG010	0707517		A J U	M F U	Y N	NO sign			
	3728767		A J U	M F U	Y N	potential WBO/KF			
			A J U	M F U	Y N				
BMASC036			A J U	M F U	Y N				
	0707557		A J U	M F U	Y N	NO sign			
	3728244		A J U	M F U	Y N	potential WBO			
			A J U	M F U	Y N				
BMAMG011	0707547		A J U	M F U	Y N	~~NO~~ Kfox scat			
	3728499		A J U	M F U	Y N	potential WBO			
			A J U	M F U	Y N				
BMASC037	0707561		A J U	M F U	Y N	NO sign - potential WBO			
	372 9431		A J U	M F U	Y N				
			A J U	M F U	Y N				
BMARW012	0707546		A J U	M F U	Y N	No sign - potential			
	372 9433		A J U	M F U	Y N	pallet - NO WBO	4		
			A J U	M F U	Y N				
BMARW013	0707541		A J U	M F U	Y N	Kit fox scat - truncated			
	372 9489		A J U	M F U	Y N	NO WBO			

*See Reverse

BBCMG001 0707552
3729618

F9

1000 ✓ check / re-check, already done
1010 ✓
20 ✓
30 ✓
40 ✓
50 ✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4-21-09

Page 1A of 1A

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	116	F9	SDA-1 GLU-6	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	4:46pm	102°F	2 to 6 mph	0% CC
Mid-day				
End	6:07PM	101°F	1 to 3mph	0% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments)		
							Burr	Scat	Shell
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

✓ Nothing observed

*See Reverse

7570	X	7600	X	7630	X	7660	X	7690	X	7720	X
7580	X	7610	X	7640	X	7670	X	7700	X	7730	X
7590	X	7620	X	7650	X	7680	X	7710	X	7740	X

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 4/22/09

Page 1 of 2

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	3, 4, 9	F4 to RON F5, F6 F7, F8	SCA-3 RWO-9	MGH-4

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	820am	77°F	0-1 / NW	calm / 1%
Mid-day	130pm	103°F	0-4 / E	clear / 1%
End	400pm	103°F	2-12 / E	clear / 10%

DATA RECORDED ON GPS # [9]

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMARW014	0707581		A J U	M F U	Y N	NO sign			
	3729284		A J U	M F U	Y N	NO WBO			
			A J U	M F U	Y N				
BBCMG002	0707581		A J U	M F U	Y N				
	3729259		A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCMG001	0707566		A J U	M F U	Y N	4cm x 2.5cm one piece			
	3728707		A J U	M F U	Y N	Remains carcass			5
			A J U	M F U	Y N	10m to west (2 pieces)			
BMARW015	0707630		A J U	M F U	Y N				
	3728937		A J U	M F U	Y N	Potential kfox / WBO	kf scat		
			A J U	M F U	Y N				
BMAMG012	0707642		A J U	M F U	Y N				
	3728483		A J U	M F U	Y N	potential kfox / WBO	kfox scat		
			A J U	M F U	Y N				
BMAMG013	0707643		A J U	M F U	Y N				
	3727978		A J U	M F U	Y N	NO sign NO WBO	truncated 2 in		
			A J U	M F U	Y N				
BBCSC003	0707677		A J U	M F U	Y N				
	3728764		A J U	M F U	Y N				

*See Reverse

BMAMG014 0707668 3728941 — NO sign potential WBO

BMASC038 0707682 3730017 — Kfox scat - potential WBO

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4-22-09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
DETO	3, 4, 9,	F4 F5 F6 F7 F8	SCA-3 RWO-9	MGH-4

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

Data on GPS #9

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAMG015	0707704		A J U	M F U	Y N	No sign			
	3729542		A J U	M F U	Y N	potential WBO / Kfox			
			A J U	M F U	Y N				
BMAMG016	0707697		A J U	M F U	Y N	No sign			
	3729063		A J U	M F U	Y N	potential WBO / Kfox			
			A J U	M F U	Y N				
BKBMG001	0707697		A J U	M F U	Y N	Kf scat			
	3728716		A J U	M F U	Y N	Marginal for WBO			
			A J U	M F U	Y N				
BMARW016	0707690		A J U	M F U	Y N	2 entrances / No sign			
	3728098		A J U	M F U	Y N	potential WBO / Kit fox			
			A J U	M F U	Y N				
BMAMG017	0707733		A J U	M F U	Y N	No sign			
	3728622		A J U	M F U	Y N	WBO & kitfox potential			
			A J U	M F U	Y N				
BMASC039	0707742		A J U	M F U	Y N	potential WBO / Kit fox			
	3729213		A J U	M F U	Y N	No sign			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

7750	X	7780	X	7810	X	7840	X	7870	X	7900	X
7760	X	7790	X	7820	X	7850	X	7880	X	7910	X
7770	X	7800	X	7830	X	7860	X	7890	X	7920	X

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4-23-09

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Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
DETO	3,4,9	F4, F5, F6, F7, F8	SCA-3 RWO-9	MGH-4

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	815am	74°F	0-1/NW	calm/10%
Mid-day	1100am	93°F	2-7/S	calm/20%
End	400pm	97°F	5-15/SW	clear/10%

GPS data on #9

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMARW017	0707781		A J U	M F U	Y N	No sign - No WBO potential			
	3728611		A J U	M F U	Y N	marginal burrow			
			A J U	M F U	Y N				
BMARW018	0707780		A J U	M F U	Y N	potential WBO			
	3729090		A J U	M F U	Y N	No sign			
			A J U	M F U	N				
BMARW019	0707784		A J U	M F U	Y N	kit fox scat			
	3729247		A J U	M F U	Y N	potential WBO			
			A J U	M F U	Y N				
BKBSC010	0707801		A J U	M F U	Y N	kit fox complex w/ scat			
	3729268		A J U	M F U	Y N	potential WBO			
			A J U	M F U	Y N				
BMAMG018	0707793		A J U	M F U	Y N	kit fox scat			
	3729344		A J U	M F U	Y N	potential WBO			
			A J U	M F U	Y N				
BKBMG002	0707789		A J U	M F U	Y N	kit fox scat			
	3729524		A J U	M F U	Y N	2 entrances 5 meters apart			
			A J U	M F U	Y N				
BKBSC011	0707806		A J U	M F U	Y N	kit fox/coyote scat/prey remains			
	3729941		A J U	M F U	Y N	10+ entrances			
			A J U	M F U	Y N	potential WBO			

*See Reverse

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4-23-09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
DETO				

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

	GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	*DETO Sign Type* (include comments) Burr	Scat	Shell
BMASC040		0707830		A J U	M F U	Y N	potential KF/WBO			
		3729635		A J U	M F U	Y N	No sign			
				A J U	M F U	Y N				
BMAMG019		0707818		A J U	M F U	Y N	No sign			
		3729492		A J U	M F U	Y N	potential WBO			
				A J U	M F U	Y N				
BMARW020		0707806		A J U	M F U	Y N	No sign			
		3728918		A J U	M F U	Y N	potential WBO			
				A J U	M F U	Y N				
BMAMG020		0707818		A J U	M F U	Y N	No sign			
		3728776		A J U	M F U	Y N	some owl potential			
				A J U	M F U	Y N				
BMASC041		0707832		A J U	M F U	Y N	No sign			
		3728735		A J U	M F U	Y N	potential WBO/Kit fox			
				A J U	M F U	Y N				
BLSSC002		0707823		A J U	M F U	Y N				
		3727989		A J U	M F U	Y N				
				A J U	M F U	Y N				
BMARW021		0707832		A J U	M F U	Y N	No sign			
		3728751		A J U	M F U	Y N	potential KF/WBO			
				A J U	M F U	Y N				

*See Reverse

BMASC042 0707859 3729312 — No sign potential WBO

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4-23-09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMASC043	0707896		A J U	M F U	Y N	No sign			
	3729106		A J U	M F U	Y N	potential WBO / KFox			
			A J U	M F U	Y N				
BMASC044	0707902		A J U	M F U	Y N	No sign			
	3728483		A J U	M F U	Y N	potential WBO / KFox			
~~BKBSC017~~			A J U	M F U	Y N				
			A J U	M F U	Y N				
BKBSC012	0707900		A J U	M F U	Y N	coyote & kit fox scat			
	3727987		A J U	M F U	Y N	NO WBO			
			A J U	M F U	Y N	In & under shrubs			
BKBRW004	0707891		A J U	M F U	Y N				
	3729005		A J U	M F U	Y N	KF scat - potential WBO			
			A J U	M F U	Y N				
BDCSC009	0707922		A J U	M F U	Y N	disarticulated pieces x5			5
	3729272		A J U	M F U	Y N	small			
			A J U	M F U	Y N				
BMARW022	0707899		A J U	M F U	Y N	Possible KFox / WBO			
	3729491		A J U	M F U	Y N	may be occluded 2' in			
			A J U	M F U	Y N				
BKBMG053	0707907		A J U	M F U	Y N	KFox scat			
	3729960		A J U	M F U	Y N	WBO pellets / wash			

*See Reverse

BMASC045 0707923 3730014 potential WBO / KF No sign

4250	✓	4010	✓
4240	✓	4000	✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: ~~4-22-09~~ 4-24-09

Page 1A of 1A

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,6	C4 to Row to C8 3728200	SDA - 1 CLU - 6	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	3:19PM	91°F	3 to 11 mph	70% CC
Mid-day				
End	5:41PM	86°F	6 to 13 mph	40% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDPSD019	0703992	DETO?	A J U	M F U	Y N	possible DETO pallet, in	5		
	3728870		A J U	M F U	Y N	galleta grass 10"x 6"x 16"			
			A J U	M F U	Y N	not suitable for BUOW			
			A J U	M F U	Y N				
BDSGL005	0704244	DETO	A J U	M F U	Y N	tortoise scat, ~2"x 3/4"		3	
	3729521		A J U	M F U	Y N	covered in dirt			
			A J U	M F U	Y N				
BDSGL006	0704240	DETO	A J U	M F U	Y N	tortoise scat w/i ~50m of		3	
	3729000		A J U	M F U	Y N	active burrow (BDBAD010)			
			A J U	M F U	Y N	2.5"x 3/4"			
			A J U	M F U	Y N				
BDSGL007	0704266	DETO	A J U	M F U	Y N	- tortoise scat, 1"x 1/2"		4	
	3728371		A J U	M F U	Y N	eroded, bleached			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Utah vine milkweed 0703995 | 3729743 (1)

0704253 | 3729423 (1)

0704248 | 3729348 (2)

3/4 mile buffer start @ 0712746/3729740
walked N on 0712715 (0,20)

turned to do 1-mile buffer to east (@ 0711371, 3731348
start 3/4 & 1-mile @ 0711370 and go west
to continue

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe Date: 4-24-09 Page 1 of _____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Buffer	1,6	3/4 mile buffer	SDA-1 GLU-6	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	9:01AM	78°F	0 to 2mph	45% CC
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDPSD017	0712632	DETO?	A J U	M F U	Y N	Possible tortoise pallet under	4		
	3730581		A J U	M F U	Y N	dead tree, currently used by			
	↳LOSH		A J U	M F U	Y N	Neotoma, not suitable for BUOW			
			A J U	M F U	Y N	full of scat, 8"x 4"			
			A J U	M F U	Y N				
BMASD024	0712282	~~BUOW?~~	A J U	M F U	Y N	- large round-tailed burrow, big			
	3731050	round-tailed	A J U	M F U	Y N	enough for BUOW, not likely			
			A J U	M F U	Y N	for tortoise (very low probability for BUOW)			
			A J U	M F U	Y N				
BMASD025	0711977	mammal	A J U	M F U	Y N	- coyote foraging burrow, narrows			
	3731245	(coyote foraging)	A J U	M F U	Y N	quickly, could be used as pallet			
			A J U	M F U	Y N	for DETO, would need to be modified			
			A J U	M F U	Y N	for BUOW use			
BMASD026	0711683	round-tailed	A J U	M F U	Y N	- large burrow (round-tailed ground			
	3731324		A J U	M F U	Y N	squirrel) low probability of BUOW			
			A J U	M F U	Y N	not suitable for DETO,			
			A J U	M F U	Y N				
BMAGL039	0711556	round-tailed	A J U	M F U	Y N	two round-tailed ground squirrel			
	3731339		A J U	M F U	Y N	complexes, some with burrows large			
			A J U	M F U	Y N	enough for BUOW, not suitable			
			A J U	M F U	Y N	for DETO, multiple burrows, no sign			

*See Reverse

In McCoy wash @ start
dry desert wash woodlands in drainages, sparse creosote bush scrub

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4-24-09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments)		
							Burr	Scat	Shell
BKBSD016	0711378	Kit fox	A J U	M F U	Y N	kit fox complex, one burrow			
	3731346		A J U	M F U	Y N	DETO shaped, turns right, multiple			
			A J U	M F U	Y N	round-tailed burrows, kit fox			
			A J U	M F U	Y N	scat (fresh & old), likely			
			A J U	M F U	Y N	active KFox burrow, 7+ burrows			
			A J U	M F U	Y N	suitable for BUOW			
			A J U	M F U	Y N				
BKBGL019	0712038	kitfox	A J U	M F U	Y N	Kit fox burrow, in drainage,			
	3731635		A J U	M F U	Y N	under dead tree, can't see to end,			
			A J U	M F U	Y N	could be used by DETO/BUOW			
			A J U	M F U	Y N	coyote scat present			
			A J U	M F U	Y N				
BDPSD018	0712275	DETO?	A J U	M F U	Y N	Possible DETO ~~burrow~~, appears	5		
	3731534		A J U	M F U	Y N	that a woodrat put pallet			
			A J U	M F U	Y N	nest in front & over			
			A J U	M F U	Y N	winter & tortoise cleaned out woodrat			
			A J U	M F U	Y N	nest 15"x 10" x 3" deep			
			A J U	M F U	Y N	coyote & KFox scat			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

very sandy soils in drainages, not a lot of forage present @ this point in season

black-tailed gnatcatcher

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 4-24-09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBGL020	0712257	Kit fox	A J U	M F U	Y N	Kit fox complex, suitable for			
	3731520		A J U	M F U	Y N	BUOW/DETO, 8+ burrows			
			A J U	M F U	Y N				
BMASD027	0712825	Coyote	A J U	M F U	Y N	- very large burrow, likely			
	3731058		A J U	M F U	Y N	coyote, Coyote tracks & scat,			
			A J U	M F U	Y N	suitable for DETO ~~[illegible]~~ BUOW			
			A J U	M F U	Y N	in drainage, faces north ☺			
			A J U	M F U	Y N				
BMASD028	0712875	Coyote foraging	A J U	M F U	Y N	- turns to left & right, could be			
	3731021	burrow	A J U	M F U	Y N	used by DETO/BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BBCGL003	0712906	barrel	A J U	M F U	Y N	- many headed, 19 ribs			
	3730906	cactus	A J U	M F U	Y N	polycephal → 17 heads			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCGL029	0712988	DETO	A J U	M F U	Y N	adult male DETO carcass,			
	3730706	carcass	A J U	M F U	Y N	most of carapace & plastron			
			A J U	M F U	Y N	present, in several large pieces,			
			A J U	M F U	Y N	no scutes in area			
			A J U	M F U	Y N	11" MCL, x ~10" wide			

Coyote scat present

*See Reverse

to 0713119 / 3729747 on 1-mile
(* go south of here to continue)

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4-24-09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day	12:56PM	91°F	0 to 5mph	40% cc
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBSD017	0713115	kit fox	A J U	M F U	Y N	kit fox burrow (1) turns to			
	3730211		A J U	M F U	Y N	right, suitable for BUOW/DETO			
			A J U	M F U	Y N	no sign			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

OHV tracks

3990	✓
980	✓
970	✓
960	✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/26/09

Page 1A of _____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
focused	1,6	CATclaw to 3728200	SDA-1 GLA-6	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	11:52AM	79°F	1 to 4 mph	1% CC
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCGL030	0703974 3728985	DETO carcass	A J U	M F U	Y N	adult male DETO carcass			4
			A J U	M F U	Y N	-pieces of bone (s) scattered in			
			A J U	M F U	Y N	area, otherwise shell intact, marginal			
			A J U	M F U	Y N	scutes still adhering to bone,			
			A J U	M F U	Y N	in drainage			
			A J U	M F U	Y N	10" MCL x 8" wide			
			A J U	M F U	Y N	-bones still domed, shell cracked			
			A J U	M F U	Y N	(plastron), likely run over?			
			A J U	M F U	Y N	↳ picture, not along growth lines			
			A J U	M F U	Y N				
BDPSD012	0703964 3729931	DETO ?	A J U	M F U	Y N	-deto pellet in caliche,	5		
			A J U	M F U	Y N	~30 cm x 25 cm x 50 cm deep			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCSD017	0703905 3729965	DETO carcass	A J U	M F U	Y N	large ♂ ~~car~~ adult tort carcass			2/3
			A J U	M F U	Y N	MCL = 11.5" x 10.5"			
			A J U	M F U	Y N	scutes mainly adhering to bone			
			A J U	M F U	Y N	some vertebrals/costals missing			
			A J U	M F U	Y N	plastron scutes mainly intact			
			A J U	M F U	Y N	fairly large gular domed plastron = ♂			
			A J U	M F U	Y N	parts of tail, some skin adhering to shell			

*See Reverse

bobcat scat, catclaw acacia

Utah milkweed 0703995 | 3729435

3990 ✓
80 ✓
70 ✓
60 ✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 4/26/04

Page 2A of _____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End	3:05pm	88°F	1 to 7 mph	0% cc

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDSSD007	0703962 3729662	DETO	A J U	M F U	Y N	tortoise scat, not shiny, medium brown, tightly packed, no odor 1¼" x ½" one piece w bit attached		3	
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

7700	X	7760	X	7820	X	7880	X	7940	7940		X	8000	X
7710	X	770	X	830	X	890	X	950	7950	930	X	010	X
7720	X	780	X	840	X	900	X	960	960		X	020	X
7730	X	790	X	850	X	910	X	970	970		X	030	X
7740	X	800	X	860	X	920	X	980	980		X	040	X
7750	X	810	X	870	X	930	X	990	990		X	050	X

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE **Date:** 04·26·2009 **Page** 1 **of** 3

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focus	DATA C #3	F9 / F10	CGE-#9 MRI #4 RWO #3	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	07:15	65°	-0 / UNMEASURE	CLEAR 0%
Mid-day	12:21	84°	2 / S	CLEAR 0%
End	3:44	89°	5 / E	CLEAR 0%

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential Usage Below DETO
BMACG056	0707715		A J U	M F U	Y N	UNDER CREOSOTE	4			X
	3727548		A J U	M F U	Y N					
BKBMR008	0707724		A J U	M F U	Y N	KIT FOX SCAT PRESENT				X X
	3727573		A J U	M F U	Y N	ONE OPENING				
BLSMR001	0707704		A J U	M F U	Y N	PAIR IN TREE - SEEN PREVIOUS				
	3727685		A J U	M F U	Y N	DAY ≈ 50 M NW OF GPS POINT				
BMACG057	0707714		A J U	M F U	Y N	POTENTIAL PALLET - 20CM x 10CM	4			X
	3727940		A J U	M F U	Y N	UNDER IRONWOOD est.				
BMAMR035	0707727		A J U	M F U	Y N	POTENTIAL PALLET USAGE	4			X
	3727974		A J U	M F U	Y N					
BMACG058	0707753		A J U	M F U	Y N	UNDER GOLDEN GRASS	4			X
	3727093		A J U	M F U	Y N					
BMAMR036	0707730		A J U	M F U	Y N	NO SCAT	4			X X
	3727469		A J U	M F U	Y N					
BDPCG003	0707768		A J U	M F U	Y N	20cm x 14cm	4			X
	3727730		A J U	M F U	Y N					
BNEMR007	0707775		A J U	M F U	Y N	VERDIN TYPE IN OLNEIA				
	3727906		A J U	M F U	Y N					
BMARW026	0707787		A J U	M F U	Y N	K.F. SCAT	4			X
	3727721		A J U	M F U	Y N					
			A J U	M F U	Y N					

*See Reverse

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 04.26.2009

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focus	DATA ON #3			

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential Usage BY OW	DETO
BMAMR037	0707814		A J U	M F U	Y N		4			X	X
	3727301		A J U	M F U	Y N						
BDBMR004	0707822		A J U	M F U	Y N	17cm x 11cm	4				X
	3727430		A J U	M F U	Y N						
BMACG059	0707835		A J U	M F U	Y N						X
	3727901		A J U	M F U	Y N						
BDCM023	0707823		A J U	M F U	Y N	44mm x 35mm			5		
	3727973		A J U	M F U	Y N						
BDCCG049	0707840		A J U	M F U	Y N	1.5cm x 1.5cm			5		
	3728001		A J U	M F U	Y N						
BMACG060	0707852		A J U	M F U	Y N	No SCAT	4			X	X
	3727943		A J U	M F U	Y N						
BMAMR038	0707863		A J U	M F U	Y N	No SCAT	4			X	X
	3727424		A J U	M F U	Y N						
BMACG061	0707888		A J U	M F U	Y N	2 OPENINGS	4				X
	3727678		A J U	M F U	Y N						
BMACG062	0707926		A J U	M F U	Y N	POTENTIAL PALLET	4				X
	3727904		A J U	M F U	Y N						
BMAMR039	0707913		A J U	M F U	Y N		4			X	
	3727436		A J U	M F U	Y N						
			A J U	M F U	Y N						

*See Reverse

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 04.26.2009

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
FOCUS	DATA C #3			

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTENTIAL USAGE BURROW	DETO
BDPRW003	0707959		A J U	M F U	Y N	18cm x 10cm	4				X
	3727912		A J U	M F U	Y N						
BDPMR013	0707949		A J U	M F U	Y N	30cm - depth	4				X
	3727947		A J U	M F U	Y N	23cm x 11cm					
BDCMR024	0707995		A J U	M F U	Y N	5cm x 4cm			5		
	3727942		A J U	M F U	Y N	1 FRAGMENT					
BKBRW005	0707967		A J U	M F U	Y N	~~[illegible]~~ KF SCAT	4			X	X
	3727869		A J U	M F U	Y N						
BNECG003	0707979		A J U	M F U	Y N	BOWL SHAPE					
	3727615		A J U	M F U	Y N						
~~[illegible]~~			A J U	M F U	Y N						
BDPCG004	0708019		A J U	M F U	Y N	DEPTH 30+	4				X
	3727945		A J U	M F U	Y N	18cm x 13cm					
BKBRW006	0708055		A J U	M F U	Y N	W/COYOTE SCAT & POSSIBLE	5			X	X
	3727452		A J U	M F U	Y N	BURROW					
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						

*See Reverse

4290
280
270
260

not last line to west, need to do 20/10

3728200 (213)

3730	✓
3740	✓
3750	✓
3760	✓

– didn't walk into Northern drainage, need to complete this drainage @ end of NW side

~~4000~~

4010
4000
3990
3980

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/3/09

Page 1 of ____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,6	C4to C8	SDA-1 GLU-6	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	11:09AM	90°F	5 to 17mph	30% CC
Mid-day	2:09 PM	97°F	6 to 12mph	30% CC
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDPGL033	0703762	DETO?	A J U	M F U	Y N	~~possibly~~ - could be used as	5		
	3728619		A J U	M F U	Y N	a pallet by DETO, foraging			
			A J U	M F U	Y N	burrow			
			A J U	M F U	Y N				
BDSSD008	0703747	DETO	A J U	M F U	Y N	tort. scat, bleached, plant		4	
	3728885		A J U	M F U	Y N	fibre loose, 2" x 3/4", in			
			A J U	M F U	Y N	drainage			
			A J U	M F U	Y N				
BDSSD009	0703740	DETO	A J U	M F U	Y N	tortoise scat, dk brown, shiny		2	
	3728519		A J U	M F U	Y N	odor, 1" x 3/4", 1" x 3/4			
			A J U	M F U	Y N	2 pieces			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

ferral burrows ~~sighs~~

3710	✓
3760	✓
3770	✓
3780	✓

+ finished N drainage of 3780, 3770, 3760, 50, 40, 30

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/4/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1, 6	C4 to C8	SDA-1 GLL-6	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	8:50 AM	~~86°F~~ 83°F	1 to 10 mph	75% CC
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDBSD011	0703708 3728543	DETO	A J U	M F U	Y N	likely active tortoise burrow, in caliches, another burrow 5m to north, near recent	1/2		
			A J U	M F U	Y N	Scat in same drainage			
			A J U	M F U	Y N	↳ connects to this burrow, (left			
			A J U	M F U	Y N	turn), also turns to right but			
			A J U	M F U	Y N	can't see to end, could be used by BUOW			
			A J U	M F U	Y N	3'x2'			
			A J U	M F U	Y N				
BDSGL008	0703723 3729630	DETO	A J U	M F U	Y N	tortoise scat, bleached, loose		4	
			A J U	M F U	Y N	material 2 1/4" x 1/2"			
			A J U	M F U	Y N	in pavement, next to drainage			
			A J U	M F U	Y N				
BDBGL020	0703722 3729004	DETO?	A J U	M F U	Y N	- potential tort burrow in caliches	5		
			A J U	M F U	Y N	less likely for BUOW, but			
			A J U	M F U	Y N	possible, not scat, narrows			
			A J U	M F U	Y N	~3' in, turns left & right			
			A J U	M F U	Y N	1 3/4' x 1'			
			A J U	M F U	Y N				
BDPSD021	0703730 3729919	DETO	A J U	M F U	Y N	possible pallet for DETO, in	5		
			A J U	M F U	Y N	caliches in deep drainage			

*See Reverse

collared lizard (Utah milkweed) 0703787 | 3729870 (6)

4010
4000
3990
3980

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5/4/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day	11:59AM	90.5°F	1 to 3 mph	5% CC
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BOSSD010	0703782 3729087	DETO	A J U	M F U	Y N	tort. scat, fibrous plant material, light brown 2" x 1/2"		3	
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BNESD001	0703779 3728795		A J U	M F U	Y N				
			A J U	M F U	Y N	- 2 eggs under brittlebush (poorwill?)			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

3790	~~4010~~	✓
3800	~~4000~~	✓
3810	~~3990~~	✓
3820	~~3980~~	✓

← need to do north drainage

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/4/09

Page 1B of 1B

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
	1,6	CA to CO	1-SPA 6-GLM	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	4:24PM	97°F	0 to 12mph	~~80~~ 70% CC
Mid-day				
End	6:45PM	93°F	0 to 8mph	90% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDSSD011	0703784 3728650	DETO	A J U	M F U	Y N	2¼"x ¾", some odor, fort scat fibrous, lt. brown on sun-side, med. brown on other in small drainage		2/3	
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDSGL009	0703810 3729390	DETO	A J U	M F U	Y N	fort. scat, bleached, no odor fibrous, tightly packed 1¼"x 1" in small drainage		3	
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
~~BMSD029~~ BDBSD012	0703786 3729419	mammal DETO?	A J U	M F U	Y N	- could be used by DETO, under thick bushes, so not likely suitable for BUON low probability of use by DETO but possible ~~14~~ 12"x12"	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPGL034	0703807 3729059	DETO?	A J U	M F U	Y N	- possible tortoise pallet, very @ entrance, fresh dirt inside no sign ~10"x7"x14" deep	4		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

~~Utha~~ Utah milkweed 0703793/3728580 (6)

0703786/3728845 (3)+(4)

0703788/3729872 (5)

0703821/3729391 (1)

711000	X	960	X	920	X	880	X	840	X	800	X	760	X	720		680		640		600			
710990	X	950	X	910	X	870	X	830	X	790	X	750	X	710		670		630		590			
710980	X	940	X	900	X	860	X	820	X	780	X	740	X	700		660		620		580			
970	X	930	X	890	X	850	X	810	X	770	X	730	X	690		650		610		570			

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/8/09

Page 1 of 1

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	4,5	K8 K9	SCA-4 BWO-5	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	745a	80°F	0-1/W	calm/0%
Mid-day	1200	103°F	0-1/E	calm/0%
End	245p	105°F	0-1/E	calm/0%

GPS Data #5

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMASC046	0711000		A J U	M F U	Y N	potential WBO			
	3727976		A J U	M F U	Y N	kit fox scat			
			A J U	M F U	Y N				
BMASC047	0710997		A J U	M F U	Y N	potential WBO			
	3728469		A J U	M F U	Y N	kit fox scat - shade burrow 10m to west			
			A J U	M F U	Y N				
BDCSC010	0710976		A J U	M F U	Y N	2x4 cm - possibly burro hip bone frag.			
	3728456		A J U	M F U	Y N				
			A J U	M F U	Y N	potential WBO/kfox			
BMASC048	0710971		A J U	M F U	Y N	kit fox scat			
	3727567		A J U	M F U	Y N				
			A J U	M F U	Y N	2 of 3 cm in shallow			
BDCRW001	0710824		A J U	M F U	Y N	drainage			
	3727525		A J U	M F U	Y N				
			A J U	M F U	Y N	4 feathers in shallow			
BBFSC001	0710821		A J U	M F U	Y N	drainage			
	3727637		A J U	M F U	Y N				
			A J U	M F U	Y N	Potential WBO / kit fox			
BMARW037	0710808		A J U	M F U	Y N	kit fox scat			
	3727619		A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

BDCSC011 0710800 3727735 — mineralized 4x3 cm near base of Larrea

BKBRW007 0710754 3728261 — WBO potential + kit fox natal den complex 12+ openings / kf scat / coyote scat

300	X	960	X	920	X	880	X	840	X	800	X	760	X	720	X	680	X	640	X	600	X	560	X		
10990	X	950	X	910	X	870	X	830	X	790	X	750	X	710	X	670	X	630	X	590	X	550	X		
710980	X	940	X	900	X	860	X	820	X	780	X	740	X	700	X	660	X	620	X	580	X	540	X		
970	X	930	X	890	X	850	X	810	X	770	X	730	X	690	X	650	X	610	X	570	X	530	X		

to 450

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/8/09

Page 1A of 2A

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	9,10	~~K6~~ ~~K7~~ K5	MRI-9 MGH-10	

↳ already done this

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	0640	~~[illegible]~~	1.4 N/E	0% CC
Mid-day	1202	101	1.3 N/E	0% CC
End	1945	99.3°	2.5 W	0% CC

waypoints Recorded on #10

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential Burrow Deto	Burrow
BNEMK008	0716876		A J U	M F U	Y N	Basket type nest in fork of					
	3729863		A J U	M F U	Y N	Iron wood tree.					
			A J U	M F U	Y N						
BMAM6021	0710623		A J U	M F U	Y N	old Apron, under creosote Bush,	4			X	X
	3729618		A J U	M F U	Y N	no recent Diggin'					
			A J U	M F U	Y N						
PMAM6022	0710527		A J U	M F U	Y N	old Apron, spider webs, no recent	4	—		X	X
	3729521		A J U	M F U	Y N	diggin', under creosote Bush.					
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						

*See Reverse

6 + 7 Start @ 400 then head west

520	X	480	X	440	400	360	
510	X	470	X	430	390	350	
500	X	460	X	420	380	340	
490	X	450	X	410	370	330	

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: _____ Date: 5/8/09 Page 2A of 2A

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments)		
							Burr	Scat	Shell
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

to do [3950 – 3790]

3950	✓	3910	✓	3870	3830		3790	✓
3940	✓	3900	✓	3860	3820	✓		
3930	✓	3890	✓	3850	3810	✓		
3920	✓	3880	✓	3840	3800	✓		

← 3700? Can do 3700 ~~3690~~

done on 5/4/09 not drainage

didn't do drainage @ N. end

5/9/09 not drainage

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/8/09

Page 1C of 2C

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	C4 Row to C7 3728200	1,6	SDA-1 GLU-6	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day	4:33pm	105°F	6 to 12mph	0% CC
End	7:31pm	100°F	4 to 7mph	0% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCSD018	0703937 3729142	DETO Carcass	A J U	M F U	Dead	adult tortoise carcass, very near			4
			A J U	M F U	Y N	9½" MCL x 9" wide, female			
			A J U	M F U	Y N	adjacent to dug out burrow			
			A J U	M F U	Y N	(likely badger foraging) possible predation?			
			A J U	M F U	Y N	scutes still present on plastron,			
			A J U	M F U	Y N	not on carapace, carapace disarticulated			
			A J U	M F U	Y N	↑ 75%			
			A J U	M F U	Y N				
BMASD029	0703939 3729164	Mammal	A J U	M F U	Y N	– mammal burrow, could be			
			A J U	M F U	Y N	used as pallet for DETO			
	→ BKPGL003 is a flat bottom potential DETO pallet		A J U	M F U	Y N	~9" x 7" x 15" deep			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
NOTE: small bit of white wash noted @ BDBSD003			A J U	M F U	Y N	→ likely active DETO burrow			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPSD023	0703944 3729164	DETO?	A J U	M F U	Y N	possible tort pallet, adjacent	5		
			A J U	M F U	Y N	to BDBSD003			

*See Reverse

~24" wide x 15" high x 24" deep

Utah milkweed 0703929/3729160
0703932/3729204
0703928/3729424 (6)

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5/8/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
	E			

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCSD019	0703948 3728934	DETO bone frag	A J U	M F U	Y N	tort. bone, 1/2"x 1/2" not mineralized, old			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCGL031	0703950 3728560	DETO bone frag.	A J U	M F U	Y N	- tort bone fragments, two pieces, not mineralized, old			5
			A J U	M F U	Y N	1"x 3/4", 1/4"x 3/4"			
			A J U	M F U	Y N				
			A J U	M F U	Y N	+ 2 pieces ~ 10m to SE			
			A J U	M F U	Y N	1 1/2"x 1", 1"x 1/2"			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Linear from South side of project

Start @ 3726028

0708260	✓	300	
270	✓	310	
280	✓		
290	✓		

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/8/09

Page 1E of 1E

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
focused	1,6	G13 ~~G14~~ ~~etc.~~	SDA-1 GMI-6	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	12:39PM	101°F	1.5 to 3mph	0% CO
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBGL021	0708284 3725904	Kitfox complex	A J U	M F U	Y N	Kitfox complex, old, some old kit fox scat, 10+ burrows, potential for BUOW, should be visited 4x for BUOW, potential for DETO use, no DETO or owl sign			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDOSD001	0708260 3725772	DETO?	A J U	M F U	Y N	- egg shell fragment? ~1/4"x1/4" potential tortoise			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPSD022	0708260 3725737	Mammal	A J U	M F U	Y N	possible use by tortoise as pallet, no deep enough for BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

0	X	680	X	640	X	600	X	560	X	520	X	480	X	440	X	400		360											
710 710	X	670	X	630	X	590	X	550	X	510	X	470	X	430	X	390		350											
710 700	X	660	X	620	X	580	X	540	X	500	X	460	X	420	X	380		340											
710 690	X	650	X	610	X	570	X	530	X	490	X	450	X	410	X	370		330											

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5-9-09

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Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
DETO	4, 5	R8 K-9	SCA-4 RWO-5	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	700a	73°F	0-1 / E	calm / 0%
Mid-day	1140a	99°F	1-3 / S	calm / 0%
End	350p	105°F	6-20 / S	clear / 0%

GPS Data #5

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMASC049	0710722		A J U	M F U	Y N	potential WBO - No sign			
	3728077		A J U	M F U	Y N	potential Kit fox - Kit fox scat			
			A J U	M F U	Y N				
BKBRW008	0710702		A J U	M F U	Y N	potential WBO - Kf complex			
	3728375		A J U	M F U	Y N	potential Kfox - Kfox scat			
			A J U	M F U	Y N				
BMASC050	0710707		A J U	M F U	Y N	potential WBO - white wash			
	3728392		A J U	M F U	Y N	potential Kit fox			
			A J U	M F U	Y N				
BMASC051	0710701		A J U	M F U	Y N	potential WBO - white wash			
	3727768		A J U	M F U	Y N	potential Kfox			
			A J U	M F U	Y N				
BUXORW001	0710694		A J U	M F U	Y N	50 cal on clip (n=3)			
	3727746		A J U	M F U	Y N	(potential WBO / Kit fox)			
			A J U	M F U	Y N	No sign			
BMASC052	0710593		A J U	M F U	Y N				
	3727867		A J U	M F U	Y N	(8" diameter single head)			
			A J U	M F U	Y N				
BBCSC001	0710600		A J U	M F U	Y N				
	3728086		A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

BKBSC013 0710601 3728261 — Degraded Kit fox complex, potential WBO / Kit fox scat

BMASC053 0710582 3728377 — potential WBO / Kit fox, No sign

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5-9-09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
DETO	4,5	K8 K9	SCA-4 RWO-5	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS #5

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BBCSC002	0710576		A J U	M F U	Y N	10" diam - single head			
	3728002		A J U	M F U	Y N				
			A J U	M F U	Y N				
BMARW028	0710551		A J U	M F U	Y N	Potential WBO / kit fox			
	3727970		A J U	M F U	Y N	No sign			
			A J U	M F U	Y N				
BMARW029	0710512		A J U	M F U	Y N	potential WBO / kit fox			
	3727537		A J U	M F U	Y N	No sign - 5m ~~east~~ occluded entrance			
			A J U	M F U	Y N	w/ kit fox scat			
BMARW030	0710514		A J U	M F U	Y N	potential WBO / kit fox			
	3727952		A J U	M F U	Y N	No sign			
			A J U	M F U	Y N				
BKBSC014	0710500		A J U	M F U	Y N	potential WBO / kit fox - 2 entrances			
	3728348		A J U	M F U	Y N	kit fox scat / white wash (Important			
			A J U	M F U	Y N				
BBCSC004	0710495		A J U	M F U	Y N				
	3728305		A J U	M F U	Y N	8" diam - single head			
			A J U	M F U	Y N				
BKBRW009	0710491		A J U	M F U	Y N				
	3727951		A J U	M F U	Y N	potential WBO / kit fox			
			A J U	M F U	Y N	white wash / kit fox scat			

*See Reverse

BMARW031 0710466
3728184

potential DETO pallet only

BMARW032 0710452
3728235

potential WBO
No sign

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5-9-09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
DETO	4,5	K8 K9	SCA-4 RWO-5	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS #5

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBSC015	0710437 3728039		A J U	M F U	Y N	degraded kit fox complex kit fox scat/potential WBO			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

710 ~~440~~ ~~410~~ ~~380~~ ~~330~~ ~~320~~ M290 M260 230
~~430~~ ~~400~~ ~~370~~ ~~340~~ ~~310~~ M280 M250 220
~~420~~ ~~390~~ ~~360~~ ~~330~~ ~~300~~ E270 E240 210

Site: Blythe

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Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
focused	9,10,7	K6 K7	MR1-9 MG#-10 CG-7	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	0555	75.4°	0.6 MPH N/W	0% CC
Mid-day	1245	104.5	3.6 mph W	0% CC
End	1935	99.0°	10.4 mph N/W	0% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential Burrow Deto	Burrow
BMACG063	0710417		A J U	M F U	Y N	Apron, maintains size, open Area	4			X	X
	3728964		A J U	M F U	Y N						
			A J U	M F U	Y N						
BMACG064	0710430		A J U	M F U	Y N	no Apron, in small Drainage,	4			X	X
	3728936		A J U	M F U	Y N	maintains size, under Creosote. Kit Fox scat on Apron.					
			A J U	M F U	Y N						
BMACG065	0710389		A J U	M F U	Y N	Small apron, open Area, base	4			X	X
	3729366		A J U	M F U	Y N	of Creosote					
			A J U	M F U	Y N						
BMAMR040	0710372		A J U	M F U	Y N	Apron, fresh excavation, under	4			X	X
	3729272		A J U	M F U	Y N	creosote, maintains shape, can't see end.					
			A J U	M F U	Y N						
BDCCG050	0710363		A J U	M F U	Y N	1cm x 1cm. Discovered in open Area			5		
	3729195		A J U	M F U	Y N	with scattered Creosote					
			A J U	M F U	Y N						
BBCMR004	0710369		A J U	M F U	Y N	25cm x 20 cm. under Bush					
	3728619		A J U	M F U	Y N						
			A J U	M F U	Y N						
BMACG066	0710353		A J U	M F U	Y N	Broken Burrow Pellets. no Apron	4			X	X
	3728471		A J U	M F U	Y N	Present. KF Scat					
			A J U	M F U	Y N						

*See Reverse

mg 260	230	200	170	140	110
m 250	220	190	160	130	100
E 240	210	180	150	120	090

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

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Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential Burrow Deto	Burro
BMAMC023	0710353		A J U	M F U	Y N	Apron, fresh tracks, no new					
	3728833		A J U	M F U	Y N	excavation. KF Scat & Coyote scat					X
			A J U	M F U	Y N						
BMACG 051	0710302		A J U	M F U	Y N	Apron, Spider webs & Debris in	4				
	3728993		A J U	M F U	Y N	Burrow. Maintains shape				X	X
			A J U	M F U	Y N						
BMAMR041	0710[redacted]246		A J U	M F U	Y N	white wash visible on Apron	4				
	3729159		A J U	M F U	Y N	KF Scat in Burrow & Around Burrow				X	X
			A J U	M F U	Y N						
BDCMR025	0710250	Tort	A J U	M F U	Y N	mineralized Bone frag			5		
	3729347		A J U	M F U	Y N	4 cm X 1.5 cm				[redacted]	
			A J U	M F U	Y N						
BMAMR042	0710221		A J U	M F U	Y N	Fresh excavation, next to	4				
	3729179		A J U	M F U	Y N	Creosote Bush.				X	X
			A J U	M F U	Y N						
BDCMR026	0710219	Tort	A J U	M F U	Y N	mineralized Bone frag			5		
	3728925		A J U	M F U	Y N	4.5 cm X 3 cm					
			A J U	M F U	Y N						
BDCCG051	0710210	Tort	A J U	M F U	Y N	2 frags 10 meters apart. In small			5		
	3728585		A J U	M F U	Y N	Drainage 2.5 cm x 2.5, 2.3 cm x					
			A J U	M F U	Y N	2.3 cm					

*See Reverse

IR44 7.66 mg ~~140~~ ~~110~~ 080 050 020
m ~~130~~ ~~100~~ 070 040 010
E ~~120~~ ~~090~~ 060 030 ~~1000~~ 710008

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

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Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential Burrow Deto	Burrow
BDCMG002	0710197	Tort	A J U	M F U	Y N	Mineralized 5.1cm x 3cm			5		
	3728476		A J U	M F U	Y N						
			A J U	M F U	Y N						
~~[illegible]~~ BKBCG009	0710183		A J U	M F U	Y N	White wash on Apron, multiple	4			X	X
	3728953		A J U	M F U	Y N	entrances.					
			A J U	M F U	Y N						
BKBMG004	0710198		A J U	M F U	Y N	white wash on Aprons.	4			X	X
	3728943		A J U	M F U	Y N	multiple openings					
			A J U	M F U	Y N						
BMAMG024	0710143		A J U	M F U	Y N	Apron. Small KF Scat.	4			X	X
	3729379		A J U	M F U	Y N						
			A J U	M F U	Y N						
BMACG068	0710146		A J U	M F U	Y N	Small Apron	4			X	X
	3728729		A J U	M F U	Y N						
			A J U	M F U	Y N						
BDCLG052	0710146	Tort	A J U	M F U	Y N	mineralized 4cm x 2.2 cm			5		
	3728729		A J U	M F U	Y N						
			A J U	M F U	Y N						
BMAMG025	0710170		A J U	M F U	Y N	~~Apr~~ small apron. Can't see	4			X	X
	3728580		A J U	M F U	Y N	end of Burrow. White wash					
			A J U	M F U	Y N	present.					

*See Reverse

~~080~~ ~~040~~ ~~020~~ 709~~990~~
~~070~~ ~~030~~ ~~010~~ ~~980~~
~~060~~ ~~030~~ ~~000~~ ~~970~~

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 05/09/09

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Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused				

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential Burrows Deto	Burrow
BKBMG005	0710142		A J U	M F U	Y N	KB scat Present, old Apron	4			X	X
	3729382		A J U	M F U	Y N						
			A J U	M F U	Y N						
BDCCg053	0710093	Tort	A J U	M F U	Y N	mineralized Fragment			5		
	3729197		A J U	M F U	Y N	3cm x 3cm, Located in small Drainage.					
			A J U	M F U	Y N						
BKBCg010	0710091		A J U	M F U	Y N	multiple entrances. Bleached KF scat	4			X	X
	3729065		A J U	M F U	Y N	multiple aprons, Complex. White Wash					
			A J U	M F U	Y N	on Apron for South Burrow					
			A J U	M F U	Y N						
BMACg069	0710088		A J U	M F U	Y N	white wash Present, Apron	4			X	X
	3728525		A J U	M F U	Y N						
			A J U	M F U	Y N						
BMAMG026	0710048		A J U	M F U	Y N	Apron, fresh Excavation.				X	X
	3729329		A J U	M F U	Y N						
			A J U	M F U	Y N						
BBBMN001	0710033		A J U	M F U	Y N	Pellets, white wash present &					
	3728519		A J U	M F U	Y N	Apron. Pellets in Burrow. Pellets contain insect parts					
			A J U	M F U	Y N						
BMACg07	0709966		A J U	M F U	Y N	multiple openings	4			X	X
	3728851		A J U	M F U	Y N						

*See Reverse

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

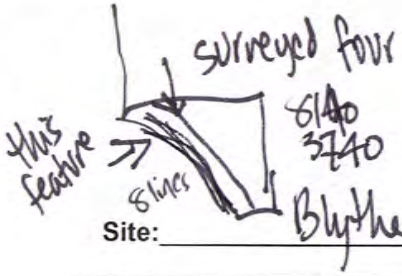
Date: 05/09/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential Burrow DETO	Burrow
BDCM6603	0709956		A J U	M F U	Y N	In Small Drainage			4		
	3728483		A J U	M F U	Y N						
			A J U	M F U	Y N						
BMAG07	0709939		A J U	M F U	Y N	Small Apron, no recent	4				
	3728679		A J U	M F U	Y N	activity.				X	X
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						

*See Reverse



Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5/9/09

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Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focus	1,6	C8 only	GLU-6 SDA-1	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day	5:10PM	102°F	2 to 8mph	0% CC
End	7:10pm	99°F	3 to 9mph	0% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCSD020	0703942	DETO	A J U	M F U	Y N	tort bone fragment 1/4"x1/2"			5
	3728102	bone frag.	A J U	M F U	Y N	old			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAGL040	0703764	mammal	A J U	M F U	Y N	-mammal burrow, rocky, in			
	3728166		A J U	M F U	Y N	side of deep drainage, could			
			A J U	M F U	Y N	be DETO burrow / potential for			
			A J U	M F U	Y N	BLOW, no sign			
			A J U	M F U	Y N				
BDBGL021	0704093	DETO	A J U	M F U	Y N	18" x 10", slightly plugged,	~~2 or 5~~		
	3728112	burrow &	A J U	M F U	Y N	goes deep, ~~very likely~~ tort.	1		
		nest	A J U	M F U	Y N	burrow, ~~but no sign~~			
			A J U	M F U	Y N	egg shell fragment, tortoise			
			A J U	M F U	Y N				
			A J U	M F U	Y N	Active burrow, nest site			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

3910	✓
3900	✓
3890	✓
3880	✓

← need to do N drainage

DESERT TORTOISE FIELD SURVEY DATA SHEET*

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Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
focused	1,6	C4 Row to C7	SDA-1 GLU-6	

3728200

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	11:14AM	95°F	1 to 2 mph	0% CC
Mid-day	2:00PM	106°F	4 to 12 mph	0% CC
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDPGL035	0703889 3729132	DETO?	A J U	M F U	Y N	potential tort. pallet	5		
			A J U	M F U	Y N	14" x 10" x 18" deep			
	↳ Same as BDBSD004?		A J U	M F U	Y N	no sign, under Krameria grayi			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Utah milkweed 0703907 / 3728476 (3) + (2)
0703909 / 3729201 (10+)
0703877 / 3729142 (1)

0703887 / 3728787 (3)+(2)

709960	X	920	X	880	X	840	X	800	X	760	X	710 X	660 X
950	X	910	X	870	X	830	X	790	X	750	X	700 X	650 X
940	X	900	X	860	X	820	X	780	X	740	X	690 X	640
930	X	890	X	850	X	810	X	770	X	730	X	670 X	630 BEGIN SEE NOTE P/2

9960
9650
310.

Site: Blythe

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Date: 5/10/09

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Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	7,10	J6 J7	CGE-7 MGA-10	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	6:20	72	1 m/h VARIA	Ø CLEAR 0%
Mid-day	4:20	104	3 m/h SOUTH	CLEAR 0%
End	7:33	96	0 m/h WEST	CLEAR 0%

GPS DATA # [10]

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTENTIAL USAGE DETO	BELOW
BBCCG005	0709955 ~~0709956~~		A J U	M F U	Y N	BARREL CACTUS					
	3728768		A J U	M F U	Y N	≈ 15 CM					
BMACG072			A J U	M F U	Y N						
~~BBCG072~~	0709930		A J U	M F U	Y N	SMALL APRON ; UNDER CREOSOTE	4			X	X
	3729410		A J U	M F U	Y N	≈ 1 METER DEEP					
			A J U	M F U	Y N						
BMAMG027	0709919		A J U	M F U	Y N	SMALL APRON - BIG OPENING LEADS	4			X	X
	3728642		A J U	M F U	Y N	TO ≈ 4' BURROW					
			A J U	M F U	Y N						
BBCCG006	0709870		A J U	M F U	Y N	≈ 12 CM BARREL CACTUS					
	3729703		A J U	M F U	Y N						
			A J U	M F U	Y N						
BDCCG054	0709792		A J U	M F U	Y N	3CM x 3CM			5		
	3729832		A J U	M F U	Y N						
			A J U	M F U	Y N						
BMACG073	0709732		A J U	M F U	Y N	2 BURROWS	4				X
	3729354		A J U	M F U	Y N						
			A J U	M F U	Y N						
BBCCG007	0709729		A J U	M F U	Y N	≈ 20CM BARREL CACTUS					
	3729178		A J U	M F U	Y N						
			A J U	M F U	Y N						

*See Reverse

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: May 10, 2009

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential Usage Blow	DETO
BMACG074	0709706		A J U	M F U	Y N	Under Creosote	4				x
	3729187		A J U	M F U	Y N						
			A J U	M F U	Y N						
BMACG075	0709684		A J U	M F U	Y N		4			x	x
	3728958		A J U	M F U	Y N						
			A J U	M F U	Y N						
BDCCG055	0709666		A J U	M F U	Y N	3cm x 3cm			5		
	3728682		A J U	M F U	Y N	MINERALIZED					
			A J U	M F U	Y N						
BKBMG006	0709677		A J U	M F U	Y N	2 OPENINGS - SOME KF SCAT	4				
	3728755		A J U	M F U	Y N						
			A J U	M F U	Y N						
END9630 ⇒			A J U	M F U	Y N	SMALL SECTION OF TILE 7 COMP.					
			A J U	M F U	Y N	BEGAN @ SOUTH END - WENT NORTH.					
			A J U	M F U	Y N	END @ 9630 & 9620 ≤ 2 TRANSECTS					
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						

*See Reverse

	710	400	X	360	X	320	X	280	X	240	X	200	X	160	X	120		080		040
710	390	360	X	350	X	310	X	270	X	230	X	190	X	150	X	110		070		030
710	380	300	X	340	X	300	X	260	X	220	X	180	X	140	X	100		060		020
710	370	400	X	330	X	290	X	250	X	210	X	170	X	130	X	090		050		010

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/10/09

Page 1 of 2

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	4,9	K8 K9	SCA-9 RWO-5	

	Time	Temp	Wind Sp/Dir		Weather & % Cloud	
Start	730a	76°F	1-3	W	calm	0%
Mid-day	1105a	94°F	1-2	E	calm	0%
End	230p	101°F	2-8	E	calm	0%

GPS DATA # [5]

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMARW033	0710375		A J U	M F U	Y N	potential WBO			
	3728178		A J U	M F U	Y N	No sign			
			A J U	M F U	Y N				
BMASC054	0710364		A J U	M F U	Y N	potential WBO/kit fox			
	3728233		A J U	M F U	Y N	kit fox scat			
			A J U	M F U	Y N				
BDCSC012	0710336		A J U	M F U	Y N	disarticulated w/in ~~[illegible]~~			
	3728065		A J U	M F U	Y N	a 10m area			
			A J U	M F U	Y N				
BBBRW002	0710328		A J U	M F U	Y N	white wash, pellet, feathers			
	3728304		A J U	M F U	Y N				
			A J U	M F U	Y N	kit fox burrow complex (15m diam)			
BKBSC016	0710332		A J U	M F U	Y N	kit fox scat/potential WBO			
	3728409		A J U	M F U	Y N	12+ openings			
			A J U	M F U	Y ~~N~~				
BMARW034	0710292		A J U	M F U	Y N	potential WBO/kit fox			
	3728037		A J U	M F U	Y N	No sign			
			A J U	M F U	Y N				
BMASC055	0710264		A J U	M F U	Y N	potential WBO/kit fox			
	3728372		A J U	M F U	Y N	No sign			
			A J U	M F U	Y N				

*See Reverse

BMASC056 0710212 3727643 — potential WBO; WBO feather near entrance

BDCSC013 0710198 3728391 — mineralized 3x3 cm; possible tortoise

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5-10-09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
DETO	4,9	K8 K9	SCA-9 RWO-5	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS data #5

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBRW010	0710120		A J U	M F U	Y N	Kit fox burrow complex			
	3727671		A J U	M F U	Y N	5+ entrances / Kit fox scat			
			A J U	M F U	Y N	Potential WBO			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

9640 X	580 X	520 X	460 X	400 X	340 X	280 X
9630 X	570 X	510 X	450 X	390 X	330 X	270 X
9620 X	560 X	500 X	440 X	380 X	320 X	260 X
610 X	550 X	490 X	430 X	370 X	310 X	250 X
600 X	540 X	480 X	420 X	360 X	300 X	240 X
590 X	530 X	470 X	410 X	350 X	290 X	230 X

9640
9230
410

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE Date: MAY 11, 2009 Page 1A of 3A

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
FOCUS	JHU-4 CGE-7 MGA-10	J6 J7	GERMAN GALLAGHER HUELSMAN	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	6:17	75°	1 M/H NE	CLEAR 0% COVER
Mid-day	1:20	104°	12 M/H SW	CLEAR 0% COVER
End	4:22	104°	13 M/H SSW	CLEAR 0% COVER

DATA @ SM-10

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTENTIAL USAGE BLOW	DETO
BMAGG076	0709600		A J U	M F U	Y N		4			X	X
	3729358		A J U	M F U	Y N						
BMAMG028	0709605		A J U	M F U	Y N		4			X	X
	3728537		A J U	M F U	Y N						
BDCJH004	0709563		A J U	M F U	Y N	3.5cm x 2.5			5		
	3729120		A J U	M F U	Y N	MINERALIZED					
BDCCG056	0709537		A J U	M F U	Y N	2cm x 2cm			5		
	3729102		A J U	M F U	Y N	MINERALIZED					
BMAJH016	0709524		A J U	M F U	Y N	APRON W/BLOW? SIGN	4			X	X
	3728879		A J U	M F U	Y N	WHITE WASH & SMALL BONE FRAGS					
			A J U	M F U	Y N	& KF SCAT					
BMAMG029	0709524		A J U	M F U	Y N	OLD RD TAIL on KF COMPLEX	4			X	X
	3729060		A J U	M F U	Y N	WHITEWASH IN AREA					
BBCCG008	0709504		A J U	M F U	Y N	30CM					
	3729300		A J U	M F U	Y N						
BDCCG057	0709475		A J U	M F U	Y N	2.5cm x 2.5cm			5		
	3729259		A J U	M F U	Y N						
BMAJH017	0709467		A J U	M F U	Y N		4			X	X
	~~3728260~~ 3729260		A J U	M F U	Y N						
BDCJH005	0709471		A J U	M F U	Y N	1cm x 2cm			5		
	3728586		A J U	M F U	Y N	NOT MINERALIZED					

*See Reverse

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: MAY 11, 2009

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTENTIAL USAGE BURROW	DEN
BDCMG004	0709483		A J U	M F U	Y N	2.5 cm x 2.5 cm			5		
	3728561		A J U	M F U	Y N	SOME MINERALIZATION					
			A J U	M F U	Y N	2nd 1cm x 1cm ≈ 10m W					
BMAJH018	0709412		A J U	M F U	Y N	UNDER GOLETA GRASS	4				X
	3729049		A J U	M F U	Y N	POTENTIAL PELLET - COYOTE COVER?					
BBCMG001	0709429		A J U	M F U	Y N	≈ 30cm BARREL CACTUS					
	3728998		A J U	M F U	Y N						
BBCG009	0709388		A J U	M F U	Y N	≈ 30cm BARREL CACTUS					
	3728982		A J U	M F U	Y N						
BMAMG030	0709403		A J U	M F U	Y N	(GOOD) COVER SITE	4				X
	3729058		A J U	M F U	Y N	UNDER GOLETA GRASS					
BDCG058	0709359		A J U	M F U	Y N	1.5cm x 1.5cm			5		
	3729328		A J U	M F U	Y N	NOT MINERALIZED					
BMACG077	0709331		A J U	M F U	Y N	NEAR CREOSOTE	4			X	X
	3728557		A J U	M F U	Y N	SMALL APRON					
BDCG059	0709330		A J U	M F U	Y N	2.5cm x 2.5cm			5		
	3729081		A J U	M F U	Y N	MINERALIZED					
BDCMG005	0709341		A J U	M F U	Y N	3.5cm x 2.5cm			5		
	3729197		A J U	M F U	Y N	MINERALIZED					
BDCJH006	0709288		A J U	M F U	Y N	2 PIECES ≈ 2.5cm x 2.5cm			5		
	3729086		A J U	M F U	Y N	NOT MINERALIZED					

*See Reverse

Site: BLYTH

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: MAY 11, 2009

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTENTIAL USAGE ~~DET~~ BLOW	DETO
BDCCG060	0709295		A J U	M F U	Y N	2 PIECES ≈ 3cm x 3cm			5		
	3728842		A J U	M F U	Y N	SOME MINERALIZATION					
BDCMG006	0709279		A J U	M F U	Y N	3.5cm x 2.5cm			5		
	3728634		A J U	M F U	Y N	SOME MINERALIZATION					
BBCMG002	0709277		A J U	M F U	Y N	8 CM					
	3729109		A J U	M F U	Y N	LARGE MULTIPLE BC DEAD ≈ 10M/E					
BMACG078	0709276		A J U	M F U	Y N	UNDER GOLETA GRASS	4				X
	3729153		A J U	M F U	Y N	POTENTIAL PALLET					
BBCJH001	0709230		A J U	M F U	Y N	15cm B.C.					
	3729090		A J U	M F U	Y N	NEXT TO PENCIL CHOLLA & GOLETA GRASS					
BMAJH019	0709234		A J U	M F U	Y N	FRESH DIG	4			X	X
	3728731		A J U	M F U	Y N						
BMAJH020	0709613		A J U	M F U	Y N		4			X	X
	3728519		A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						

*See Reverse

710120	X	080	X	040	X	710000	X	960	X	920	X	880	X	840	X				
710110	X	070	X	030	X	709990	X	950	X	910	X	870	X	830	X				
710100	X	060	X	020	X	709980	X	940	X	900	X	860	X	820	X				
710090	X	050	X	010	X	709970	X	930	X	890	X	850	X	810	X				

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe Date: 5-11-09 Page 1 of 1

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
DETO	4,9	K8 K9	SCA-9 RWO-5	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	700a	74°F	0-1 / E	calm / 0%
Mid-day	1220p	102°F	2-8 / SE	clear / 0%
End	300p	103°F	3-14 / SE	clear / 0%

GPS Data [#5]

	GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBRWO11		0710110		A J U	M F U	Y N	potential WBO / kit fox			
		3727556		A J U	M F U	Y N	kit fox scat - 2 entrances			
				A J U	M F U	Y N				
BMASCO57		0710019		A J U	M F U	Y N	potential WBO / kit fox			
		3728091		A J U	M F U	Y N	white wash			
				A J U	M F U	Y N				
BDCSCO14		0710003		A J U	M F U	Y N	3x3 cm - adjacent to shallow			
		3728294		A J U	M F U	Y N	wash - mineralized			
				A J U	M F U	Y N				
BKBRWO12		0709970		A J U	M F U	Y N	kit fox burrow complex - 2 entrances			
		3728166		A J U	M F U	Y N	potential WBO / kit fox scat			
				A J U	M F U	Y N				
BUXORWO02		0709965		A J U	M F U	Y N	50 cal. clip w/ 6 bullets			
		3728273		A J U	M F U	Y N				
				A J U	M F U	Y N				
BMASCO58		0709940		A J U	M F U	Y N	potential WBO - 2 entrances			
		3728106		A J U	M F U	Y N	No sign			
				A J U	M F U	Y N				
BMASCO59		0709901		A J U	M F U	Y N	potential WBO			
		3727832		A J U	M F U	Y N	No sign			
				A J U	M F U	Y N				

*See Reverse

BMASC060 0709875 3727789 potential WBO No sign

711000	X	960	X	920	X	880	X	840	X	800	X	760	X	720	X	680	X	640	X	600	X	560	X	520	X	480	X	440	X		
710990	X	950	X	910	X	870	X	830	X	790	X	750	X	710	X	670	X	630	X	590	X	550	X	510	X	470	X	430	X		
980	X	940	X	900	X	860	X	820	X	780	X	740	X	700	X	660	X	620	X	580	X	540	X	500	X	460	X	420			
970	X	930	X	890	X	850	X	810	X	770	X	730	X	690	X	650	X	610	X	570	X	530	X	490	X	450	X	410			

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/12/09

Page 1 of 3

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	4,5 7,10	K10 K11	NGA-10 RWD-5	JHU-4 EEL-7

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	0630	74°F	0-1 mph	Clear
Mid-day				
End	1645	104°F	6-10mph/SW	Clear

DATA ON GPS #5

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
3UXOMG001	0710931 mE		A J U	M F U	Y N	single 50.cal 1/2 barrel			
	3727421 mN		A J U	M F U	Y N	rear of the shell extending out (unfired)			
BMAEE001	0710953		A J U	M F U	Y N	small mammal burrow ~2 feet deep white wash and pellets			
	3727083		A J U	M F U	Y N	at entrance. Potential for DETO, BUOW burrow			
~~BMAMG001~~	0716895		A J U	M F U	Y N	old complex with several burrows suitable for DETO, BUOW			
BKBMG007	3727278		A J U	M F U	Y N	one burrow suitable for kit fox (DETO, BUOW, Kit fox)			
BMAEE002	0710913		A J U	M F U	Y N	mammal burrow ~2 feet deep			
	3727336		A J U	M F U	Y N	potential DETO pellet			
BLSEE001	0710915		A J U	M F U	Y N	single adult			
	3727466		A J U	M F U	Y N				
BMAJH021	0710862		A J U	M F U	Y N	mammal burrow: NO sign			
	3726771		A J U	M F U	Y N	potential for DETO, BUOW			
BMAJH022	0710864		A J U	M F U	Y N	mammal burrow: NO sign			
	3726760		A J U	M F U	Y N	potential for DETO, BUOW			
BMARW035	0710884		A J U	M F U	Y N	mammal burrow: No sign			
	3726642		A J U	M F U	Y N	potential for DETO BUOW			
BMARW036	0710840		A J U	M F U	Y N	mammal burrow (probably an old kit fox burrow) old scat			
	3727372		A J U	M F U	Y N	at entrance potential for BUOW, Kit fox			
BDCJH007	0710778		A J U	M F U	Y N	3cm x 2cm ~~pot~~ (possibly DETO)			
	3726673		A J U	M F U	Y N	mineralized			
BDCRW002	0710746		A J U	M F U	Y N	2 pieces 1cm x 1cm, 2cm x 2cm			
	3727497					mineralized (possibly DETO)			

*See Reverse

Site: ~~Palo~~ Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5/12/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	4, 5 7, 10	K10 K11	MGA-10 RWO-5	JHU-4 EEL 9

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

DATA ON GPS #5

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAJH023	0710699		A J U	M F U	Y N	mammal burrow: No sign			
	3726984		A J U	M F U	Y N	potential DETO			
BMAEE003	0710716		A J U	M F U	Y N	mammal burrow: No sign			
	3726880		A J U	M F U	Y N	potential DETO, BUOW			
BMG	0710692		A J U	M F U	Y N	mammal burrow: No sign			
BMAMG031	3726674		A J U	M F U	Y N	potential DETO burrow			
BMARW037	0710678		A J U	M F U	Y N	mammal burrow: No sign			
	3727184		A J U	M F U	Y N	potential DETO pellet			
BMAEE004	0710628		A J U	M F U	Y N	mammal dig under creosote			
	3727383		A J U	M F U	Y N	potential DETO pellet			
BMARW038	0710641		A J U	M F U	Y N	mammal burrow: No sign			
	3726933		A J U	M F U	Y N	potential DETO burrow			
BMAEE005	0710626		A J U	M F U	Y N	mammal dig: No sign			
	3726664		A J U	M F U	Y N	potential DETO pellet			
BKBJH002	0710583		A J U	M F U	Y N	Old kit fox complex: No sign one burrow			
	3726562		A J U	M F U	Y N	potential for DETO, BUOW, Kit fox			
BMAMG032	0710571		A J U	M F U	Y N	mammal burrow No sign			
	3726713		A J U	M F U	Y N	potential for DETO BUOW, kit fox			
BMAJH024	0710580		A J U	M F U	Y N	mammal burrow No sign			
	3727210		A J U	M F U	Y N	potential DETO burrow			
BKBJH003	0710542		A J U	M F U	Y N	large Complex, several suitable burrows (kit fox scat Coyote white wash)			
	3727241					potential for DETO, BUOW, Kit fox			

*See Reverse

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5/12/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	4, 5 7, 10	K10 K11	MGA-10 RWD-5	JHU-4 EEL-7

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

DATA ON GPS #5

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAJH025	0710537		A J U	M F U	Y N	manmade burrow; NO sign			
	3727148		A J U	M F U	Y N	potential DETO burrow			
BOCJH008	0710518		A J U	M F U	Y N	mineralized Bone frag. ~2cm x 2cm			
	3727130		A J U	M F U	Y N	possibly DETO			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

700 420 410 400 390 | 709 380 370 360 350 | 340 330 320 310 | 300 290 280 270 | 260 250 240 230 | 220 210 200 190 | 180 170 160 150 | 40 130 120 110 | 100 90 80 70 | 60 50 40 30 | 700 20 10

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/13/09

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Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	4,5	K10	MGA - 10	JHU - 4
	7,10	K11	RWO - 5	EEZ - 7

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	0600	73°F	2mph / N	Clear
Mid-day	1330	100°F	6-8mph / SW	Clear
End	1530	101°F	6 mph / SW	Clear

Data on GPS #s

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAEE006	0710367mE		A J U	M F U	Y N	small mammal burrow: No sign			
	3727154mN		A J U	M F U	Y N	potential for BUOW			
BMAMG033	0710383		A J U	M F U	Y N	mammal burrow: No sign			
	3726734		A J U	M F U	Y N	potential for DETO, BUOW, Kit fox			
BMAEE007	0710291		A J U	M F U	Y N	mammal burrow: No sign			
	3727029		A J U	M F U	Y N	potential for DETO, BUOW			
BKBRW013	0710231		A J U	M F U	Y N	Complex with several good burrows. Kit fox scat			
	3727118		A J U	M F U	Y N	potential for DETO, BUOW, Kit fox			
BMASH026	0710142		A J U	M F U	Y N	mammal burrow: No sign			
	3727454		A J U	M F U	Y N	potential DETO,			
BMAMG034	0710115		A J U	M F U	Y N	mammal burrow: No sign			
	3727089		A J U	M F U	Y N	potential DETO, BUOW			
BMAEE008	0710105		A J U	M F U	Y N	mammal burrow: No sign (shallow)			
	3727492		A J U	M F U	Y N	potential DETO pellet			
BMAEE009	0710077		A J U	M F U	Y N	mammal burrow: No sign			
	3727492		A J U	M F U	Y N	potential DETO pellet			
BMASH027	0710068		A J U	M F U	Y N	old kit fox complex most of the entrances are barred			
	3727269		A J U	M F U	Y N	no recent sign. potential DETO, BUOW, KIT FOX			
BMAEE010	0710045		A J U	M F U	Y N	mammal burrow: No sign			
	3726765		A J U	M F U	Y N	potential DETO burrow			
BKBEE001	0710020		A J U	M F U	Y N	Old complex with 1 potential burrow (old scat)			
	3727369					potential for DETO, BUOW, Kit fox BDCEE001 outside of burrow entrance			
BDCEE001	0710021								
	3727370								

*See Reverse

~15 pieces between 5cm x to 1cm x 1cm

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5/13/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	4, 5 7, 0	K10 K11	MGA - 10 RWO - 5	JHV - 4 EEL - 7

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

DATA on GPS #5

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMA3H028	0716028		A J U	M F U	Y N	mammal burrow NO sign			
	3727049		A J U	M F U	Y N	potential DETO pellet			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

-drainage redirection area in D10 / D11

5880	✓	5840	✓	5800	✓
5870	✓	5830	✓	5790	✓
5860	✓	5820	✓	5780	✓
5850	✓	5810	✓	5770	✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe Date: 5/15/09 Page 1 of _____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,6	D10	SDA-1 GLL-6	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	4:28PM	102°F	1 to 3mph	0%
Mid-day				
End	6:50PM	98.6°F	4 to 6mph	0%

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMASD030	0706319	Mammal	A J U	M F U	Y N	mammal burrow, recently			
	3727040		A J U	M F U	Y N	run over by vehicle, turns			
			A J U	M F U	Y N	to left, no sign, adjacent to			
			A J U	M F U	Y N	canid dug out mammal burrow			
			A J U	M F U	Y N	suitable for DETO/BUOW use			
BMAGL041	0705878	mammal	A J U	M F U	Y N	- mammal burrow (dig, could			
	3726805		A J U	M F U	Y N	be used as DETO pallet, not			
			A J U	M F U	Y N	suitable for BUOW			
			A J U	M F U	Y N				
BDPSD024	0705866	DETO?	A J U	M F U	Y N	Potential tort. pallet, in	5		
	3726741		A J U	M F U	Y N	deep drainage, very large apron			
			A J U	M F U	Y N	12"x10" x 28" (could turn left,			
			A J U	M F U	Y N	can't tell) not suitable for BUOW			
			A J U	M F U	Y N				
BMASD031	0705864	mammal	A J U	M F U	Y N	- mammal burrow, narrows			
	3726505		A J U	M F U	Y N	quickly, could be used as pallet by DETO			
			A J U	M F U	Y N	not suitable for BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

710020	X	9980	X	940	X	900	X	860	X	820	X	780	X	740	X	700	X	660	X	620	X		
010	X	9970	X	930	X	890	X	850	X	810	X	770	X	730	X	690	X	650	X	610	X		
710000	X	9960	X	920	X	880	X	840	X	800	X	760	X	720	X	680	X	640	X	600	X		
709990	X	9950	X	910	X	870	X	830	X	790	X	750	X	710	X	670	X	630	X	590	X		

580 X
570 X
560 X
550 X
STARTED
540
30
20
10
POTENTIAL USFWS

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 5/16/09

Page 1 of 3

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	4,5	J10	RWO-5	EEL-7
	7,10	J11	CGE-4	JLU-10

DATA @ GPS #5

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	6:30	76°	1 W	CLEAR 0%
Mid-day	12:00	103°	3 NE	CLEAR 0%
End	2:37	105°	5 E	CLEAR 0%

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	BHOW	DETO
BLSEE002	071 0278		A J U	M F U	Y N	SHRIKE IN IRONWOOD					
	372 6838		A J U	M F U	Y N						
BMAJL001	070 9931		A J U	M F U	Y N	NO SIGN	5			X	X
	372 6725		A J U	M F U	Y N						
BMACG079	070 9868		A J U	M F U	Y N	COMPLEX - MULTIPLE	5			X	X
	372 7322		A J U	M F U	Y N	OPENINGS.					
BMAEE011	070 9882		A J U	M F U	Y N		5				X
	372 6904		A J U	M F U	Y N						
BNERW002	070 9910		A J U	M F U	Y N	~~POSSIBLE~~ SHRIKE NEST					
	372 6763		A J U	M F U	Y N	BASED ON STICKS THROUGHOUT & SIZE & SIGHTINGS					
BDCEE002	070 9878		A J U	M F U	Y N	6cm x 2.5cm			5		
	372 6732		A J U	M F U	Y N						
BNECG004	070 9835		A J U	M F U	Y N	POSSIBLE SHRIKE NEST					
	372 6690		A J U	M F U	Y N						
BMARW039	070 9854		A J U	M F U	Y N	MULTIPLE OPENINGS	5			X	
	372 6796		A J U	M F U	Y N						
BMARW040	070 9861		A J U	M F U	Y N		5			X	X
	372 6902		A J U	M F U	Y N						
BDCCG061	070 9830		A J U	M F U	Y N	1.5cm x 1.5cm			5		
	372 7470		A J U	M F U	Y N						
			A J U	M F U	Y N						

*See Reverse

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: MAY 16, 2009

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	BLOW	DETO
*BBBCG001	0709778		A J U	M F U	Y N	WHITEWASH & PELLET	S			X	X
	3727292		A J U	M F U	Y N	MANY OPENINGS + KF SCAT + COYOTE SCAT					
BMACG080	0709796		A J U	M F U	Y N					X	
	3727010		A J U	M F U	Y N						
BKBJL001	0709813		A J U	M F U	Y N	± 15 m²	S			X	X
	3726790		A J U	M F U	Y N	KF SCAT - OLD					
BMAEG081	0709747		A J U	M F U	Y N					X	
	3726734		A J U	M F U	Y N						
BNGEE001	0709758		A J U	M F U	Y N	2 EGGS WHITE W/ BROWN					
	3727243		A J U	M F U	Y N	IRONWOOD DEFS = ACTIVE?					
BMAEE012	0709680		A J U	M F U	Y N		S				X
	3726590		A J U	M F U	Y N						
BNERW004	0709698		A J U	M F U	Y N	USED TO BE NEST					
	3726744		A J U	M F U	Y N						
BBORW001	0709687		A J U	M F U	Y N	PERCH W/ WHITE WASH					
	3726884		A J U	M F U	Y N	BURROWING OWL PELLET					
BMAJL002	0709692		A J U	M F U	Y N	NO SIGN	S			X	X
	3727201		A J U	M F U	Y N	KF?					
BKBCG011	0709642		A J U	M F U	Y N	KF SCAT					
	3726800		A J U	M F U	Y N	MULTIPLE OPENINGS	S			X	X
			A J U	M F U	Y N						

POTENTIAL USAGE

*See Reverse

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: MAY 16,

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments)			POTENTIAL USAGE	
							Burr	Scat	Shell	BLOW	DEN
B/MARW041	0709619 3726882		A J U	M F U	Y N	NO SIGN	4			X	
B/MACG082	0709554 3727254		A J U	M F U	Y N		5			X	
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						

*See Reverse

3700
3830
3840
3850

3860
3870

~~3680~~	M	3840	✓
3690		3850	✓
3700		3860	✓
3830	south	3870	✓
3820	south		

re-check

South end only

DRAINAGE

3680
3690
3700 line

3790 - 3950 ⊕ → DONE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/16/09

Page 1A of ____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,6	C4 to Row to C7 3728200	SDA-1 GLU-6	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day	12:12 pm	99°F	1 to 3mph	0% CC
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAGL042	0703856 3729128	badger?	A J U	M F U	Y N	badger foraging burrow, turns to right, could be used by BLOW / DETO, no sign, badger claw marks but could be used by kit fox, can't see to end			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDBGL022	0703857 3729137	DETO	A J U	M F U	Y N	- potential tortoise burrow & right shape in side of drainage, can't see to end	5		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPSD025	0703870 3729897	DETO	A J U	M F U	Y N	- potential tort pallet, in caliche in side of deep drainage, 16" x 8" x 20" deep	5		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPSD026	0703871 3729901	DETO	A J U	M F U	Y N	- potential tort pallet, in caliche in side of deep drainage 20" x 8" x 18" deep	5		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPSD027	0703895 3729906	DETO	A J U	M F U	Y N	- potential tort pallet caliche (~5m to south of cat claw acacia) 26" x 15" x 30" deep - couldn't get closer b/c very dry, but IS'ed based on dead flowers	5		
			A J U	M F U	Y N				

low prob.

*See Reverse

Utah milkweed 0703858/3728877 (3)+2

Collared lizard

3690 | 3700 | 3820 | 3830

840 ✓ | 850 ✓

3728190 ✓ | 180 ✓ | 170 ✓ | 160 ✓

5790-3950

ended @ 0704770

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/16/09

Page 2A of ____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDPSD028	0703863	DETO	A J U	M F U	Y N	-potential tort pallet, in	5		
	3729931		A J U	M F U	Y N	caliche in deep drainage			
			A J U	M F U	Y N	12"x5"x12" deep			
BDPSD029	0703936	DETO	~~A J U~~	~~M F U~~	Y N	no sign			
	3729933		A J U	M F U	Y N				
			A J U	M F U	Y N	→ 5 caliches (2 here, 3 to east ~10m)	← 5 or 4		
			A J U	M F U	Y N	could function as pallets for DETO			
			A J U	M F U	Y N	one partially collapsed, one good			
			A J U	M F U	Y N	size/shape ~18"x12"x20" deep			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPSD030	0703796	DETO	A J U	M F U	Y N	potential tort pallet, caliche	5		
	3729931		A J U	M F U	Y N	18"x10"x18" deep			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCSD021	0703827	DETO	A J U	M F U	Y N	adult tort bone frag, thick			5
	3728189	bone frag	A J U	M F U	Y N	1/2" thick 1 1/2"x 3/4"			
			A J U	M F U	Y N				
BDCSD022	0704327	DETO	A J U	M F U	Y N	-5 bone fragments, large pieces			5
	3728158	bone fragments	A J U	M F U	Y N	2 pieces of vertebral & costals 5"x3" each			
			A J U	M F U	Y N	2 pieces vertebrals 2"x1" each			
						1 pieces vertebral/costal 3"x2"			
						all carapace, adult			

*See Reverse

bobcat scat in drainage @ N end

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5/16/09

Page 3A of _____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End	5:05pm	99°F	4 to 12 mph	0% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBGL022	0704705 3728182	Kit fox	A J U	M F U	Y N	Kit fox burrow, tracks to left no scat, potential for DETO/BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Utah vine milkweed 0704107/3728188

0704127/3728180

540 X	500 X	460 X	420 X	380 X	340 X	300 X	260	220	
530 X	490 X	450 X	410 X	370 X	330 X	290 X	250	210	LAST
520 X	480 X	440 X	400 X	360 X	320 X	280 X	240	200	0708970
510 X	470 X	430 X	390 X	350 X	310 X	270 X	230	190	

*

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: MAY 17

Page 1 of 3

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
FOCUS	EEL-7 J44-10 RWO-5 CGE-4	J10 J11		

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	5:28	75°	3 NW	CLEAR 0%
Mid-day				
End	12:55	~~103°~~ 105°	3 W	CLEAR 0%

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential Usage Burow	DETO
BMACG083	0709511		A J U	M F U	Y N		4			X	X
	3727069		A J U	M F U	Y N						
~~B~~ BMAEE013	0709483		A J U	M F U	Y N	3 PALLET LIKE	5				X
	3727414		A J U	M F U	Y N	2 BURROWS ≈ 5M APART					
BMAJL003	0709474		A J U	M F U	Y N		5			X	X
	3727056		A J U	M F U	Y N						
BMAJL004	0709489		A J U	M F U	Y N		5			X	X
	3726863		A J U	M F U	Y N						
BMAEE014	0709396		A J U	M F U	Y N	MULTIPLE OPENINGS	5			X	X
	3727345		A J U	M F U	Y N	NO SIGN					
BNERW005	0709434		A J U	M F U	Y N	OLD STICK NEST					
	3726705		A J U	M F U	Y N						
BMAEE015	0709359		A J U	M F U	Y N		5			X	X
	3726826		A J U	M F U	Y N						
BKBRW014	0709380		A J U	M F U	Y N	MULTIPLE OPENINGS				X	X
	3727485		A J U	M F U	Y N						
BMAEE016	0709290		A J U	M F U	Y N	TWO OPENINGS	5			X	X
	3726860		A J U	M F U	Y N						
~~BMAJL005~~	0709288		A J U	M F U	Y N		4			X	X
BMAJL005	3727325		A J U	M F U	Y N						
			A J U	M F U	Y N						

*See Reverse

* ENDED @ PROPERTY LINE (EAST SIDE)

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: MAY 17 2009

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
FOLLOW				

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTENTIAL USAGE BELOW	DETO
BLSCG001	EST. 0709212		A J U	M F U	Y N	IN IRONWOOD					
	3727396		A J U	M F U	Y N						
BNECG005	0709230		A J U	M F U	Y N	STICK NEST (NEAR SHRINE SIGHTING)					
	3727436		A J U	M F U	Y N	+ MA BELOW DETO POTENTIAL					
BMAJL006	0709254		A J U	M F U	Y N	1 OPENING	5			X	X
	3727258		A J U	M F U	Y N						
BKBEE002	0709246		A J U	M F U	Y N	MULTIPLE OPENINGS	4			X	X
	3726656		A J U	M F U	Y N						
BNERW006	0709167		A J U	M F U	Y N	DEGRADED STICK NEST					
	3727423		A J U	M F U	Y N	IN IRONWOOD					
* BBBCG002	0709100		A J U	M F U	Y N	ACTIVE - WHITEWASH + PELLETS	4			X	X
	3726679		A J U	M F U	Y N	IN KB					
BMAEE017	0709116		A J U	M F U	Y N	NO SCAT	5			X	X
	3727450		A J U	M F U	Y N						
BKBCG012	0709069		A J U	M F U	Y N	ONE FRESH SCAT	4			X	X
	3726741		A J U	M F U	Y N						
BMARW042	0709057		A J U	M F U	Y N		5			X	
	3727283		A J U	M F U	Y N						
BMARW043	0709063		A J U	M F U	Y N	COYOTE SIZE	4			X	X
	3727394		A J U	M F U	Y N	U/KF SCAT					
			A J U	M F U	Y N						

*See Reverse

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: MAY 17 2009

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential usage BRW	DETO
RMSL007	0709009 3726732		A J U	M F U	Y N	Fresh KF Scat	5			X	X
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						

*See Reverse

0709009
5970

710450	490	530	570	610	650	690	730	770	810	850	890	930	970	1010							
460	500	540	580	620	660	700	740	780	820	860	900	940	980	1020							
470	510	550	590	630	670	710	750	790	830	870	910	950	990	1030							
480	520	560	600	640	680	720	760	800	840	880	920	960	1000	1040							

NOT SURVEYED

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/18/09

Page 1 of 4

Northend GPS~ 3729400
Southend GPS~ 3728460

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
focused	4,5, 7,10	K6 K7	5-RWO 4-JHU	107-JLU 710-EEL

Data on GPS # 7

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	05:45 AM	84	2	80
Mid-day	14:00	99	15	90
End	15:15	104	8.6	70

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	potential BUOW	DETO
BMAJL008	0710459		A J U	M F U	Y N	Small man / no sign / single				X	
	3728859		A J U	M F U	Y N						
EMALH029	0710486		A J U	M F U	Y N	Man / no sign / kit potential				X	X
	9275		A J U	M F U	Y N						
BBBJL001	0710496		A J U	M F U	Y N	wash / old Pellets / complex				X	
	3728844		A J U	M F U	Y N	several Holes smaller N/W					
BLSEE003	0710512		A J U	M F U	Y N	foraging					
	3728636		A J U	M F U	Y N						
BMAJL009	0710505		A J U	M F U	Y N	no sign				X	X
	3728439		A J U	M F U	Y N						
BMARW044	0710528		A J U	M F U	Y N	no sign				X	X
	3728894		A J U	M F U	Y N						
BMARW045	0710529		A J U	M F U	Y N	no sign				X	X
	3728924 0		A J U	M F U	Y N						
BMARW046	0710578		A J U	M F U	Y N	no sign / single Hole				X	X
	3729270		A J U	M F U	Y N						
BBBJH001	0710612		A J U	M F U	Y N	Pellet / kit scat				X	
	3729159		A J U	M F U	Y N						
BKBJH004	0710620		A J U	M F U	Y N	kit scat + tracks				X	X
	3729154		A J U	M F U	Y N	Pellets / white wash				X	X
			A J U	M F U	Y N						

*See Reverse

Site: Blyth

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 05/18/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	4, 5, 7, 10			

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	
BKBEE003	0710595		A J U	M F U	Y N	Kit scat / Single Hole				Bow Tort
	3729054		A J U	M F U	Y N					
BBBJL002	0710577		A J U	M F U	Y N	Bur owl / wash / no pellet				Bow Tort
	3728938		A J U	M F U	Y N					
BUXOJH001	0710638		A J U	M F U	Y N	Live poss 3.6 Live Round				
	3728530		A J U	M F U	Y N					
BMAEE018	0710630		A J U	M F U	Y N	Poss Pellett / Bur Owl / Tort				Bow Tor
	3728747		A J U	M F U	Y N					
BMAJH030	0710636		A J U	M F U	Y N	Shallow Man Burro				Buow Tor
	3728910		A J U	M F U	Y N					
BMAJL010	07100616		A J U	M F U	Y N	No Sign / Shallow				Buow Tor
	3728925		A J U	M F U	Y N					
BKBEE004	0710627		A J U	M F U	Y N	Single Hole / Kit scat				Buow Tort
	3728995		A J U	M F U	Y N					
BMAJL011	07100619		A J U	M F U	Y N	Bur Owl / potential				Buow Tort
	3729013		A J U	M F U	Y N					
BMARW047	0710607		A J U	M F U	Y N	Kit scat				Buow Tort
	3729030		A J U	M F U	Y N					
BBBEE001	0710669		A J U	M F U	Y N	Pellett / Wash				Buow Tor
	3729055		A J U	M F U	Y N					
			A J U	M F U	Y N					

*See Reverse

Site: Blyth

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 05/18/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	4,5 7,10	K6 K7		

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Buow	Tort
BBGJH002	0710684		A J U	M F U	Y N	Ferro Cactus					
	3728473		A J U	M F U	Y N						
BDGJH009	0710721		A J U	M F U	Y N	Poss Tort Bone/Plastron					Tort
	3728869		A J U	M F U	Y N	4cm x 4cm/Fossilized?					
BMAJH031	0710753		A J U	M F U	Y N	old Kit comp potent for					Buow Tort
	3728857		A J U	M F U	Y N	owl					
BBBEE002	0710794		A J U	M F U	Y N	pellet/ ~ wash					
	3728497		A J U	M F U	Y N					X	X
BMAJH032	0710797		A J U	M F U	Y N	Shallow Mam				X	X
	3728934		A J U	M F U	Y N	No sign					
DCJH010	0710800		A J U	M F U	Y N	30-40 small frags					
	3729151		A J U	M F U	Y N	not fossilized					
BMAJH033	0710843		A J U	M F U	Y N	mammal Dig, Potent Pallet					
	3729124		A J U	M F U	Y N	Degraded					X
BMAJH034	0710835		A J U	M F U	Y N	pot kit fox/scat					
	3728589		A J U	M F U	Y N					X	
BMARW048	0710885		A J U	M F U	Y N	No sign				X	X
	3729341		A J U	M F U	Y N						
BMARW049	0710889		A J U	M F U	Y N	Kit fox scat					X
	3728928		A J U	M F U	Y N						
			A J U	M F U	Y N						

*See Reverse

Site: Blyth

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 05/18/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	4,5 7,10	K6 K7	EEL = #7 JHU = #4	JLU = #10 RWO = #5

DATA ON #7

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	05:45 am	84	2	80
Mid-day	02:00 pm	99	15	90
End	03:15 pm	104	8.6	70

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Dnow Tort
BMAHE09	0710906		A J U	M F U	Y N	Shallow for Tort				
	3728672		A J U	M F U	Y N	Potent Pallett				X
BMAHO35	0710955		A J U	M F U	Y N	mammal/kit				
	3728455		A J U	M F U	Y N	No Sign				X X
BMAHO36	0710962		A J U	M F U	Y N	mammal/kit				
	3728615		A J U	M F U	Y N					X X
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					

*See Reverse

Linear H21, H20, H19

8440 ✓ 8430 ✓ 20 ✓ 10 ✓ 8400

8400 ✓ 8390 ✓ 380 ✓ 370 ✓ ~~360~~

8420 ✓ 8410 ✓ 8400 ✓ 8390 ✓

8380 ✓ 370 ✓ 8360 ✓ 8350 ✓

@ 23000 8400 ✓ 8390 ✓ 8380 ✓ 8370 ✓ 8360 ✓ 8350 ✓ 8340 ✓ 8330 ✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/18/09

Page 1A of _____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,3 6,9	H19 H20 H20	SOA-1 GM-6	AOA-3 ESC-9

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	3:19 PM	102°F	3 to 7 mph	50% CO
Mid-day				
End	6:45 pm	102°F	2 to 6 mph	30% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCSD023	0708427 3721572	DETO bone frag.	A J U	M F U	Y N	- deto bone mineralized 1¼" x 1" → plastron			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAGL043	0708440 3721669	Mammal	A J U	M F U	Y N	mammal dig, could be used by DETO as pallet			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCAD065	0708414 3721684	DETO bone frag.	A J U	M F U	Y N	- deto bone, likely pectoral girdle 2"x1", not mineralized			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCGL032	0708436 3721742	DETO bone frag.	A J U	M F U	Y N	- deto bone, not mineralized			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BKBGL023	0708454 3721915	Kit fox Complex	A J U	M F U	Y N	- large kit fox complex, 7+ entrances, kit fox scat potential for tort/owl			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAGL044	0708417 3722442	mammal	A J U	M F U	Y N	mammal burrow, under ironwood can't see to end, potential for tort			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAGS001	0708380 3723173	badger foraging burrow	A J U	M F U	Y N	badger foraging burrow, potential for DETO pellet			

*See Reverse

arches → large picture on desert pavement 0708359 / 3723312

H21 8370-8440 H19 to 3723000 8350-8420 H19 H18 from 3723000 N - ? 8330 8400
H20

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe Date: 5/18/09 Page 2A of _____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAES002	0708365	mammal	A J U	M F U	Y N	badger foraging, turns left,			
	3722534		A J U	M F U	Y N	no sign, suitable for tort & owl			
			A J U	M F U	Y N	turns to left			
BMAES003	0708369	mammal	A J U	M F U	Y N	mammal burrow, (badger)			
	3722428		A J U	M F U	Y N	can't see to end, potentiale for			
			A J U	M F U	Y N	Burrow w/DETO			
			A J U	M F U	Y N				
BOBCL023	0708368	DETO?	A J U	M F U	Y N	potential tort. burrow	4		
	3721371		A J U	M F U	Y N	erosional feature, 24"x10"			
			A J U	M F U	Y N	can't see to end			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

1010 X	60 X	110 X	160 X	210 X	260 X	310 X
1020 X	70 X	120 X	170 X	20 X	70 X	320 X
1030 X	80 X	130 X	180 X	30 X	80 X	330 X
1040 X	90 X	140 X	190 X	40 X	90 X	340 X
1050 X	100 X	150 X	200 X	50 X	300 X	350 X

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/19/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	4, 5	K-6 K-7	RWO - 5 EEL - ~~8~~ 7	JHU - 4 ESC - 9 JLU - 10

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	0530	79°F	2-3mph / SW	Clear 20%
Mid-day	1100	106°F	2-3mph / E	Clear 10%
End	1530	109°F	3-4mph / SW	Cloudy 40%

Data on

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAJL012	0711022 mE		A J U	M F U	Y N	small mammal burrow: No sign			
	3728524 mN		A J U	M F U	Y N	potential BUOW, DETO pellet			
BMAJH037	0711026		A J U	M F U	Y N	mammal burrow: No sign			
	3728637		A J U	M F U	Y N	potential BUOW, Kit fox, DETO,			
BLSEE004	0711046		A J U	M F U	Y N	single			
	3729104		A J U	M F U	Y N				
BMAJH038	0711080		A J U	M F U	Y N	Small mammal burrow: No sign			
	3729125		A J U	M F U	Y N	potential for BUOW, DETO			
BMAJH039	0711085		A J U	M F U	Y N	small mammal burrow complex: No sign			
	3728974		A J U	M F U	Y N	potential for BUOW			
BMAEE020	0711093		A J U	M F U	Y N	mammal burrow: No sign			
	3728696		A J U	M F U	Y N	potential for Kit fox, BUOW, DETO			
BKBES001	0711098		A J U	M F U	Y N	2 burrow openings Kit fox scat at entrance			
	3728677		A J U	M F U	Y N	potential for Kit fox, DETO,			
BMAJH040	0711081		A J U	M F U	Y N	mammal burrow (deteriorated) No sign			
	3728560		A J U	M F U	Y N	potential DETO pellet			
BMAES001	0711151		A J U	M F U	Y N	shallow mammal dig: No sign			
	3728784		A J U	M F U	Y N	potential DETO pellet			
BMAEE021	0711136		A J U	M F U	Y N	large ground squirrel complex			
	3729447		A J U	M F U	Y N	potential, BUOW,			
BMAEE022	0711188		A J U	M F U	Y N				

*See Reverse 3729404

310 X	260 X	210 X	160 X	110 X
320 X	70 X	20 X	170 X	120 X
330 X	80 X	30 X	180 X	130 X
340 X	90 X	40 X	190 X	140 X
350 X	300 X	50 X	200 X	150 X

7/10/10	
20	
30	
40	
50	

AF
BMASC

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 5/19/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
FOCUSED	~~[illegible]~~	K6	5-RWO	10-JLU 9-ESC
	~~[illegible]~~	K7	4-JHU	7-EZZ

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMARWO50	0711160 mE		A J U	M F U	Y N	small mammal burrow: No sign			
	3729357 mN		A J U	M F U	Y N	potential BUOW			
BMAEE023	0711234		A J U	M F U	Y N	mammal burrow: No sign			
	3728528		A J U	M F U	Y N	potential DETO burrow			
BBCES001	0711317		A J U	M F U	Y N	many headed barrel cactus (cotton top)			
	3729166		A J U	M F U	Y N	Oech. polycephalus			
BDCJL001	0711273		A J U	M F U	Y N	one piece of mineralized bone			
	3728545		A J U	M F U	Y N	4cm x 3cm possible DETO			
BMARWO51	0711264		A J U	M F U	Y N	mammal burrow; No sign			
	3728541		A J U	M F U	Y N	potential Kit Fox, BUOW, DETO			
BMAES002	0711350		A J U	M F U	Y N	mammal burrow: No sign			
	3728918		A J U	M F U	Y N	potential Kit fox, BUOW			
BMAES003	0711354		A J U	M F U	Y N	mammal dig: No sign			
	3728849		A J U	M F U	Y N	potential DETO			
BBCEE001	0711335		A J U	M F U	Y N	Cotton top type			
	3728910		A J U	M F U	Y N				
BMARWO52	0711324		A J U	M F U	Y N	burrow w/ coyote scat			
	3729176		A J U	M F U	Y N	potent. DETO, Kit fox, BUOW			
BBCJH003	0711385		A J U	M F U	Y N	regular (Fire Barrel) cactus			
	3729043		A J U	M F U	Y N				
BMARWO53	0711367		A J U	M F U	Y N	mammal burrow (shallow): No sign			
	3728839					potential DETO			

*See Reverse

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5/19/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused		K-6 K-7	RWO-5 EEL-7	JHU-4 ESC-9 JLU-10

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAJH041	0711374 mE		A J U	M F U	Y N	mammal complex: NO sign			
	3728632 mN		A J U	M F U	Y N	potential for DETO, BUOW			
BMAEE024	0711385		A J U	M F U	Y N	two burrows: NO sign			
	3728559		A J U	M F U	Y N	potential kit fox, DETO			
BMARW054	0711414		A J U	M F U	Y N	mammal burrow: NO sign			
	3728696		A J U	M F U	Y N	potential DETO, BUOW			
~~BMA~~	0711418		A J U	M F U	Y N	Class 4 170 mm x 130 mm			
BOBRW004	3729147		A J U	M F U	Y N	potential DETO, BUOW			
BMARW055	071[illegible]1416		A J U	M F U	Y N	Ground squirrel complex: NO sign			
	3729332		A J U	M F U	Y N	potential BUOW			
BMAJL013	0711417		A J U	M F U	Y N	ground squirrel complex: NO sign			
	3729353		A J U	M F U	Y N	potential BUOW			
BMAJL014	0711463		A J U	M F U	Y N	shallow mammal burrow: NO sign			
	3729291		A J U	M F U	Y N	potential DETO, BUOW			
BMAES004	0711495		A J U	M F U	Y N	mammal burrow: NO sign			
	3729148		A J U	M F U	Y N	potential DETO			
BMAES005	0711498		A J U	M F U	Y N	two mammal burrows: ~~[illegible]~~ claw marks on side of burrow			
	3728817		A J U	M F U	Y N	potential Badger, DETO, kit fox			
BOCJH011	0711479		A J U	M F U	Y N	~20 ~~[illegible]~~ pellets mostly 1cm x 1cm few larger ones (15 mm radius) (Class 5)			
	3728627		A J U	M F U	Y N	~~[illegible]~~ 3cm x 2cm with suture lines scat lines Not mineralized			
BMAJL015	0711472		A J U	M F U	Y N	shallow mammal burrow / NO sign			
						potential DETO pellet			

*See Reverse 3728537

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5/19/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused		K6 K7	RWO -5 EEC -7	JHU-4 ESC-9 JLU-10

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAJH042	0711470 mE		A J U	M F U	Y N	unusual burrow; NO sign			
	3728437 mN		A J U	M F U	Y N	potential Kit fox, DETO			
BBCRWO02	0711508		A J U	M F U	Y N	Cotton top (type)			
	3728613		A J U	M F U	Y N				
BBCEE002	0711542		A J U	M F U	Y N	cotton top			
	3728968		A J U	M F U	Y N				
BMAEE025	0711539		A J U	M F U	Y N	dug out unusual burrow			
	3728970		A J U	M F U	Y N	potential DETO			
BMAJL016	0711522		A J U	M F U	Y N	Small unusual burrow & NO sign			
	3729097		A J U	M F U	Y N	potential DETO			
BBCEE003	0711532		A J U	M F U	Y N	unusual burrow & NO sign			
	3729200		A J U	M F U	Y N	potential DETO, BUOW			
BMAEE026	0711552		A J U	M F U	Y N				
	3729336		A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

111010	X	1070	X	1130	X	90	X
020	X	1080	X	1140	X	200	X
030	X	1090	X	1150	X	10	X
040	X	1100	X	1160	X	20	X
050	X	1110	X	1170	X	30	X
060	X	1120	X	1180	X	40	X

L8 start is approx 3728460
L11 end is approx. 3726580

Please follow shapefiles to determine start/end

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/26/09

Page 1 of 3

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
FOLLOW	7, 9, 11	K/L8 K/L9 K/L10 K/L11	JHU-7 EEL-9	JBE-11

DATA ON GPS # 7

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	5:35	69	0 CALM	0% NONE
Mid-day	13:45	101	6 SE	0% NONE
End	16:00	101	6-8 SE	0% NONE

	GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTENTIAL DETO	BURW
B LS	EE 005	071 1016 / 372 6840		A J U	M F U	Y N	CALLED 100m to SW flew to E					
B BB	EE 003	071 1009 / 372 7005		A J U	M F U	Y N	~~SEA~~ WHITEWASH & 1 PELLET 2 ENTRANCES				X	X
B MA	EE 027	071 1003 / 372 7091		A J U	M F U	Y N					X	
B MA	JH 043	071 1032 / 372 7439		A J U	M F U	Y N	POTENTIAL PELLET				X	
B MA	JH 044	071 1031 / 372 7919		A J U	M F U	Y N					X	
B MA	JH 045	071 1033 / 372 8256		A J U	M F U	Y N					X	X
B MA	EE 028	071 1017 / 372 8389		A J U	M F U	Y N					X	X
B MA	EE 029	071 0996 / 372 8465		A J U	M F U	Y N	QUITE A BIT OF KIT FOX SCAT				X	
				A J U	M F U	Y N	STOPS ABOUT 5' DOWN					
B DC	EE 003	071 1045 / 372 8192		A J U	M F U	Y N	EDGE OF CARAPACE 3x3cm (MARGINAL)	1 piece		5		
				A J U	M F U	Y N	2 more pieces about 20m to south	not	Mineralized			
B MA	JB 001	071 1049 / 372 7685		A J U	M F U	Y N	WHITEWASH & OUR PELLET (HOLE GOES NOWHERE)				X	X?
B MA	EE 030	071 1045 / 372 7338		A J U	M F U	Y N	POSS KIT FOX SIZED				X	X
B MA	JB 002	071 1049 / 372 6978		A J U	M F U	Y N	WHITE WASH & HOLE GOES NOWHERE (ABOUT 3')	1 kit			X	X
				A J U	M F U	Y N	Fox poop too					
B MA	JB 003	071 1015 / 372 6634		A J U	M F U	Y N	tapers to nothing about 60cm down.				X	
				A J U	M F U	Y N	potential tort. pellet.					
B MA	JH 046	071 1097 / 372 7364		A J U	M F U	Y N	potential K Fox - prob Badger dig - 3 holes - 1 goes down				X	X
B MA	JB 004	071 1078 / 372 8401		A J U	M F U	Y N	potential K Fox 1 hole - goes down				X	X
B DP	EE 001	071 1076 / 372 8466		A J U	M F U	Y N	D shape - goes back 1 foot	4			X	
				A J U	M F U	Y N	part of roof caved in					

160mm x 70mm x 200 deep.

*See Reverse

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/26/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

	GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTENTIAL MA DETO	BYLOW
B MA	JB 005	071 1106/372 8120		A J U	M F U	Y N	FRESH KF SCAT				X	X
B MA	JH 047	071 1125/372 7910		A J U	M F U	Y N						X
B MA	JH 048	071 1127/372 7309		A J U	M F U	Y N	PROBABLE KIT FOX. BY SIZE				X	X
B MA	JB 006	071 1118/372 7049		A J U	M F U	Y N	PROBABLE KIT FOX. BY SIZE				X	X
B MA	JH 049	071 1118/372 6955		A J U	M F U	Y N	POTENTIAL PALLET.				X	
B MA	JH 050	071 1121/372 6939		A J U	M F U	Y N					X	
B MA	JH 051	071 1151/372 6796		A J U	M F U	Y N	COMPLEX OF HOLES; PROB KIT FOX (SCAT)				X	X
B MA	JH 052	071 1148/372 7239		A J U	M F U	Y N	SHALLOW BURROW; POTENT. DETO PALLET				X	
B MA	JB 007	071 1134/372 7734		A J U	M F U	Y N	POTENTIAL DETO PALLET				X	X
B MA	JB 008	071 1135/372 7780		A J U	M F U	Y N	NOT VERY DEEP 4.5'				X	X
B MA	JB 009	071 1137/372 8035		A J U	M F U	Y N	PROB KFOX				X	X
B MA	JH 053	071 1184/372 8392		A J U	M F U	Y N	POTENTIAL PALLET; MAMMAL DIGGING				X	
B MA	JH 054	071 1181/372 8020		A J U	M F U	Y N	POTEN. PALLET; MAMMAL DIGGING				X	
B MA	JH 055	071 1177/372 7987		A J U	M F U	Y N	POTEN. PALLET; MAMMAL DIGGING				X	X
B DC	JH 011	071 482/372 7958		A J U	M F U	Y N	2x2 PLASTRON; MINERALIZED PARTIALLY			5		
B DB	JH 001	071 1177/372 7713		A J U	M F U	Y N	TORT. SHAPE INSIDE BUT ENTRY WAS	4				X
				A J U	M F U	Y N	ALTERED; 170MM X 100 X 1M+					
B MA	EE 031	071 1164/372 7491		A J U	M F U	Y N	POTEN. PALLET MAMMAL DIGGING				X	
B MA	EE 032	071 1158/372 7304		A J U	M F U	Y N	POTEN. PALLET MAMMAL DIGGING				X	
B MA	JH 056	071 1181/372 7149		A J U	M F U	Y N	POTEN. PALLET MAMMAL DIGGING				X	
B MA	EE 033	071 1161/372 7134		A J U	M F U	Y N	POTEN. PALLET MAMMAL DIGGING				X	

*See Reverse

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5/26/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

	GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTEN. BURROW DETO	SHOW
B MA	JH 057	071 1180 / 372 6732		A J U	M F U	Y N	PROB KF				X	X
B MA	JB 010	071 1201 / 372 7194		A J U	M F U	Y N	POTEN. PALLET				X	
B MA	EE 034	071 1190 / 372 7695		A J U	M F U	Y N	PROB KFOX DIG.				X	X
B MA	EE 035	071 1191 / 372 7707		A J U	M F U	Y N	POTEN. PALLET				X	
B MA	JB 011	071 1199 / 372 7833		A J U	M F U	Y N	POTEN. PALLET MAMMAL DIGGING				X	
B MA	JB 012	071 1204 / 372 8156		A J U	M F U	Y N	POTEN PALLET MAMMAL DIGGING				X	
B MA	JB 013	071 1235 / 372 7962		A J U	M F U	Y N					X	X
B MA	JH 058	071 1242 / 372 7869		A J U	M F U	Y N	POTEN. PALLET MAMMAL DIGGING				X	
B MA	JH 059	071 1236 / 372 7525		A J U	M F U	Y N	POTEN. PALLET MAMMAL DIGGING				X	
B MA	JH 060	071 1240 / 372 7342		A J U	M F U	Y N	POTEN. PALLET MAM. DIG.				X	
B MA	JB 014	071 1230 / 372 7251		A J U	M F U	Y N	POTEN. PALLET MAM. DIG.				X	
B MA	JH 061	071 1236 / 372 7164		A J U	M F U	Y N	POTEN. PALLET MAM. DIG.				X	
B MA	EE 036	071 1221 / 372 7117		A J U	M F U	Y N	POTEN. PALLET MAM. DIG.				X	
B MA	JH 062	071 1242 / 372 6836		A J U	M F U	Y N	POTEN. PALLET MAM. DIG.				X	
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						

*See Reverse

Top of G13, G12, G11
3726020 bottom

0707460 ✓	520 ✓	580 ✓	640 ✓
7470 ✓	530 ✓	590 ✓	650 ✓
7480 ✓	540 ✓	600 ✓	660 ✓
490 ✓	550 ✓	610 ✓	670 ✓
500 ✓	560 ✓	620 ✓	680 ✓
510 ✓	570 ✓	630 ✓	690 ✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/26/09

Page 1 of 2

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,6,10	G11 G12 G13(top)	SDA-1 GLU-6	ADA-10

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	10:14AM	99°F	1 to 4mph	0% CC
Mid-day				
End				

DATA ON GPS #1

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCAD066	0707463 3726760	DETO bone frag	A J U	M F U	Y N	- tort bone fragment 1/4"x1/4" not mineralized			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BKBGL024	0707500 3727053	kit fox	A J U	M F U	Y N	- turns to left can't see to end likely kit fox			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCAD067	0707511 3726777	DETO bone frag	A J U	M F U	Y N	- tort bone fragments one piece carapace 1 1/2" x 1/2" 1" x 1/2" + 50+ more pieces (from 0707490 to 0707510) likely one tort & died in vicinity			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCAD068	0707523 3726155	DETO bone frag.	A J U	M F U	Y N	- tort bone fragment 1/2"x1/4" mineralized			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCSD024	0707559 3726130	DETO bone frag.	A J U	M F U	Y N	tort bone fragment 1 1/2 x 1" 2 pieces, starting to erode not mineralized			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCAD069	0707568 3726116	DETO bone frag.	A J U	M F U	Y N	tort bone fragment, mineralized	1"x1/2"		5

*See Reverse

tarantula hawk, black-throated sparrow, ash-throated flycatcher,

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/26/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End	7:50PM	94°F	3 to 9mph	1% cc, 10% humid

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBSD018	0707650	degraded	A J U	M F U	Y N	-2 old kit fox burrows, filled			
	3726418	kit fox	A J U	M F U	Y N	in, could be modified for KFox			
		complex	A J U	M F U	Y N	Burrow, potential DETO pellets			
			A J U	M F U	Y N				
BDCSD025	0707676	DETO	A J U	M F U	Y N	-tort bone frag. slightly			5
	3726442	bone frag.	A J U	M F U	Y N	mineralized 3/4"x 1/2"			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BLSSD001	0707724	LOSH	A J U	M F U	Y N	loggerhead shrike			
	3725925		A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

- patch nosed snake, coach whip

711250	X	330	X	410	X		
260	X	340	X	420	X		
270	X	350	X	430	X		
280	X	360	X	440	V		
290	X	370	X	450	V		
300	X	380	X	460	V		
310	X	390	X	470			
320	X	400	X	480			

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5/27/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	4, 7, 9, 11	K/L8 to K/L11	JHL7 EEL-9	JBE-11 KDL-4

	Time	Temp	Wind Sp/Dir		Weather & % Cloud	
Start	5:30	69	2	N	NONE	0%
Mid-day	13:00	101	4	S	NONE	0%
End						

DATA ON GPS # 7

	GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	DETO	BURROW
B BB	EE 004	071 1252/372 6846		A J U	M F U	Y N	MAMMAL BURROW W/ INTERWARM; NO				X	X
				A J U	M F U	Y N	PELLETS; SOME KB SCAT					
B MA	JB 015	071 1259/372 7515		A J U	M F U	Y N	3 holes; only good for DETO				X	
				A J U	M F U	Y N	MAMMAL DIGGING; POTENT PALLET					
B MA	KD 001	071 1282/372 7663		A J U	M F U	Y N	POTENT PALLET; MAMMAL DIG.				X	
B MA	JB 016	071 1258/372 7739		A J U	M F U	Y N	POTENT PALLET; PROB COYOTE DIGGING				X	
B MA	KD 002	071 1253/372 7743		A J U	M F U	Y N	POTENT PALLET;					
B LS	JH 001	071 1267/372 7839		A J U	M F U	Y N	FOLLOWED ON CREASOTE 150m TO SW					
B LT	EE 001	071 1248/372 7703		A J U	M F U	Y N	HEAD 150m TO SW very close to LOSH					
B MA	JH 063	071 1270/372 7928		A J U	M F U	Y N	POTENT. PALLET; 3' DEEP; MAM. DIG.				X	
B MA	JH 064	071 1263/372 8004		A J U	M F U	Y N	POTENT. PALLET; 2' DEEP MAM. DIG				X	
B MA	JB 017	071 1261/372 8061		A J U	M F U	Y N	POTENT. PALLET; 2 HOLES 1' FOOT DEEP				X	
B MA	EE 037	071 1255/372 8111		A J U	M F U	Y N	POTENT. PALLET; 1' FOOT DEEP				X	
B MA	JH 065	071 1315/372 8244		A J U	M F U	Y N	KF SCAT; POSS. KB BURROW				X	X
B MA	KD 003	071 1325/372 7929		A J U	M F U	Y N	POTENT. PALLET; 1' FOOT DEEP; MAMMAL DIG				X	
B MA	JB 018	071 1298/372 7759		A J U	M F U	Y N	" " " "; very steep. MAM DIG				X	
B MA	EE 038	071 1298/372 7735		A J U	M F U	Y N	" " 3' FOOT DEEP; MAMMAL DIG				X	
B MA	KD 004	071 1316/372 7693		A J U	M F U	Y N	POSS KF; 2 holes				X	X
B BC	JH 004	071 1308/372 7607		A J U	M F U	Y N	FEROCACTUS SP. SMALL 8" DIAMETER					
B MA	KD 005	071 1319/372 7547		A J U	M F U	Y N	POTENT. PALLET; MAMMAL DIGGING				X	
B MA	JB 019	071 1304/372 7469		A J U	M F U	Y N	Potent Pallet; Mammal Digging				X	

*See Reverse

7/1250

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe Date: 5/27/09 Page 2 of 4

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
	4, 7, 9 11	KFL8 + K/L11		

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

	GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTENT. BURROW DETO	BUOW
B MA	JB 020	071 1301/372 7277		A J U	M F U	Y N	POTEN. PALLET, MAM. DIG.				X	
B MA	KD 006	071 1315/372 6867		A J U	M F U	Y N	LIKELY KF BURROW BUT NO SIGN.					X
B MA	EE 039	071 1285/372 6807		A J U	M F U	Y N	POTEN PALLET, MAM. DIG.				X	
B MA	JB 021	071 1299/372 6630		A J U	M F U	Y N	POTEN PALLET, MAM. DIG.				X	
B MA	JB 022	071 1338/372 7198		A J U	M F U	Y N	LIKELY KF BURROW				X	X
B BC	KD 001	071 1355/372 7516		A J U	M F U	Y N	FEROCACTUS SP. 4" DIAMETER					
B MA	JB 023	071 1335/372 7845		A J U	M F U	Y N	POTEN PALLET, MAM. DUG				X	
B MA	JH 066	071 1347/372 8098		A J U	M F U	Y N	POTEN PALLET, MAM DUG				X	
B MA	JH 067	071 1347/372 8337		A J U	M F U	Y N	POTENT. PALLET, MAM DUG.				X	
B BC	KD 002	071 1400/372 8412		A J U	M F U	Y N	Echinocactus sp. Cottontop					
B MA	JH 068	071 1394/372 8244		A J U	M F U	Y N	POTENT. PALLET, MAM. DUG				X	
B MA	JH 069	071 1397/372 8224		A J U	M F U	Y N	~~POTENT. PALLET~~, MAM. DUG				X	X
B MA	KD 007	071 1398/372 8218		A J U	M F U	Y N	POTENT. PALLET, MAM. DUG SHALLOW				X	
B MA	EE 040	071 1362/372 8086		A J U	M F U	Y N	POTENT. PALLET, MAM DUG				X	
B MA	JB 024	071 1370/372 8071		A J U	M F U	Y N	POTENT. PALLET, MAM DUG				X	
B MA	JH 070	071 1386/372 8076		A J U	M F U	Y N	POTENT. PALLET, MAM DUG SHALLOW				X	
B MA	KD 008	071 1402/372 7711		A J U	M F U	Y N	~~POTENT. PALLET~~, MAM. DUG					X
B MA	EE 041	071 1367/372 7726		A J U	M F U	Y N	POTENT. PALLET, MAM. DUG				X	
B MA	KD 009	071 1396/372 7405		A J U	M F U	Y N	POTENT. PALLET, MAM. DUG				X	
B MA	JB 025	071 1384/372 7173		A J U	M F U	Y N	POTENT. PALLET, MAM. DUG				X	
B LS	EE 005	071 1682/372 7127		A J U	M F U	Y N	PERCHED 300m x 100°					

*See Reverse

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 5/27/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

	GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTENTIAL BURROW DETO	BUROW
BMA	EE 042	071 1353/372 7145		A J U	M F U	Y N	POTENT PALLET; MAMMAL DIG				X	
BMA	JH 071	071 1400/372 6994		A J U	M F U	Y N	POTENT. PALLET; MAMMAL DIG				X	
BBC	JH 005	071 1421/372 7159		A J U	M F U	Y N	FEROCACTUS SP. 6"					
BMA	JH 072	071 1434/372 7383		A J U	M F U	Y N	POTENT. PALLET; SHALLOW MAMMAL DIG				X	
BMA	JH 073	071 1426/372 7531		A J U	M F U	Y N	POTENT. PALLET; MAMMAL DIG				X	
BMA	JH 074	071 1427/372 7611		A J U	M F U	Y N	PROS KIT FOX DIG; ~~[illegible]~~ GOES DOWN (TO END IN SIGHT)				X	X
				A J U	M F U	Y N	ANOTHER HOLE 5 M TO SOUTH					
BMA	JH 075	071 1424/372 7547		A J U	M F U	Y N	POTENT. PALLET; MAMM. DIG				X	
BMA	JH 076	071 1428/372 8231		A J U	M F U	Y N	BURROW - KEEPS GOING; KF DIG; SOME WHITEWASH BUT ALSO				X	X
				A J U	M F U	Y N	ON BRANCHES ABOVE TREE; THEREFOR NOT BUROW SIGN					
BMA	JB 026	071 1425/372 8272		A J U	M F U	Y N	POTENT. PALLET; MAMMAL DIG.				X	
BMA	JH 077	071 1433/372 8285		A J U	M F U	Y N	POTENT. PALLET; MAMMAL DIG				X	
BMA	JB 027	071 1424/372 8380		A J U	M F U	Y N	POTENT. PALLET; MAMMAL DIG				X	
BMA	EE 043	071 1409/372 8394		A J U	M F U	Y N	BURROW - KF DIG (PROS) (3 entrances)				X	X
BMA	JH 078	071 1452/372 8476		A J U	M F U	Y N	POTENT. PALLET; UNDER GRASS; MAM. DIG.				X	
BMA	JH 079	071 1462/372 8341		A J U	M F U	Y N	BURROW; KF				X	X
BMA	EE 044	071 1441/372 8202		A J U	M F U	Y N	POTENT PALLET; MAMMAL DIGGING				X	
BMA	JH 080	071 1463/372 8100		A J U	M F U	Y N	POTENT. PALLET; MAMMAL DIGGING				X	
BMA	JH 081	071 1467/372 8011		A J U	M F U	Y N	POTENT. PALLET; 3' DEEP; MAMMAL DIGGING				X	
BMA	JH 082	071 1463/372 7895		A J U	M F U	Y N	POTENT. PALLET; 1' DEEP; MAMMAL DIGGING				X	
BBC	EE 004	071 1455/372 7893		A J U	M F U	Y N	FEROCACTUS SP.					

*See Reverse

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 5/27/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start		~~103~~	~~6-8 SE~~	
Mid-day				
End	1600	103	6-8 SE	5%

	GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTEN USABL DETO	BUOW
BMA	JB 028	071 1452/372 7838		A J U	M F U	Y N	POTENT PALLET; MAMMAL DIG.	6" DEEP			X	
BMA	EE 045	071 1439/372 7453		A J U	M F U	Y N	6 OPENINGS; 1 BURROW; 5 POTENTIAL					
				A J U	M F U	Y N	PALLETS; 2 BUOW PELLETS; PROB KF DIGGING.				X	X
BMA	JH 083	071 1455/372 7433		A J U	M F U	Y N	BURROW; PROB COYOTE				X	X
BMA	JB 029	071 1451/372 7368		A J U	M F U	Y N	BURROW;				X	X
BBC	EE 005	071 1436/372 7063		A J U	M F U	Y N	FERACACTUS SP. 4" DIAMETER					
BMA	EE 046	071 1441/372 6778		A J U	M F U	Y N	POTENT. PALLET; MAM. DIG. (2 HOLES)				X	
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						

*See Reverse

0707700	✓	740	✓	780	✓	820	✓	880	✓		
710	✓	750	✓	790	✓	830	✓	890	✓		
720	✓	760	✓	800	✓	840	✓	900	✓		
730	✓	770	✓	810	✓	850	✓	910	✓		
						860	✓	920	✓		
						870	✓	930	✓		

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe Date: 5/27/09 Page 1 of 3

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	5, 6	G11, G12 G13 (part)	ADA	GLU SDA

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	8:35am	84°	0-2mph	0%
Mid-day	11:55am	98°	2-5 mph	3%
End				

Data Recorded on GPS #5 #1

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCAD071	0707726	DETO	A J U	M F U	Y N	2 DETO bone fragments			5
	3726179	fragments	A J U	M F U	Y N	½" x ½", Not mineralized			
			A J U	M F U	Y N	Not in wash. on desert pavement			
			A J U	M F U	Y N	thin bone. Probably from subadult			
BDCAD072	0707740	DETO	A J U	M F U	Y N				
	3726627	fragments	A J U	M F U	Y N	1 deto bone fragment			5
			A J U	M F U	Y N	½" x ½"			
			A J U	M F U	Y N	Very thin bone. Def tortoise			
			A J U	M F U	Y N	in old tank track.			
			A J U	M F U	Y N	slightly mineralized.			
			A J U	M F U	Y N	Dec'd in 1994.			
BDCAD073	0707742	DETO	A J U	M F U	Y N				
	3726709	fragment	A J U	M F U	Y N	1 fragment in desert pavement			5
			A J U	M F U	Y N	next to tank track.			
			A J U	M F U	Y N	3/4" x ½".			
			A J U	M F U	Y N				
BDCGL033	0707759	Deto	A J U	M F U	Y N	1 fragment. Probably from			5
	3726414	fragment	A J U	M F U	Y N	carapace			
			A J U	M F U	Y N	1" x 3/4"			
			A J U	M F U	Y N				
BDCAD074	0707772	Deto fragment	A J U	M F U	Y N	1 fragment 2" x 1.5". Def tortoise			5
	3726379								

*See Reverse

ash (ATFL), BTGN, HOFE, TUVU

820	✓	880	✓
830	✓	890	✓
840	✓	900	✓
850	✓	910	✓
860	✓	920	✓
870	✓	930	✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe Date: 5/27/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	5, 6	G11 G12 G13 (part)	ADA	GLU SDA-1

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day	4:48pm	99°F	4 to 8mph	20% CC
End	7:13pm	98°F	2 to 6mph	5% CC

Data Recorded on GPS #5, #1

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCGL030	0707750 3726029	DETO fragment	A J U	M F U	Y N	completely mineralized tortoise bone fragment 1" x 1"			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCGL035	0707798 3726427	DETO fragment	A J U	M F U	Y N				
			A J U	M F U	Y N	1 piece of tortoise bone. marginal 1/2" x 1/2"			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCSD026	0707831 3726427	DETO bone frag.	A J U	M F U	Y N	- one piece of vertebral tort bone 3/4" x 1/2"	bone		5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCAD075	0707845 3726437	Deto bone frag	A J U	M F U	Y N	marginal plastron, one piece 1/2" x 1/4" tort bone			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N	- likely from subadult animal			
			A J U	M F U	Y N				
BKBAD008	0707847 3726194	Kit fox complex	A J U	M F U	Y N	- 2 burrows, active, potential for DETO / BKFX			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAAD044	0707837 3726035	mammal burrow	A J U	M F U	Y N	- 2 burrows, show evidence of predation by coyote, may be currently used by kfox potential for DETO / BKFX	dog		
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5/27/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMASD032	0707917	mammal	A J U	M F U	Y N	potential DETO pallet	4		
	3726746	DETO?	A J U	M F U	Y N	14" x 8" x 16" deep			
			A J U	M F U	Y N	full of veg.			
BMASD033	0707919	~~DETO~~	A J U	M F U	Y N	- old kit fox complex, one			
	3726225	mammal	A J U	M F U	Y N	burrow could function as	4		
			A J U	M F U	Y N	a DETO pallet, others			
			A J U	M F U	Y N	caved in			
			A J U	M F U	Y N	24" x 18" x 18" deep			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

L8 to L11: 711470 x, 480 x, 490 x, 500 x, 510 x, 520 x, 530 x, 540 x

L9 (partial) to L11 (partial): 711550 x, 560 x, 570 x, 580 x, 590 x, 600 x, 610 x, 620 x, 630 x, 640 x, 650 x, 660 x, 670 x, 680 x, 690 x, 700 x, 710 x, 720 x, 730 x, 740 x, 750 x, 760 x, 770 x, 780 x, 790 x, 800 x, 810 x, 820 x, 830 x, 840 x, 850 x, 860 x, 870 x, 880 x, 890 x, 900 x, 910 x, 920 x, 930 x, 940 x, 950 x, 960 x, 970 x, 980 x, 990 x, 2000 x, 2010 x, 2020 x, 2030 x, 2040 x, 2050 x, 2060 x, 2070 x, 2080 x, 2090 x, 2100 x, 2110 x, 2120 x, 2130 x, 2140 x, 2150 x, 2160 x, 2170 x, 2180 x, 2190 x, 2200 x, 2210 x, 2220 x, 2230 x, 2240 x, 2250 x, 2260 x, 2270 x, 2280 x, 2290 x, 2300 x

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe Date: 5/28/09 Page 1 of 2

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	4,7,9,11		JHU-7 EEL-9	JBE-11 KDU-4

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	0530	74	0-1	10%
Mid-day	1125	92°F	0-1	10%
End	1620	105°F	~~0-1~~ 4-6	10%

DATA ON GPS # 11

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	potential for DETO	BUOW
BMAKD010	0711502/3727022		A J U	M F U	Y N	ends @~3' back, under E side of creosote				X	
BMAJB030	0711488/3727031		A J U	M F U	Y N	under W side of creosote; potential DETO burrow				X	
BMAKD011	0711512/3727341		A J U	M F U	Y N	potential DETO pallet; mam. dug				X	
BMAJB031	0711489/3727950		A J U	M F U	Y N	ends ~3-4' back, 3 openings; mam. dug; pot. DETO pallet or burrow				X	
BMAKD012	0711499/3728053		A J U	M F U	Y N	mam. dug; could be used as atypical DETO burrow				X	
BMAEE047	0711485/3728226		A J U	M F U	Y N	mam. dug; potential DETO pallet				X	
* BMAJH079	found 5/27/09		A J U	M F U	Y N	saw fresh hit for scat @ entrance 5/28/09					
BMAJB032	0711482/3728392		A J U	M F U	Y N	mam. dug; 2 opening; 1 could be potential DETO pallet				X	
BMAEE048	0711519/3728290		A J U	M F U	Y N	mam. dug; 1 opening under creosote; can't see end				X	X
BMAJH084	0711508/3728175		A J U	M F U	Y N	large ground squirrel complex; some could be used by BUOW					X
BMAJH085	0711512/3727779		A J U	M F U	Y N	potential DETO pallet under E side of creosote				X	
BMAKD013	0711540/3727765		A J U	M F U	Y N	mam. dug; could be used by DETO, BUOW or hit for				X	X
BMAJH086	0711517/3727295		A J U	M F U	Y N	mam. dug; no sign but possible for DETO, BUOW+KF				X	X
BMAJH087	0711509/3727168		A J U	M F U	Y N	under creosote; could be used by DETO as pallet				X	
BNEEE002	0711527/3727033		A J U	M F U	Y N	nest in ironwood tree; verdein nest					
BMAJH088	0711510/3726977		A J U	M F U	Y N	mam. dug; 2 entrances; 1 with pot. for DETO, BUOW, KF				X	X
BNEEE003	0711639/3726902		A J U	M F U	Y N	nest in ironwood tree; small nest					
BMAJB033	0711736/3727197		A J U	M F U	Y N	under N side of creosote; could be used by DETO as pallet or burrow				X	
BMAJH089	0711710/3727445		A J U	M F U	Y N	enlarge ground squirrel burrow w/ pot. for BUOW					X
BMAKD014	0711785/3727408		A J U	M F U	Y N	mam. dug; pot. burrow for DETO				X	
BMAKD015	0711863/3727517		A J U	M F U	Y N	rear creosote; possible DETO pallet				X	

*See Reverse

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5/28/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	DETO	BUOW
BMAJB034	071 1845 / 3727487		A J U	M F U	Y N	potential DETO pallet; aole @ 1' back				X	
BMAEE049	071 1920 / 3727552		A J U	M F U	Y N	mammal burrow, potential for DETO, BUOW, KF				X	Y
BMAJB035	071 1955 / 3727482		A J U	M F U	Y N	2 openings, could be used as burrow or pallet				X	
BMAJB036	071 1972 / 3727288		A J U	M F U	Y N	2 openings, both could be used by DETO as pallets				X	
—			A J U	M F U	Y N	also 3rd. burrow SW of these					
BMAJH090	071 2025 / 3727280		A J U	M F U	Y N	mammal burrow; no sign; pot. for DETO + KF				X	
BMAJH091	071 2065 / 3727325		A J U	M F U	Y N	mammal burrow; coyote scat; pot. for DETO + KF				X	
BMAJB037	071 2129 / 3727499		A J U	M F U	Y N	mammal burrow under creosote, pot. for DETO; old KF scat				X	X
BMAEE050	071 2116 / 3727493		A J U	M F U	Y N	mam. dug; pot. for DETO + BUOW				X	X
BMAJH092	071 2133 / 3727561		A J U	M F U	Y N	mam. dug, pot. for DETO, KF, BUOW				X	Y
BMAJB038	071 2253 / 3727556		A J U	M F U	Y N	mam. dug, possibly DETO pallet				X	
BMAJH093	071 2217 / 3726953		A J U	M F U	Y N	mam. dug, pot. DETO pallet				X	
BMAJB039	071 2285 / 3727515		A J U	M F U	Y N	mam. dug, pot. DETO, KF, BUOW				X	Y
BMAEE051	071 2281 / 3727545		A J U	M F U	Y N	mam. dug, pot. DETO pallet				X	
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						

*See Reverse

0707940	✓	0708000	✓	8060	✓	8120	✓	8180	✓
950	✓	8010	✓	8070	✓	8130	✓	8190	✓
960	✓	8020	✓	8080	✓	8140	✓	8200	✓
970	✓	8030	✓	8090	✓	8150	✓	8210	✓
980	✓	8040	✓	8100	✓	8160		8220	✓
990	✓	8050	✓	8110	✓	8170	✓	8230	✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/28/09

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Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,5,6	G11 G12 G13	ADA - 5 GCU - 6	SDA - 1

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	↑	↑	↑	↑
Mid-day	9:22AM	87°F	0 to 2 mph	20% CC
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDPAD027	0707964	DETO?	A J U	M F U	Y N	potential DETO ~~burrow~~ pallet	5		
	3726379		A J U	M F U	Y N	narrows to small mammal burrows			
			A J U	M F U	Y N	20" wide x 12" x 24" deep			
			A J U	M F U	Y N				
BDPSD031	0707948	DETO?	A J U	M F U	Y N	potential DETO pallet	5		
	3726412		A J U	M F U	Y N	narrows to small mammal burrow,			
			A J U	M F U	Y N	20" x 12" x 24" deep			
			A J U	M F U	Y N				
BMAAD045	0707969	mammal	A J U	M F U	Y N	- badger foraging burrow, could			
	3726725		A J U	M F U	Y N	be used as DETO pallet			
			A J U	M F U	Y N				
BMAGL045	0707996	mammal	A J U	M F U	Y N	mammal burrow, could be used			
	3726101		A J U	M F U	Y N	as DETO pallet			
			A J U	M F U	Y N				
BDCSD027	0708011	DETO	A J U	M F U	Y N	4 pieces DETO bone 1" x 3/4"			5
	3726317	bone frag.	A J U	M F U	Y N	1" x 1/2", 1/2" x 1/2" (vertebral)			
			A J U	M F U	Y N	1/4" x 1/4", slightly mineralized			
			A J U	M F U	Y N				
BDCSD028	0708014	DETO	A J U	M F U	Y N	several small bone fragments			5
	3726528	bone frag.	A J U	M F U	Y N	beginning to erode			
			A J U	M F U	Y N	10+ fragments			

*See Reverse

largest ~ 1" x 1/2"

Verdin

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe Date: 5/28/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
~~BADD~~ BDCAD076	0708020 3726598	DETO bone frag	A J U	M F U	Y N	-one piece of DETO bone frag. old, eroded 1/2"x1/4"			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDPSD032	0708007 3727027	DETO!	A J U	M F U	Y N	potential DETO pellet 8x5" x 16" deep	5		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCAD077	0708032 3726641	DETO bone frag	A J U	M F U	Y N	1"x1" bone frag, likely plastron,			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCGL036	0708047 3726501	DETO bone frag.	A J U	M F U	Y N	1"x1" tort bone			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BLSSD002	0708031 3726440	LOSH	A J U	M F U	Y N	-loggerhead shrike, in ironwood			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BNEAD001	0708031 3726400	woodpecker nest	A J U	M F U	Y N	- wood pecker nest in paloverde ~6' high picture ~ 1 1/2" wide			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCGL037	0708045 3726238	DETO bone frag	A J U	M F U	Y N	-one piece 1 1/2" x 3/4" plastron, slightly mineralized			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

8060	✓	8120	✓
8070	✓	8130	✓
8080	✓	8140	✓
8090	✓	8150	✓
8100	✓	8160	✓
8110	✓	8170	✓

6.61
2.70
5.00

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5/28/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day	12:17PM	100°F	1 to 4 mph	10% CC
End	5:20PM	99°F	4 to 9 mph	25% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCSD029	0708070 3726286	DETO bone frag.	A J U	M F U	Y N	-1"x 1/2" one piece DETO bone not mineralized plastron marginal			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCAD078	0708081 3726072	DETO bone frag.	A J U	M F U	Y N	3/4"x 1/2" one piece DETO bone likely subadult slightly mineralized			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCAD079	0708089 3726045	DETO bone frag	A J U	M F U	Y N	-bone frag. 1"x 1" not mineralized			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCGL038	0708113 3726074	DETO bone frag	A J U	M F U	Y N	-tort bone frag. 1"x 1" eroded, not mineralized			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCAD080	0708088 3726641	DETO bone frag	A J U	M F U	Y N	mineralized marginal bone frag 1"x 1/2"			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAAD046	0708149 3726400	mammal	A J U	M F U	Y N	-mammal ~~pellet~~ burrow could be used as DETO pellet			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAAD047	0708135 3726612	mammal	A J U	M F U	Y N	~~mett~~ mammal burrow could be used as DETO pellet			

*See Reverse

8180	✓
8190	✓
8200	✓
8210	✓
8220	✓
8230	✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/28/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End	7:48pm	97°F	3 to 8 mph	30% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCAD081	0708133	DETO	A J U	M F U	Y N	3/4" x 1/2" one piece DETO			5
	3726657	bone frag.	A J U	M F U	Y N	bone frag, not mineralized			
			A J U	M F U	Y N				
BMAAD048	0708142	mammal	A J U	M F U	Y N	badger foraging burrows			
	3726715		A J U	M F U	Y N	could be used by DETO as pallets			
			A J U	M F U	Y N				
BDCGL039	0708208	DETO	A J U	M F U	Y N	tort bone frag, mineralized			5
	3726229	bone frag.	A J U	M F U	Y N	3/4" x 1/2"			
			A J U	M F U	Y N				
BDCAD082	0708230	DETO	A J U	M F U	Y N	tort bone frag, non-mineralized			5
	3726245	bone frag	A J U	M F U	Y N	1/2" x 1/4"			
			A J U	M F U	Y N				
BDCGL040	0708213	DETO	A J U	M F U	Y N	1" x 1", ~~[illegible]~~ carapace			5
	3726664	bone frag	A J U	M F U	Y N	non-mineralized			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

0710	70	X	230	X	290	X	350	X	410	X	470	X	530	X	590	X	650
	180	X	240	X	300	X	360	X	420	X	480	X	540	X	600	X	
	190	X	250	X	310	X	370	X	430	X	490	X	550	X	610	X	
	200	X	260	X	320	X	380	X	440	X	500	X	560	X	620	X	
	210	X	270	X	330	X	390	X	450	X	510	X	570	X	630	X	
	220	X	280	X	340	X	400	X	460	X	520	X	580	X	640	X	

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE Date: 5/29/09 Page 1 of 3

DATA ON

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Forward		~~[illegible]~~	EEL9, JBE-11	KDU-4

K12 - top ~ ~~3726590~~
K13 ← → 3726110 —
K14 - bottom ~ 3725100 —

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	0530	68	0-1 / S	20% NONE
Mid-day	1000	94	5-8 / E	15% NONE
End	1846	92	7-10 / SE	10% NONE

	GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTENTIAL USAGE DETO	BUOW
BMA	EE 052	071 0202/372 5447		A J U	M F U	Y N	POTENT. PALLET; MAMMAL DUG; ~~[illegible]~~ SQUIRREL COMPLEX				X	
BMA	KD 016	071 0225/372 6096		A J U	M F U	Y N	POSS KF BURROW; IN SQUIR. COMPLEX				X	X
BMA	EE 053	071 0231/372 5907		A J U	M F U	Y N	POSS KF BURROW; IN SQUIR COMPLEX				X	X
BMA	EE 054	071 0229/372 5810		A J U	M F U	Y N	MAMMAL DIG; POTENTIAL PALLET				X	
BMA	EE 055	071 0226/372 5607		A J U	M F U	Y N	POTENT. PALLET; MAMMAL DIG				X	
BMA	EE 056	071 0295/372 5990		A J U	M F U	Y N	MAMMAL BURROW; IN SQUIR. COMPLEX; SMALL SIDE				X	X
BKB	JB 001	071 0335/372 5881		A J U	M F U	Y N	KF POOP & FOOTPRINTS; KF COMPLEX				X	X
BMA	EE 057	071 0354/372 6051		A J U	M F U	Y N	MAMM. BURR.; SQUIR; POTENT. PALLET				X	
BMA	EE 058	071 0346/372 5693		A J U	M F U	Y N	MAMM. BURR; TAPOVR QUICKLY; POTENT PALLET				X	
BMA	JB 040	071 0363/372 5488		A J U	M F U	Y N	MAMM. BURR; TAPORS QUICKLY; POTENT. PALLET				X	
BKB	KD 004	071 0410/372 5846		A J U	M F U	Y N	KF complex; KF scat (old)				X	X
BMA	JB 041	071 0399/372 6078		A J U	M F U	Y N	MAMM. BURR.; TAPORS QUICKLY; POTENT. PALLET.				X	
BMA	KD 017	071 0431/372 5726		A J U	M F U	Y N	BURROW COMPLEX; 2 PONTENTIAL PALLETS				X	
BKB	KD 005	071 0468/372 5132		A J U	M F U	Y N	COMPLEX; KF SCAT (OLD)				X	X
BMA	JB 042	071 0457/372 5259		A J U	M F U	Y N	P. PALLET; MAMMAL DUG				X	
BMA	EE 059	071 0445/372 5396		A J U	M F U	Y N	P. PALLET				X	
BKB	KD 006	071 0470/372 5735		A J U	M F U	Y N	KF COMPLEX; MULT HOLES				X	X
BMA	KD 018	071 0490/372 5473		A J U	M F U	Y N	P. PALLET; MAMMAL DUG				X	
BKB	EE 005	071 0478/372 5211		A J U	M F U	Y N	KB COMPLEX; MULTI ENTRANCE				X	X
BMA	KD 019	071 0553/372 5890		A J U	M F U	Y N	P. PALLET; 2 HOLES; MAMMAL DUG				X	
BKB	KD 007	071 0557/372 5700		A J U	M F U	Y N	KF COMPLEX; MULTI HOLES				X	X

*See Reverse

0710 170	230	290	350	410	470	530
180	240	300	360	420	480	540
190	250	310	370	430	490	550
200	260	320	380	440	500	560
210	270	330	390	450	510	570
220	280	340	400	460	520	580

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 5/29/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused		~~[illegible]~~ K12 - top ~ ~~3726590~~ 3726110 K13 K14 - bottom ~ 3725100	EEL9, JBE-11	KDU-4

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

	GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTEN USEAGE DETO	BMOW
BKB	KD 008	071 0553/372 5110		A J U	M F U	Y N	COMPLEX				X	X
BKB	JB 002	071 0580/372 6045		A J U	M F U	Y N	COMPLEX				X	X
B MA	EE 060	071 0590/372 5870		A J U	M F U	Y N	P. PALLET; MAMMAL; TAPERS				X	
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						

*See Reverse

L-12 K-11 LITTLE

0710	170	X	230	X	290	X	350	X	410	X	470	X	530	X	590	X	650
	180	X	240	X	300	X	360	X	420	X	480	X	540	X	600	X	660
	190	X	250	X	310	X	370	X	430	X	490	X	550	X	610	X	670
	200	X	260	X	320	X	380	X	440	X	500	X	560	X	620	X	680
	210	X	270	X	330	X	390	X	450	X	510	X	570		630	X	690
	220	X	280	X	340	X	400	X	460	X	520	X	580		640	X	0700

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 5/29/09

Page 3 of 3

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Forward		~~[illegible]~~ K12 - top ~ ~~3726590~~ ~~[illegible]~~ ~~[illegible]~~	EEL9, JBE-11	KDU-4

DATA ON 11

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

	GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTENT USAGE DETO	BLOW
B MA	JB 043	071 0178/372 6519		A J U	M F U	Y N	P. PALLET, MAMMAL DIG				X	
B MA	JB 044	071 0272/372 6265		A J U	M F U	Y N	P PALLET; MAMMAL DIG				X	
B MA	JB 045	071 0267/372 6453		A J U	M F U	Y N	BURROW, MAMMAL DIG				X	X
B MA	EE 061	071 0370/372 6500		A J U	M F U	Y N	BURROW COMPLEX; MAM; SQUIRREL;				X	X
B MA	JB 046	071 0404/372 6411		A J U	M F U	Y N	P. PALLET; MAM DUG;				X	
B MA	EE 062	071 0407/372 6414		A J U	M F U	Y N	P. PALLET; MAM DUG;				X	
B MA	EE 063	071 0486/372 6427		A J U	M F U	Y N	3 hole in complex; Mam dug				X	X
B MA	JB 047	071 0518/372 6398		A J U	M F U	Y N	WHITE WASH; complex; Mam dug.				X	X
B MA	EE 064	071 0534/372 6393		A J U	M F U	Y N	P. PALLET; COMPLEX(2); MAM DUG; BURROW				X	X
B MA	EE 065	071 0547/372 6376		A J U	M F U	Y N	P. PALLET; SQUIRREL; MAM-DUG				X	
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						
				A J U	M F U	Y N						

*See Reverse

711010	x	090	x	170	x	250	x	330	x	410	x	490	x
020	x	100	x	180	x	260	x	340	x	420	x	500	x
030	x	110	x	190	x	270	x	350	x	430	x	510	x
040	x	120	x	200	x	280	x	360	x	440	x	520	x
050	x	130	x	210	x	290	x	370	x	450	x		
060	x	140	x	220	x	300	x	380	x	460	x		
070	x	150	x	230	x	310	x	390	x	470	x		
080	x	160	x	240	x	320	x	400	x	480	x		

0710355 → 0710410 ✓

UTM ≈ 3730245 ↓ 3730066 ✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/29/09

Page 1 of 1

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Foods	DATA @7	~~[illegible]~~ K5 ~~[illegible]~~ L5	CGE-11 MRI-	

① H6 H7 ~~[illegible]~~ TOP = 3730110 BOTTOM = 3729400

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	06:35	73°	3 NW	High Cloud 20%
Mid-day	14:03	100°	7 SW	" " 20%
End	18:40	98	6 SW	

DATA ON GPS # ~~98~~ 7

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Potential Usage Below	Deto
BMACG084	0711124		A J U	M F U	Y N	Potential D.P.	4				x
	3729424		A J U	M F U	Y N						
BMACG085	~~0711B~~ 0711389		A J U	M F U	Y N	Multiple Holes - Previous KB	4			x	x
	3729641		A J U	M F U	Y N						
BMACG086	0711502		A J U	M F U	Y N	No Sign				x	x
	3729707		A J U	M F U	Y N						
BKBCG013	0711521		A J U	M F U	Y N	∓15m Multiple Openings	5			x	x
	3729580		A J U	M F U	Y N						
BMACG087	0709197		A J U	M F U	Y N	3 MAS ∓10m Apart	4				x
	3728646		A J U	M F U	Y N						
BMACG088	0709123		A J U	M F U	Y N	Rabbit?	4				x
	3729401		A J U	M F U	Y N						
BNEMR009	0709125		A J U	M F U	Y N	Verdin?					
	3728838		A J U	M F U	Y N	2 Nest - Palo Verde					
* BPOTDROPMR002	0709228		A J U	M F U	Y N	Pot Drop ≈ 10 Shards					
	3728690		A J U	M F U	Y N	~~[illegible]~~					
BMAMR043	0709234		A J U	M F U	Y N	No Sign - Fresh	5			x	x
	3728732		A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						

*See Reverse

① ≈ 3729400 ↓ 3728450

709230	x	190	x	150	x
220	x	180	x	140	x
210	x	170	x	130	x
200	x	160	x	120	x

8240 ✓ 8250 ✓ 8260 ✓ 8270 ✓ 8280 ✓ 8290 ✓

8300 ✓ 8310 ✓ 8320 ✓ 8330 ✓ 8340 ✓ 8350 ✓

8360 ✓ 8370 ✓ 8380 ✓ 8390 ✓ 8400 ✓ 8410 ✓

8420 ✓ 8430 ✓ 8440 ✓ 8450 ✓ 8460 ✓ 8470 ✓

8480 ✓ 8490 ✓

stop @ 960 ↑ last line in H11

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/29/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,5,6	G11 G12 G13	ADA-5 GLU-6	SDA-1

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	8:48AM	87°F	1 to 4 mph	25% CC
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCAD083	0708279	DETO	A J U	M F U	Y N	11+ fragments, large animal			5
	3726575	bone frag	A J U	M F U	Y N	adult not mineralized			
			A J U	M F U	Y N	marginal, plastron, carapace			
			A J U	M F U	Y N	⊕ one frag 10 m to east			
BMASD034	0708282	mammal	A J U	M F U	Y N	old mammal burrow, turns			
	3726579		A J U	M F U	Y N	to right, could be used as			
			A J U	M F U	Y N	DETO burrow			
BDCSD030	0708281	DETO bone	A J U	M F U	Y N	- mineralized tort bones			5
	3726514	frag.	A J U	M F U	Y N	1 1/2" x 1" carapace			
			A J U	M F U	Y N	+ 1/4" x 1/4"			
			A J U	M F U	Y N				
BDCGL041	0708287	DETO bone	A J U	M F U	Y N	- one piece 3/4" x 1/2"			5
	3726456	frag.	A J U	M F U	Y N	starting to mineralize			
			A J U	M F U	Y N				
BDCAD084	0708268	DETO	A J U	M F U	Y N	- one piece 1" x 3/4"			5
	3726151	bone frag.	A J U	M F U	Y N	partially mineralized			
			A J U	M F U	Y N	marginal			
BMAAD049	0708265	mammal	A J U	M F U	Y N	- badger foraging burrow, could			
	3726143		A J U	M F U	Y N	be used by BUOW, quite steep			
			A J U	M F U	Y N	for DETO			
			A J U	M F U	Y N				

*See Reverse

8240	✓	8300	
8250	✓	8310	✓
8260	✓	8320	✓
8270	✓	8330	✓
8280	✓	8340	✓
8290	✓	8350	✓

760-376 3814

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/29/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDPSD033	0708280	DETO?	A J U	M F U	Y N	2 potential DETO pallet,	4		
	3726130		A J U	M F U	Y N	full of veg. 12"x 7"x 16" deep			
			A J U	M F U	Y N				
BDCADO85	0708266	DETO	A (J) U	M F U	Y N	Deto vertebral, juvenile, likely			5
	3726069		A J U	M F U	Y N	~3" to 4" MCL estimate, not mineralized			
			A J U	M F U	Y N				
BKBGL025	0708240	KFOX	A J U	M F U	Y N	kit fox complex, 5 openings			
	3726156		A J U	M F U	Y N	active, potential for DETO&BUOW			
			A J U	M F U	Y N				
BMAGL046	0708241	mammal	A J U	M F U	Y N	badger foraging burrow			
	3726238		A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCGL042	0708240	DETO bone	A J U	M F U	Y N	tort bone frag. 1/2"x 1/4"			5
	3726507	frag.	A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAGL047	0708235	mammal	A J U	M F U	Y N	mammal burrow in round-			
	3726510		A J U	M F U	Y N	tailed complex, turns right			
			A J U	M F U	Y N	larger, could be used by DETO/BUOW			
BDPAD028	0708259	DETO pallet	A J U	M F U	Y N	- DETO pallet, 8"x 6"x 6" deep			
	3726568		A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

pseamount@earthlink.net

8300 ✓
8310 ✓
8370 ✓
8330
8340
8350

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 5/29/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BBBAD001	0708317 3726343	BUOW	A J U	M F U	Y N	likely active BUOW burrow, white wash, pellets, old coyote den?			
			A J U	M F U	Y N	under palo verde, white wash			
			A J U	M F U	Y N	in burrow @ 2 other burrows			
			A J U	M F U	Y N	under same tree			
BBBSD003	0708305 3726330	BUOW	A J U	M F U	Y N	- likely satellite burrow of			
			A J U	M F U	Y N	BBBAD001, some WW, under			
			A J U	M F U	Y N	dead palo verde			
			A J U	M F U	Y N				
BMAGL048	0708299 3726256	mammal burrow	A J U	M F U	Y N	badger foraging burrow, could			
			A J U	M F U	Y N	be used as pallet for DETO			
			A J U	M F U	Y N				
BKBAD009	0708327 3725850	KFOX	A J U	M F U	Y N	active kit fox complex, ~5 burrows			
			A J U	M F U	Y N	potential for DETO/BUOW			
			A J U	M F U	Y N				
BKBSD019	0708342 3725905	KFOX	A J U	M F U	Y N	Kit fox complex, active			
			A J U	M F U	Y N	~6 burrows, fresh kit fox			
			A J U	M F U	Y N	scat, potential for DETO/BUOW			
			A J U	M F U	Y N	likely pupping			
BDCSD031	0708341 3726121	DETO bone frag.	A J U	M F U	Y N	- deto bone, confirmed tort,			
			A J U	M F U	Y N	from smaller animal, possibly			
						juvenile 1/4" x 1/2"			

*See Reverse

⊕ one more piece 10m to north 1" x 3/4"

~~8360~~
~~8370~~
~~8380~~
8390
~~8400~~
~~8410~~

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/29/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCSD032	0708344	DETO	A J U	M F U	Y N	one piece, ~~int~~ &			5
	3726215	bone frag	A J U	M F U	Y N	1/4"x1/4", starting to mineralize			
			A J U	M F U	Y N				
BDCGL043	0708348	DETO	A J U	M F U	Y N	1"x1", 1"x1", carapace			5
	3726455	bone frag.	A J U	M F U	Y N	multiple fragments, likely subadult			
			A J U	M F U	Y N	thin fragments, & pitted by weathering			
BMAADO50	0708411	mammal	A J U	M F U	Y N	two mammal burrows, potential			
	3726721		A J U	M F U	Y N	for DETO/BUOW possible KFOX			
			A J U	M F U	Y N	KFOX scat present			
BMAADO51	0708409	mammal	A J U	M F U	Y N	badger claw marks, in burrow that			
	3726445		A J U	M F U	Y N	is likely KFOX, suitable for			
			A J U	M F U	Y N	tort BUOW			
			A J U	M F U	Y N				
BDBAD020	0708414	DETO?	A J U	M F U	Y N	possibly tort burrow,	5		
	3726348		A J U	M F U	Y N	10"x5", can't see to			
			A J U	M F U	Y N	end, tort shaped, potential for			
			A J U	M F U	Y N	BUOW/DETO			
BDCGL044	0708387	DETO	A J U	M F U	Y N	mineralized, 3/4"x1/2"			5
	3726337	bone frag	A J U	M F U	Y N	one piece, marginal (plastron			
			A J U	M F U	Y N				
BMAGL049	0708389	mammal	A J U	M F U	Y N	mammal foraging burrow, & could			
	3726213					be used by DETO as pallet			
						badger claw marks			

*See Reverse

~~8360~~ 8360 ✓
8370 ✓
8380 ✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe Date: 5/29/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day	2:09	103	1-06	
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BLSGL001	0708397	loggerhead	A J U	M F U	Y N	LS feeding fledgling (not in			
	3726168	w/ shell	A J U	M F U	Y N	nest)			
BDCGL045	0708390	DETO bone frag.	A J U	M F U	Y N	-1/2"x1/2" tort bone frag			
	3726095		A J U	M F U	Y N				
BDCAD086	0708407	DETO bone	A J U	M F U	Y N	-1/2"x1/2" tort bone frag			
	3726080	frag.	A J U	M F U	Y N	mineralized			
BDCSD033	0708400	DETO bone	A J U	M F U	Y N	3/4"x1/4", tort bone frag			
	3726002	frag	A J U	M F U	Y N	slightly mineralized			
BDCGL046	0708388	DETO bone	A J U	M F U	Y N	3/4"x3/4" tort bone frag			
	3725886	frag	A J U	M F U	Y N	mineralized			
BMASD035	0708372	mammal	A J U	M F U	Y N	mammal burrow, could be used			
	3725851		A J U	M F U	Y N	as DETO pallet			
BMASD036	0708361	mammal	A J U	M F U	Y N	badger foraging burrow, could			
	3725956		A J U	M F U	Y N	be used as DETO pallet			
BMAGL050	0708386	mammal	A J U	M F U	Y N	mammal burrow, could be			
	3726382		A J U	M F U	Y N	used as DETO pallet			
BMAGL051	0708383	"	A J U	M F U	Y N	"mammal burrow could			
	3726450		A J U	M F U	Y N	be used by DETO/BUOW/KFOX			
BDCGL047	0708386	tort bone	A J U	M F U	Y N	1/4"x1/4" slightly mineralized			
	3726506	frag	A J U	M F U	Y N	DETO bone frag			
BDCSD034	0708369	tort bone	A J U	M F U	Y N	1 1/2"x1" thick DETO bone			
*See Reverse	3726521	frag.				likely near guular area of ♂			
BDCAD087	0708363	tort bone				-tort bone, 1/4"x1/4", slightly			
	3726561	frag				mineralized			

8420 ✓
8430 ✓
8440 ✓
8450 ✓
8460 ✓
8470 ✓
8480 ✓
8490 ✓

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5/29/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
			SDA-1 GLU-6	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day	5:16pm	101°F	2 to 5mph	8% CC
End	7:59pm	94°F	1 to 3mph	40% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMASD037	~~03~~ 0708437 3726193	Mammal	A J U	M F U	Y N	badger foraging burrow, suitable for use by DETO/BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N	no sign, narrows to small			
			A J U	M F U	Y N	mammal burrow			
BKBGL026	0708445 3726172	Kitfox	A J U	M F U	Y N	-Kit fox burrows, turns to left			
			A J U	M F U	Y N	could be used by DETO/BUOW			
			A J U	M F U	Y N				
~~BMASD038~~	~~0708437 3726194~~	~~mammal~~	~~A J U~~	~~M F U~~	~~Y N~~	~~mammal foraging burrow, could~~			
			A J U	M F U	Y N	~~be used by DETO or modified~~			
			A J U	M F U	Y N	~~for use by BUOW~~			
BMASD038	0708433 3726285	Mammal	A J U	M F U	Y N	burrow under dead ironwood			
			A J U	M F U	Y N	brush, suitable for DETO/BUOW			
			A J U	M F U	Y N	tracks (mammal?) inside			
			A J U	M F U	Y N	burrow, ~~[illegible]~~			
			A J U	M F U	Y N				
BDPSD034	0708472 3725972	DETO?	A J U	M F U	Y N	-potential DETO pallet	5		
			A J U	M F U	Y N	14"x10"x 20" deep			
			A J U	M F U	Y N	right shape but narrows inside			
BDCGL048	0708462 3726150	DETO bonefrag.	A J U	M F U	Y N	-DETO leg bone			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

709110 x/	70 x	30 x	708990	50 x	10 x	70 x	30 x	790 x	50 x	10 x	70 x
100 x/	60 x	20 x	80	40 x	900 x	60 x	20 x	780 x	40 x	700 x	60 x
90 x	50 x	10	70	30 x	890 x	50 x	10 x	70 x	30 x	90 x	50 x
80 x	40 x	800	60	20 x	80 x	40 x	300 x	60 x	20 x	80 x	40 x

~~TO = 708460~~

FINISH @ 708640

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: MAY · 30 · 2009

Page 1 of 2

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
FOCUS	DATA 7	H6 H7	CGE-11 MRI-7	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	6:20	70	CALM	CLEAR 5%
Mid-day	15:00	100	2 W	CLEAR 5%
End	18:45	97	2 W	CLEAR 5%

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTENTIAL BURROW	DEN
BMACG089	0709089		A J U	M F U	Y N		5			x	x
	3729104		A J U	M F U	Y N						
BMAMR044	0709080		A J U	M F U	Y N		5			x	x
	3728871		A J U	M F U	Y N						
BMACG090	0709023		A J U	M F U	Y N		5				x
	3729037		A J U	M F U	Y N						
BDCMR027	0708979		A J U	M F U	Y N	2cm x 1cm - MINERALIZED			5		
	3729318		A J U	M F U	Y N						
BDCCG062	0708970		A J U	M F U	Y N	3cm x 1.5cm - MINERALIZED			5		
	3729318		A J U	M F U	Y N						
BDCMR028	0708903		A J U	M F U	Y N	3cm x 2cm - NOT MINERALIZED			5		
	3729241		A J U	M F U	Y N						
BDCMR029	0708857		A J U	M F U	Y N	2.5cm x 2.5cm - NOT MINERALIZED			5		
	3728912		A J U	M F U	Y N						
BMACG091	0708865		A J U	M F U	Y N		5				x
	3729346		A J U	M F U	Y N						
BDCCG063	0708807		A J U	M F U	Y N	2 PIECES 5cm x 2.5cm 2.5cm x 2cm			5		
	3728947		A J U	M F U	Y N						
BMAMR045	0708779		A J U	M F U	Y N		4			x	x
	3728902		A J U	M F U	Y N						
			A J U	M F U	Y N						

*See Reverse

67 — 63
46 — 46
21 — 17
+1 — +1
22 — 18

~~708640~~ 708630
20
10
600
<90
80

70
60
50
40
30
20

10
500
490
80
70
60

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: MAY 30, 2009

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
FOCW				

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	BELOW DETO
BNGMR010	070 8762		A J U	M F U	Y N	OLD NEST - BASKET				
	372 ~~8673~~ 8673		A J U	M F U	Y N	IRONWOOD				
BMAMR046	070 8736		A J U	M F U	Y N	2 OPENINGS	4			X X
	372 8982		A J U	M F U	Y N	+ COYOTE SCAT				
~~BMACG064~~	X X		A J U	M F U	Y N					
~~BMACG091~~			A J U	M F U	Y N		~~5~~			~~X X~~
BMACG092	070 8704		A J U	M F U	Y N		5			X X
	372 8742		A J U	M F U	Y N					
BMACG093	070 8660		A J U	M F U	Y N					X X
	~~372 3~~		A J U	M F U	Y N					
	372 9252		A J U	M F U	Y N					
BBCMR004	070 8645		A J U	M F U	Y N	BARREL CACTUS.				
	372 9360		A J U	M F U	Y N	≥ 80 cm				
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					

*See Reverse

Stop @ 960 last line in H11

8500 ✓	8560 ✓	8620 ✓	8680 ✓	8740 ✓	8800 ✓	8860	8920	8980	9040	9100
510 ✓	570 ✓	8630 ✓	8690 ✓	8750 ✓	8810 ✓	8870	8930	8990	9050	9110
520 ✓	580 ✓	8640 ✓	8700 ✓	8760 ✓	8820 ✓	8880	8940	9000	9060	9120
530 ✓	590 ✓	8650 ✓	8710 ✓	8770 ✓	8830 ✓	8890	8950	9010	9070	9130
540 ✓	600 ✓	8660 ✓	8720 ✓	8780 ✓	8840 ✓	8900	8960	9020	9080	9140
550 ✓	610 ✓	8670 ✓	8730 ✓	8790 ✓	8850 ✓	~~9000~~ 8910	8970	9030	9090	9150

last line H11

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe Date: 5/30/09 Page 1 of 9

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1,5,6	G11 G12 G13	SDA-1 GLU-6	ESC-5

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	7:37AM	76°F	0 to 1 mph	5% CC
Mid-day				
End				

9160 9170 9180 9190 9200 9210 9220 9230 9240 9250 9260 ⟨9270⟩

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAGL052	0708551 3726334	mammal	A J U	M F U	Y N	- mammal foraging burrow could be used by BUOW/DETO turns to right, no sign			
~~BDSSD~~ 001	BDSSD014 0708545 ~~DETO~~ 3726298		A J U	M F U	Y N	- DETO scat, 2"x3/4", loose old eroded		5	
BMAGL053	0708547 3726216	mammal	A J U	M F U	Y N	- 6 burrows, 3 to west, potential for BUOW/DETO/KFOX ~~no sign~~ KFOX scat + 1 to SW Canid foraging?			
BMAES004	0708526 3726082	mammal	A J U	M F U	Y N	- 3 potential BUOW burrows kit fox & coyote scat, potential for DETO, not deep enough to be KFOX			
BDCGL049	0708549 3726076	DETO bone frag.	A J U	M F U	Y N	plastron marginal DETO bone could be gular, likely ♀ not mineralized			
BMAES005	0708520 3726430 Merlin?	mammal	A J U	M F U	Y N	- ♀ can see to end, potential as DETO pallet			

*See Reverse

BDCSD035 0708509 3726524 DETO bone frag. - tort bone, 3/4" x 1/2" not mineralized

Note: H6/H7 to do ⟨708460-709220⟩ BDCSD036 0708509 3726562 DETO bone frag - tort bone, 3 pieces 1/2" x 1/2"

480-600-5720

8560	✓
570	✓
580	✓
590	✓
600	✓
610	✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/30/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCGL050	0708563	DETO	A J U	M F U	Y N	two DETO bone frag 1"x3/4"			
	3726723	bone frag.	A J U	M F U	Y N	Slightly mineralized, 1"x3/4"			
			A J U	M F U	Y N				
BMASD039	0708572	mammal	A J U	M F U	Y N	-two burrows potentially suitable			
	3726595		A J U	M F U	Y N	for BUOW, round-tailed burrows			
			A J U	M F U	Y N	that are very large, no sign			
			A J U	M F U	Y N	potential for DETO			
			A J U	M F U	Y N				
BKBSGL027	0708562	Kit Fox	A J U	M F U	Y N	-kit fox burrow, some evidence			
	3726330		A J U	M F U	Y N	of badger foraging, no sign			
			A J U	M F U	Y N	potential for DETO/BUOW			
			A J U	M F U	Y N				
BMASD040	0708570	mammal	A J U	M F U	Y N	-burrow under dead ironwood			
	3726160		A J U	M F U	Y N	potential for BUOW/DETO			
			A J U	M F U	Y N	no sign			
			A J U	M F U	Y N				
BDCSD037	0708569	DETO bone	A J U	M F U	Y N	-two DETO bone frag. 1"x1/4"			
	3726069	frag	A J U	M F U	Y N	1"x1", starting to erode			
			A J U	M F U	Y N	carapace & plastron			
			A J U	M F U	Y N				
BBBGL004	0708613	BUOW?	A J U	M F U	Y N	-burrows in wash, potential			
	3725817					BUOW burrow, 2 burrows old KFox complex			

*See Reverse

Dipodomys merriami (dead in burrow)

ed.larue@verizon.net

760-964-0012 Ed LaRue

560 ✓
570 ✓
580 ✓
590 ✓
600 ✓

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5/30/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBES001	0708598 3725910	KFOX pot. BLOW complex	A J U	M F U	Y N	Kit fox burrow (active tracks & scat), potential BLOW burrow at adjacent burrow			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N	3+ burrows			
BDCSD038	0708599 3726000	DETO bone frag.	A J U	M F U	Y N				
			A J U	M F U	Y N	- marginal (plastron?) tort bone frag. 1/2" x 1/2"			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAGL054	0708611 3726126	mammal	A J U	M F U	Y N	- mammal burrow, badger claw marks, potential for BLOW/DETO/KFOX			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N	opening large			
			A J U	M F U	Y N				
BDCGL051	0708614 3726153	tort bone frag	A J U	M F U	Y N	1" x 1/4" water tort bone frag non-mineralized			
			A J U	M F U	Y N				
			A J U	M F U	Y N	1/2" x 1/2" water tort bone frag non-mineralized			
BDCSD039	0708600 3726241	DETO bone frag.	A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCSD040	0708603 3726345	DETO bone frag.	A J U	M F U	Y N	- 1/2" x 1/2" tort bone frag. marginal of subadult animal slightly mineralized			
			A J U	M F U	Y N				

*See Reverse

8620 ✓
8630 ✓
8640 ✓
8650 ✓
8660 ✓
8670 ✓

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5/30/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCGL052	0708608	DETO	A J U	M F U	Y N	1"x3/4" deto bone frag			
	3726544	bone frag.	A J U	M F U	Y N	slightly mineralized			
			A J U	M F U	Y N				
BDCSD041	0708598	DETO bone	A J U	M F U	Y N	1/2"x1/2" deto bone frag			
	3726671	frag.	A J U	M F U	Y N	mineralized			
			A J U	M F U	Y N				
BMAGL055	0708644	Mammal	A J U	M F U	Y N	- 2 mammal burrows, one			
	3726266		A J U	M F U	Y N	turns to right, other may			
			A J U	M F U	Y N	turn, potential for BUOW / DETO			
			A J U	M F U	Y N	KFOX			
			A J U	M F U	Y N				
BKBSD020	0708627	Kitfox	A J U	M F U	Y N	- two potential KFOX burrows			
	3726082		A J U	M F U	Y N	potential for DETO/BUOW			
			A J U	M F U	Y N	second burrow large enough			
			A J U	M F U	Y N	to be coyote den / KFOX's cat			
			A J U	M F U	Y N				
BDCGL053	0708637	DETO	A J U	M F U	Y N	3/4"x1/4" DETO bone frag			
	3726032	bone frag	A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCSD042	0708661	DETO bone	A J U	M F U	Y N	- three DETO bone fragments			
	3726029	frag	A J U	M F U	Y N	one plastron			

*See Reverse

1 1/2"x1/2", 1"x1", 1"x1"
Starting to mineralize
large thick pieces

8650 ✓
8660 ✓
8670 ✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE Date: 5/30/09 Page 5 of 9

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBES002	0708673 3726058	KFOX	A J U	M F U	Y N	KFox burrow, potential for DETO/BUOW, turns to right, can't see to end			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAGL056	0708654 3726017	mammal	A J U	M F U	Y N	mammal burrow potential for BUOW/DETO/KFOX			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCES001	0708671 3726177	DETO bone frag.	A J U	M F U	Y N	fully mineralized DETO bone frag. 1"x3/4"			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BKBES003	0708669 3726207	KFOX	A J U	M F U	Y N	KFox burrow, turns to right, can't see to end, potential for DETO/BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAES006	0708672 3726289	mammal	A J U	M F U	Y N	-2 burrows, some evidence of badger predation, looks like ~~KF~~ KFox burrows inside potential for DETO/BUOW; KFOX scat			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDESD043	0708662 3726383	DETO bone frag.	A J U	M F U	Y N	-very thick, marginal 3/4"x1/2", not mineralized			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCES002	0708671 3726569	DETO bone frag.	A J U	M F U	Y N	1/4"x1/2" DETO bone frag 2 pieces, mineralized ⊕ 2 pieces ~ 15m to north non-mineralized 1/2"x1/2"			

*See Reverse

Stop @ 960 (HII)

8680	✓
8690	✓
8700	✓
8710	✓
8720	✓
8730	✓

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5/30/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBSD021	0708658 3726705	KFOX	A J U	M F U	Y N	KFOX burrow, in middle of old dirt road, potential for DETO/BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCGL054	0708695 3726559	DETO bone frag.	A J U	M F U	Y N	2 thick DETO bone frag. 1"x1", 1"x1" both likely marginal plastron no mineralization			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCGL055	0708695 3726502	DETO bone frag.	A J U	M F U	Y N	marginal 1 1/4"x 1/4" not mineralized			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BKBGL028	0708697 3726368	KFOX	A J U	M F U	Y N	KFOX burrow, turns to left potential for BUOW/DETO			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMASD041	0708694 376210	mammal	A J U	M F U	Y N	mammal foraging burrow, could function as DETO pallet			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BKBLL029	0708700 3726169	KFOX Complex	A J U	M F U	Y N	KFOX Complex, 2 burrows can't see to end, potential for BUOW/DETO			
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

BDCGL056 0708697 3726160 DETO bone frag 1"x3/4", non-mineralized from adult

8680 ✓
90 ✓
700 ✓
10
20
30

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5/30/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCSD044	0708688	DETO bone	A J U	M F U	Y N	1"x1" plastron marginal, appears			
	3726100	frag	A J U	M F U	Y N	to have been burned			
			A J U	M F U	Y N				
BDCES003	0708667	DETO bone	A J U	M F U	Y N	1/4"x1/4" thick, non-mineralized			
	3726059	frag	A J U	M F U	Y N	adult			
			A J U	M F U	Y N				
BDCSD045	0708690	DETO bone	A J U	M F U	Y N	thin, likely juvenile 1/4"x1/4"			
	3726041	frag.	A J U	M F U	Y N	non-mineralized			
			A J U	M F U	Y N				
BBPES001	0708732	Owl	A J U	M F U	Y N	owl pellet, no burrows in			
	3725855	pellet	A J U	M F U	Y N	vicinity			
			A J U	M F U	Y N				
BKBGL030	0708715	KFOX	A J U	M F U	Y N	kit fox burrow, potential for			
	3725997	burrow	A J U	M F U	Y N	BUOW/DETO			
			A J U	M F U	Y N				
BKBSD022	0708715	KFOX	A J U	M F U	Y N	two burrows, one KFOX w/	- BUOW		
	3726551	burrow	A J U	M F U	Y N	KFOX scat, turns to left	- DETO potent.		
			A J U	M F U	Y N	other could be used as DETO pellet			
BDCES004	0708727	DETO bone	A J U	M F U	Y N	1/2"x1/2" DETO bone fragment			
	3726560	frag	A J U	M F U	Y N	slightly mineralized			
			A J U	M F U	Y N				

*See Reverse

Stephens.nicole@gmail.com
916-834-0853

~~8160~~ 8140 ✓
50 ✓
60 ✓
70
80
90

DESERT TORTOISE FIELD SURVEY DATA SHEET*

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Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day	2:40pm	99°F	6 to 11 mph	
End	5:15	96°F	1 to 6mph	10% cc

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBGL031	0708707	KFOX	A J U	M F U	Y N	Kit fox burrow complex			
	3726659	complex	A J U	M F U	Y N	3 burrows, KFOX scat			
			A J U	M F U	Y N	potential for BUOW/DETO			
BDCGL051	0708713	DETO	A J U	M F U	Y N				
	3726663	bone frag	A J U	M F U	Y N	3/4" x 1/2" marginal subadult			
			A J U	M F U	Y N	(+) 1 ~ 10m to NE 1/2" x 1/2"			
			A J U	M F U	Y N				
BDCSD046	0708747	DETO	A J U	M F U	Y N	1/2" x 1/4" juvenile DETO			
	3726502	bone frag	A J U	M F U	Y N	bone frag, partially mineralized			
			A J U	M F U	Y N	plastron, marginal			
BKBGL032	0708761	KFOX	A J U	M F U	Y N	Kit fox burrow, can't see to		- potential	
	3726395	burrow	A J U	M F U	Y N	end, turns to right, then left		BUOW/DETO	
BKBGL033	0708757	KFOX	A J U	M F U	Y N	kit fox burrow, can't see		- potential BUOW/DETO	
	3726072	burrow	A J U	M F U	Y N	to end, (+) potential DETO pellet 10m to west (mammal burrow)			
BKBSD023	0708749	KFOX	A J U	M F U	Y N	- one large potential DETO burrow			
	3725826	complex	A J U	M F U	Y N	4 kit fox complex, White wash @ DETO burrow			
		DETO burrow	A J U	M F U	Y N	DETO burrow = 32" x 18" high can't see to end			
		BUOW "	A J U	M F U	Y N	Kit fox scat, canid digging → class 5			
			A J U	M F U	Y N	4 burrows			
			A J U	M F U	Y N				
BMASD042	0708784	mammal	A J U	M F U	Y N	foraging burrow, potential			
	3726036					DETO pellet			

*See Reverse

~~8770~~ ~~88~~ 90 8800 ✓ 10 ✓ 20 ✓ 30 ✓ 40 ✓ 50 ✓ H/J8 H/J9 709800 to west

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE Date: 5/30/09 Page 9 of 9

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End	7:55pm	93°F	2 to 4mph	

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMASD043	0708776	mammal	A J U	M F U	Y N	- badger foraging burrow (+)			
	3726071		A J U	M F U	Y N	one mammal burrow			
BKBGL034	0708769	KFOX	A J U	M F U	Y N	- one burrow turns to right			
	3726214	burrow	A J U	M F U	Y N	potential for DETO/BUOW			
			A J U	M F U	Y N	(+) foraging burrow to north - potential DETO pallet			
BMAES007	0708793	Mammal	A J U	M F U	Y N	- potential DETO pallet			
	3726235		A J U	M F U	Y N				
BMASD044	0708782	mammal	A J U	M F U	Y N	badger foraging burrow, turns			
	3726328		A J U	M F U	Y N	to right, potential for DETO/BUOW/KFOX			
BKBGL035	0708797	KFOX	A J U	M F U	Y N	kit fox burrow, fresh kfox tracks			
	3726517	burrow	A J U	M F U	Y N	turns to left			
BMAES008	0708815	mammal	A J U	M F U	Y N	- potential DETO pallet			
	3726249		A J U	M F U	Y N	mammal foraging burrow			
BLSES001	0708810	Loggerhead	A J U	M F U	Y N	(+) 1 more DETO/BUOW burrow 10 mtr east.			
	3726142	shrike	A J U	M F U	Y N				
BMAES009	0708816	Mammal	A J U	M F U	Y N	- potential use as DETO pallet			
	3725987		A J U	M F U	Y N				
BDCSD047	0708839	DETO bone	A J U	M F U	Y N	- deto bone frag. gular			
	3725905	frag	A J U	M F U	Y N	1" x 3/4"			
BDCES004	0708836	DETO bone	A J U	M F U	Y N	1" x 3/4", not mineralized			
	3726048	frag	A J U	M F U	Y N				

*See Reverse

BDCGL058 0708851 DETO bone - slightly mineralized
3726059 frag 1" x pv

~~[illegible]~~ - mammal burrow ~~[illegible]~~ 0708825
BMAES010 3726738 KFOX BUOW DETO potential

K12 top of K13 (little): 0711 650 ×, 660 ×, 670 ×, 680 ×, 690 ×, 700 ×, 710 ×, 720 ×, 730 ×, 740 ×, 750 ×, 760 ×, 770 ×, 780 ×, 790 ×, 800 ×, 810 ×, 820 ×, 830 ×, 840 ×, 850 ×, 860 ×, 870 ×, 880 ×, 890 ×, 900 ×, 910 ×, 920 ×, 930 ×, 940 ×, 950 ×, 960 ×, 970 ×, 980 ×, 990 ×, 1000 ×, 1010 ×, 1020 ×, 1030 ×, 1040 ×, 1050 ×, 1060 ×

L12: 1070 ×, 1080 ×, 1090 ×, 1100 ×, 1110 ×, 1120 ×, 1130 ×, 1140 ×, 1150 ×, 1160 ×, 1170 ×, 1180 ×, 1190 ×, 1200 ×, 1210 ×, 1220 ×, 1230 ×, 1240 ×, 1250 ×, 1260 ×, 1270 ×, 1280 ×, 1290 ×, 1300 ×, 1310 ×, 1320 ×, 1330 ×, 1340 ×, 1350 ×, 1360 ×, 1370 ×, 1380 ×, 1390 ×, 1400 ×, 1410 ×, 1420 ×, 1430 ×, 1440 ×, 1450 ×, 1460 ×, 1470 ×, 1480

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE Date: 5/30/09 Page 1 of ____

70 / 83 / 32 / 95

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	(372 bottom 6800)	K12 top of K13	EEL-9 JBE-11 KDU-4	
	(372 bottom 6070)	L12 (bigger)		

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	524	71	1-3 N	5% NONE
Mid-day	1230	95	1-5 VAR	0% NONE
End				

DATA ON GPS # 11

	GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	DETO	BUOW	MAMMAL DIG	POTENTIAL TORT. PALLET	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
B KB	KD 009	071 0668/372 6102		A J U	M F U	Y N	X	X	X		ACTIVE KF COMPLEX			
B MA	JB 048	071 0748/372 6048		A J U	M F U	Y N	X		X	X	SQUIRREL COMPLEX			
B MA	KD 020	071 0793/372 6120		A J U	M F U	Y N	X		X	X	BUT WHITE WASH			
B MA	KD 021	071 0788/372 6159		A J U	M F U	Y N	X		X	X				
B MA	EE 066	071 0767/372 6181		A J U	M F U	Y N	X		X	X				
B NA	EE 067	071 0950/372 6459		A J U	M F U	Y N	X		X	X				
B MA	KD 022	071 0997/372 6572		A J U	M F U	Y N	X		X	X	taper to krat hole			
B NE	EE 004	071 0987/372 6264		A J U	M F U	Y N					PROB. LOSH NEED			
B LS	EE 007	071 1018/372 6375		A J U	M F U	Y N					LOSH-ON TREE 150 to SE			
B MA	KD 023	071 1459/372 6476		A J U	M F U	Y N	X		X	X				
				A J U	M F U	Y N								
				A J U	M F U	Y N								
				A J U	M F U	Y N								
				A J U	M F U	Y N								
				A J U	M F U	Y N								
				A J U	M F U	Y N								
				A J U	M F U	Y N								
				A J U	M F U	Y N								
				A J U	M F U	Y N								
				A J U	M F U	Y N								
				A J U	M F U	Y N								

*See Reverse

J[redacted]12
J[redacted]13
J[redacted]14
J[redacted]15
(top sliver)

0710160 X, 50 X, 140 X, 130 X, 120 X, 110 X | 100 X, 090 X, 080 X, 070 X, 060 X, 050 X | 040 X, 030 X, 020 X, 010 X, 10000 X, 09990 X (1440) | 109980 X, 970 X, 960 X, 950 X, 940 X, 930 X (1500, 1540, 1615) | 920 X, 910 X, 900 X, 890 X, 880 X, 870 X (1730, 1752, 1827) | 860 X, 850 X, 840 X, 830 X, 820 X, 810 X | 800 X, 790 X, 780 X, 770 X, 760 X, 750 X | 740 X, 730 X, 720 X, 710 X, 700 X, 690 X | 680 X, 670 X, 660 X, 650 X, 640 X, 630 X ← J12, J13 only | 620 X, 610 X, 600 X, 590 X, 580 X, 570 X | 560 X, 550 X, 540 X, 530 X, 520 X, 510 X | 500 X, 490 X, 480 X, 470 X, 460 X, 450 X | 440 X, 430 X, 420 X, 410 X, 400 X, 390 X | 380 X, 310 X, 360 X, 350 X, 340 X, 330 X, 320 X, 310 X, 300, 290, 280, 9210

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 5/30/09

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Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	4,9,11	J[redacted]12 - 3726590 J[redacted]13 J[redacted]14 ~ 3725100	EEL-9 JBE-11	KDU-4

DATA ON GPS # 11

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

6580
5100
1480

48km

	GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	DETO (potential user)	BUOW	MAM. DIG	POT. TORT. PALLET	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
B MA	KD 024	071 0164/372 5848		A J U	M F U	Y N	X		X	X	SQUIRREL			
B MA	JB 049	071 0141/372 5769		A J U	M F U	Y N	X	X	X		BURROW			
B MA	EE 068	071 0098/372 5826		A J U	M F U	Y N	X		X	X				
B KB	JB 003	071 0119/372 5922		A J U	M F U	Y N	X	X	X	X	KF COMPLEX (OLD)			
B MA	EE 069	071 0072/372 5879		A J U	M F U	Y N	X		X	X	SQUIRREL COMPLEX			
B MA	JB 050	071 0083/372 5520		A J U	M F U	Y N	X		X	X	2 ent. SQUIRREL			
B MA	EE 070	071 0077/372 5306		A J U	M F U	Y N	X	X	X	X	3 ent. (SQUIRREL)			
B MA	EE 071	071 0056/372 5251		A J U	M F U	Y N	X	X	X					
B MA	EE 072	071 0054/372 5654		A J U	M F U	Y N	X		X	X				
B MA	KD 025	071 0040/372 6552		A J U	M F U	Y N	X		X	X				
B MA	EE 073	071 0017/372 5662		A J U	M F U	Y N	X	X	X		BURROW SQUIRREL COMPLEX			
B MA	JB 051	071 0025/372 5336		A J U	M F U	Y N	X		X	X				
B MA	JB 052	070 9973/372 6561		A J U	M F U	Y N	X		X	X				
B MA	EE 074	070 9962/372 6304		A J U	M F U	Y N	X		X	X	SQUIRREL COMPLEX			
B NE	EE 005	070 9968/372 6167		A J U	M F U	Y N					UNKNOWN NEST			
B MA	EE 075	070 9970/372 5985		A J U	M F U	Y N	X		X	X				
B MA	JB 053	070 9918/372 5149		A J U	M F U	Y N	X	X	X		BIG BURROW			
B MA	EE 076	070 9908/372 5201		A J U	M F U	Y N	X	X	X		PROB COYOTE (NOT ACTIVE)			
B LT	EE 002	070 9926/372 5602		A J U	M F U	Y N					LCTH FLYING WEST UP WASH			
B LS	JB 001	070 9927/372 5616		A J U	M F U	Y N					LOSH FLYING EAST DOWN WASH			
B MA	EE 077	070 9866/372 6436		A J U	M F U	Y N	X		X	X				

*See Reverse

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5/30/09

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Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

5/31/09	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	0530	73.6°F	0-1 mph	10%
Mid-day	1250	101.0°F	2-3 mph	5%
End	1740	102.4°F	2-3 mph	5%

	GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	DETO	BUOW	NAM DIG	POT. TORT. PALLET	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMA	EE 078	070 9863/372 5808		A J U	M F U	Y N	X		X	X	SHALLOW			
BMA	EE 079	070 9872/372 5757		A J U	M F U	Y N	X	X	X		PROB COYOTE			
BMA	EE 080	070 9862/372 5212		A J U	M F U	Y N	X	X	X		PROB COYOTE			
↓5/31/09				A J U	M F U	Y N					[illegible]			
BMA	EE 081	070 9793/372 5926		A J U	M F U	Y N	X		X	X	~~pro~~ shallow			
BMA	KD 026	070 9777/372 5972		A J U	M F U	Y N	X		X	X	shallow			
BNE	JB 001	070 9781/372 5600		A J U	M F U	Y N					unknown species			
BMA	KD 027	070 9777/372 5556		A J U	M F U	Y N	X		X	X	in the desert asphalt			
BMA	KD 028	070 9747/372 5384		A J U	M F U	Y N	X		X	X	2 openings			
BMA	JB 054	070 9735/372 5476		A J U	M F U	Y N	X		X	X	shallow			
BMA	EE 082	070 9728/372 5984		A J U	M F U	Y N	X		X	X	shallow			
BMA	EE 083	070 9704/372 6007		A J U	M F U	Y N	X		X	X	ends @ ~2'			
BMA	EE 084	070 9702/372 5874		A J U	M F U	Y N	X		X	X	goes back ~8"			
BMA	KD 029	070 9690/372 5807		A J U	M F U	Y N	X		X	X	~1' deep			
BMA	JB 055	070 9627/372 6022		A J U	M F U	Y N	X		X	X	under creosote			
BMA	JB 056	070 9635/372 6041		A J U	M F U	Y N	X	X	X	X	under creosote; pot. BUOW			
BMA	JB 057	070 9631/372 6216		A J U	M F U	Y N	X	X	X	X	maybe KF			
BMA	JB 058	070 9588/372 6082		A J U	M F U	Y N	X		X	X	shallow			
BMA	JB 059	070 9572/372 6008		A J U	M F U	Y N	X		X	X	shallow			
BMA	KD 030	070 9557/372 5747		A J U	M F U	Y N	X		X	X	3 openings			
BMA	JB 060	070 9540/372 5947		A J U	M F U	Y N	X		X	X	shallow			

*See Reverse

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: _____ Date: 5/31/09 Page 4 of _____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

	GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	DETO	Burow	MAM DIG	Pot. Tot Pallet	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMA	JB 061	070 9555/372 6136		A J U	M F U	Y N	x		x	x				
BMA	JB 062	070 9525/372 6108		A J U	M F U	Y N	x		x	x	potential pallet, +turns to righ			
BMA	JB 063	070 9531/372 6048		A J U	M F U	Y N	x		x	x	pallet			
BMA	JB 064	070 9512/372 6008		A J U	M F U	Y N	x		x	x	possible pallet			
BKB	JB 004	070 9467/372 6332		A J U	M F U	Y N	x	x	x	x	K Frampler w/scat			
BMA	KD 031	070 9455/372 6500		A J U	M F U	Y N	x		x	x	~1' deep			
BMA	JB 065	070 9433/372 5993		A J U	M F U	Y N	x		x	x	pot. pallet			
BMA	JB 066	070 9400/372 6334		A J U	M F U	Y N	x		x	x	pot. pallet			
BMA	JB 067	070 9352/372 6286		A J U	M F U	Y N	x		x	x	pallet			
BMA	JB 068	070 9318/372 6126		A J U	M F U	Y N	x		x	x	pallet			
BMA	KD 032	070 9317/372 5967		A J U	M F U	Y N	x		x	x	pot. pallet			
BMA	JB 069	070 9308/372 6010		A J U	M F U	Y N	x		x	x	pot. pallet & opening			
				A J U	M F U	Y N								
				A J U	M F U	Y N								
				A J U	M F U	Y N								
				A J U	M F U	Y N								
				A J U	M F U	Y N								
				A J U	M F U	Y N								
				A J U	M F U	Y N								
				A J U	M F U	Y N								
				A J U	M F U	Y N								

*See Reverse

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: MAY 31, 2009

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
FOCUS	DAMA 7		CGE-71 MRI-7 NST-13	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	6:18	75	CALM	HIGH CLOUDS 15%
Mid-day	15:18	102	4 / S	HIGH CLOUDS 15%
End	18:10	99	8 / S	HIGH CLOUDS 20%

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	POTENTIAL USAGE BELOW DETO	
BMAMR047	070 8567		A J U	M F U	Y N		4			X	X
	372 9378		A J U	M F U	Y N						
BDCMR030	070 8572		A J U	M F U	Y N	3cm x 3cm			5		
	372 9333		A J U	M F U	Y N						
BMACG094	070 8521		A J U	M F U	Y N		4				X
	372 8997		A J U	M F U	Y N						
BMACG095	070 8490		A J U	M F U	Y N	OLD KIT FOX SCAT PRESENT	4			X	X
	372 8612		A J U	M F U	Y N						
BKBCG014	070 8465		A J U	M F U	Y N	KF SCAT + COYOTE SCAT	5			X	X
	372 9159		A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						

*See Reverse

709000 ✓ 940 ✓ 880 ✓ 820 ✓ 760 ✓ 700 ✓ 640 ✓ 570 ✓ 500 ✓ H9 only (G9)
8990 930 ✓ 870 ✓ 810 ✓ 750 ✓ 690 ✓ 630 ✓ 560 ✓ 490 ✓
980 ✓ 920 ✓ 860 ✓ 800 ✓ 740 ✓ 680 ✓ 620 ✓ 550 ✓ 480 ✓
970 ✓ 910 ✓ 850 ✓ 790 ✓ 730 ✓ 670 ✓ 610 ✓ 540 ✓ 470 ✓
960 ✓ 900 ✓ 840 ✓ 780 ✓ 720 ✓ 660 ✓ 590 ✓ 530 ✓ 460 ✓
950 ✓ 890 ✓ 830 ✓ 770 ✓ 710 ✓ 650 ✓ 580 ✓ 520 ✓ 450 ✓

440 380 320 260
430 370 310 250
420 360 300 240
410 350 290 230
400 340 280 220
390 330 270 210

200 190 180 170 160 150 140 130 120 110 100 090 ~~080~~ 080 070 060

① G10 to property line

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE   Date: MAY 31, 2009   Page 2 of 3

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
	~~H8~~ H/J8 ~~H9~~ H/J9		DATA @ 7	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

TOP N 3728460
BOTTOM N 3727660

DATA ON GPS # 7

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	Burr	Scat	Shell
BDCCG062	070 8471		A J U	M F U	Y N	7cm x 3cm MINERALIZED			5
	372 8022		A J U	M F U	Y N				
BNENS003	070 8482		A J U	M F U	Y N	3 NESTS - BOWL			
	372 7922		A J U	M F U	Y N	IRONWOOD			
BNEMR011	070 8484		A J U	M F U	Y N	2 NESTS - BASKET/BOWL			
	372 7839		A J U	M F U	Y N	IRONWOOD			
			A J U	M F U	Y N				
BDCMR031	~~372~~ 070 8603		A J U	M F U	Y N	3cm x 4cm			5
	372 7887		A J U	M F U	Y N	NOT MINERALIZED			
BDCCG064	070 8744		A J U	M F U	Y N	2.5cm x 2.5cm			8
	372 7877		A J U	M F U	Y N	NOT MINERALIZED			
BMANS001	070 8759		A J U	M F U	Y N	COYOTE SCAT	5		
	372 7674		A J U	M F U	Y N				
BNECG006	070 8764		A J U	M F U	Y N	NEST - IRONWOOD - BOWL			
	372 7798		A J U	M F U	Y N				
BNEMR012	070 8747		A J U	M F U	Y N	IRONWOOD - DETERIORATED BOWL			
	372 7844		A J U	M F U	Y N				
BNEMR013	070 8811		A J U	M F U	Y N	3 NESTS - BOWL SHAPE			
	372 7792		A J U	M F U	Y N	IRONWOOD			
BNEMR014	070 8813		A J U	M F U	Y N	1 NEST BOWL SHAPE			
	372 7868		A J U	M F U	Y N	IRONWOOD			

BELOW DETO

*See Reverse

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: MAY 31, 2009

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
DATA	C7			

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	BELOW DFG
BNEMR015	070 3903		A J U	M F U	Y N					
	372 7732		A J U	M F U	Y N					
BMACL096	070 8976		A J U	M F U	Y N		5			X X
	372 7704		A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					
			A J U	M F U	Y N					

*See Reverse

6970	✓	930	✓	890	✓
960	✓	920	✓	880	✓
950	✓	910	✓	870	✓
940	✓	900	✓	860	✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/31/09

Page 1 of 1

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
focused		F13	SDA-1 GLU-6	JBE-11

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

DATA ON GPS # 1

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BLSSD004	0706899 3726115	Loggerhead Shrike	A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMA[redacted]JB010	0706881 3726077	mammal	A J U	M F U	Y N	mammal burrow, potential DETO packet @ one 20m to west			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

6210	✓	170	✓	130	✓	090	✓	050	✓	010	✓	970	✓	930	✓	
200	✓	160	✓	120	✓	080	✓	040	✓	000	✓	960	✓	920	✓	
190	✓	150	✓	110	✓	070	✓	030	✓	5990	✓	950	✓	910	✓	
180	✓	140	✓	100	✓	060	✓	020	✓	980	✓	940	✓	900	✓	

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/31/09

Page 1 of 2

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	~~E10~~ E13	↗	SDA-1 GLU-6	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day	11:45AM	93°F	2 to 7mph	5% CC
End				

DATA ON GPS # 1

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDBSD013	0706151 3725922	DETO burrow	A J U	M F U	Y N	active DETO burrow, DETO tracks, picture 9"x 11", can't see to end cobwebs in front disturbed in exact shape of a DETO. Neotoma in burrow, in drainage ~6' in turns to left, egg shell (tort) fragments	1		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCGL059	0706143 3725769	DETO scute	A J U	M F U	Y N	-one marginal DETO scute (top & bottom) from adult ~1¼"x1"			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCSD048	0706040 3726075	DETO bone frag	A J U	M F U	Y N	-Deto bone frag, eroded, not mineralized 1"x½"			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDSGL010	0706015 3725959	DETO scat	A J U	M F U	Y N	4" long DETO scat, old bleached, eroded, all grass		5	
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDSSD012	0706032 3726041	DETO scat	A J U	M F U	Y N	fresh DETO scat, dried w glaze odor medium brown 2 pieces 2"x 3/4", 1¼"x 3/4"			
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

BDCSD049	0706030 3726070	DETO bone frag	20+ pieces of DETO bones old eroded, not mineralized	5

010 ✓ 970 ✓ 930 ✓
000 ✓ 960 ✓ 920 ✓
990 ✓ 950 ✓ 910 ✓
980 ✓ 940 ✓ 900 ✓

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 5/31/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDSSD013	0705958	DETO	A J U	M F U	Y N	Deto scat, falling apart		5	
	3725615	Scat	A J U	M F U	Y N	loose, linear, 3/4" x 2"			
			A J U	M F U	Y N	broken into two pieces			
BKBGL036	0705945	Kit fox	A J U	M F U	Y N	Kit fox burrow, turns to			
	3725690		A J U	M F U	Y N	right, can't see to end, potential			
			A J U	M F U	Y N	for DETO / BUOW, fresh diggings			
			A J U	M F U	Y N				
BMAGL057	0705938	mammal	A J U	M F U	Y N	mammal foraging burrow			
	3726111		A J U	M F U	Y N	could function as DETO pallet			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

109800	730	670	610	540	480	420	360	300	240	180	120	060
790	720	660	600	530	470	410	350	290	230	170	110	050
780	710	650	590	520	460	400	340	280	220	160	100	040
770 760	700	640	580	510	450	390	330	270	210	150	090	030
750	690	630	570	500	440	380	320	260	200	140	080	020
740	680	620	560	490	430	370	310	250	190	130	070	010

done to bottom

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: ~~5/29/09~~ 5/31/2009

Page ~~#~~1 of 2

GPS 8,5 12

Sm5, Sm12, Sm8 Recorded on #12

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	HJ8 HJ9	~~#~~ ~~#~~	~~FBL 9~~ ~~JBE 11~~	~~KDU 4~~ E. Schuthauser M. Gallagher P. Seamount

TOP N 3728460
BOTTOM N 3727660

DATA ON GPS # 12

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	7:31	79°	0 1.00 mph	5%
Mid-day	1:51		5.2 Gusts mph	65%
End	4:15			5%

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAES006	0709778/3727865		A J U	M F U	Y N	Digging, potential Tort pallet			
BMAES007	0709783/3728176		A J U	M F U	Y N	possible DT use in future poor condition			
BMAPS001	0709799/3728305		A J U	M F U	Y N	2 MA unknown			
BKBPS001	0709803/3728319		A J U	M F U	Y N	K Fox Den Complex Deteriorated			
BMAPS002	0709767/3728349		A J U	M F U	Y N	unknown / Deteriorated			
BDCMG007	0709758/3728182		A J U	M F U	Y N	7 Carcass peices 2cm x 3cm Aprox			
BBPPS001	0709745/3727796		A J U	M F U	Y N	Pellets, Numerious, whitewash, under Dead Tree			
BMAES008	0709717/3728232		A J U	M F U	Y N	unknown Deteriorated			
BMAES009	0709725/3728445		A J U	M F U	Y N	unknown Deteriorated			
BMAES010	0709693/3727852		A J U	M F U	Y N	Possible K Fox unknown			
BMAMG035	070'		A J U	M F U	Y N				
BMAMG036	0709696/3727579		A J U	M F U	Y N	Canid possible B. owl Habitation due to			
G			A J U	M F U	Y N	pellets nearby			
~~BBPPS002~~	~~——~~	~~——~~	A J U	M F U	Y N	~~deteriorated 3 pellets with insects~~			
BDCES006	0709666/3728216		A J U	M F U	Y N	Mineralized Bone 1cm x 1cm Fragment			
BMAPS003	0709652/3728322		A J U	M F U	Y N	probable Forage dig			
BMAES011	0709599/3727852		A J U	M F U	Y N	possible ~~Tort~~ for tort Habitation			
BMAES012	0709600/3727872		A J U	M F U	Y N	possible for Tort Habitation			
BMAPS004	0709624/3728199		A J U	M F U	Y N	Could be used By B. owl			
→ BARCH001	0709609/3728366		A J U	M F U	Y N	Pot Shard (MG)			
BDCMG009	0709579/3728410		A J U	M F U	Y N	Chip 1cm x 1cm			

*See Reverse

3729500
3729410

10.5

805 895 9842 ERIC

Site: Blyth

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 5/31/2009

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focus	5, 12, 8		E. Schafhauser	M. Gallagher, P. Seamount

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
	BMAES013 0709481/3727946		A J U	M F U	Y N	Backup for age Dig			
~~BDPES001~~	~~0709453 / 3727840~~		A J U	M F U	Y N	~~Most likely a Rabbit Pellet~~			
BDPES001	0709453/3727840		A J U	M F U	Y N	Pellet Prob Rabbit			
BMAPS006	0709437/3727582		A J U	M F U	Y N	Dig			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Linear south of I-10, from Blythe Rd north to I-10
turned around @ 0706200
3719971

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 6/1/09

Page ____ of ____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
			SDA-1 GLU-6	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day	5:19PM	100°F	7 to 17 mph	70% CC
End	7:19PM	96°F	5 to 14 mph	20% CC

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
			A J U	M F U	Y N	trash, dumping, OHV use			
			A J U	M F U	Y N	heavily impacted by			
			A J U	M F U	Y N	human activity			
			A J U	M F U	Y N				
BDTSD001	0707415 3720218	DETO	A J U	M F U	Y N	tort tracks, ~6" width, in			
			A J U	M F U	Y N	sandy drainage			
			A J U	M F U	Y N				
			A J U	M F U	Y N	further to west, very large			
			A J U	M F U	Y N	drainage, desert pavement &			
			A J U	M F U	Y N	arroyos w/ veg.			
			A J U	M F U	Y N				
BKBSD024	0706235 3719977	Kitfox Complex	A J U	M F U	Y N	-several burrows, kit fox scat			
			A J U	M F U	Y N	(sub), some old cared in			
			A J U	M F U	Y N	some canid digging, could			
			A J U	M F U	Y N	be used by DETO/BUOW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

whiptail, kfox, coyote, cottontail, sahara mustard prevalent

50cal. 0709109
3726080

703 706 0170
703 677 5200

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 6/1/09

Page 1 of ____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
		C9 D10 E10	SDA-1 GLU-6	N -11 BV -9

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	9:30AM	93°F	1 to 3mph	hazy 45%
Mid-day				
End				

DATA ON GPS # [1]

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
~~BBVMA009~~			A J U	M F U	Y N				
BMABV009	0705277	mammal	A J U	M F U	Y N	- coyote dig, coyote scat, kit fox scat			
	3727108		A J U	M F U	Y N	3 burrows, one deep enough			
			A J U	M F U	Y N	for potential BUOWuse.			
			A J U	M F U	Y N	one could be used as a DETO pallet			
			A J U	M F U	Y N				
BMASD045	0704688	mammal	A J U	M F U	Y N	-3 burrows in side of			
	3727734		A J U	M F U	Y N	drainage, can't see to end			
			A J U	M F U	Y N	coyote & KFox scat, potential			
			A J U	M F U	Y N	for BUOW / DETO			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

709380 370 360 350 340 330 320 | 310 300 290 280 270 260 250 240 | 230 220 210 200 190 180 170 160 | 150 140 130 120 110 100 090 080 | 070 060 050 040 030 020 010 000 9000 | 8990 Stop!

1660 50 40 30 20 | 10 00 90 80 | 70 60 50 40 | 30 20

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE Date: 6/1/05 Page 1 of 2

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Faus	SM5 SM3 SM8 SM12	H/J8 H/J9 Data GPS	ESH-5 MGH-8	PSE-12 ELA-9 E. Schathauser P. Seamount M. Gallagher E. LaRue

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	6 AM		1 mph	70%
Mid-day	4:17 PM	103.5	9.8 mph	90%
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
GMAMG007	0709652/3727629		A J U	M F U	Y N	.5 M length Digging / Possible Badger			
BMAPS006	0709693/3727579		A J U	M F U	Y N	Unknown / Deep			
BMAPS007	0709345/3727615		A J U	M F U	Y N	Dig			
BMAMG008	0709358/3728354		A J U	M F U	Y N	under Galleda Grass			
BDPEL001	0709333/3728363		A J U	M F U	Y N	Large pallet under Galleda / probably used by mammal			
~~BLSEL001 070~~			A J U	M F U	Y N				
BLSEL001	0709301/3727795		A J U	M F U	Y N	ID. by Call			
BPREL001	0709284/3727489		A J U	M F U	Y N	Flying overhead			
BARCH002 ~~BARC002~~	0709235/3728424		A J U	M F U	Y N	Gallegher found / WWII Radio Head Set			
BLSEL002	0709226/3727436		A J U	M F U	Y N	2 Shrike in tree			
BDCMG010	0709205/3727721		A J U	M F U	Y N	~~10mm x 1mm~~ 10 X 10mm			
BDCPS001	0709192/3728077		A J U	M F U	Y N	3mm x 30 mm, mineralized fragment			
BDOEL001	0709208/3728225		A J U	M F U	Y N	Devils Claw plant / Seed pod			
~~BARC003~~			A J U	M F U	Y N	~~Ear peice to head set WWII~~			
BARCH003	0709158/3728488		A J U	M F U	Y N	Ear peice to head set WWII			
BMAMG	0709155/3727910		A J U	M F U	Y N	Has tortoise potential			
BDCPS 002	0709148/3727814		A J U	M F U	Y N	35mm x 65mm Fragment / mineralized			
BDCPS003	0709073/3727667		A J U	M F U	Y N	25 mm x 25mm Frag / mineralized			
BLSPS001	0709042/3727810		A J U	M F U	Y N	~~Site~~ Call Recognition			
BKBES002	0709058/3728305		A J U	M F U	Y N	Large Complex with B. gul Evidence			
			A J U	M F U	Y N	with pellets + white wash			

*See Reverse

(11-5) Rd. 90 S - L(0710638/3726289) (W) - K11 - J11 - Edge #12 + H13 [~~First~~ Line 709120/ West 110 Last 708860

740m 9.5 : 12:30 4-

7091	7091																
20	10	00	90	80	70	60	50	40	30	20	10	9000	90	80	70	60	50

9000	90	80	70	60	50	40	30	20	10	8900	90

Site: Blyth

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 6/1/2009

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focus	8 12 3 5		E. Schafhauser M. Gallagher	P. Seamount E. La Rue

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMAEL001	0709113 / 3726248		A J U	M F U	Y N	2 holes in area Badger Sign			
BMAMG040	0709099/3726196		A J U	M F U	Y N	Could be suitable for Tortoise			
BUXOEL001	0709109/3726080		A J U	M F U	Y N	50 Cal Bullet Shell			
BMAPS008	0709097/3725870		A J U	M F U	Y N	In Bank of wash			
BMAMG041	0709062/3725666		A J U	M F U	Y N	Ground Squirrel Complex			
BMAMG042	0709064/3725871		A J U	M F U	Y N	potential for tortoise			
BDCPS004	0709049/3726512		A J U	M F U	Y N	Fragment 40mm x 20mm			
BDCMG012	0709058/3726519		A J U	M F U	Y N	Fragment ~~20mm x 20mm~~ 20mm x 20mm			
BMAES014	0709002/3726099		A J U	M F U	Y N	Large possible Canid			
BMAMG043	0708981 / 3726315		A J U	M F U	Y N	Round possible foraging dig			
BMAPS009	0708928/3726295		A J U	M F U	Y N	Likely Badger			
BMAEL002	0708952/3726157		A J U	M F U	Y N	?.75 Deep Possible Canid			
BKBMG008	0708944/3725730		A J U	M F U	Y N	Large KF complex w/ B.owl	white wash		
BKBEL001	0708864/3726368		A J U	M F U	Y N	~~and pellet~~. Large Complex			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

UXO *

*See Reverse

7099 300	X	240	X	180	X	120	000	9000	8940	8800
290	X	230	X	170	X	110	050	8990	8930	8800
280	X	220	X	160	X	100	040	8980	8920	8870
270	X	210	X	150	X	090	030	8970	8910	8860
260	X	200	X	140	X	080	020	8960	8900	STOP!
250	X	190	X	130	X	070	010	8950	8890	

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 6/1/09

Page 1 of ____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	4,9,11	J12 J13	KDu - 4 BVI - 9	NST - 11

~~J14~~

Data on 11

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	0520	74.0°F	0-1 mph	5%
Mid-day				
End				

	GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	DETO	BUOW	TORT. PALLET	MAM DIG	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMA	NS 001	070 9286/372 6292		A J U	M F U	Y N			X	X	pot. pallet; shallow			
BMA	NS 002	070 9282/372 6100		A J U	M F U	Y N			X	X	pot. pallet; shallow			
BMA	NS 003	070 9249/372 5668		A J U	M F U	Y N	X		X	X	pot. pallet			
BMA	KD 033	070 9264/372 6373		A J U	M F U	Y N			X	X	under creosote			
BMA	BV 001	070 9228/372 6423		A J U	M F U	Y N			X	X	shallow			
BMA	BV 002	070 9227/372 6364		A J U	M F U	Y N			X	X	narrows at back			
BMA	BV 003	070 9226/372 6077		A J U	M F U	Y N	X	X	X	X	pot. BUOW, KF, DETO; 2 opening			
BMA	KD 034	070 9238/372 6051		A J U	M F U	Y N		X	X	X	steep for DETO; possible KF or BUOW / another opening ~ 30' S			
BMA	BV 004	070 9235/372 5803		A J U	M F U	Y N	X		X	X	shallow			
BMA	NS 004	070 9191/372 6250		A J U	M F U	Y N	X		X	X	can't see end			
BMA	BV 005	070 9200/372 6278		A J U	M F U	Y N	X		X	X	shallow			
BMA	BV 006	070 9169/372 6311		A J U	M F U	Y N	X		X	X	shallow			
BMA	KD 035	070 9180/372 6199		A J U	M F U	Y N	X	X	X	X	pot. KF, BUOW, DETO; multi-opening			
BMA	NS 005	070 9164/372 6188		A J U	M F U	Y N	X		X	X	pot. pallet; ends at ~ 1'			
BMA	BV 007	070 9136/372 5712		A J U	M F U	Y N	X		X	X	shallow			
BMA	KD 036	070 9146/372 2122		A J U	M F U	Y N	X		X	X	shallow			
BMA	BV 008	070 9137/372 6385		A J U	M F U	Y N	X		X	X	shallow			
				A J U	M F U	Y N								
				A J U	M F U	Y N								
				A J U	M F U	Y N								
				A J U	M F U	Y N								

*See Reverse

707280	X	340	X	400	X		
290	X	350	X	410	X		
300	X	360	X	420	X		
310	X	370	X	430	X		
320	X	380	X	440	X		
330	X	390	X	450	X		

~~9400~~
~~8900~~
~~420~~ ~~AJ~~
~~9400~~

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 6/1/09

Page 1A of 1A

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
		F11 – top ~ 3727050 F12 F13 – bottom ~ 3725640		BM-9 N-11

DATA ON GPS# 11

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day	12:11 pm	102°F	2 to 7 mph	65% CC
End	5:00 pm			

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Burrowing owl possible	Whitetailed Antelope Squirrel	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMANS006	707418/3726561		A J U	M F U	Y N		no	2 entrances, no scat	4	—	
BMANS007	707382/3726648		A J U	M F U	Y N		no	2 shallow entrance ~~[illegible]~~ deep burrow	4	—	
BMABV010	707368/3726910		A J U	M F U	Y N		no	1 entrance	4	—	
BMANS008	707356/3725957		A J U	M F U	Y N			nest/cup shape/ironwood	—	—	—
JUNE 2 2009 → BDCNS009	707276/3725730		A J U	M F U	Y N			1 shell piece disarticulated 5cm x 5cm		plastron	5
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						

*See Reverse

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 02 JUNE 2009

Page 1 of

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
			NS-11 BV-9	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell	Burrowing owl	tort pellet
BLSNS011	T08144/3730021	LS	(A) J U	M F (U)	Y N	~~Not Spotted~~ Perched on creosote.	—	—	—		
BMANS013	708152/3729273		A J U	M F U	Y N	End burrow not observed.	4			X	no
BDCNS012	708159/3729445		A J U	M F U	Y N	1 piece; 1"x1"	—	—	5		
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						
			A J U	M F U	Y N						

*See Reverse

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 02 JUNE 2009

Page 1 of ____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
			NS-11 BV-9	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMABV014	705881/3727219	MA	A J U	M F U	Y N	One entrance, 2ft + Possible	4	0	0
~~BMANS013~~	~~705818/3727083~~	~~MA~~	~~A J U~~	~~M F U~~	Y N	burrowing ~~entrance~~ oil			
BMANS013	705818/3727083	MA	A J U	M F U	Y N	one entrance, Scat present (Kit	4	1	0
			A J U	M F U	Y N	Fox), 3ft +			
BMANS014	705829;3727962	MA	A J U	M F U	Y N	one entrance, 3ft,	4	0	0
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

930	✓	970	✓	8010	✓	8050	✓	8090		8130		8170		8210	8250	8290	8330	8370
940	✓	980	✓	8020	✓	8060	✓	8100		8140		8180		8220	8260	8300	8340	8380
950	✓	990	✓	8030	✓	8070	✓	8110		8150		8190		8230	8270	8310	8350	8390
960	✓	8000	✓	8040	✓	8080	✓	8120		8160		8200		8240	8280	8320	8360	8400

G9 to private property line

8410
8420
8430
8440

(UXO guide required) + G9/G10 + G9/G10

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE Date: 6/2/09 Page 1A of 3A

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
		G4	SDA-1 B	-9 ESC-7
		G8	GLU-6 N	-11 ELA-3
			PSE - MGH -	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	9:08AM	88°F	1 to 4 mph	50% CC
Mid-day				
End				

DATA ON GPS #1, 11

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMASD046	0707977	mammal	A J U	M F U	Y N	- mammal burrow, potential			
	3729857		A J U	M F U	Y N	DETO pallet			
			A J U	M F U	Y N				
BMASD047	0707979	mammal	A J U	M F U	Y N	" potential DETO			
	3729514		A J U	M F U	Y N	pallet			
			A J U	M F U	Y N				
BDCGL060	0707974	DETO	A J U	M F U	Y N	- 1" x 3/4", plastron marginal			
	3728808	bone frag	A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCSD050	0707978	DETO	A J U	M F U	Y N	- 2 pieces, marginal + costal carapace			
	3728611	bone frag	A J U	M F U	Y N	1"x1", 1"x1", fit together			
			A J U	M F U	Y N	- slightly mineralized			
			A J U	M F U	Y N	large adult > 100 yrs old, DETO bones			
			A J U	M F U	Y N				
BDCNS010	0708001	DETO bone	A J U	M F U	Y N	- DETO bone frag, 3/4"x3/4"			5
	3728399	frag.	A J U	M F U	Y N	old, very slightly mineralized			
			A J U	M F U	Y N				
BDCGL061	0708000	DETO bone	A J U	M F U	Y N	3/4" x 1/2" DETO bone frag			
	3727964	frag.	A J U	M F U	Y N	slightly mineralized			
			A J U	M F U	Y N				
BDCGL062	0708022	"	A J U	M F U	Y N	6 pieces DETO bone frag			
	3727969					largest 1"x1"			
BDCSD051	0708031	DETO bone				- 1/2"x1/2", + ① 3/4"x3/4"			
	3728110	frag							

*See Reverse

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 6/2/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BKBGL037	0708038 3728445	KFOX burrow	A J U	M F U	Y N	one spot of white wash,			
			A J U	M F U	Y N	can't see to end, turns to			
			A J U	M F U	Y N	right, can't see to end			
			A J U	M F U	Y N	KFOX scat			
			A J U	M F U	Y N				
BDCGL063	0708041 3728602	DETO bone frag.	A J U	M F U	Y N	- 1½"x1½", 8mm thick			
			A J U	M F U	Y N	mineralized w/i last 100 yrs			
			A J U	M F U	Y N				
BDCGL064	0708037 3728693	DETO bone frag.	A J U	M F U	Y N	3/4"x 1/4" DETO bone frag			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BKBGL038	0708035 3728744	KFOX burrow	A J U	M F U	Y N	turns to left, can't see to end			
			A J U	M F U	Y N	potential for BUOW/DETO			
			A J U	M F U	Y N				
BDCGL065	0708041 3728923	DETO bone frag	A J U	M F U	Y N	1/4"x 1/4" juv. tort bone frag.			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMABV011	708017 3728951	mammal burrow	A J U	M F U	Y N	potential DETO pellet			
			A J U	M F U	Y N	12"x 8"x 16" deep			
			A J U	M F U	Y N				
BMABV012	708023 3729228	mammal burrow	A J U	M F U	Y N	likely badger foraging burrow could be used as DETO pellet			
						narrows, would need to be			
						modified by BUOW			

*See Reverse

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 6/2/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCGL066	0708038 3729236	DETO bone frag.	A J U	M F U	Y N	1/4"x 1/4" wafer, juvenile DETO bone frag.			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAGL059	0708045 3729380	mammal burrow	A J U	M F U	Y N	mammal burrow, badger claw marks, turns to left, can't see to end, potential DETO/BURW			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCSD052	0708031 3729389	DETO bone frag.	A J U	M F U	Y N	wafer like, likely juvenile deto 1/2"x 1/4"			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BMAGL059	0708044 3729728	mammal burrow	A J U	M F U	Y N	badger foraging burrow, could function as DETO pallet			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCSD052A	0709100 3726075	DETO bone frag	A J U	M F U	Y N	marginal 1"x 1" not mineralized			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCSD053A	0709119 3726238	DETO bone frag	A J U	M F U	Y N	1/2"x 1/2" juvenile, not mineralized			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCSD054A	0709124 3726479	DETO bone frag	A J U	M F U	Y N	1/2"x 1/2", not mineralized			
			A J U	M F U	Y N				

*See Reverse

BURO 8 = 50 cal.

0709109
3726080

7930 ✓
40 ✓
50 ✓
60 ✓

8080
70
60
50

8090 - 8200
90 ✓
00 ✓
10 ✓
20 ✓
30 ✓
40 ✓

50 ✓
60 ✓
70 ✓
80 ✓
90 ✓
8200 ✓

Site: Blyth

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 6/2/2009

Page ____ of ____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focus	7		E. Schafhauser	
	12		E. La Rue	
	8		P. Seamount	
	13		M. Gallegher	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	9.19	89	3-5 SW	75%
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCMG013	0707942 / 3729543		A J U	M F U	Y N	Tort frag 2mm x 3mm			
BMAEL003	0707948 / 3729088		A J U	M F U	Y N	.75 m deep Taper to rat hole			
BDCPS005	0707936 / 3728430		A J U	M F U	Y N	10mm x 10mm Frag			
BMAMG044	0707946 / 3728250		A J U	M F U	Y N	Active possible Canid			
BDCEL001	~~0707976~~ / ~~3727~~		A J U	M F U	Y N	2 10x10 Fragments			
	0708031 / 3727976		A J U	M F U	Y N	Canid			
BMAMG045	0708064 / 3728388		A J U	M F U	Y N	Canid			
BDCMG014	0708065	3728577	A J U	M F U	Y N	Frag 30mm x 30mm			
BDCEL002	0708068 / 3728678		A J U	M F U	Y N	Frag 20mm x 20mm			
BMAMG046	0708056 / 3728851		A J U	M F U	Y N	Foraging dig Canid			
BDCPS006	0708052	3729232	A J U	M F U	Y N	Frag 30mm x 2mm			
BDCPS007	0708052	3729383	A J U	M F U	Y N	~~[illegible]~~ 20mm x 10mm 3 Fragments			
BMAMG047	0708062	3729713	A J U	M F U	Y N	Canid, possible forage			
BMAEL003	0708105	3729478	A J U	M F U	Y N	.75 meters, kit fox scat			
BDCEL003	0708111	3729410	A J U	M F U	Y N	frag. 20mm x 20mm			
BDCPS008	0708090	3729410	A J U	M F U	Y N	frag 20mm x 10mm			
BDCPS009	0708093	3729143	A J U	M F U	Y N	Frag 30mm x 20mm			
BDCPS010	0708092	3729015	A J U	M F U	Y N	Frag 20mm x 20mm			
BMAMG048	0708178	3729041	A J U	M F U	Y N	Canid			
BBCEL001	0708192	3729370	A J U	M F U	Y N	Mammalaria (fish Hook Cacti)			
BDCMG015	0708174	3729441	A J U	M F U	Y N				

*See Reverse

BDC MG016 0708179 3730024

10mm x 10mm

705890	850	810	770	730	690	650	610	570	
880	840	800	760	720	680	640	600	560	
870	830	790	750	710	670	630	590	550	
860	820	780	740	700	660	620	580	540	

(UXO guide required)

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 6/2/09

5530

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focus	13 12 7 8	E9 ~ 3727990 E10 E11 to top of drainage realignment (~ 3726890)		M. Gallagher E. La Rue E. Schafhauser P. Seamount

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	3:59			
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BBCES002	705847	3727456	A J U	M F U	Y N	Fish Hook			
BMAEL005	705858	3727166	A J U	M F U	Y N	Dig, Canid on Bank of Wash			
BOSPS001	0705778	3727314	A J U	M F U	Y N	in wash, caught with debris		5	
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

LINEAR
K14
K15
K16

~~0710620~~ ~~0710630~~ ~~640~~ ~~650~~ 6

~~0710640~~ ~~0710645~~ ~~630~~ ~~640~~ ~~650~~ ~~660~~

615 625 635 645

~~go out to 100~~
~~go south to 1000' buffer (0710650, 3723920)~~
~~and split up and walk north along~~
~~buffer to 0710296/3725112 on west~~
~~and 0710642/3725419 on east~~

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 6/3/09

Page 1 of ____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused Linear	NS-11 BV-9	K14 K15 K16	3725110 3724220	

DATA ON GPS # [ ]

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMANS017	710613;3724705	MA	A J (U)	M F (U)	Y N	One entrance; 18 in deep	4	0	0
BUXONS002	710613;3724332	UXO	A J U	M F U	Y N	45 caliber casings - empty			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

70	0705730	690	650	610	520	340	280
60	720	680	640	600	560	350	290
50	710	670	630	590	550	360	300
40	700	660	620	580	540	370	310
							stop @ cars

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blyth (UXO guide required) Date: 6/3/2009 Page ____ of ____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focus	3 12		E. Schafhauser E. LaRue	N. Stevens B. Vickers

E. Dennis (UXO)

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	6:00 Am	80°	.2	90%
Mid-day	4:30 pm		gusting?	80%
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BLSEL003	0705870/3727580		A J U	M F U	Y N	Loggerhead Shrike; Remote Cal			
BBCNS015	0705568/3727251		A J U	M F U	Y N	Barrel Cacti			
BMANS016	0705601/3727566		A J U	M F U	Y N	possible Badger, embankment of wash			
BMABV015	0705573	3727580	A J U	M F U	Y N	~~Active~~ Active Canid			
BLSES004	0705640	3727514	A J U	M F U	Y N	Loggerhead Perch			
BUXOED001	0705696	3727022	A J U	M F U	Y N	Grenade Spoon			
BMAES015	0705668	3727053	A J U	M F U	Y N	2 holes (1) forage Digg (1) MA			
BMAES016	0705669	3727253	A J U	M F U	Y N	1.5 m Long, in Bank of wash			
BMABV016	0705664	3727643	A J U	M F U	Y N	Under Iron wood 4ft long/ white wash			
BMAEL006	0705716	3727618	A J U	M F U	Y N	Could be used by Tortoise			
BUXOED002	0705707	3727025	A J U	M F U	Y N	Granade Fuse, Remnant of Smoke Can			
BMAES017	0708154	3727513	A J U	M F U	Y N	Dig + Associated Burrow			
BLSEL004	0708153	3727528	A J U	M F U	Y N	Flying Horn Free			
BDCEL004	0708153	3727528	A J U	M F U	Y N	40 mm/x, 10 mm			
BBCES004	0708160	3727868	A J U	M F U	Y N	Fish Hook Cacti			
BMAEL007	0708330	3727809	A J U	M F U	Y N	Tortoise Shape			
BDPES004	0708344	3727811	A J U	M F U	Y N	Tortoise Shape			
BMAEL008	0708065	3727792	A J U	M F U	Y N	in wash			
BMAEL009	0708053	3727449	A J U	M F U	Y N	prob. K. fox			
BUXOFI001	0708303	3725017	A J U	M F U	Y N	150 cal projectile, Fired			
BUXONS001	0705282	3724227	A J U	M F U	Y N				

*See Reverse

Site: Blyth

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 6/3/2009

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focus	12 3 9 11			ED Larue E. Schathauser N. Stevens B. Vickers

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BUXOEL004	0708344	3724489	A J U	M F U	Y N	projectile (2)			
BUXOEL005	0708351	3724600	A J U	M F U	Y N	projectile			
BUXOEL006	0708292	3725489	A J U	M F U	Y N	projectile			
BMAES	0704934	3729703	A J U	M F U	Y N	prob. K. fox			
017			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

8050	8090	8130	8170	8210	8260	8310	8360	8410															
8060	8100	8140	8180	8220	8270	8320	8370	8420															
8070	8110	8150	8190	8230	8280	8330	8380	8430															
8080	8120	8160	8200	8240	8290	8340	8390	8440															
				8250	8300	8350	8400	8															

G9 to property line

UKO guide required

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 6/3/09

Page _____ of _____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
		G9 - 3728000 G10 - 372067		

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	10:50 AM	100°F	5 to 11 mph	20% CC
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCSD053	0708121	DETO bone	A J U	M F U	Y N	1/2" x 1/4" DETO bone frag.			
(053)	3727361	frag.	A J U	M F U	Y N	not mineralized			
			A J U	M F U	Y N				
BMAGL060	0708106	mammal	A J U	M F U	Y N	- ~2' deep kit fox (likely)			
	3727770		A J U	M F U	Y N	but not deep enough; pieces			
			A J U	M F U	Y N	of alkali soil			
			A J U	M F U	Y N	potential for DETO pellet			
			A J U	M F U	Y N				
BKBSD025	0708269	kit fox	A J U	M F U	Y N	- burrow (kit fox shape) with			
	3727809		A J U	M F U	Y N	a lot of predator activity			
			A J U	M F U	Y N	in small mammal burrows			
			A J U	M F U	Y N	(+) one burrow tract that			
			A J U	M F U	Y N	goes straight down & back			
			A J U	M F U	Y N	Potential DETO / BLOW			
			A J U	M F U	Y N				
BKBSD026	0708092	Kit fox	A J U	M F U	Y N	Kit fox, can't see to end,			
	3727770		A J U	M F U	Y N	potential BLOW / DETO (+) potential			
			A J U	M F U	Y N	DETO pellet			
			A J U	M F U	Y N				
BKBSD027	0708096	kit fox	A J U	M F U	Y N	- 3 burrows, KFOX scat	5		
	3727451	Complex	A J U	M F U	Y N	complex, one burrow Class			
						5 DETO burrow, no DETO sign			
						- Potential for BLOW			
						active KFOX, recent scat			

*See Reverse

Linear south of I-10 706200 to west

~~4720~~ 0320 stop @ 4770

DESERT TORTOISE FIELD SURVEY DATA SHEET Habitat Assessments*

Site: BLYTHE Date: 6/3/09 Page 1 of 1

Type of Survey	GPS Unit	Surveyor	Additional Surveyors

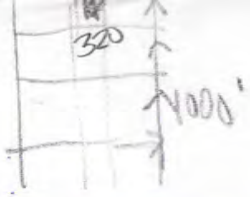
	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

Map Page	Habitat Description	Suitable DETO?	Suitable BUOW?	Any excluded areas? Label as (P)EX(DH)(SD)001*
	- nothing recorded			

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments
			A J U	M F U	Y N	
			A J U	M F U	Y N	
			A J U	M F U	Y N	
			A J U	M F U	Y N	

LINEAR
H14
H15
H16
H17

1000' buffer ☑



DESERT TORTOISE FIELD SURVEY DATA SHEET ~~Habitat Assessments*~~

Site: Blythe Date: 6/3/09 Focused survey Page _____ of _____

Type of Survey	GPS Unit	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

Map Page	Habitat Description	Suitable DETO?	Suitable BUOW?	Any excluded areas? Label as (P)EX(DH)(SD)001*
BKBG050	1 Kit fox burrow next to creosote. old Kit fox scat in area. Potential use by DETO, BUOW & Kit fox. Turns to right.			
	0704663 3725470 Cant see to read.			

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments
			A J U	M F U	Y N	
			A J U	M F U	Y N	
			A J U	M F U	Y N	
			A J U	M F U	Y N	

LINEAR H14 H15 H16 H17

drive up west side road (cans on bush) take 1st dirt road after two large wood poles that mark start of private property

~0708280 ✓ 290 ✓ 300 ✓ 310 ✓ 320 ✓ 330 ✓ 340 ✓ 350 ✓ 360 ✓ 370 ✓

1000' buffer ☐ west ☑ east

330

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: 6/2/09

Page ____ of ____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	~~7~~ ~~13~~ ~100m wide	H14 H15 H16 H17 → end 3723750	~~ESC 7~~ ~~ELA 13~~ 3725170	~~MGH - PCH~~ ~~PSE~~

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day	4:44PM	106°F	8 to 14mph	10% Cl
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BLSSD006	0708079 3724237	Loggerhead	A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCSD054	DETO bone frag.	0707984 3724393	A J U	M F U	Y N	- DETO tort leg bone, 1/2 present			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

BUXOED001 0708321, 3724357 50 cal projectile, fired.

3/4 & 1 mile

Site: Blythe

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 6/4/09

Page 1 of

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focused	1/6	3/4 1 mile @SW corner to N	SDA-1 GLL-6	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	8:17AM	83°F	2 to 6 mph	100% CC
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCGL067	0704780 3726012	DETO bone frag	A J U	M F U	Y N	2" x 1 1/4" DETO vertebral bones (3) adult			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCSD055	0704773 3725993	DETO bone frag	A J U	M F U	Y N	1" x 3/4" DETO bone adult			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDSSD014	0704720 3726001	DETO scat	A J U	M F U	Y N	DETO scat 1/2" wide x 1" long no glaze, medium brown		2/3	
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCGL068	0704746 3726060	DETO half carcass	A J U	M F U	Y N	- plastron (♀) in pieces, scutes in area, 1/2 plastron intact			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDSSD015	0704704 3726032	DETO scat	A J U	M F U	Y N	- DETO scat, 2 pieces 3/4" wide x 1" 3/4" wide x 1" medium brown			3
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCGL069	0704567 3726224	DETO carcass	A J U	M F U	Y N	dried, no glaze, tightly packed - adult male carcass, in several large pieces, scutes & pelvic bone in area picture w/ ID tag ~12" MCL, one scute still attached to bone			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

- speckled rattlesnake

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 6/4/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDCGL010	0704549 3726211	DETO carcass (1/4)	A J U	M F U	Y N	- different animal than BDCGL069, picture 1/4 plastron 9cm x 13cm estimated MCL = 20cm			5
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N	- ~~Adult male~~			
BDLGL001	0704461 3726235	DETO LIVE!!!	A J U	M F U	Y N	Live adult male DETO in caliche, came out of burrow as we approached			
			A J U	M F U	Y N				
			A J U	M F U	Y N	shell worn, see health sheets, DETO scat in burrow			
			A J U	M F U	Y N				
			A J U	M F U	Y N	88°F air temp, ground temp 90°F			
			A J U	M F U	Y N				
BDBSD014	0704304 3726195	DETO	A J U	M F U	Y N	- potential DETO burrow, flattened bottom, in caliche			5
			A J U	M F U	Y N				
			A J U	M F U	Y N	can't see to end			
			A J U	M F U	Y N	15" x 10", (+) potential DETO			
			A J U	M F U	Y N	pellet directly adjacent			
			A J U	M F U	Y N	18" x 12"			
BDPSD035	0703853 3726135	DETO?	A J U	M F U	Y N	- potential DETO pellet in caliche/rock in drainage			5
			A J U	M F U	Y N				
			A J U	M F U	Y N	speckled rattlesnake inside			

*See Reverse

Utah milkweed (4)-(4) 0703703/3726250

(2)-(2) 0703769/3726208

Collared lizard (20) 0703793/3726179

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 6/4/04

Page 3 of ____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMASD048	0704486 3725990	mammal	A J U	M F U	Y N	very large mammal burrow ~28" wide x 20" high			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N	turns to right can't see to end, could be used by DETO/BUSH			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N	narrows 18" wide x 10" tall to			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDSSD016	0704729 3725948	DETO	A J U	M F U	Y N	- fresh scat, bleached, tightly packed but eroded 2" x 1" wide			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDCSD056	0704887 3726010	DETO bone frag.	A J U	M F U	Y N	- one piece carapace 1" x 3/4"			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Site: BLYTHE

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 6/4/09

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start				
Mid-day	11:37	98°F	3 to 9 mph	50% CC
End				

Data Recorded on GPS [#6]

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDBGL024	0704316 3726206		A J U	M F U	Y N	Def. ~~Possible~~ Active DETO burrow in caliche. Large 3'w x 1'h, 4 plus ft. deep turns to left. can't see to end. Tortoise tracks inside	1		
			A J U	M F U	Y N				
			A J U	M F U	Y N				
BDBGL004	0704945 3725961		A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N	Small barrel cactus 2" tall			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

705000

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: BLYTHE

Date: 04 JUNE 2009

Page 1 of ____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
	NS-5		Nicole Stephens	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	7:45am			
Mid-day	11:34am			
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BOONS016	706850/3731317		A J U	M F U	Y N	Ocotillo (1)			
BBCNS002	708092/3731246		A J U	M F U	Y N	Barrel cactus / 20 heads/cotton top			
BUXONS003	709094/3731306		A J U	M F U	Y N	Munition debris/1: 50 caliber shell case			
BMANS017	708978/3731605		A J U	M F U	Y N	1 entrance/possible pallet/2ft + deep/old	4	none	
BMANS018	708531/3731544		A J U	M F U	Y N	1 entrance / 2 ft + deep / used in last yr.	4	now	
BBCNS003	707074/3731568		A J U	M F U	Y N	Cotton top cactus / 16 heads			
BBONS001	708092/3731246		(A) J U	M F (U)	Y N	2 thrashers in tree & on ground			
BBONS002	707074/3731568		(A) J U	M F (U)	Y N	1 THRASHER on ground & 1 nest bowl shape in tree			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Frank 907 394 0889

EARL 909 782 6350

don't go east of 705600

Site: Blyth

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Date: 6/4/2009

Page _____ of _____

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
Focus	8 3		E. LaRive E. Schathauser	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	707		.5 mph	100 %
Mid-day				
End				

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BDBES003	0702439	3728497	A J U	M F U	Y N	Definite Tort Burrow	1		
BBCES002	0702094	3724637	A J U	M F U	Y N	Adult/300mm(W) 1.5m Deep		Cover Site	
BBCEL003	0702375	3729654	A J U	M F U	Y N	Barrel Cacti			
BBDBEL009	0702640	3729531	A J U	M F U	Y N	Wash Bank Cave	4		
			A J U	M F U	Y N				
BBCEL004	0702324	3730083	A J U	M F U	Y N	Young B. Cacti			
~~BBCEL005~~			A J U	M F U	Y N				
BBCEL005	0702955	3728850	A J U	M F U	Y N	B Cacti			
BBCES006	0702951	3728839	A J U	M F U	Y N	B. Cacti (2)			
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Frank 907-394-0889
Earl 909-782-6350

don't go west of 705600

DESERT TORTOISE FIELD SURVEY DATA SHEET*

Site: Blythe

Date: ~~6/4/2009~~ 4 June 2009

Page 1 of 1

Type of Survey	GPS Unit	Map #	Surveyor	Additional Surveyors
			Brent Vickers	

	Time	Temp	Wind Sp/Dir	Weather & % Cloud
Start	7:45			95%
Mid-day				
End	1:00			45%

GPS Ident Code*	GPS Coordinates	Species	Age	Sex	Healthy?	Comments	DETO Sign Type* (include comments) Burr	Scat	Shell
BMABU017	0707906 / 3731345	MA	A J U	M F U	Y N	Kit Fox. 2 openings. 2 scat.	4	2	—
			A J U	M F U	Y N		~~4~~	~~0~~	~~—~~
BMABU018	0709602 / 3731342	MA	A J U	M F U	Y N	Kit Fox, 4 openings. Old - probably vacated. No scat	4	0	
			A J U	M F U	Y N				
BMABU019	710268 / 3731469	MA	A J U	M F U	Y N	Kit Fox, 10+ openings. Old - vacated. No scat	4	0	
			A J U	M F U	Y N				
BBCBU001	709838; 3731522	BC	A J U	M F U	Y N	Cotton Top			
BBCBU002	708039; 3731443	BC	A J U	M F U	Y N	cotton Top			
BBCBU003	707926; 3731467	BC	A J U	M F U	Y N	Barrel Cactus; 30 ridges, 2ft high			
BBCBU004	70779; 3731521	BC	A J U	M F U	Y N	Barrel Cactus; 23 ridges, 1.5ft tall			
BMABU020	706698; 3731285	MA	A J U	M F U	Y N	Kit Fox, Single entrance, 3 feet deep	4	0	
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				
			A J U	M F U	Y N				

*See Reverse

Frank 907-394-0889
Earl 909-782-6350

check in by NOON

Do not abbreviate

Data Sheet for Live Desert Tortoises

Write on this side only

Located by .....
Processed by .....
Study site name .....

Township ..... Range .....
Section ..... Quadrat .....

Coordinates (Reference SW corner)
..... meters North ..... meters East

UTM's 0704461 n 3726235 e

Elevation ..... m Accuracy ± ..... m

County ..... State .....

O On Plot O Off Plot

Show location of tortoise in quadrat

Tortoise ID # BDCGL001
Year first marked .....
Verification of ID ☐
Capture type ..... Sex M
Date (dd/mm/yy) 6/4/09
Time (PST): Start ..... End .....
Frequency ..... Transmitter # .....
Transmitter type .....
Transmitter attached .....
Transmitter to be replaced on .....
PIT # .....

Tortoise Location

Cover site type:
- ☐ burrow
- ☐ pallet
- ☐ shrub
- ☒ caliche cave
- ☐ rock shelter

At cover site:
- ☐ entering
- ☐ exiting
- ☐ on mound
- ☐ inside

Not at cover site:
- ☐ in open
- ☐ other

Burrow Data

ID # .....
Orientation .....
Length ..... Height .....
Width ..... Soil cover .....
Location .....

Survey Type

- O Radio track
- O Burrow search
- O Coverage 1
- O Coverage 2
- O Incidental
- O Other

Tortoise Activity

- ☐ resting
- ☐ basking
- ☒ walking
- ☐ feeding
- ☐ Interacting with other tortoise
- ☐ Interacting with other animals

ID & sex of other tortoise .....
Species .....
Describe interaction:

Plants/items eaten (specific):

MCL ~ 11" adult ♂ large gular

Color (shell & skin)

	HV	Hue	Value	Chroma	Color
V1 (center)					
V4 (center)					
LC1,2&V2 (seam)					
LM5,6 & LC2 (seam)					
Foreleg					
Hindleg					

Are you color blind? O Yes O No
Type of blindness .....

Body Measurements

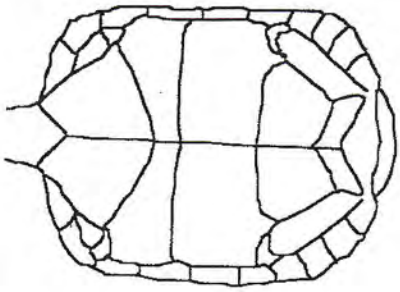
MCL (mm) _____
PLN (mm) _____
Weight (g) _____
Void (g) _____
Total wt (g) _____

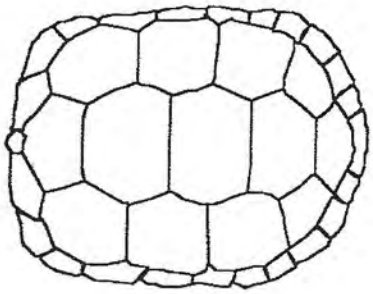
New growth
☐ present ☐ absent

Epoxy #
☐ present ☐ legible

Behavior

came out of burrow upon our approach rested head on gular & observed





Other notes

Photos; roll ..... frames .....

Draw locations of notches (old and new), chips, and anomalies, etc.
Describe anomalies in numbering of marginals and any identification problems.

Entered by ☐ date ☐ on computer ☐
Modified by ☐ on ☐

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Do not abbreviate

Health Profile Form for Desert Tortoises

Write on this side only

Located by .....
Processed by .....
Study site name [ ]

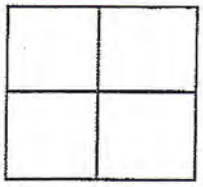
Township ..... Range .....
Section ..... Quadrat .....

Coordinates (Reference SW corner)
..... meters North ..... meters East

UTM's ..... n ..... e

County ..... State .....

O On Plot O Off Plot



Show location of tortoise in quadrat

Tortoise ID # BDCGL001
Year first marked .....
Verification of ID [ ]
Capture type ..... Sex M
Date (dd/mm/yy) 6/4/2009
Time (PST): Start ..... End .....
Shell wear class .....
Process time ..... hours
Frequency .....
Transmitter # .....

BEAK & NARES

Beak/nares wet	O Yes	X No	O Unk
Beak/nose damp	O Yes	X No	O Unk
Nasal exudate present	O Yes	X No	O Unk
Exudate color	☐ clear ☐ cloudy ☐ white ☐ yellow ☐ green		
Bubble(s) from nares	O Yes	X No	O Unk
One nare occluded	O Yes	X No	O Unk
Both nares occluded	O Yes	X No	O Unk
Dirt on nose/beak	O Yes	X No	O Unk
Dirt in nares	O Yes	X No	O Unk

FORELEGS (adjacent to face)

Dried dirt on forelegs	O Yes	X No	O Unk
Moisture on forelegs	O Yes	X No	O Unk
Dried exud. on scales	O Yes	X No	O Unk
Scales cracking	O Yes	X No	O Unk

BREATHING

Smooth	X Yes	O No	O Unk
Wheezing	O Yes	X No	O Unk
Rasping, clicking	O Yes	X No	O Unk

EYES, CHIN GLANDS Circle eyes or lids:

Eyes/lids whitened or discolored	O Yes	X No	O Unk
Eyelids swollen	O Yes	X No	O Unk
Eyes/lids wet	O Yes	X No	O Unk
Discharge from eyes	O Yes	X No	O Unk
Eyes sunken	O Yes	X No	O Unk
Eyes clear, bright	X Yes	O No	O Unk
Eyes dull, cloudy	O Yes	X No	O Unk
Chin glands draining	O Yes	X No	O Unk

INTEGUMENT

Integument dull	O Yes	X No	O Unk
Integument glossy	X Yes	O No	O Unk
Normal elasticity	X Yes	O No	O Unk
Abnormal skin peeling	O Yes	X No	O Unk

POSTURE/BEHAVIOR

Alert, responsive	X Yes	O No	O Unk
Lethargic	O Yes	X No	O Unk
Can withdraw tightly into shell	O Yes	O No	X Unk
Limbs, head hanging loose	O Yes	X No	O Unk

ORAL CAVITY

Observed	O Yes	O No	O Unk
Discharge present	O Yes	O No	O Unk
Membranes pink	O Yes	O No	O Unk
Membranes pale, white	O Yes	O No	O Unk
Smells/mouth rot	O Yes	O No	O Unk

EVIDENCE OF SHELL DISEASE

Lesions present	O Yes	X No	O Unk
Lesions active	O Yes	O No	O Unk
Lesions healed	O Yes	O No	O Unk
Scute laminae peeling	O Yes	O No	O Unk
Scutes missing/peeling	O Yes	O No	O Unk
Pitting	O Yes	O No	O Unk
Scutes depressed/concave	O Yes	O No	O Unk
Fungal areas	O Yes	O No	O Unk

EVIDENCE OF TRAUMA

Head	O Yes	X No	O Unk
Gular	O Yes	X No	O Unk
Forelimbs	O Yes	X No	O Unk
Hindlimbs	O Yes	X No	O Unk
Shell	O Yes	X No	O Unk
Scute/bone replacement	O Yes	X No	O Unk

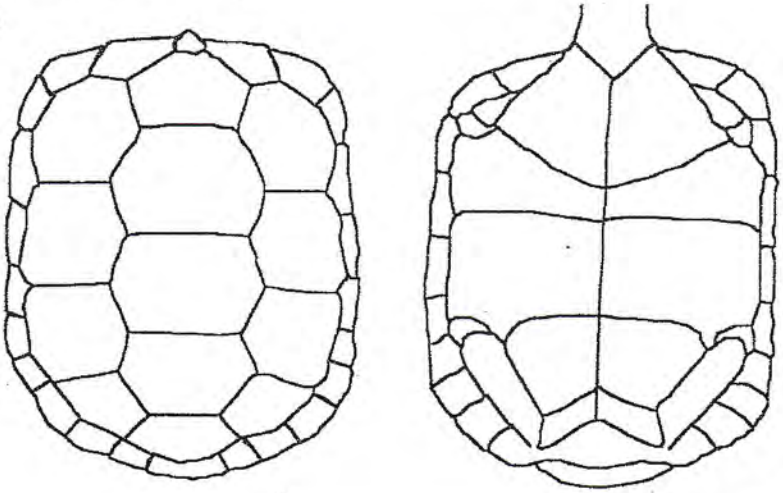
Describe: .....

Soil dryness: O wet O damp X O dry

Last precipitation (dd/mm/yy) .....

Urine (vol) .....
Color .....
Viscosity .....
Particulates .....
Color .....
Nasal wash collected .....
Amt. blood/lymph taken (cc) .....
# of needle sticks .....
Time (min) of needle sticks .....
Location .....
PCV% .....
Other samples taken .....
Describe/draw parasites .....

DRAW: shape of gulars, location of notches; chips, chews, shell damage, lesions; shell disease; shell abnormalities; scute concavities. Make new drawing at least once per year (spring).



Other notes .....

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ATTACHMENT 4

SPREADSHEET OF DATA COLLECTED DURING FOCUSED DESERT TORTOISE SURVEYS

ATTACHMENT 4

Spreadsheet of Data Collected during Focused Desert Tortoise Surveys

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDLGL001	Tortoise	3726235	704462	04-JUN-09 9:10:39AM	Adult live male tortoise, in caliche cave, came out of burrow as surveyors approached, shell worn, tortoise scat in burrow, 88 F air temp, ground temp 90 F	
BDTCG001	Tortoise	3725820	706228	13-APR-09 10:34:10AM	Live male tortoise, in open, in desert pavement, tortoise activity=walking, MCL ~ 28 cm x 21 cm, worn shell, some scales on forelegs missing, growth rings on scutes worn away, no sign of URDs, strong withdrawal, some signs of eating around mouth (older and dry), chew mark on rear right marginal, some scarring due to chewing on front marginals on both sides	
TORTLIVEBOTANY	Tortoise	3728894	703450	27-MAR-09 10:43:42PM	In caliche burrow	
BDCAD064	Tortoise Bone Fragments - Class 5	3727707	702923	16-APR-09 5:13:31PM	Bone fragments with tortoise burrow nearby, 5 fragments, adult, rock burrow opening, can't see to end, 45 cm x 20 cm, Class 5 bones, Class 2 Burrow	5
BMASC012	Tortoise Bone Fragments - Class 5	3728233	706204	02-APR-09 9:38:20AM	Large mammal burrow, potential for tortoise, small bone fragment, potential tortoise bone fragment	5
BDCPS004	Tortoise Bone Fragments - Class 5	3726511	709050	01-JUN-09 17:50:34	Fragment, 40 mm x 20 mm	5
BDCMG012	Tortoise Bone Fragments - Class 5	3726518	709059	01-JUN-09 17:53:17	Fragment, 20 mm x 20 mm	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCMG010	Tortoise Bone Fragments - Class 5	3727720	709206	01-JUN-09 9:31:56	10 x 10 mm	5
BGCNS012	Tortoise Bone Fragments - Class 5	3729445	708159	02-JUN-09 1:42:53PM	1 piece, 1" x 1"	5
BDCSD053A	Tortoise Bone Fragments - Class 5	3726238	709121	02-JUN-09 1:53:01PM	1/2" x 1/2", juvenile, not mineralized	5
BDCSD054A	Tortoise Bone Fragments - Class 5	3726479	709126	02-JUN-09 1:57:11PM	1/2" x 1/2", not mineralized	5
BDCPS005	Tortoise Bone Fragments - Class 5	3728429	707937	02-JUN-09 10:00:48	10 mm x 10 mm, fragment	5
BDCEL001	Tortoise Bone Fragments - Class 5	3727976	708032	02-JUN-09 10:21:30	2 - 10 x 10 mm fragments	5
BDCGL062	Tortoise Bone Fragments - Class 5	3727969	708023	02-JUN-09 10:23:13AM	6 pieces, tortoise bone fragments, largest 1" x 1"	5
BDCSD051	Tortoise Bone Fragments - Class 5	3728110	708032	02-JUN-09 10:27:42AM	1/2" x 1/2", 3/4" x 3/4"	5
BDCSD052A	Tortoise Bone Fragments - Class 5	3726074	709101	02-JUN-09 10:38:08PM	Marginal, 1" x 1", not mineralized	5
BDCMG014	Tortoise Bone Fragments - Class 5	3728577	708065	02-JUN-09 10:43:31	Fragment, 30 x 30 mm	5
BDCGL064	Tortoise Bone Fragments - Class 5	3728692	708038	02-JUN-09 10:48:29AM	3/4" x 1/4", tortoise bone fragment	5
BDCEL002	Tortoise Bone Fragments - Class 5	3728678	708068	02-JUN-09 10:49:19	Fragment, 20 x 20 mm	5
BDCGL065	Tortoise Bone Fragments - Class 5	3728923	708042	02-JUN-09 10:56:28AM	1/4" x 1/4", jurvenile tortoise bone fragment	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCPS006	Tortoise Bone Fragments - Class 5	3729231	708053	02-JUN-09 11:04:05	Fragment, 30 mm x 2 mm	5
BDCGL066	Tortoise Bone Fragments - Class 5	3729235	708039	02-JUN-09 11:08:46AM	1/4" x 1/4", wafer, juvenile tortoise bone fragment	5
BDCPS007	Tortoise Bone Fragments - Class 5	3729383	708053	02-JUN-09 11:13:45	20 mm x 10 mm, 3 fragments	5
BDCSD052	Tortoise Bone Fragments - Class 5	3729389	708031	02-JUN-09 11:17:42AM	wafer like, likely juvenile tortoise 1/2" x 1/4"	5
BDCEL003	Tortoise Bone Fragments - Class 5	3729409	708113	02-JUN-09 12:23:51	Fragment, 20 mm x 20 mm	5
BDCPS008	Tortoise Bone Fragments - Class 5	3729410	708091	02-JUN-09 12:26:35	Fragment, 20 x 10 mm	5
BDCPS009	Tortoise Bone Fragments - Class 5	3729143	708095	02-JUN-09 12:34:50	Fragment, 30 x 20 mm	5
BDCPS010	Tortoise Bone Fragments - Class 5	3729015	708094	02-JUN-09 12:39:14	Fragment, 20 x 20 mm	5
BDCMG015	Tortoise Bone Fragments - Class 5	3729440	708175	02-JUN-09 13:41:52	No comments	5
BDCMG016	Tortoise Bone Fragments - Class 5	3730023	708180	02-JUN-09 13:57:22	10 x 10 mm	5
BDCNS009	Tortoise Bone Fragments - Class 5	3725730	707277	02-JUN-09 7:55:52AM	1 shell piece, disarticulated, 5 cm x 5 cm, plastron	5
BDCMG013	Tortoise Bone Fragments - Class 5	3729542	707944	02-JUN-09 9:34:36	Tortoise bone fragment, 2 mm x 3 mm	5
BDCSD053	Tortoise Bone Fragments - Class 5	3727367	708123	03-JUN-09 11:48:00AM	1/2" x 1/4", tortoise bone fragment, not mineralized	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCEL004	Tortoise Bone Fragments - Class 5	3727526	708153	03-JUN-09 11:51:57	40 mm x 10 mm	5
BDCSD056	Tortoise Bone Fragments - Class 5	3726010	704888	04-JUN-09 11:27:40AM	One piece, carapace, 1" x 3/4"	5
BDCSD055	Tortoise Bone Fragments - Class 5	3725993	704775	04-JUN-09 8:28:10AM	1" x 3/4", tortoise bone adult	5
BDCGL067	Tortoise Bone Fragments - Class 5	3726012	704781	04-JUN-09 8:29:23AM	2" x 1 1/4", tortoise vertebral bones (3), adult	5
BDCGL045	Tortoise Bone Fragments - Class 5	3726095	708390	29-MAY-09 1:03:58PM	Fragment, 1/2" x 1/2", tortoise bone fragment	5
BDCSD034	Tortoise Bone Fragments - Class 5	3726520	708370	29-MAY-09 1:57:21PM	1 1/2" x 1", thicker tortoise bone, likely near gular area of male	5
BDCGL042	Tortoise Bone Fragments - Class 5	3726507	708241	29-MAY-09 10:28:40AM	Tortoise bone fragment, 1/2" x 1/4"	5
BDCGL043	Tortoise Bone Fragments - Class 5	3726454	708350	29-MAY-09 12:13:19PM	1" x 1" and 1" x 1", carapace, multiple fragments, likely subadult, thin fragments, exposed by weathering	5
BDCAD083	Tortoise Bone Fragments - Class 5	3726575	708280	29-MAY-09 9:12:08AM	11+ fragments, large animal, adult, not mineralized, marginal, plastron, carapace, + 1 fragment 10 m to east	5
BDCAD085	Tortoise Bone Fragments - Class 5	3726069	708268	29-MAY-09 9:51:30AM	Tortoise vertebral, juvenile, about 3" x 4" MCL estimate, not mineralized	5
BDCGL054	Tortoise Bone Fragments - Class 5	3726559	708696	30-MAY-09 1:19:41PM	Two thick tortoise bone fragments, 1" x 1", 1" x 1", both likely marginal plastron, no mineralization	5
BDCGL055	Tortoise Bone Fragments - Class 5	3726501	708696	30-MAY-09 1:22:39PM	Tortoise bone fragment, marginal 1 1/4" x 1/4", not mineralized	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCGL056	Tortoise Bone Fragments - Class 5	3726159	708698	30-MAY-09 1:37:15PM	Tortoise bone fragment, 1" x 3/4", non-mineralized, from adult	5
BDCSD044	Tortoise Bone Fragments - Class 5	3726099	708689	30-MAY-09 1:41:32PM	1" x 1", plastron marginal, appears to have been burned	5
BDCES003	Tortoise Bone Fragments - Class 5	3726059	708669	30-MAY-09 1:44:36PM	1/4" x 1/4" thick, non-mineralized, adult	5
BDCSD045	Tortoise Bone Fragments - Class 5	3726041	708692	30-MAY-09 1:46:53PM	Thin, likely juvenile, 1/4" x 1/4", non-mineralized	5
BDCSD038	Tortoise Bone Fragments - Class 5	3725999	708600	30-MAY-09 10:24:05AM	Marginal, plastron (?), tortoise bone fragment, 1/2" x 1/2"	5
BDCGL051	Tortoise Bone Fragments - Class 5	3726152	708616	30-MAY-09 10:33:37AM	Tortoise bone fragment, 1" x 1/4", wafer, non-mineralized	5
BDCSD039	Tortoise Bone Fragments - Class 5	3726241	708601	30-MAY-09 10:37:11AM	1/2" x 1/2", wafer tortoise bone fragment, non-mineralized	5
BDCMR028	Tortoise Bone Fragments - Class 5	3729241	708904	30-MAY-09 11:46:40AM	3 cm x 2 cm, not mineralized	5
BDCGL053	Tortoise Bone Fragments - Class 5	3726031	708638	30-MAY-09 11:56:12AM	3/4" x 1/4", tortoise bone fragment	5
BDCMR029	Tortoise Bone Fragments - Class 5	3728912	708858	30-MAY-09 12:22:23PM	2.5 x 2.5 cm, not mineralized	5
BDCSD043	Tortoise Bone Fragments - Class 5	3726387	708663	30-MAY-09 12:40:25PM	Fragments, very thick, marginal, 3/4" x 1/2", not mineralized	5
BDCGL057	Tortoise Bone Fragments - Class 5	3726662	708714	30-MAY-09 2:28:33PM	3/4" x 1/2", marginal, subadult, plus 1 piece about 10 m to NE, 1/2" x 1/2"	5
BDCSD047	Tortoise Bone Fragments - Class 5	3725905	708839	30-MAY-09 7:29:49PM	Tortoise bone fragment, gular, 1 x 3/4"	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCES005	Tortoise Bone Fragments - Class 5	3726047	708837	30-MAY-09 7:35:07PM	1" x 3/4", not mineralized	5
BDCGL049	Tortoise Bone Fragments - Class 5	3726075	708550	30-MAY-09 8:22:10AM	Plastron marginal, tortoise bone, could be gular, likely female, not mineralized	5
BDCSD035	Tortoise Bone Fragments - Class 5	3726523	708510	30-MAY-09 8:57:42AM	Tortoise bone, 3/4" x 1/2", not mineralized	5
BDCSD036	Tortoise Bone Fragments - Class 5	3726561	708510	30-MAY-09 9:03:45AM	Tortoise bone, 3 pieces, 1/2" x 1/2"	5
BDCSD037	Tortoise Bone Fragments - Class 5	3726068	708571	30-MAY-09 9:50:06AM	Two tortoise bone fragments, 1" x 1/4", 1" x 1", starting to erode, carapace and plastron	5
BDCCG064	Tortoise Bone Fragments - Class 5	3727876	708745	31-MAY-09 1:48:41PM	2.5 cm x 2.5 cm, not mineralized	5
BDCMR031	Tortoise Bone Fragments - Class 5	3727887	708604	31-MAY-09 12:34:36PM	3 cm x 4 cm, not mineralized	5
BDC009	Tortoise Bone Fragments - Class 5	3728410	709580	31-MAY-09 12:35:05	chip, 1 cm x 1 cm	5
BDCGL059	Tortoise Bone Fragments - Class 5	3725768	706144	31-MAY-09 12:55:06PM	One marginal tortoise scute, top and bottom, from adult, ~ 1 1/4" x 1"	5
BDCSD048	Tortoise Bone Fragments - Class 5	3726075	706041	31-MAY-09 2:12:24PM	Tortoise bone fragment, eroded, not mineralized, 1" x 1/2"	5
BDCSD049	Tortoise Bone Fragments - Class 5	3726075	706031	31-MAY-09 2:46:33PM	20+ pieces of tortoise bones, old eroded, not mineralized	5
No point	Tortoise Bone Fragments - Class 5	3726595	708672	may 30 09	see BDCES002	5
BDCGL060	Tortoise Bone Fragments - Class 5	3728808	707974	02-JUN-09 9:55:35AM	1" x 3/4", plastron marginal	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCCG014	Tortoise Bone Fragments - Class 5	3729994	709612	07-APR-09 10:06:29AM	Tortoise bone fragment, 1 x 0.5 cm, not mineralized	5
BDCCG015	Tortoise Bone Fragments - Class 5	3729978	709604	07-APR-09 10:13:41AM	Tortoise bone fragment (4), 1 x 1.5 cm, not mineralized	5
BBCAD037	Tortoise Bone Fragments - Class 5	3729690	709518	07-APR-09 11:30:55AM	Tortoise bone fragment, not mineralized, 2.5 x 1 cm (mislabeled in GPS)	5
BDCAD038	Tortoise Bone Fragments - Class 5	3729829	709527	07-APR-09 11:46:49AM	Tortoise bone fragment, 3 shell fragments, 1 x 1 cm, no mineralization	5
BDCSD019	Tortoise Bone Fragments - Class 5	3728933	703948	08-MAY-09 7:07:43PM	Tortoise bone fragment, 1/2" x 1/2", not mineralized, old	5
BDCCG054	Tortoise Bone Fragments - Class 5	3728831	709792	10-MAY-09 10:20:33AM	3 cm x 3 cm tortoise bone fragment	5
BDCSC012	Tortoise Bone Fragments - Class 5	3728065	710337	10-MAY-09 9:09:36AM	Disarticulated within a 10 m area	5
BDCPB020	Tortoise Bone Fragments - Class 5	3728970	704280	15-APR-09 2:10:34PM	One fragment, 2 x 4 cm	5
BDCSD015	Tortoise Bone Fragments - Class 5	3729602	704422	15-APR-09 3:21:02PM	Small piece of flat bone, likely tortoise, 1/4" x 3/4"	5
BDCSD016	Tortoise Bone Fragments - Class 5	3728543	704325	20-APR-09 4:21:24PM	One piece, 1" x 0.5", eroded, old	5
BDCAD013	Tortoise Bone Fragments - Class 5	3728011	705163	28-MAR-09 2:16:59PM	Tortoise plastron bone, 1 1/4" x 1"	5
BDCGL027 1	Tortoise Bone Fragments - Class 5	3727777	702824	16-Apr-09	One piece of marginal bone, old	5
BDCGL018	Tortoise Bone Fragments - Class 5	3730006	706813	01-APR-09 1:16:38PM	One small piece of flat bone, possible tortoise bone, 1/4" x 1/4"	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCGL015	Tortoise Bone Fragments - Class 5	3727788	706583	01-APR-09 10:14:26AM	Possible tortoise bone fragment, 1" x 1/2", very old, very flat, could be tortoise	5
BDCGL016	Tortoise Bone Fragments - Class 5	3727531	706503	01-APR-09 10:32:00AM	Two pieces, likely marginal scutes from plastron, cracking	5
BDCSD013	Tortoise Bone Fragments - Class 5	3727733	706523	01-APR-09 10:39:27AM	Tortoise bone fragment, disarticulated, not cracking into pieces, piece of costal, 2" x 1"	5
BDCSC002	Tortoise Bone Fragments - Class 5	3727801	706544	01-APR-09 10:45:56AM	One piece, starting to crack, likely marginal, 1" x 1"	5
BDCGL017	Tortoise Bone Fragments - Class 5	3729495	706809	01-APR-09 12:39:01PM	Tortoise bone, piece of marginal, 1/4" x 1/2"	5
BDCGL019	Tortoise Bone Fragments - Class 5	3729713	704659	02-APR-09 2:08:39PM	Tortoise bone fragment, one piece of marginal, 3/4" x 3/4", bone starting to erode	5
BDCGL020	Tortoise Bone Fragments - Class 5	3729909	704649	02-APR-09 2:31:55PM	Four pieces of bone fragments, large, 3" x 1/2", one piece of scute still on bone, adult, upstream from scutes of BDCGL021	5
BDCGL021	Tortoise Bone Fragments - Class 5	3729918	704662	02-APR-09 2:39:59PM	Two scutes downstream from pieces of BDCGL020	5
BDCSC003	Tortoise Bone Fragments - Class 5	3728570	707157	03-APR-09 2:51:18PM	Bone fragments from tortoise	5
BDCAD023	Tortoise Bone Fragments - Class 5	3730007	710823	05-APR-09 1:07:45PM	Tortoise bone fragments, 2 cm x 2.5 cm, starting to peel, old bone	5
BDCMR011	Tortoise Bone Fragments - Class 5	3730051	710270	05-APR-09 12:13:02PM	Two small bone fragments	5
BDCCG011	Tortoise Bone Fragments - Class 5	3730035	709742	06-APR-09 2:04:03PM	Tortoise bone fragment, 1 x 2 cm, not mineralized	5
BDCAD032	Tortoise Bone Fragments - Class 5	3729738	709714	06-APR-09 2:25:46PM	Tortoise bone fragments (2), 1.5 x 2 cm, 1 x 1 cm, not mineralized	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCCG012	Tortoise Bone Fragments - Class 5	3729682	709729	06-APR-09 2:29:41PM	Tortoise bone fragment (2) 1 x 1 cm, 2 x 2 cm, not mineralized	5
BDCCG013	Tortoise Bone Fragments - Class 5	3729790	709672	06-APR-09 3:54:11PM	Tortoise bone fragment, 2 x 3 cm	5
BDCAD033	Tortoise Bone Fragments - Class 5	3729718	709654	06-APR-09 3:58:22PM	Tortoise Bone Fragments (2), 2 x 3 cm, 1 x 2 cm	5
BDCAD034	Tortoise Bone Fragments - Class 5	3729905	709640	06-APR-09 4:30:14PM	Tortoise bone fragment, 2 x 2 cm	5
BDCAD035	Tortoise Bone Fragments - Class 5	3729990	709643	06-APR-09 4:35:07PM	Tortoise bone fragments, 1 x 2 cm	5
BDCAD027	Tortoise Bone Fragments - Class 5	3729971	709942	06-APR-09 9:17:32AM	Tortoise bone fragment, 2 x 2.5 cm, highly mineralized	5
BDCPB009	Tortoise Bone Fragments - Class 5	3727364	706132	08-APR-09 2:09:34PM	Tortoise bone fragment, not mineralized, 3 fragments, 2 x 3 cm	5
BDCAD047	Tortoise Bone Fragments - Class 5	3727240	706207	08-APR-09 9:44:26AM	Tortoise bone fragments (6), not mineralized, from adult	5
BDCPB008	Tortoise Bone Fragments - Class 5	3727198	706210	08-APR-09 9:51:59AM	Plastron fragment, not mineralized, from adult	5
BDCGL031	Tortoise Bone Fragments - Class 5	3728559	703952	08-MAY-09 7:21:03PM	Tortoise bone fragments, 2 pieces, not mineralized, old, 1" x 3/4", 1/4" x 3/4" + 2 pieces about 10 m to SE, 1 1/2" x 1", 1" x 1/2"	5
BDCJH001	Tortoise Bone Fragments - Class 5	3727416	706014	09-APR-09 1:12:25PM	Tortoise bone fragment, 11 cm x 5 cm, plastron fragment	5
BDCAD048	Tortoise Bone Fragments - Class 5	3726497	706049	09-APR-09 10:34:40AM	Two pieces of bone fragments, 1 x 5 cm, 1 x 5.5 cm, pelvic?	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCAD049	Tortoise Bone Fragments - Class 5	3726710	706039	09-APR-09 11:36:35AM	Five bone fragments, old, near possible pallet/burrow	5
BDCPB010	Tortoise Bone Fragments - Class 5	3726954	706008	09-APR-09 12:18:39PM	8 cm x 3 cm, tortoise bone	5
BDCAD050	Tortoise Bone Fragments - Class 5	3726965	706027	09-APR-09 12:21:01PM	Scute, adult	5
BDCJH002	Tortoise Bone Fragments - Class 5	3726956	705985	09-APR-09 3:30:08PM	Tortoise scute, adult	5
BDCJH003	Tortoise Bone Fragments - Class 5	3726942	705909	09-APR-09 4:49:23PM	Marginal and other bone, 6 fragments, adult	5
BDCPB0011	Tortoise Bone Fragments - Class 5	3726944	705916	09-APR-09 4:52:25PM	In woodrat midden, 2 scutes	5
BDCMR025	Tortoise Bone Fragments - Class 5	3729347	710251	09-MAY-09 11:03:09AM	Mineralized bone fragment, 4 cm x 1.5 cm	5
BDCMR026	Tortoise Bone Fragments - Class 5	3728925	710220	09-MAY-09 11:19:42AM	Mineralized bone fragment, 4.5 cm x 3 cm	5
BDCCG051	Tortoise Bone Fragments - Class 5	3728585	710211	09-MAY-09 11:29:07AM	2 fragments, 10 meters apart, in small drainage, 2.5 cm x 2.5 cm, 3 cm x 2 cm	5
BDCMG002	Tortoise Bone Fragments - Class 5	3728476	710199	09-MAY-09 11:36:01AM	Mineralized, 5 x 3 cm	5
BDCCG052	Tortoise Bone Fragments - Class 5	3728728	710147	09-MAY-09 12:27:29PM	Mineralized, 4 cm x 2.2 cm	5
BDCCG053	Tortoise Bone Fragments - Class 5	3729197	710094	09-MAY-09 5:02:24PM	Mineralized fragment, 3 cm x 3 cm, located in small drainage	5
BDCSD020	Tortoise Bone Fragments - Class 5	3728101	703943	09-MAY-09 5:32:08PM	Tortoise bone fragment 1/4" x 1/2", old	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCCG050	Tortoise Bone Fragments - Class 5	3729195	710364	09-MAY-09 7:51:11AM	1 cm x 1 cm, discovered in open area, with scattered creosote,	5
BDCGL024	Tortoise Bone Fragments - Class 5	3728572	704576	10-APR-09 10:57:33AM	One piece of tortoise bone fragment, 1/4" x 1"	5
BDCSD014	Tortoise Bone Fragments - Class 5	3729215	704490	10-APR-09 3:47:55PM	Tortoise bone fragments, half of plastron still intact, carapace and fragments, some scutes fallen off but present, adult, pelvic bone present, likely female, MCL = 9", width = 8"	5
BDCPB013	Tortoise Bone Fragments - Class 5	3726726	706661	11-APR-09 11:46:37AM	1 cm x 0.5 cm, two fragments, not mineralized	5
BDCCG023	Tortoise Bone Fragments - Class 5	3726781	706525	11-APR-09 6:00:14PM	Tortoise bone fragments, 6 x 2 cm	5
BDCCG059	Tortoise Bone Fragments - Class 5	3729080	709331	11-MAY-09 1:59:51PM	2.5 cm x 2.5 cm, mineralized	5
BDCSC014	Tortoise Bone Fragments - Class 5	3728244	710004	11-MAY-09 10:11:50AM	3 x 3 cm, adjacent to shallow wash, mineralized	5
BDCCG058	Tortoise Bone Fragments - Class 5	3729328	709360	11-MAY-09 12:00:53PM	1.5 x 0.5 cm, not mineralized	5
BDCMG005	Tortoise Bone Fragments - Class 5	3729197	709342	11-MAY-09 2:06:54PM	3.5 cm x 2.5 cm, mineralized	5
BDCJH006	Tortoise Bone Fragments - Class 5	3729087	709290	11-MAY-09 2:25:01PM	2 pieces, about 2.5 cm x 2.5 cm, not mineralized	5
BDCCG060	Tortoise Bone Fragments - Class 5	3728842	709296	11-MAY-09 2:35:42PM	2 pieces, 3 cm x 3 cm, some mineralization	5
BDCMG006	Tortoise Bone Fragments - Class 5	3728633	709279	11-MAY-09 2:54:30PM	3.5 cm x 2.5 cm, some mineralization	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCJH004	Tortoise Bone Fragments - Class 5	3729120	709564	11-MAY-09 7:43:56AM	3.5 x 2.5 cm, mineralized	5
BDCCG056	Tortoise Bone Fragments - Class 5	3729101	709538	11-MAY-09 8:06:07AM	2 cm x 2 cm, mineralized	5
BDCCG057	Tortoise Bone Fragments - Class 5	3729258	709476	11-MAY-09 9:14:00AM	2.5 cm x 2.5 cm	5
BDCJH005	Tortoise Bone Fragments - Class 5	3728585	709472	11-MAY-09 9:52:08AM	1 cm x 2 cm, not mineralized	5
BDCMG004	Tortoise Bone Fragments - Class 5	3728560	709484	11-MAY-09 9:55:42AM	2.5 cm x 2.5 cm, some mineralization, 1 cm x 1 cm about 10 meters west	5
BDCCG024	Tortoise Bone Fragments - Class 5	3727103	706450	12-APR-09 11:00:52AM	Tortoise bone fragments, 2.5 x 3 cm, one fragment, marginal bone	5
BDCCG025	Tortoise Bone Fragments - Class 5	3727109	706308	12-APR-09 2:49:42PM	Old, one fragment, 2 cm x 2 cm	5
BDCCG026	Tortoise Bone Fragments - Class 5	3727265	706261	12-APR-09 4:45:29PM	One fragment, 3 cm x 3 cm	5
BDCJH007	Tortoise Bone Fragments - Class 5	3726672	710779	12-MAI-09 10:09:25AM	3 cm x 2 cm, possibly tortoise, mineralized	5
BDCRW002	Tortoise Bone Fragments - Class 5	3727497	710748	12-MAY-09 11:20:50AM	2 pieces, 1 cm x 1 cm, 2 cm x 2 cm, mineralized, possibly tortoise	5
BDCPB015	Tortoise Bone Fragments - Class 5	3728907	706989	13-APR-09 1:43:06PM	Tortoise bone fragment, 1 cm x 1 cm	5
BDCAD052	Tortoise Bone Fragments - Class 5	3729257	704406	14-APR-09 10:31:55AM	Tortoise plastron, adult, 3.5 x 3.5 cm	5
BDCAD053	Tortoise Bone Fragments - Class 5	3728582	704412	14-APR-09 11:12:54AM	Plastron piece, mineralized, 3 x 4 cm	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDBAD009	Tortoise Bone Fragments - Class 5	3728569	704423	14-APR-09 11:19:39AM	Tortoise bone, 5 x 10 cm	5
BDCPB017	Tortoise Bone Fragments - Class 5	3728607	704357	14-APR-09 2:27:21PM	Tortoise finger/claw bone, 0.5 x 1 cm	5
BDCAD054	Tortoise Bone Fragments - Class 5	3728552	704337	14-APR-09 2:36:01PM	Plastron bone fragment, 1 x 4 cm	5
BDCAD051	Tortoise Bone Fragments - Class 5	3729349	704381	14-APR-09 9:20:05AM	Tortoise bone fragments, 2 scutes, adult, very warn, 3 x 7 cm, in wash	5
BDCAD002	Tortoise Bone Fragments - Class 5	3729907	706410	14-MAR-09 1:57:38PM	Bone fragment from marginal	5
BDCAD003	Tortoise Bone Fragments - Class 5	3730051	706414	14-MAR-09 2:05:20PM	Bone fragment from marginal	5
BDCAD004	Tortoise Bone Fragments - Class 5	3730055	706562	14-MAR-09 2:13:07PM	Bone fragment from marginal	5
BDCCG002	Tortoise Bone Fragments - Class 5	3728685	706368	14-MAR-09 6:16:01PM	Disarticulated tortoise skeleton, less than 10 years, 12.5" x 19" (one half plastron)	5
BDCAD058	Tortoise Bone Fragments - Class 5	3729363	704297	15-APR-09 1:43:44PM	Scute, 3.5 x 4 cm, heavily worn, small hole on margin, pellet hole?	5
BDCPB019	Tortoise Bone Fragments - Class 5	3729236	704220	15-APR-09 10:27:38AM	One bone fragment, adult, 4 x 5 cm	5
BDCAD055	Tortoise Bone Fragments - Class 5	3728738	704258	15-APR-09 11:54:18AM	One bone fragment, 2 x 2 cm, not mineralized	5
BDCAD056	Tortoise Bone Fragments - Class 5	3728959	704272	15-APR-09 12:04:54PM	Five fragments, adult, 5 x 4 cm = largest	5
BDCAD057	Tortoise Bone Fragments - Class 5	3728965	704256	15-APR-09 12:08:22PM	Two bone fragments, shell edge, 1 x 1 cm	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCGL026	Tortoise Bone Fragments - Class 5	3728560	704432	15-APR-09 12:57:43PM	One piece of tortoise bone, 1 1/4" x 3/4", eroded	5
BDCPB018	Tortoise Bone Fragments - Class 5	3729231	704208	15-APR-09 9:26:42AM	Seven fragments, adult	5
BDCMR004	Tortoise Bone Fragments - Class 5	3728765	706247	15-MAR-09 1:15:11PM	Bone fragments, very small pieces, scattered down wash, less than 1"	5
BDCMR005	Tortoise Bone Fragments - Class 5	3728884	706245	15-MAR-09 1:22:27PM	Bone fragments, very small, one piece, less than 1"	5
BDCMR006	Tortoise Bone Fragments - Class 5	3729926	706248	15-MAR-09 1:59:37PM	Bone fragment, 1", one piece, split into 3 pieces when touched	5
BDCAD006	Tortoise Bone Fragments - Class 5	3728467	706323	15-MAR-09 10:03:10AM	Plastron fragment, greater than 10 years old, plus shell fragment	5
BDCCG003	Tortoise Bone Fragments - Class 5	3728472	706301	15-MAR-09 10:20:48AM	Six to 8 shell fragments, within 10 meters	5
BDCAD007	Tortoise Bone Fragments - Class 5	3728703	706308	15-MAR-09 10:30:08AM	Old tortoise shell, greater than 10 years old	5
BDCMR003	Tortoise Bone Fragments - Class 5	3729143	706291	15-MAR-09 10:55:52AM	Old shell fragments, greater than 15 years	5
BDCCG004	Tortoise Bone Fragments - Class 5	3730003	706300	15-MAR-09 11:37:26AM	Plastron fragment, greater than 10 years old	5
BDCAD008	Tortoise Bone Fragments - Class 5	3729943	706184	15-MAR-09 2:19:14PM	Bone fragments, 7 pieces, 15+ years old, white, disarticulated	5
BDCMR002	Tortoise Bone Fragments - Class 5	3730013	706329	15-MAR-09 9:01:06AM	Bone fragment, marginal	5
BDCAD005	Tortoise Bone Fragments - Class 5	3728480	706324	15-MAR-09 9:57:09AM	Shell fragments, greater than 10 years old	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCAD060	Tortoise Bone Fragments - Class 5	3729455	704112	16-APR-09 1:13:31PM	Shell fragment, 2 x 2 cm	5
BDCPB021	Tortoise Bone Fragments - Class 5	3729893	704128	16-APR-09 1:41:05PM	Adult fragments, embedded in desert pavement in tank track	5
BDCAD059	Tortoise Bone Fragments - Class 5	3728729	704118	16-APR-09 12:19:56PM	1 x 2 cm, shell fragment, unmineralized	5
BDCAD061	Tortoise Bone Fragments - Class 5	3728930	704111	16-APR-09 2:35:25PM	One tortoise bone fragment, 1 x 1.5 cm	5
BDCAD062	Tortoise Bone Fragments - Class 5	3728727	704106	16-APR-09 2:46:27PM	Tortoise bone fragment, 0.5 x 2 cm	5
BDCAD063	Tortoise Bone Fragments - Class 5	3728517	704105	16-APR-09 3:06:36PM	2 to 3 fragments, 1.5 x 1 cm	5
BDCPB024	Tortoise Bone Fragments - Class 5	3728146	703313	16-APR-09 5:47:43PM	Vertebral bones	5
BDCGL002	Tortoise Bone Fragments - Class 5	3729358	704272	16-FEB-09 10:31:05AM	Desert tortoise bone fragments (several), may be from BDCSD003 and BDCGL001, vertebral, mainly marginal, one nuchal	5
BDCGL003	Tortoise Bone Fragments - Class 5	3728599	707062	16-MAR-09 1:18:16PM	One piece of tortoise bone, marginal scute	5
BDCSD021	Tortoise Bone Fragments - Class 5	3728188	703827	16-MAY-09 3:46:01PM	Adult tortoise bone fragment, thick (1/2", 1 1/2" x 1/4"	5
BDCSD022	Tortoise Bone Fragments - Class 5	3728157	704327	16-MAY-09 4:13:37PM	5 bone fragments, large pieces, 2 pieces of vertebral and costal, 5" x 3" each, 2 pieces vertebrals, 2" x 1" each, one piece vertebral/costal 3" x 2", all carapace, adult	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCEE002	Tortoise Bone Fragments - Class 5	3726732	709879	16-MAY-09 8:40:59AM	6 cm x 2.5 cm	5
BDCCG061	Tortoise Bone Fragments - Class 5	3727470	709832	16-MAY-09 9:48:28AM	1.5 cm x 1.5 cm	5
BDCMR017	Tortoise Bone Fragments - Class 5	3730056	709118	17-APR-09 1:15:15PM	Adult tortoise bone fragment, 2 x 1.5 cm	5
BDCCG027	Tortoise Bone Fragments - Class 5	3729526	709199	17-APR-09 10:33:34AM	2 x 2 cm, adult, mineralized	5
BDCCG028	Tortoise Bone Fragments - Class 5	3730054	709201	17-APR-09 10:51:37AM	Adult, 2.5 x 1.5 cm, not mineralized	5
BDCMR016	Tortoise Bone Fragments - Class 5	3729861	709174	17-APR-09 11:23:01AM	Adult fragment, 3 x 2 cm, mineralized	5
BDCCG029	Tortoise Bone Fragments - Class 5	3730058	709153	17-APR-09 12:06:28PM	Adult, 1.5 x 1 cm fragment	5
BDCSC004	Tortoise Bone Fragments - Class 5	3729676	709095	17-APR-09 12:44:03PM	Adult, 40 x 30 cm fragment	5
BDCGL027	Tortoise Bone Fragments - Class 5	3728225	704023	17-APR-09 3:50:37PM	Three pieces, one piece is 1/4 of carpace with marginals, costals and vertebrals, one piece vertebral, one marginal, adult	5
BDCMR015	Tortoise Bone Fragments - Class 5	3729615	709294	17-APR-09 9:25:40AM	Disarticulated, old, not mineralized, 5 cm x 4 cm	5
BDCCG045	Tortoise Bone Fragments - Class 5	3729410	708631	18-APR-09 2:12:27PM	One fragment, mineralized, 3 cm x 3 cm	5
BDCSD023	Tortoise Bone Fragments - Class 5	3721572	708429	18-MAY-09 3:44:44PM	Tortoise bone, mineralized, 1 1/4" x 1", plastron	5
BDCAD065	Tortoise Bone Fragments - Class 5	3721683	708414	18-MAY-09 3:55:18PM	Tortoise bone, likely pectoral girdle, 2" x 1", not mineralized	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCMR019	Tortoise Bone Fragments - Class 5	3729574	708261	19-APR-09 1:44:51PM	Disarticulated, ~1/4 tortoise, ~20 pieces	5
BDCSC006	Tortoise Bone Fragments - Class 5	3729333	708280	19-APR-09 1:57:12PM	2 x 1 cm, some mineralization	5
BDCSC005	Tortoise Bone Fragments - Class 5	3729441	708332	19-APR-09 12:45:46PM	2 fragments, ~1.5 cm x 1.5 cm	5
BDCSC007	Tortoise Bone Fragments - Class 5	3727970	708238	19-APR-09 2:31:30PM	Two fragments, 2 x 1.5 cm	5
BDCSC008	Tortoise Bone Fragments - Class 5	3729915	707262	20-APR-09 11:14:29AM	Mineralized gular, 75 mm x 70 mm	5
BDCGL028	Tortoise Bone Fragments - Class 5	3729365	704311	20-APR-09 5:04:37PM	One piece of tortoise bone, eroded, old, 3/4" x 1/2", plus one tiny piece and one large scute (3" x 2")	5
BDCSD007	Tortoise Bone Fragments - Class 5	3728694	706178	20-MAR-09 10:31:50AM	One piece of tortoise bone, old, confirmed tortoise	5
BDCSD008	Tortoise Bone Fragments - Class 5	3729943	706184	20-MAR-09 11:40:45AM	Seven pieces of disarticulated, scattered bones, confirmed tortoise, juvenile	5
BDCGL004	Tortoise Bone Fragments - Class 5	3729968	706169	20-MAR-09 11:53:37AM	Tortoise bone, marginal, one piece	5
BDCGL005	Tortoise Bone Fragments - Class 5	3728440	706162	20-MAR-09 12:52:29PM	Tortoise bone, 1.5" x 1.5", one piece, confirmed tortoise	5
BDCAD009	Tortoise Bone Fragments - Class 5	3728991	706123	21-MAR-09 11:16:32AM	Tortoise plastron bone, two pieces	5
BDCMG001	Tortoise Bone Fragments - Class 5	3728706	707567	22-APR-09 9:22:53AM	4 x 2.5 cm, one piece, remaining carcass 10 m to west, 20+ pieces	5
BDCAD010	Tortoise Bone Fragments - Class 5	3728897	705916	22-MAR-09 11:35:02AM	One marginal tortoise fragment, 5+ years	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCGL006	Tortoise Bone Fragments - Class 5	3728596	704769	22-MAR-09 12:58:31PM	Tortoise scute, vertebral, adult, 3" x 2" wide (one scute), likely a piece from BDCGL007, picture	5
BDCSC009	Tortoise Bone Fragments - Class 5	3729272	707922	23-APR-09 3:19:20PM	Disarticulated pieces, small, 5	5
BDCAD011	Tortoise Bone Fragments - Class 5	3729763	705751	23-MAR-09 1:33:17PM	One tortoise bone fragment, dead about 5 years	5
BDCGL008	Tortoise Bone Fragments - Class 5	3728104	706890	23-MAR-09 3:18:47PM	Two pieces of confirmed desert tortoise bone, 1" each	5
BDCGL009	Tortoise Bone Fragments - Class 5	3729757	705649	24-MAR-09 1:15:00PM	One piece of marginal tortoise bone, some small bones in area may be tortoise	5
BDCMR021	Tortoise Bone Fragments - Class 5	3727526	707529	25-APR-09 1:17:14PM	2.5 x 1.5 cm, one fragment	5
BDCMR020	Tortoise Bone Fragments - Class 5	3727451	707401	25-APR-09 11:09:33AM	1.5 x 1.5 cm fragment	5
BDCCG047	Tortoise Bone Fragments - Class 5	3727720	707470	25-APR-09 12:06:37PM	Three fragments, 3 x 2 cm	5
BDCCG048	Tortoise Bone Fragments - Class 5	3727627	707516	25-APR-09 12:32:18PM	Two fragments, 3 x 3 cm	5
BDCMR022	Tortoise Bone Fragments - Class 5	3727506	707616	25-APR-09 3:48:22PM	Two fragments, 2.5 x 1.5 cm	5
BDCCG046	Tortoise Bone Fragments - Class 5	3727746	707319	25-APR-09 9:02:59AM	Two fragments, +/- 10 meters apart, 3 cm x 3 cm	5
BDCMR024	Tortoise Bone Fragments - Class 5	3727942	707996	26-APR-09 1:57:11PM	One fragment, 5 x 4 cm	5
BDCMR023	Tortoise Bone Fragments - Class 5	3727973	707824	26-APR-09 10:38:39AM	44 mm x 35 mm	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCCG049	Tortoise Bone Fragments - Class 5	3728001	707841	26-APR-09 10:45:35AM	1.5 cm x 1.5 cm	5
BDCAD066	Tortoise Bone Fragments - Class 5	3726759	707464	26-MAY-09 11:04:37AM	Tortoise bone fragment, 1/4" x 1/4", not mineralized	5
BDCAD067	Tortoise Bone Fragments - Class 5	3726777	707512	26-MAY-09 11:27:33AM	Tortoise bone fragments, one piece carapace 1 1/2" x 1/2", 1" x 1/2", 50+ more pieces from 0707490 to 070510, likely one piece and died in vicinity	5
BDCAD068	Tortoise Bone Fragments - Class 5	3726154	707523	26-MAY-09 12:02:05PM	Tortoise bone fragment, 1/2" x 1/4" mineralized	5
BDCJH011	Tortoise Bone Fragments - Class 5	3727957	711183	26-MAY-09 12:14:33PM	2 x 2 (no units) partially mineralized plastron	5
BDCSD024	Tortoise Bone Fragments - Class 5	3726130	707560	26-MAY-09 12:56:31PM	Tortoise bone fragment, 1 1/2" x 1", two pieces, starting to erode, not mineralized	5
BDCAD069	Tortoise Bone Fragments - Class 5	3726118	707569	26-MAY-09 12:58:46PM	Tortoise bone fragment, mineralized, 1" x 1/2"	5
BDCSD025	Tortoise Bone Fragments - Class 5	3726442	707678	26-MAY-09 7:22:33PM	Tortoise bone fragment, slightly mineralized, 3/4" x 1/2"	5
BDCAD072	Tortoise Bone Fragments - Class 5	3726626	707740	27-MAY-09 10:11:34AM	1 tortoise bone fragment, 1/2" x 1/2", very thin bone, definitely tortoise, in old tank track, slightly mineralized	5
BDCAD073	Tortoise Bone Fragments - Class 5	3726708	707742	27-MAY-09 10:17:15AM	1 tortoise bone fragment, in desert pavement, next to tank track, 3/4" x 1/2"	5
BDCGL033	Tortoise Bone Fragments - Class 5	3726414	707760	27-MAY-09 10:44:55AM	One fragment, probably from carapace, 1" x 3/4"	5
BDCAD074	Tortoise Bone Fragments - Class 5	3726378	707773	27-MAY-09 10:48:04AM	One fragment, 2" x 1.5", definitely tortoise	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCGL034	Tortoise Bone Fragments - Class 5	3726029	707751	27-MAY-09 10:58:40AM	Fragment, completely mineralized, 1" x 1"	5
BDCGL035	Tortoise Bone Fragments - Class 5	3726426	707799	27-MAY-09 11:40:32AM	One piece of marginal tortoise bone, 1/2" x 1/2"	5
BDCSD026	Tortoise Bone Fragments - Class 5	3726426	707833	27-MAY-09 5:06:23PM	One piece of vertebral tortoise bone, 3/4" x 1/2"	5
BDCAD075	Tortoise Bone Fragments - Class 5	3726437	707847	27-MAY-09 5:08:52PM	Marginal plastron, one piece, 1/2" x 1/4", tortoise bone likely from subadult animal	5
BDCAD071	Tortoise Bone Fragments - Class 5	3726179	707727	27-MAY-09 9:39:53AM	2 tortoise bone fragments, 1/2" x 1/2", not mineralized, on desert pavement, thin bone, probably from subadult	5
BDCGL010	Tortoise Bone Fragments - Class 5	3729433	705387	28-MAR-09 10:38:32AM	One piece of marginal tortoise bone	5
BDCAD012	Tortoise Bone Fragments - Class 5	3728817	705169	28-MAR-09 12:11:39PM	Tortoise carcass, one piece, white bone fragment, adult	5
BDCSD009	Tortoise Bone Fragments - Class 5	3728433	705152	28-MAR-09 2:01:15PM	Tortoise carapace fragment, 1 1/2" x 1"	5
BDCMR008	Tortoise Bone Fragments - Class 5	3728836	705204	28-MAR-09 2:30:59PM	Plastron fragment, 5+ years	5
BDCMR009	Tortoise Bone Fragments - Class 5	3728810	705056	28-MAR-09 5:54:05PM	Small fragment of scute, less than 1"	5
BDCSD029	Tortoise Bone Fragments - Class 5	3726285	708071	28-MAY-09 1:00:07PM	1" x 1/2", one piece tortoise bone, not mineralized, plastron marginal	5
BDCAD078	Tortoise Bone Fragments - Class 5	3726071	708083	28-MAY-09 1:05:59PM	3/4" x 1/2", one piece tortoise bone, likely subadult, slightly mineralized	5
BDCAD079	Tortoise Bone Fragments - Class 5	3726045	708090	28-MAY-09 1:10:31PM	Tortoise bone fragment, 1" x 1", not mineralized	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCGL038	Tortoise Bone Fragments - Class 5	3726074	708114	28-MAY-09 1:12:40PM	1" x 1", eroded, not mineralized	5
BDCAD080	Tortoise Bone Fragments - Class 5	3726640	708089	28-MAY-09 1:29:13PM	mineralized marginal bone fragment, 1" x 1/2"	5
BDCSD027	Tortoise Bone Fragments - Class 5	3726316	708012	28-MAY-09 10:42:44AM	4 pieces of tortoise bone, 1" x 3/4", 1" x 1/2", 1/2" x 1/2" vertebral, 1/4" x 1/4", slightly mineralized	5
BDCSD028	Tortoise Bone Fragments - Class 5	3726528	708015	28-MAY-09 10:50:25AM	Several small bone fragments, beginning to erode, 10+ fragments, largest = 1" x 1/2"	5
BDCAD076	Tortoise Bone Fragments - Class 5	3726598	708021	28-MAY-09 10:53:23AM	One piece of tortoise bone, old, eroded, 1/2" x 1/4"	5
BDCAD077	Tortoise Bone Fragments - Class 5	3726641	708033	28-MAY-09 11:24:12AM	1" x 1" bone fragment, likely plastron	5
BDCGL036	Tortoise Bone Fragments - Class 5	3726500	708047	28-MAY-09 11:31:55AM	1" x 1" tortoise bone	5
BDCGL037	Tortoise Bone Fragments - Class 5	3726238	708046	28-MAY-09 11:44:11AM	One piece, 1 1/2" x 3/4" plastron, slightly mineralized	5
BDCAD081	Tortoise Bone Fragments - Class 5	3726657	708134	28-MAY-09 6:26:38PM	3/4" x 1/2", one piece, tortoise bone fragment, not mineralized	5
BDCGL039	Tortoise Bone Fragments - Class 5	3726229	708210	28-MAY-09 7:19:54PM	Tortoise bone fragment, mineralized, 3/4" x 1/2"	5
BDCAD082	Tortoise Bone Fragments - Class 5	3726244	708230	28-MAY-09 7:22:07PM	Tortoise bone fragment, non-mineralized, 1/2" x 1/4"	5
BDCGL040	Tortoise Bone Fragments - Class 5	3726664	708214	28-MAY-09 7:36:08PM	1" x 1", carapace, non-mineralized	5
BDCSD011	Tortoise Bone Fragments - Class 5	3729329	704855	29-MAR-09 1:11:48PM	Tortoise bone fragment, one piece	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCCG008	Tortoise Bone Fragments - Class 5	3729961	704886	29-MAR-09 1:37:21PM	Small fragment of bone, over 5 years dead	5
BDCAD015	Tortoise Bone Fragments - Class 5	3729708	704869	29-MAR-09 1:38:04PM	One piece of marginal bone	5
BDCSD010	Tortoise Bone Fragments - Class 5	3729393	704948	29-MAR-09 10:38:41AM	Tortoise bone fragments, eroded, several pieces, marginal with coastal areas on one side, picture	5
BDCCG005	Tortoise Bone Fragments - Class 5	3729408	705009	29-MAR-09 10:42:22AM	Small bone fragments, 5 meter area, dead 10+ years	5
BDCCG006	Tortoise Bone Fragments - Class 5	3729400	705012	29-MAR-09 10:47:08AM	3 disarticulated bone fragments, 10+ years dead	5
BDCAD014	Tortoise Bone Fragments - Class 5	3728807	704873	29-MAR-09 12:52:49PM	Tortoise bone fragment, one piece, adult, appears to be nuchal	5
BDCAD016	Tortoise Bone Fragments - Class 5	3729660	704816	29-MAR-09 2:21:01PM	Joint bone from tortoise	5
BDCSD012	Tortoise Bone Fragments - Class 5	3729481	704831	29-MAR-09 2:29:09PM	Two pieces of marginal scutes, likely from carcass upstream in wash	5
BDCAD017	Tortoise Bone Fragments - Class 5	3729478	704822	29-MAR-09 2:32:26PM	One plastron bone piece, likely from carcass upstream	5
BDCSC001	Tortoise Bone Fragments - Class 5	3728833	705091	29-MAR-09 9:04:55AM	Small bone fragment in wash	5
BDCMR010	Tortoise Bone Fragments - Class 5	3729336	705041	29-MAR-09 9:40:54AM	Disarticulated, concentrated in a 2 meter area, predated, 5 years +	5
BDCGL048	Tortoise Bone Fragments - Class 5	3726149	708463	29-MAY-09 7:45:00PM	Tortoise leg bone	5
BDCAD018	Tortoise Bone Fragments - Class 5	3729361	706959	30-MAR-09 12:23:27PM	Tortoise bone, one piece, 1/2" x 1/2"	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCGL011	Tortoise Bone Fragments - Class 5	3728615	704773	30-MAR-09 6:26:08PM	Tortoise bones, 2 scutes, leg bone and a few other pieces, probably from same animal as BDCGL007	5
BDCAD019	Tortoise Bone Fragments - Class 5	3728596	704797	30-MAR-09 6:34:04PM	One piece of tortoise scute	5
BDCCG063	Tortoise Bone Fragments - Class 5	3728947	708807	30-MAY-09 1:30:24PM	2 pieces, 5 cm x 2.5 cm, 2.5 cm x 2 cm	5
BDCAD021	Tortoise Bone Fragments - Class 5	3729656	704733	31-MAR-09 10:00:41AM	One piece of marginal bone, very old	5
BDCGL013	Tortoise Bone Fragments - Class 5	3729948	704722	31-MAR-09 10:23:48AM	Small tortoise bone fragment, one piece	5
BDCGL014	Tortoise Bone Fragments - Class 5	3729116	704708	31-MAR-09 11:43:40AM	Three small pieces of tortoise bone	5
BDCAD022	Tortoise Bone Fragments - Class 5	3728609	704705	31-MAR-09 2:45:29PM	One small piece of tortoise bone, fragment	5
BDCAD020	Tortoise Bone Fragments - Class 5	3729470	704728	31-MAR-09 9:42:47AM	One piece of tortoise bone, shell fragment	5
BDCPB012	Tortoise Bone Fragments - Class 5	3725928	706835	10-APR-09 10:35:27AM	Tortoise bone fragment, 2.5 x 3 cm	5
BDCSD054	Tortoise Bone Fragments - Class 5	3724392	707986	03-JUN-09 5:35:02PM	Tortoise leg bone, 1/2 present	5
BDCRW001	Tortoise Bone Fragments - Class 5	3727524	710824	08-MAI-09 11:17:31AM	2 x 3 cm, in shallow drainage	5
BDCSC010	Tortoise Bone Fragments - Class 5	3728455	710976	08-MAI-09 8:43:20AM	2 x 4 cm, possibly burro hip bone fragment	5
BDCEE001	Tortoise Bone Fragments - Class 5	3727370	710022	13-MAY-09 2:21:32PM	Observed outside of BKBEE001 burrow entrance, 15 pieces, between 5 cm and 1 cm	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCPB023	Tortoise Bone Fragments - Class 5	3727868	702792	16-APR-09 4:34:24PM	Plastron fragment, 5 x 8 cm	5
BDCSD031	Tortoise Bone Fragments - Class 5	3726120	708342	29-MAY-09 11:56:05AM	Tortoise bone (confirmed), from smaller animal, possibly juvenile, 1/4" x 1/2" plus one more piece 10 m to north, 1" x 3/4"	5
BDCMR030	Tortoise Bone Fragments - Class 5	3729333	708572	31-MAY-09 7:11:43AM	3 cm x 3 cm	5
BDCMG007	Tortoise Bone Fragments - Class 5	3728181	709758	31-MAY-09 8:50:56	7 carcass pieces, 2 cm x 3 cm	5
BDCAD001	Tortoise Bone Fragments - Class 5	3729411	706451	14-MAR-09 11:48:37AM	Tortoise piece plastron 3.5 cm x 4.5 cm	5
BDBAD027	Tortoise Bone Fragments - Class 5	3728768	704288	15-APR-09 2:31:22PM	Bone Fragment near BDBAD027	5
BDCSD050	Tortoise Bone Fragments - Class 5 - Fossil	3728610	707979	02-JUN-09 10:03:03AM	2 pieces, marginal and costal carapce, 1" x 1", 1" x 1", fit together, mineralized FOSSIL	5
BDCPS002	Tortoise Bone Fragments - Class 5, Mineralized	3727813	709150	01-JUN-09 10:23:35	35 x 65 mm, fragment, mineralized	5
BDCPS003	Tortoise Bone Fragments - Class 5, Mineralized	3727667	709074	01-JUN-09 11:15:05	25 x 25 mm, fragment, mineralized	5
BDCPS001	Tortoise Bone Fragments - Class 5, Mineralized	3728077	709194	01-JUN-09 9:47:03	30 mm x 30 mm, mineralized, fragment	5
BDCNS010	Tortoise Bone Fragments - Class 5, Mineralized	3728399	708002	02-JUN-09 10:10:45AM	Tortoise bone fragment, 3/4" x 3/4", old, very slightly mineralized	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCGL061	Tortoise Bone Fragments - Class 5, Mineralized	3727964	708001	02-JUN-09 10:21:49AM	3/4" x 1/2", tortoise bone fragment, slightly mineralized	5
BDCGL063	Tortoise Bone Fragments - Class 5, Mineralized	3728601	708043	02-JUN-09 10:44:37AM	1 1/2" x 1 1/2", 8 mm thick, mineralized, within last 100 years	5
BDCAD086	Tortoise Bone Fragments - Class 5, Mineralized	3726079	708408	29-MAY-09 1:05:38PM	1/2" x 1/2", tortoise bone fragment, mineralized	5
BDCSD033	Tortoise Bone Fragments - Class 5, Mineralized	3726002	708401	29-MAY-09 1:11:19PM	3/4" x 1/4", tortoise bone fragment, slightly mineralized	5
BDCGL046	Tortoise Bone Fragments - Class 5, Mineralized	3725886	708389	29-MAY-09 1:15:05PM	3/4" x 3/4", tortoise bone fragment, mineralized	5
BDCGL047	Tortoise Bone Fragments - Class 5, Mineralized	3726505	708387	29-MAY-09 1:55:19PM	1/4" x 1/4", slightly mineralized tortoise bone fragment	5
BDCSD032	Tortoise Bone Fragments - Class 5, Mineralized	3726214	708345	29-MAY-09 12:02:35PM	One piece, 1/4" x 1/4" starting to mineralize	5
BDCGL044	Tortoise Bone Fragments - Class 5, Mineralized	3726337	708388	29-MAY-09 12:50:24PM	Mineralized, 3/4" x 1/2", one piece, marginal plastron	5
BDCSD030	Tortoise Bone Fragments - Class 5, Mineralized	3726514	708282	29-MAY-09 9:19:11AM	Mineralized tortoise bone, 1.5" x 1", carapace and 1/4" x 1/4"	5
BDCGL041	Tortoise Bone Fragments - Class 5, Mineralized	3726455	708289	29-MAY-09 9:24:19AM	One piece, 3/4" x 1/2", starting to mineralize	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCSD040	Tortoise Bone Fragments - Class 5, Mineralized	3726344	708603	30-MAY-09 10:41:40AM	1/2" x 1/2", tortoise bone fragment, marginal of subadult animal, slightly mineralized	5
BDCGL052	Tortoise Bone Fragments - Class 5, Mineralized	3726543	708609	30-MAY-09 10:49:26AM	1" x 3/4", tortoise bone fragment, slightly mineralized	5
BDCSD041	Tortoise Bone Fragments - Class 5, Mineralized	3726671	708599	30-MAY-09 10:55:11AM	1/2" x 1/2", tortoise bone fragment, mineralized	5
BDCSD042	Tortoise Bone Fragments - Class 5, Mineralized	3726028	708663	30-MAY-09 12:17:55PM	3 tortoise bone fragments, one plastron 1 1/2" x 1/2", 1" x 1", 1" x 1", starting to mineralize, large thick pieces	5
BDCES001	Tortoise Bone Fragments - Class 5, Mineralized	3726176	708671	30-MAY-09 12:29:14PM	Fully mineralized tortoise bone fragment, 1" x 3/4"	5
BDCES002	Tortoise Bone Fragments - Class 5, Mineralized	3726568	708673	30-MAY-09 12:46:14PM	1/4" x 1/2", tortoise bone fragment, 2 pieces, mineralized, + 2 pieces about 15 m to north, that are non-mineralized, 1/2" x 1/2"	5
BDCES004	Tortoise Bone Fragments - Class 5, Mineralized	3726576	708728	30-MAY-09 2:23:35PM	1/2" x 1/2", tortoise bone fragment, slightly mineralized	5
BDCSD046	Tortoise Bone Fragments - Class 5, Mineralized	3726501	708748	30-MAY-09 5:28:06PM	1/2" x 1/4", juvenile tortoise bone fragment, partially mineralized, plastron marginal	5
BDCGL058	Tortoise Bone Fragments - Class 5, Mineralized	3726058	708852	30-MAY-09 7:36:17PM	Slightly mineralized fragment, 1" x 1"	5
BDCMR027	Tortoise Bone Fragments - Class 5, Mineralized	3729317	708979	30-MAY-09 9:23:23AM	2 cm x 1 cm, mineralized	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCGL050	Tortoise Bone Fragments - Class 5, Mineralized	3726723	708564	30-MAY-09 9:27:11AM	2 tortoise bone fragments, 1" x 3/4" (both), slightly mineralized	5
BDCCG062	Tortoise Bone Fragments - Class 5, Mineralized	3729318	708971	30-MAY-09 9:32:44AM	3 cm x 1.5 cm, mineralized	5
BDCCG62	Tortoise Bone Fragments - Class 5, Mineralized	3728021	708472	31-MAY-09 10:42:21AM	7 cm x 3 cm, mineralized	5
BDCES006	Tortoise Bone Fragments - Class 5, Mineralized	3728215	709666	31-MAY-09 11:27:12	Mineralized bone, 1 cm x 1 cm fragment	5
BDCJH007	Tortoise Bone Fragments - Class 5, Mineralized	3726672	710779	12-MAI-09 10:09:25AM	3 cm x 2 cm, mineralized	5
BDCAD084	Tortoise Bone Fragments - Class 5, Mineralized	3726150	708270	29-MAY-09 9:39:30AM	One piece, 1" x 3/4", partially mineralized, marginal	5
BDCAD026	Tortoise Bone Fragments - Class 5, Mineralized	3729874	709948	06-APR-09 8:34:16AM	Tortoise bone fragment, 1.5 x 1.5 cm, slightly mineralized	5
BDCPB004	Tortoise Bone Fragments - Class 5, Mineralized	3729662	709471	07-APR-09 1:01:03PM	Tortoise bone fragment, 3 x 2.5 cm, mineralized	5
BDCAD043	Tortoise Bone Fragments - Class 5, Mineralized	3729652	709483	07-APR-09 1:04:03PM	Tortoise bone fragment, 2 x 2 cm, mineralized	5
BDCCG020	Tortoise Bone Fragments - Class 5, Mineralized	3729620	709450	07-APR-09 1:40:33PM	Tortoise bone fragment, 1.5 x 1.5 cm, mineralized	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCCG016	Tortoise Bone Fragments - Class 5, Mineralized	3729933	709605	07-APR-09 10:18:25AM	Tortoise bone fragment, 2 x 1.5 cm, mineralized	5
BDCCG017	Tortoise Bone Fragments - Class 5, Mineralized	3729705	709540	07-APR-09 10:32:25AM	Tortoise bone fragment, 2.5 x 2 cm, mineralized	5
BDCPB001	Tortoise Bone Fragments - Class 5, Mineralized	3729590	709512	07-APR-09 11:24:13AM	Tortoise bone fragment, mineralized shell fragment, 1 x 2 cm	5
BDCPB002	Tortoise Bone Fragments - Class 5, Mineralized	3729765	709513	07-APR-09 11:40:02AM	Tortoise bone fragment, slight mineralization, 2 x 2.5 cm	5
BDCAD039	Tortoise Bone Fragments - Class 5, Mineralized	3729947	709518	07-APR-09 11:55:51AM	Tortoise bone fragments (1), 1 x 2.5 cm, mineralized	5
BDCAD040	Tortoise Bone Fragments - Class 5, Mineralized	3730073	709501	07-APR-09 12:06:30PM	Tortoise bone fragment, 1 x 2 cm, leg bone, mineralized	5
BDCPB003	Tortoise Bone Fragments - Class 5, Mineralized	3729977	709553	07-APR-09 12:16:37PM	Tortoise bone fragment, 2.5 x 2 cm, mineralized	5
BDCCG018	Tortoise Bone Fragments - Class 5, Mineralized	3729967	709541	07-APR-09 12:20:13PM	Tortoise bone fragment, 1.5 x 2 cm, mineralized	5
BDCAD041	Tortoise Bone Fragments - Class 5, Mineralized	3729776	709479	07-APR-09 12:45:28PM	Tortoise bone fragment, 1.5 x 1 cm, mineralized	5
BDCCG019	Tortoise Bone Fragments - Class 5, Mineralized	3729748	709492	07-APR-09 12:50:54PM	Tortoise bone fragment, 1 x 1 cm, mineralized	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCAD042	Tortoise Bone Fragments - Class 5, Mineralized	3729716	709487	07-APR-09 12:55:55PM	Tortoise bone fragments, 1.5 x 3 cm, mineralized	5
BDCCG021	Tortoise Bone Fragments - Class 5, Mineralized	3729981	709392	07-APR-09 3:59:13PM	Tortoise bone fragment, mineralized shell, 2 cm x 1.5 cm	5
BDCAD044	Tortoise Bone Fragments - Class 5, Mineralized	3730043	709419	07-APR-09 4:05:47PM	Tortoise bone fragment, 1 x 2 cm, mineralized shell	5
BDCAD045	Tortoise Bone Fragments - Class 5, Mineralized	3729895	709350	07-APR-09 4:21:07PM	Tortoise bone fragment, 1.5 x 1 cm shell, mineralized	5
BDCCG022	Tortoise Bone Fragments - Class 5, Mineralized	3729762	709371	07-APR-09 4:28:58PM	Tortoise bone fragment, 1 x 0.5 cm, mineralized shell fragment	5
BDCAD046	Tortoise Bone Fragments - Class 5, Mineralized	3729813	709340	07-APR-09 5:01:37PM	Tortoise bone fragment, shell fragment, 2 x 2.5 cm, mineralized	5
BDCPB005	Tortoise Bone Fragments - Class 5, Mineralized	3729915	709317	07-APR-09 5:09:47PM	Tortoise bone fragment, shell fragment, 2 x 2.5 cm, not mineralized	5
BDCPB006	Tortoise Bone Fragments - Class 5, Mineralized	3730046	709361	07-APR-09 5:20:35PM	Tortoise bone fragment, shell fragment, 2 x 2.5 cm, slightly mineralized	5
BDCPB007	Tortoise Bone Fragments - Class 5, Mineralized	3729968	709361	07-APR-09 5:25:22PM	Tortoise bone fragment, shell fragment, 1 x 2 cm, not mineralized	5
BDCAD036	Tortoise Bone Fragments - Class 5, Mineralized	3730083	709573	07-APR-09 9:56:53AM	Tortoise bone fragment, 2 cm x 1 cm, slight mineralization	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCSC013	Tortoise Bone Fragments - Class 5, Mineralized	3728390	710199	10-MAY-09 12:42:03PM	Mineralized, 3 x 3 cm, possible tortoise	5
BDCCG055	Tortoise Bone Fragments - Class 5, Mineralized	3728682	709667	10-MAY-09 6:25:57PM	3 cm x 3 cm, mineralized	5
BDCMR018	Tortoise Bone Fragments - Class 5, Mineralized	3729915	708793	18-APR-09 10:59:25AM	2.5 x 1 cm, single fragment, partially mineralized	5
BDCAD024	Tortoise Bone Fragments - Class 5, Mineralized	3729453	710073	05-APR-09 3:24:10PM	Fragment, 2.5 cm x 4 cm, mineralized	5
BDCAD025	Tortoise Bone Fragments - Class 5, Mineralized	3729574	709987	05-APR-09 3:37:47PM	Fragment, 2.5 cm x 3.5 cm, mineralized	5
BDCMR012	Tortoise Bone Fragments - Class 5, Mineralized	3729748	709984	05-APR-09 3:48:33PM	Fragment, mineralized, 5.5 cm x 4 cm	5
BDCCG009	Tortoise Bone Fragments - Class 5, Mineralized	3729756	709791	06-APR-09 1:09:12PM	Tortoise bone fragment, 2.5 x 1 cm, moderately mineralized	5
BDCAD031	Tortoise Bone Fragments - Class 5, Mineralized	3729787	709759	06-APR-09 1:49:18PM	Tortoise bone fragment, 1.5 x 2 cm, lightly mineralized	5
BDCCG010	Tortoise Bone Fragments - Class 5, Mineralized	3729909	709745	06-APR-09 1:56:34PM	Tortoise bone fragments, from carapace, fully mineralized, 4 x 1 cm	5
BDCAAD028	Tortoise Bone Fragments - Class 5, Mineralized	3729761	709881	06-APR-09 10:20:13AM	Tortoise bone fragment, 3 x 4 cm, slightly mineralized plastron	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCAD029	Tortoise Bone Fragments - Class 5, Mineralized	3730061	709827	06-APR-09 10:54:21AM	Tortoise bone fragment, 1.5 x 2 cm, fully mineralized	5
BDCAD087	Tortoise Bone Fragments - Class 5, Mineralized	3726561	708365	29-MAY-09 2:00:29PM	Tortoise bone fragment, 1/4" x 1/4", slightly mineralized	5
BDCAD030	Tortoise Bone Fragments - Class 5, Mineralized	3729637	709834	06-APR-09 11:12:01AM	Tortoise bone fragment, 0.5 x 0.5 cm, mineralized	5
BDCSC011	Tortoise Bone Fragments - Class 5, Mineralized	3727734	710801	08-MAI-09 1:10:47PM	Mineralized, 4 x 3 cm, near base of creosote	5
BDCJH008	Tortoise Bone Fragments - Class 5, Mineralized	3727130	710519	12-MAY-09 3:00:46PM	Mineralized bone fragment, 2 cm x 2 cm, possibly tortoise	5
BDCJH009	Tortoise Bone Fragments - Class 5, Mineralized	3728869	710721	18-MAY-09 11:00:06AM	Possible tortoise bone, plastron, 4 cm x 4 cm, mineralized	5
BDCJH010	Tortoise Bone Fragments - Class 5, Mineralized	3729150	710801	18-MAY-09 12:30:10PM	30 to 40 small fragments, no mineralized	5
BDCGL032	Tortoise Bone Fragments - Class 5, Mineralized	3721741	708438	18-MAY-09 4:00:18PM	Tortoise bone fragments, not mineralized	5
BMCJH011	Tortoise Bone Fragments - Class 5, Mineralized	3728626	711480	19-MAY-09 2:01:42PM	20 pieces, mostly 1 cm x 1 cm, a few larger pieces, 15 meter radius, 3 cm x 2 cm with suture lines/scute lines, not mineralized	5
BDCJL001	Tortoise Bone Fragments - Class 5, Mineralized	3728544	711275	19-MAY-09 9:38:51AM	One piece of mineralized bone, 4 cm x 3 cm, possible tortoise	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCEE003	Tortoise Bone Fragments - Class 5, Mineralized	3728191	711046	26-MAY-09 7:12:45AM	Edge of carapace, 3 x 3 cm, marginal, 1 piece, 4 more pieces about 20 m to south, not mineralized	5
BDCSD006	Tortoise Bone Fragments - Class 5, Mineralized	3727154	707084	18-MAR-09 10:08:32AM	Possible tortoise bone fragments, 6 pieces of old bone, may be piece of marginal, could also be sheep bones, picture taken (Kim Duncan camera)	5
BDBES003	Tortoise Burrow - Class 1	3728495	702440	04-JUN-09 7:42:42AM	Definite tortoise burrow, adult 300 mm (wide) 1.5 m deep, cover site	1
BDBGL024	Tortoise Burrow - Class 1	3726207	704317	04-JUN-09 9:36:42AM	Active tortoise burrow, in caliche, Large (3'w x 1'h, 4+' deep, turns to left, can't see to end, tortoise tracks inside	1
BDBSD013	Tortoise Burrow - Class 1	3725921	706153	31-MAY-09 12:35:56PM	Active tortoise burrow, tortoise tracks, picture, 9" x 11", can't see to end, cobwebs in front disturbed in exact shape of tortoise, Neotoma in burrow, burrow in drainage, ~6' in, turns to left, tortoise egg shell fragments	1
BDBGL021	Tortoise Burrow - Class 1	3728111	704094	09-MAY-09 6:29:52PM	18" x 10", slightly plugged, goes deep, tortoise burrow, tortoise egg shell fragments, active burrow, nest site	1
BDBAD004	Tortoise Burrow - Class 1	3729402	706443	14-MAR-09 11:42:49AM	Fresh tortoise tracks in burrow, 29 cm x 20 cm	1
BDBAD010	Tortoise Burrow - Class 1	3729067	704254	15-APR-09 12:18:41PM	Tortoise burrow with recent tracks, 12 x 24 cm	1
BDBSD011	Tortoise Burrow - Class 1	3728543	703708	04-MAY-09 9:18:32AM	Likely active tortoise burrow, in caliches, another burrow (connected) 5' to north, near recent tortoise scat in same drainage, turns to left to connect to other burrow, turn to right, can't see to end of this burrow, could be used by burrowing owl, 3' x 2'	1

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDBGL005	Tortoise Burrow - Class 1	3729672	706923	13-MAR-09 6:36:37PM	Active tortoise burrow, tortoise scat	1
BDCAD064	Tortoise Burrow - Class 2	3727707	702923	16-APR-09 5:13:31PM	Bone fragments with tortoise burrow nearby, 5 fragments, adult, rock burrow opening, can't see to end, 45 cm x 20 cm, Class 5 bones, Class 2 Burrow	
BDBSD006	Tortoise Burrow - Class 2	3729072	704599	09-APR-09 4:44:28PM	Tortoise burrow, 40 cm x 25 cm, turns to right, Neotoma scat present, could be used by tortoise or burrowing owl, can't see to end, flat bottom	2
BDBGL012	Tortoise Burrow - Class 2	3728597	704787	30-MAR-09 6:32:54PM	Tortoise burrow, possible tracks inside, recent use, 7" x 6"	2
BDBSD009	Tortoise Burrow - Class 2	3728071	703038	13-APR-09 3:51:40PM	Tortoise burrow in caliche, tortoise shaped entrance on one side, can't see to end	2
BDBAD008	Tortoise Burrow - Class 2	3729005	704417	14-APR-09 10:50:39AM	Tortoise burrow main hibernation burrow, in caliche cave, 22 x 32 cm	2
BDBAD026	Tortoise Burrow - Class 2	3728847	704296	15-APR-09 2:23:21PM	12 x 24 cm, partial plug at approximately 1' inside entrance	2
BDBSD010	Tortoise Burrow - Class 2	3729680	704407	15-APR-09 2:58:46PM	Point taken previously, same as BBBSD002 and BDBPB001	2
BDBAD011	Tortoise Burrow - Class 2	3727737	703000	16-APR-09 5:28:02PM	Deep burrow in rocks in drainage, pallet 4 m to the west, 38 cm x 19 cm, can't see to end, could be used by burrowing owl, but burrow is very large	2
BDBGL019	Tortoise Burrow - Class 2	3728235	704022	17-APR-09 3:40:00PM	Tortoise burrow, caliche, in deep drainage, 26" x 12" x 36" can see to end, occupied by woodrat, possibly active, not deep enough for burrowing owl	2

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDBSD007	Tortoise Burrow - Class 2	3728406	704458	11-APR-09 12:13:54PM	Active tortoise burrow, 11" x 7", can't see to end, tortoise tracks (possible) inside burrow, turns to left, could be used by burrowing owl, flat bottom, dome shaped, large apron	2
BDBGL018	Tortoise Burrow - Class 2	3729607	704439	15-APR-09 2:17:34PM	Tortoise burrow, adjacent to BDPGL028, 40 cm x 25 cm x 60 cm deep, likely active, not deep enough for burrowing owl, under ironwood, tortoise shaped, flat bottom	2
BDBSD011	Tortoise Burrow - Class 2	3727628	702903	16-APR-09 5:29:14PM	Tortoise burrow, caliche, signs of recent use, flattened bottom, likely occupied, 45 cm x 30 cm x 2 m deep	2
BDBSD003	Tortoise Burrow - Class 2	3729164	703947	16-FEB-09 11:01:35AM	Two desert tortoise burrows, one can't see to the end, faces north, very large entrance, possibly active, no sign, 19" x 8.5" tall, other burrow can see to end, faces north, small bit of whitewash present, owl pellet	2
BDBAD027	Tortoise Burrow - Class 2	3728768	704288	15-APR-09 2:31:22PM	Tortoise burrow, 12 x 24 cm, one bone fragment also present	2
BDBAD006	Tortoise Burrow - Class 3	3729443	705402	28-MAR-09 9:37:58AM	Tortoise burrow under dead palo verde, 7" x 5", can't see to end	3
BDBAD002	Tortoise Burrow - Class 3	3729782	706580	13-MAR-09 4:11:57PM	Desert tortoise burrow with plug, 9 cm x 9 cm, can't see to end, possibly active	3
BDBP005	Tortoise Burrow - Class 3	3728523	704281	15-APR-09 2:50:13PM	Tortoise burrow, 8 x 20 cm, debris (rocks) in front, on edge of arroyo	3

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDBPB001	Tortoise Burrow - Class 3	3729682	704407	14-APR-09 10:01:26AM	Tortoise burrow, 4 openings, burrowing owl sign also present with owl scat at openings, old kit fox complex, now 3 active tortoise burrows and one likely active burrowing owl burrow with white wash, same as BBBSD002, and BDBSD010, 15 x 12", can't see to end, 15" x 8", can't see to end, 9" x 6", can't see to end	3
BDBAD001	Tortoise Burrow - Class 4	3725701	706731	15-FEB-09 7:18:37PM	Tortoise like burrow, plugged or collapsed, upper edge of wash, about 6 to 12 inches deep	4
BMASD016	Tortoise Burrow - Class 4	3729100	704638	02-APR-09 1:11:45PM	Large mammal burrow, Neotoma scat, bottom flattened, not tortoise shaped, but could be used by tortoise and owl, in wash, under galleta grass, 12" x 12", can't see to end	4
BDBSD012	Tortoise Burrow - Class 4	3729419	703787	04-MAY-09 5:28:09PM	Burrow, could be used by tortoise, under thick bushes, so likely not suitable for burrowing owl, low probability of use by tortoise, but possible, 12" x 12"	4
BDBAD007	Tortoise Burrow - Class 4	3726967	706200	08-APR-09 10:11:23AM	Potential tortoise burrow, 22 x 15 cm, in galleta grass	4
BDBGL014	Tortoise Burrow - Class 4	3729814	704534	10-APR-09 12:10:40PM	Possible tortoise burrow, flattened bottom, can't see to end 10" x 8", narrows	4
BDBGL015	Tortoise Burrow - Class 4	3729709	704543	10-APR-09 12:23:22PM	Possible tortoise burrow, 12" x 10", tortoise shaped dome, under palo verde, faces north	4
BDBGL016	Tortoise Burrow - Class 4	3729017	704509	10-APR-09 4:02:32PM	Likely tortoise burrow, 18" x 8", turns, can't see to end, could be modified for burrowing owl	4

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDBGL017	Tortoise Burrow - Class 4	3729389	704484	11-APR-09 10:41:36AM	Possible tortoise burrow, flat bottom, turns to right, could be used by burrowing owl, but unlikely, 12" x 8", class 4	4
BDBRW001	Tortoise Burrow - Class 4	3726642	707092	18-MAR-09 10:22:30AM	Burrow under palo verde, can see to end, difficult to get close to, 12" x 10"	4
BDBRW002	Tortoise Burrow - Class 4	3727143	707181	18-MAR-09 12:55:18PM	Two possible tortoise burrows, one with partial plug entrance, may turn right, second burrow turns (no plug), both 8" x 6"	4
BDBKH001	Tortoise Burrow - Class 4	3725950	707159	18-MAR-09 2:47:09PM	Old possible tortoise burrow	4
BDBGL007	Tortoise Burrow - Class 4	3730004	706113	21-MAR-09 10:10:06AM	Potential tortoise burrow, 10" x 6"	4
BDBGL008	Tortoise Burrow - Class 4	3729953	706115	21-MAR-09 10:15:22AM	Potential tortoise burrow, 8" x 6", no scat but burrow bottom flat, can't see to end, Neotoma scat present	4
BDBAD003	Tortoise Burrow - Class 4	3729951	706067	21-MAR-09 4:56:14PM	Possible tortoise burrow, 8" x 6"	4
BDBGL009	Tortoise Burrow - Class 4	3728979	704763	22-MAR-09 1:17:51PM	Two burrows, 5" x 15", 7" x 11", no tortoise sign, associated with 12 burrow kit fox complex and points BBBGL002, BKBGL012	4
BMAAF002	Tortoise Burrow - Class 4	3729912	705950	22-MAR-09 12:13:53PM	Some whitewash, 18 x 13 cm, depth ~50 cm	4
BMAAD012	Tortoise Burrow - Class 4	3729773	705852	22-MAR-09 3:01:18PM	Tortoise shape, 4' deep	4
BMACG006	Tortoise Burrow - Class 4	3729817	705884	22-MAR-09 3:04:53PM	Possible tortoise burrow? Under palo verde	4
BDBAD005	Tortoise Burrow - Class 4	3729128	705347	27-MAR-09 4:42:10PM	Tortoise burrow under galleta grass, 30 cm x 20 cm, needs to be scoped, too large and extensive, may have multiple animals	4
BDBCG001	Tortoise Burrow - Class 4	3729374	705219	28-MAR-09 2:06:12PM	Opening facing south	4

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDBGL010	Tortoise Burrow - Class 4	3728255	705132	28-MAR-09 2:09:43PM	Possible tortoise pallet, may turn to the right, 9" x 6" x ?"	4
BDBGL011	Tortoise Burrow - Class 4	3728031	704966	29-MAR-09 11:35:49AM	Not typical tortoise shape, but bottom flattened, no scat, could be occupied by tortoise/burrowing owl	4
BDBGL013	Tortoise Burrow - Class 4	3729912	704686	31-MAR-09 3:57:50PM	Tortoise burrow, possibly damaged by badger, 11" x 9", could be used by tortoise or burrowing owl	4
BDBMR004	Tortoise Burrow - Class 4	3727430	707823	26-APR-09 10:07:09AM	17 x 11 cm, potential for tortoise	4
BBDES009	Tortoise Burrow - Class 4	3729512	702642	04-JUN-09 9:29:36AM	Wash bank cave	4
BDBGL023	Tortoise Burrow - Class 4	3721370	708369	18-MAY-09 6:24:19PM	Potential tortoise burrow, erosional feature, 24" x 10", can't see to end	4
BDBRW004	Tortoise Burrow - Class 4	3729147	711419	19-MAY-09 1:14:04PM	170 mm x 130 mm, potential for tortoise and burrowing owl	4
BDBJH001	Tortoise Burrow - Class 4	3727712	711178	26-MAY-09 12:24:33PM	Tortoise shape inside but entry was altered, 170 mm x 100 x 1 meter plus, potential for burrowing owl and tortoise	4
BMAPB005	Tortoise Burrow - Class 4	3726627	706120	08-APR-09 3:42:06PM	Potential tortoise, 3 entrances/burrows, in caliche, scope for tortoise	5
BKBSD027	Tortoise Burrow - Class 5	3727450	708097	03-JUN-09 1:12:25PM	3 burrows, kit fox scat, complex, one burrow, class 5 tortoise burrow, no tortoise sign, potential for burrowing owl, active kit fox, recent scat	5
BKBSD023	Tortoise Burrow - Class 5	3725825	708750	30-MAY-09 5:54:09PM	One large potential tortoise burrow, kit fox complex, white wash at tortoise burrow, tortoise burrow = 32" x 8" high, can't see to end, kit fox scat, canid digging, 4+ burrows	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDBGL020	Tortoise Burrow - Class 5	3729003	703722	04-MAY-09 9:53:38AM	Potential tortoise burrow, in caliches, less likely for burrowing owl but possible, narrows about 3' in, no scat, turns left and right, 1 3/4' x 1' high	5
BDBMR003	Tortoise Burrow - Class 5	3726807	706291	12-APR-09 3:03:18PM	Old kit fox burrow, 6 openings, 9" x 7"	5
BDBSD008	Tortoise Burrow - Class 5	3728078	703041	13-APR-09 3:48:10PM	Tortoise burrow in caliches, in buffer, can see to end, no tortoise present	5
BDBGL006	Tortoise Burrow - Class 5	3729875	707006	15-MAR-09 10:56:33AM	Possible tortoise burrow under grass clump, can't see to end, possible tortoise, no scat	5
BMAMR027	Tortoise Burrow - Class 5	3729822	708557	18-APR-09 2:57:28PM	Potential tortoise burrow, no scat	5
BMARW004	Tortoise Burrow - Class 5	3728349	708368	19-APR-09 9:58:27AM	Kit fox scat	5
BDBSD014	Tortoise Burrow - Class 5	3726194	704305	04-JUN-09 9:36:57AM	Tortoise burrow, flattened bottom, in caliche, can't see to end, 15" x 10", plus potential tortoise pallet directly adjacent (18" x 12"	5
BDBGL022	Tortoise Burrow - Class 5	3729137	703858	16-MAY-09 1:19:00PM	Potential tortoise burrow, right shape, in side of drainage, can't see to end	5
BDBAD028	Tortoise Burrow - Class 5	3726398	708415	29-MAY-09 12:47:30PM	Possible tortoise burrow, 10" x 5", can't see to end, tortoise shaped, potential for burrowing owl and tortoise	5
BDBCG003	Tortoise Burrow - Class 5	3726279	706532		Tortoise burrow, 30 cm x 15 cm, not entered in GPS unit	5
BDBRW003	Tortoise Burrow - Class 5	3729762	707229	20-APR-09 10:20:19AM	Under shrub, no sign, no potential for burrowing owl, 150 mm x 9 cm	5
BDBMR001	Tortoise Burrow - Class 5	3730127	713853	16-FEB-09 10:14:32AM	Possible tortoise burrow, observed during habitat assessment	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDBSD002	Tortoise Burrow - Class 5	3729197	704151	16-FEB-09 10:42:02AM	Possible tortoise burrow, woodrat burrow in caliche, wood rat sign, could not see to end of burrow, needs further evaluation during focused survey, no sign, faces north,	5
BDBGL003	Tortoise Burrow - Class 5	3729186	704126	16-FEB-09 10:52:43AM	Possible tortoise burrow, can see to end, no tortoise sign, in caliche, faces north, 14" x 10" wide x 24" deep	5
BDBGL004	Tortoise Burrow - Class 5	3728895	703451	16-FEB-09 11:47:43AM	Possible tortoise burrow, south facing, caliche, deep, can see to end, no tortoise or tortoise sign present, 9" wide x 8" high, 3 to 4' deep	5
BDBSD001	Tortoise Burrow - Class 5	3729903	705971	16-FEB-09 8:34:23AM	Possible desert tortoise burrow, in drainage, under bush, no sign observed, 16" x 10" wide, 10" deep	5
BDBAF001	Tortoise Burrow - Class 5	3728899	707062	16-MAR-09 1:06:55PM	Burrow 7" x 6" high, no sign, 18" deep	5
BDBSD005	Tortoise Burrow - Class 5	3727927	707080	18-MAR-09 9:39:20AM	Possible tortoise burrow, entrance very long, tortoise shape, 13" x 10" can see to end, no tortoise sign	5
BMACG049	Tortoise Burrow - Class 5	3728570	708245	19-APR-09 2:48:45PM	Tortoise type burrow, one opening	5
BDBAD002 1	Tortoise Burrow - Class 5	3729395	706456	14-MAR-09 8:27:18PM	Tortoise burrow	5
BDCPB014	Tortoise Carcass - Class 2	3726043	706410	12-APR-09 11:50:48AM	Carapace, whole, female, some flesh present, 26 cm x 19 cm	2
BDCMR013	Tortoise Carcass - Class 2	3725749	706291	12-APR-09 3:39:44PM	Female tortoise carcass, 27 x 18 cm	2
BDCCG001	Tortoise Carcass - Class 2	3729467	706456	14-MAR-09 8:19:55PM	Adult female desert tortoise carcass, 5 to 7 years old	2
BDCAD013 1	Tortoise Carcass - Class 2	3729520	705112	28-MAR-09 4:46:25PM	Tortoise carcass, dead 2 to 3 years, adult male, MCL = 11.5", width = 11", PLN = 11"	2

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCSD017	Tortoise Carcass - Class 2	3729965	703907	26-APR-09 1:33:10PM	Large adult male tortoise carcass, MCL= 11.5" x 10.5", scutes mainly adhering to bone, some vertebrals/costals missing, plastron scutes mainly in tact, fairly large gular, concave plastron = male, part of tail and some skin adhering to shell	2
BDCGL022	Tortoise Carcass - Class 3	3729936	704576	09-APR-09 5:40:19PM	Tortoise carcass, missing vertebral bones and half plastron, short gular, possibly female, adult, all vertebrae present, plastron not in area, 20 cm wide x 25 cm MCL	3
BDCJJ001	Tortoise Carcass - Class 3	3726993	706066	09-APR-09 9:52:19AM	Beginning to disarticulate, male, scutes peeling from bone, MCL=20 cm	3
BDCGL025	Tortoise Carcass - Class 3	3728040	703071	13-APR-09 3:58:43PM	Tortoise carcass, 12" MCL, male, 10" wide, scutes on plastron fallen off, scutes on carapace still adhering, took pictures of both sides, split gular	3
BDCSD001	Tortoise Carcass - Class 3	3729466	704834	16-FEB-09 9:29:06AM	Adult desert tortoise carcass, likely female, MCL = 9 3/4", full shell, most scutes fallen off, highly domed scutes, no evidence of predation, tail mostly present (small tail), crack in shell along left side plastron, vertebral column still inside shell	3
BDCMR007	Tortoise Carcass - Class 3	3729092	705486	27-MAR-09 10:02:58AM	Tortoise carcass, 22 cm MCL x 18 cm wide, female, shell was chewed on or shot with pellet gun	3
BDCCG007	Tortoise Carcass - Class 3	3729363	705012	29-MAR-09 10:50:48AM	Large female carcass under creosote bush, 5+ years since death	3
BDCMG003	Tortoise Carcass - Class 4	3728483	709957	09-MAY-09 7:22:23PM	In small drainage	4

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCSD005	Tortoise Carcass - Class 4	3729683	707024	15-MAR-09 11:43:20AM	Tortoise bone fragments, some detached scutes present, adult tortoise, kit fox scat present, width 7", MCL ~10"	4
BDCGL068	Tortoise Carcass - Class 4	3726060	704748	04-JUN-09 8:40:17AM	Female plastron, in pieces, scutes in area, 1/2 plastron in tact	4
BDCGL069	Tortoise Carcass - Class 4	3726223	704568	04-JUN-09 8:56:35AM	Adult male carcass, in several pieces, scutes and pelvic bone in area, picture with ID tag, ~12" MCL, one scute still attached to bone	4
BDCGL070	Tortoise Carcass - Class 4	3726210	704550	04-JUN-09 9:01:18AM	Different animal than BDCGL069, picture, 1/4 plastron, estimated MCL = 20 cm (9 cm x 13 cm bone piece)	4
BDCGL001	Tortoise Carcass - Class 4	3729392	704353	16-FEB-09 10:03:22AM	Desert tortoise carcass, likely male, gular intact, several pieces of bone along drainage, one large scute, MCL 11.5", 8.25" wide, flat domes on scutes, plastron in 4 pieces	4
BDCSD002	Tortoise Carcass - Class 4	3729480	704807	16-FEB-09 9:41:06AM	Desert tortoise carcass, adult, possibly male, one scute present, bones scattered throughout drainage, 13" MCL, 10" + wide, fairly long gular, missing carapace, dome on scute fairly high	4
BDCGL007	Tortoise Carcass - Class 4	3728605	704752	22-MAR-09 3:14:56PM	Tortoise carcass, MCL = 12.5", PLN = 9.5", likely male, scutes peeling off bone, carapace in two large pieces, adult, BDCGL006 scute likely from this carcass (same drainage)	4
BDCGL029	Tortoise Carcass - Class 4	3730706	712988	24-APR-09 12:17:21PM	Adult male tortoise carcass, most of carapace and plastron present, in several large pieces, no scutes in area, 11" MCL x 10" wide, coyote scat present	4

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCGL030	Tortoise Carcass - Class 4	3728985	703976	26-APR-09 12:36:49PM	Adult male tortoise carcass, 5 pieces of bone scattered in area, otherwise shell in tact, marginal scutes still adhering to bone, in drainage, 10" MCL x 8" width, bones still domed, shell cracked, not along growth lines, likely ran over? Picture	4
BDCGL012	Tortoise Carcass - Class 4	3728712	704725	31-MAR-09 8:53:44AM	Female tortoise carcass, in half, 9" x 9", most scutes have fallen off shell, beginning to disarticulate, found in short arroyo	4
BDCSD018	Tortoise Carcass - Class 4	3729141	703937	08-MAY-09 5:49:00PM	Female, adult tortoise carcass, very near 9 1/2" MCL x 9" wide, adjacent to dug out burrow, likely badger foraging burrow, possibly predation ?, scutes still present on plastron, not on carapace, carapace 75% disarticulated	4
BDCPB016	Tortoise Carcass - Class 4	3729390	704350	14-APR-09 12:57:31PM	Old male tortoise carcass, plastron 30 cm	4
BDCSD004	Tortoise Carcass - Class 4	3729134	703898	16-FEB-09 11:13:49AM	Adult, possibly female, MCL= 12", 9.5" wide, carcass, bones, mainly carapace, in many pieces, in tact enough to get measurements	4
BDCMR001	Tortoise Carcass - Class 4	3728485	706344	14-MAR-09 6:06:25PM	Adult partial plastron, less than 10 years old	4
BDCGL028 1	Tortoise Carcass - Class 4	3727489	703014	16-Apr-09	Half plastron, adult, 7" wide, broken gular	4
BDCJJ002	Tortoise Carcass - Class 4	3726945	705925	09-APR-09 4:44:57PM	Large tortoise, 20 cm MCL, disarticulated most pieces	4
BDCGL023	Tortoise Carcass - Class 4	3729068	704571	09-APR-09 6:20:39PM	Tortoise carcass, 28 cm MCL x 20 cm wide, plastron still present, many pieces of bone, no scutes, some pieces of carapace, male, adult	4

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDCMR014	Tortoise Carcass - Class 4	3725695	706296	12-APR-09 3:53:15PM	Disarticulate female carcass, 30 cm x 20 cm	4
BDCPB022	Tortoise Carcass - Class 4	3728720	704103	16-APR-09 2:49:55PM	Adult female, partial carapace, 11 x 22 cm	4
BDCSD003	Tortoise Carcass - Class 4	3729326	704335	16-FEB-09 10:01:55AM	Adult desert tortoise carcass, MCL = 11.5", width 9.5", plastron relatively intact, all scutes fallen off, some scutes in area, part of carapace on right side present, no evidence of predation, likely male, scutes fairly domed	4
BDOMR001	Tortoise Drinking Depression	3730058	706659	13-MAR-09 9:49:11AM	Possible tortoise drinking depression	
BDSMR004	Tortoise Pallet - Class 1	3725957	706735	10-APR-09 3:53:31PM	From adult tortoise, 8 x 2.5 cm, with potential tortoise pallet at 0706722/3725950	1
BDPAD005	Tortoise Pallet - Class 1	3728996	706129	21-MAR-09 9:17:57AM	Tortoise pallet, bottom flattened by plastron, smooth, recent use by tortoise, likely old badger foraging burrow, may have plug and tortoise may be behind plug, 6" high x 8" wide	1
BDPAD026	Tortoise Pallet - Class 1	3729213	704116	16-APR-09 12:53:47PM	Plant pallet with scat present, 10 x 24 cm, scat 2 x 4 cm, both Class 2	2
BDPAD025	Tortoise Pallet - Class 2	3728971	704296	15-APR-09 2:15:11PM	8 x 16 cm	2
BDPSD001	Tortoise Pallet - Class 2	3729835	707018	15-MAR-09 11:53:52AM	Tortoise pallet, 12" x 20" deep x 6" high, no tortoise scat or tracks present	2
BDPAD020	Tortoise Pallet - Class 3	3726359	706205	08-APR-09 10:55:51AM	Plug, good shape, 23 cm x 11 cm, potential for tortoise, not for burrowing owl	3
BDPPB001	Tortoise Pallet - Class 3	3726486	706174	08-APR-09 11:52:49AM	Pallet, in drainage, classic tortoise shape, 28 x 10 cm, potential for tortoise, not burrowing owl	3
BDPPB003	Tortoise Pallet - Class 3	3729357	704403	14-APR-09 10:23:33AM	Tortoise pallet, 12 x 20 cm	3

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDPAD024	Tortoise Pallet - Class 3	3729233	704293	15-APR-09 1:54:23PM	Pallet, 15 x 30 cm, woodrat sign	3
BDPPB006	Tortoise Pallet - Class 3	3728077	703237	16-Apr-09	10 x 20 cm, pallet	3
BDPAD001	Tortoise Pallet - Class 3	3729462	706632	13-MAR-09 11:43:33AM	Tortoise pallet, 150 x 70 mm, full of creosote leaves, 30 mm deep	3
BDPAD002	Tortoise Pallet - Class 3	3729452	706591	13-MAR-09 4:31:21PM	Tortoise pallet, 13 x 6 cm, 20 cm deep	3
BDPAD003	Tortoise Pallet - Class 3	3729470	706976	13-MAR-09 6:50:49PM	Desert tortoise pallet, 15 cm x 10 cm	3
BDPSD004	Tortoise Pallet - Class 3	3729924	704781	22-MAR-09 2:17:22PM	Tortoise pallet, 6" x 4" high, no scat, in hillside	3
BDPGL013	Tortoise Pallet - Class 3	3728255	705438	27-MAR-09 11:45:53AM	Tortoise pallet, possible recent use by tortoise, 15 cm x 21 cm	3
BDPAD016	Tortoise Pallet - Class 3	3729285	704801	30-MAR-09 5:04:03PM	Tortoise pallet in clay bank, 12" x 6"	3
BDPAD017	Tortoise Pallet - Class 3	3729469	704699	31-MAR-09 11:01:26AM	Tortoise pallet under brittlebush, 7" x 5"	3
BDPGL019	Tortoise Pallet - Class 3	3729358	704705	31-MAR-09 11:18:05AM	Small tortoise pallet near top of clay bank, 3" x 4"	3
BDPAD019	Tortoise Pallet - Class 3	3729640	704667	31-MAR-09 4:27:25PM	Tortoise pallet under brittlebush, 12" x 8"	3
BDPGL007	Tortoise Pallet - Class 3	3729969	704744	22-MAR-09 2:27:47PM	Tortoise pallet, 8" x 5", no tortoise scat present	3
BDPJJ001	Tortoise Pallet - Class 4	3727794	706683	01-APR-09 8:58:56AM	Possible tortoise pallet, no evidence of activity, no scat, 190 mm x 100 mm x 330 mm	4
BDPSC002	Tortoise Pallet - Class 4	3728465	706649	01-APR-09 9:47:43AM	Duplicate of BDPMR001, could be used as a pallet by tortoise, 180 mm x 100 mm x 200 mm deep	4
BDPGL021	Tortoise Pallet - Class 4	3729423	704654	02-APR-09 1:43:16PM	Could be used as a pallet for tortoise, 10" x 10" x 18" deep	4
BDPJJ002	Tortoise Pallet - Class 4	3726541	706978	02-APR-09 11:44:24AM	Possible tortoise pallet, some deterioration, 180 mm x 80 mm tall, 300 mm deep, other mammals using currently	4

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDPSD013	Tortoise Pallet - Class 4	3728492	704643	02-APR-09 12:29:50PM	Possible tortoise pallet, 7" x 4" x 8" deep, no sign, good shape, in desert pavement	4
BDPGL022	Tortoise Pallet - Class 4	3729735	704615	02-APR-09 3:01:25PM	Pallet, likely tortoise, 7" x 5" x 10"	4
BPBSC001	Tortoise Pallet - Class 4	3729564	707079	03-APR-09 11:03:36AM	No scat present, tortoise pallet, 180 mm x 110 mm	4
BDPSC003	Tortoise Pallet - Class 4	3729326	707092	03-APR-09 11:49:27AM	Burrow facing north, pallet, no scat, 150 mm x 260 mm	4
BPBSC004	Tortoise Pallet - Class 4	3729517	707175	03-APR-09 3:14:19PM	Pallet, no scat, 160 mm x 80 mm	4
BDPGL034	Tortoise Pallet - Class 4	3729058	703808	04-MAY-09 6:14:05PM	Possible tortoise pallet, vegetation at entrance, fresh digging (dirt) inside, no sign, 10" x 7" x 14"	4
BDPGL023	Tortoise Pallet - Class 4	3729444	704614	09-APR-09 5:08:31PM	Old mammal burrow, abandoned while digging, could be used by tortoise for pallet, 8" x 7" x 16"	4
BDPGL024	Tortoise Pallet - Class 4	3729916	704485	11-APR-09 11:02:33AM	Possible tortoise pallet, 12" x 9" x 20" deep	4
BDPGL026	Tortoise Pallet - Class 4	3728235	704432	11-APR-09 12:26:00PM	Mammal dig, could be used by tortoise as pallet, 8" x 6" x 15"	4
BDPGL002	Tortoise Pallet - Class 4	3728531	706788	12-MAR-09 11:30:15AM	Possible tortoise pallet, 8" x 6", narrows very quickly	4
BDPCG005	Tortoise Pallet - Class 4	3729421	706380	14-MAR-09 5:15:08PM	Tortoise pallet, 15 x 24 cm	4
BDPGL029	Tortoise Pallet - Class 4	3729618	704434	15-APR-09 2:23:22PM	Possible tortoise pallet, 10" x 9" x 2.5' deep, creosote was blocking entrance	4
BDPSD014	Tortoise Pallet - Class 4	3728539	704161	15-APR-09 6:20:10PM	Possibly plugged tortoise burrow, may be nest, 10" x 7" x 10" deep	4
BDPSD015	Tortoise Pallet - Class 4	3728458	704154	15-APR-09 6:26:16PM	10" x 4" x 10", possible pallet, no sign	4
BDPAD004	Tortoise Pallet - Class 4	3729097	706188	15-MAR-09 2:48:43PM	Tortoise pallet, 11 cm x 15 cm	4

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDPCG007	Tortoise Pallet - Class 4	3728606	706235	15-MAR-09 3:15:14PM	Possible tortoise pallet, 20 x 15 x 15 cm	4
BDPPG005	Tortoise Pallet - Class 4	3729514	704090	16-APR-09 9:36:07AM	10 x 16 cm	4
BDPAF001	Tortoise Pallet - Class 4	3728583	707062	16-MAR-09 1:20:57PM	Tortoise pallet, 2' deep, 12" x 10", no scat, no tracks	4
BDPGL031	Tortoise Pallet - Class 4	3729444	704018	17-APR-09 4:47:36PM	Mammal pallet, goes back far enough that could be used by tortoise as pallet, not suitable for burrowing owl	4
BDPRW001	Tortoise Pallet - Class 4	3729796	708374	19-APR-09 11:21:41AM	Possible tortoise pallet, no scat	4
BDPGL005	Tortoise Pallet - Class 4	3728131	706161	20-MAR-09 1:02:49PM	Potential tortoise pallet, full of leaves/sticks	4
BDPSD002	Tortoise Pallet - Class 4	3728684	706158	20-MAR-09 12:41:59PM	Tortoise pallet, no tracks, no scat	4
BDPAD006	Tortoise Pallet - Class 4	3729660	706122	21-MAR-09 10:29:22AM	Could be used as a tortoise pallet, 8" x 6"	4
BDPAD007	Tortoise Pallet - Class 4	3729047	706065	21-MAR-09 4:19:58PM	Possible tortoise pallet, 6" x 6"	4
BDPAD008	Tortoise Pallet - Class 4	3729788	706068	21-MAR-09 4:46:25PM	Possible tortoise pallet, 6" x 6"	4
BDPMR003	Tortoise Pallet - Class 4	3728296	706001	22-MAR-09 10:53:44AM	Tortoise pallet	4
BDPSD003	Tortoise Pallet - Class 4	3727973	704770	22-MAR-09 12:20:20PM	Old kit fox burrow with kit fox scat, but rear is tortoise shaped, 4" high x 7" wide, possible tortoise use	4
BDPGL006	Tortoise Pallet - Class 4	3728596	704782	22-MAR-09 12:57:19PM	Possible tortoise burrow or burrow with plug, no scat	4
BDPMR004	Tortoise Pallet - Class 4	3728693	705831	22-MAR-09 3:53:57PM	Old tortoise pallet	4
BDPSD005	Tortoise Pallet - Class 4	3728047	706793	23-MAR-09 4:51:32PM	Possible tortoise pallet, 8" x 6", depth 12", narrows to small mammal entrance, no sign	4

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDPGL008	Tortoise Pallet - Class 4	3728229	706739	23-MAR-09 5:45:04PM	Possible tortoise pallet, 10" x 8" x 14" deep, no sign	4
BDPCG008	Tortoise Pallet - Class 4	3729712	705780	23-MAR-09 9:36:11AM	Possible tortoise pallet, under small creosote, near small arroyo	4
BDPSD017	Tortoise Pallet - Class 4	3730580	712632	24-APR-09 9:48:28AM	Possible tortoise pallet, under dead tree, currently used by Neotoma, 8" x 4",	4
BDPGL010	Tortoise Pallet - Class 4	3729670	705650	24-MAR-09 1:22:35PM	Tortoise pallet, 5.5" wide x 4" high	4
BDPAD011	Tortoise Pallet - Class 4	3729367	705640	24-MAR-09 1:40:50PM	Pallet under creosote, 10" wide x 8" high	4
BDPAD009	Tortoise Pallet - Class 4	3729095	705667	24-MAR-09 11:57:56AM	Pallet under *Acacia greggii*, 9" wide x 7" high	4
BDPAD010	Tortoise Pallet - Class 4	3729795	705670	24-MAR-09 12:34:35PM	Pallet could be used by tortoise, 7" wide x 5" high	4
BDPGL009	Tortoise Pallet - Class 4	3729826	705661	24-MAR-09 12:42:06PM	Old tortoise pallet, poor condition, 7" wide x 5" high	4
BDPRW002	Tortoise Pallet - Class 4	3727347	707650	25-APR-09 4:11:25PM	Possible tortoise pallet, 14 x 9 cm	4
BDPSD006	Tortoise Pallet - Class 4	3728424	706733	25-MAR-09 1:46:33PM	Possible tortoise pallet, poor condition, but flattened bottom, kit fox scat present, 6" high x 7" wide x 8" deep	4
BDPSD007	Tortoise Pallet - Class 4	3729163	705632	25-MAR-09 5:04:26PM	Possible tortoise pallet, narrows to small mammal burrow, no sign, 6" x 4" x 8" deep	4
BDPGL011	Tortoise Pallet - Class 4	3729409	705622	25-MAR-09 5:14:54PM	Possible tortoise pallet, 6" x 4" x 6" deep	4
BDPGL012	Tortoise Pallet - Class 4	3729666	705616	25-MAR-09 5:26:58PM	Possible tortoise pallet, 7" x 5" x 4"	4
BDPRW003	Tortoise Pallet - Class 4	3727911	707960	26-APR-09 1:44:28PM	Possible tortoise pallet, 18 cm x 10 cm	4
BDPMR013	Tortoise Pallet - Class 4	3727947	707950	26-APR-09 1:49:11PM	Possible tortoise pallet, 23 cm x 11 cm x 30 cm depth	4
BDPCG004	Tortoise Pallet - Class 4	3727945	708020	26-APR-09 3:03:01PM	Depth 30+ cm, 18 x 30 cm	4

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDPCG003	Tortoise Pallet - Class 4	3727729	707768	26-APR-09 9:03:00AM	Possible tortoise pallet, 20 x 14 cm	4
BDPAD012	Tortoise Pallet - Class 4	3729126	705452	27-MAR-09 11:16:34AM	Tortoise pallet, in drainage, 14 cm x 6 cm high	4
BDPMR005	Tortoise Pallet - Class 4	3728508	705360	27-MAR-09 4:15:22PM	Tortoise pallet under *Krameria grayi*, 11 cm x 17 cm	4
BDPGL014	Tortoise Pallet - Class 4	3729398	705368	27-MAR-09 4:53:25PM	Tortoise pallet with apron, under creosote bush, 10 cm x 21 cm	4
BDPSD009	Tortoise Pallet - Class 4	3729709	705151	28-MAR-09 1:19:43PM	Possible tortoise pallet, no sign, 7" x 5" x 6" deep	4
BDPMR006	Tortoise Pallet - Class 4	3729616	705216	28-MAR-09 1:49:24PM	Pallet faces northwest, no scat present 35 cm x 11 cm tall	4
BDPSD008	Tortoise Pallet - Class 4	3728526	705178	28-MAR-09 11:44:30AM	Possible tortoise pallet, 8" x 6" x 6" deep, no sign	4
BDPMR007	Tortoise Pallet - Class 4	3729495	705117	28-MAR-09 4:40:18PM	Opening faces northwest	4
BDPMR008	Tortoise Pallet - Class 4	3729565	705062	28-MAR-09 5:28:33PM	Opening faces northwest	4
BDPMR009	Tortoise Pallet - Class 4	3728545	705062	28-MAR-09 6:06:39PM	Facing east	4
BDPAD013	Tortoise Pallet - Class 4	3728766	705423	28-MAR-09 9:03:21AM	Juvenile tortoise pallet, 6" x 3" tall x 4" deep	4
BDBAD016	Tortoise Pallet - Class 4	3729464	704869	29-MAR-09 1:23:28PM	Tortoise pallet, under bush, 8" x 6"	4
BDPAD015	Tortoise Pallet - Class 4	3728135	704940	29-MAR-09 11:27:33AM	Possible tortoise pallet, bottom filled in with sand from drainage, should be scoped with clearance survey, 5" x 7" wide	4
BDPGL015	Tortoise Pallet - Class 4	3729691	704836	29-MAR-09 2:10:52PM	One possible tortoise pallet with two small mammal burrows, possible tortoise and owl use 9" x 6" x 6"	4
BDPGL016	Tortoise Pallet - Class 4	3729359	704836	29-MAR-09 2:40:25PM	Possible tortoise pallet, 7" x 5" x 4" deep	4
BDPMR010	Tortoise Pallet - Class 4	3727990	704880	29-MAR-09 2:45:05PM	Tortoise pallets (3), one collapsed, one 23 cm x 10 cm, one 23 cm x 15 cm, west side of slope	4

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDPSD010	Tortoise Pallet - Class 4	3728835	704836	29-MAR-09 3:06:20PM	Possible tortoise pallet, under palo verde, 7" x 5" x 5" deep	4
BDPSD033	Tortoise Pallet - Class 4	3726130	708282	29-MAY-09 9:46:40AM	Potential tortoise pallet, full of vegetation, 12" x 7" x 16" deep	4
BDPGL017	Tortoise Pallet - Class 4	3729266	706886	30-MAR-09 10:29:11AM	Possible tortoise pallet, recent digging but full of vegetation, 8" x 6" x 8" deep	4
BDPEE001	Tortoise Pallet - Class 4	3728465	711076	26-MAY-09 9:11:38AM	D-shaped, goes back 1', part of roof caved in, 160 mm x 70 mm x 200 mm deep, potential for tortoise	4
BDPGL025	Tortoise Pallet - Class 4	3728764	704476	11-APR-09 11:55:41AM	Badger foraging and small mammal burrow, could be used as a tortoise pallet, 8" x 5" x 8"	4
BDPAD014	Tortoise Pallet - Class 4	3729853	705404	28-MAR-09 10:18:06AM	Possible tortoise pallet, 8" x 3" x 6" deep, some digging by badger	4
BDPGL018	Tortoise Pallet - Class 4	3729189	706923	30-MAR-09 11:05:40AM	Possible tortoise pallet, possible badger digging into krat burrow, 8" x 5" x 8" deep	4
BDPSD011	Tortoise Pallet - Class 4	3728531	706941	30-MAR-09 11:34:07AM	Possible tortoise pallet, likely badger foraging burrow, (claw marks), 9" x 6"	4
BDPSD012	Tortoise Pallet - Class 4	3728569	706938	30-MAR-09 11:37:00AM	Possible tortoise pallet, likely badger foraging, 9" x 7"	4
BDPAD018	Tortoise Pallet - Class 4	3728609	704695	31-MAR-09 2:41:40PM	Badger foraging burrow, turned into possible tortoise pallet, 4" x 7"	4
BDPCG002	Tortoise Pallet - Class 5	3727306	706182	08-APR-09 12:36:39PM	Under ironwood, in wash, potential pallet for tortoise, not suitable for burrowing owl	5
BDBGL002	Tortoise Pallet - Class 5	3729193	704140	16-FEB-09 10:49:08AM	Possible tortoise pallet, can see to end, no tortoise sign, in side of berm, 12" x 10" wide x 15" deep, faces north	5
BDBSD004	Tortoise Pallet - Class 5	3729130	703891	16-FEB-09 11:15:43AM	Tortoise burrow/pallet, under bush, south facing, 10" x 8" wide x 10" deep, can see to end, rock at end, same as BDPGL035	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDBGL001	Tortoise Pallet - Class 5	3729915	706471	16-FEB-09 8:07:28AM	Possible tortoise pallet, 8" wide, 4 1/2" tall, 9" deep, inactive, no sign	5
BDPGL033	Tortoise Pallet - Class 5	3728618	703763	03-MAY-09 12:12:03PM	Mammal foraging burrow, could be used as pallet by tortoise	5
BDPSD022	Tortoise Pallet - Class 5	3725736	708260	08-MAY-09 1:16:14PM	Possible use by tortoise as pallet, not deep enough for burrowing owl	5
BDPSD023	Tortoise Pallet - Class 5	3729163	703945	08-MAY-09 6:05:03PM	Possible tortoise pallet, adjacent to BDBSD003, about 24" wide x 15" high x 24" deep	5
BDPJH002	Tortoise Pallet - Class 5	3727433	706010	09-APR-09 1:19:32PM	Possible tortoise pallet, 16 x 8 cm	5
BDPAD021	Tortoise Pallet - Class 5	3726981	706054	09-APR-09 10:03:27AM	Possible tortoise pallet, 17 cm x 9 cm	5
BDPJH001	Tortoise Pallet - Class 5	3726956	706009	09-APR-09 12:12:28PM	Possible tortoise pallet, 30 x 25 x 40 cm deep, in wash, under galleta grass	5
BDPGL035	Tortoise Pallet - Class 5	3729132	703890	09-MAY-09 1:33:10PM	Same as BDBSD004, potential tortoise pallet, 14" x 10" x 18" deep, no sign, under Krameria grayii	5
BDPMR011	Tortoise Pallet - Class 5	3726369	706648	11-APR-09 10:08:38AM	Active woodrat, 30 cm x 19 cm, with kit fox scat	5
BDPPB002	Tortoise Pallet - Class 5	3725653	706584	11-APR-09 2:29:14PM	Two pallets, 30 x 13 cm, 17 x 10 cm, potential for tortoise, not burrowing owl	5
BDPMR012	Tortoise Pallet - Class 5	3726295	706504	11-APR-09 5:34:02PM	30 cm x 10 cm	5
BDPCG009	Tortoise Pallet - Class 5	3726652	706626	11-APR-09 9:51:42AM	17 cm x 9 cm, in drainage, potential for tortoise	5
BDPGL001	Tortoise Pallet - Class 5	3729831	706789	12-MAR-09 10:36:25AM	Possible tortoise pallet, no sign, 10" x 6" x 8"	5
BMAPB013	Tortoise Pallet - Class 5	3726017	706239	13-APR-09 10:20:43AM	Potential tortoise pallet, 19 cm x 15 cm	5
BDPCG010	Tortoise Pallet - Class 5	3726670	706239	13-APR-09 11:28:20AM	Potential tortoise pallet, 25 cm x 10 cm	5
BDPMR001	Tortoise Pallet - Class 5	3728464	706648	13-MAR-09 10:57:59AM	Tortoise pallet, same point as BDPSC002	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDPGL003	Tortoise Pallet - Class 5	3729196	706595	13-MAR-09 4:48:17PM	Tortoise pallet, no sign 10 cm x 8 cm	5
BDPAD022	Tortoise Pallet - Class 5	3729350	704368	14-APR-09 12:46:07PM	9 x 11 cm, old pallet, under creosote	5
BDPAD023	Tortoise Pallet - Class 5	3728613	704347	14-APR-09 2:20:25PM	Two pallets in caliche caves, 12 x 16 cm	5
BDPCG001	Tortoise Pallet - Class 5	3729912	706471	14-MAR-09 10:58:10AM	Possible tortoise pallet, 10 cm x 22 cm	5
BDPGL027	Tortoise Pallet - Class 5	3729261	704439	15-APR-09 1:37:29PM	Possible tortoise pallet, under bush, likely used by mammal, not deep enough for burrowing owl, 11" x 7" x 18"	5
BDPGL028	Tortoise Pallet - Class 5	3729604	704434	15-APR-09 1:58:18PM	Possible tortoise pallet, correct shape, 450 mm x 150 mm x 400 mm deep, may turn to left, can't tell, adjacent to BDBGL018	5
BDPPB004	Tortoise Pallet - Class 5	3729225	704262	15-APR-09 12:32:47PM	Possible tortoise pallet, 3 x 7 cm	5
BDPGL030	Tortoise Pallet - Class 5	3729193	704137	15-APR-09 5:51:40PM	Possible tortoise pallet, in caliche, 14" x 7" x 28" deep	5
BDPSD024	Tortoise Pallet - Class 5	3726740	705868	15-MAY-09 5:20:01PM	Potential tortoise pallet, in deep drainage, very large apron, 12" x 10" x 28", could turn left, can't tell, not suitable for burrowing owl	5
BDPSD025	Tortoise Pallet - Class 5	3729897	703871	16-MAY-09 1:48:06PM	Potential tortoise pallet, in caliche, inside of deep drainage, 16 " x 8" x 20" deep	5
BDPSD026	Tortoise Pallet - Class 5	3729900	703873	16-MAY-09 1:49:59PM	Potential tortoise pallet, in caliche, inside of deep drainage, 20" x 8" x 18" deep	5
BDPSD027	Tortoise Pallet - Class 5	3729905	703896	16-MAY-09 1:54:20PM	Potential tortoise pallet, in caliche, about 5' to south, couldn't get closer because of catclaw acacia, 26" x 15" x 30" deep	5
BDPSD028	Tortoise Pallet - Class 5	3729930	703864	16-MAY-09 1:59:25PM	Potential tortoise pallet, in caliche, in deep drainage, 12" x 5" x 12" deep, no sign5	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDPSD030	Tortoise Pallet - Class 5	3729931	703797	16-MAY-09 2:26:20PM	Potential tortoise pallet, caliche, 18" x 10" x 18" deep	5
BDPGL032	Tortoise Pallet - Class 5	3728542	704311	20-APR-09 4:17:48PM	Rocky pallet, 8" x 5" x 24" deep, in drainage	5
BDPSD016	Tortoise Pallet - Class 5	3729660	704306	20-APR-09 5:22:06PM	Possible tortoise pallet, 10" x 8"x 16" deep, in drainage, under bush	5
BDPGL004	Tortoise Pallet - Class 5	3729955	706169	20-MAR-09 11:46:08AM	Likely tortoise, no scat or tracks observed, 10" x 8", can see to end	5
BDPSD018	Tortoise Pallet - Class 5	3731534	712276	24-APR-09 11:39:38AM	Possible tortoise pallet, appears that wood rat has nested in front and nest has been disturbed, overwinter pallet? 15" x 10" x 3' deep, coyote and kit fox scat	5
BDPSD019	Tortoise Pallet - Class 5	3728869	703994	24-APR-09 4:00:51PM	Possible tortoise pallet, in galleta grass, 10" x 6" x 12"	5
BDPSD020	Tortoise Pallet - Class 5	3729930	703966	26-APR-09 1:27:10PM	Tortoise pallet in caliche, 30 cm x 25 cm x 50 cm deep	5
BDPSD032	Tortoise Pallet - Class 5	3727026	708008	28-MAY-09 11:07:43AM	Potential tortoise pallet, 8" x 5" x 16" deep	5
BDPAD027	Tortoise Pallet - Class 5	3726379	707965	28-MAY-09 9:37:19AM	Potential tortoise pallet, narrows to small mammal burrows, 20" x 12" x 24" deep	5
BDPSD031	Tortoise Pallet - Class 5	3726412	707950	28-MAY-09 9:42:53AM	Potential tortoise pallet, narrows to small mammal burrows, 20" x 12" x 24" deep	5
BDPES004	Tortoise Pallet - Class 5	3727810	708345	03-JUN-09 12:38:10	Tortoise Shape	5
BDPSD035	Tortoise Pallet - Class 5	3726134	703854	04-JUN-09 10:35:52AM	Potential tortoise pallet, in caliche/rock, in drainage, speckled rattlesnake inside	5
BDPSD021	Tortoise Pallet - Class 5	3729919	703731	04-MAY-09 10:33:28AM	Possible tortoise pallet, in caliches in deep drainage	5
BDPSD034	Tortoise Pallet - Class 5	3725971	708473	29-MAY-09 7:38:56PM	Potential tortoise pallet, 14" x 10" x 20" deep, right shape but narrows inside	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDPSD029	Tortoise Pallet - Class 5	3729933	703937	16-MAY-09 2:15:18PM	Potential tortoise pallets, 5 caliches, 2 here, 3 to east about 10 meters, could function as pallets for tortoise, one partially collapsed, one good size and shape, about 18" x 12" x 20" deep,	5
BDPEL001	Tortoise Pallet - Class 5	3728362	709334	01-JUN-09 7:27:43	Large pallet under galleta grass, probably used by mammal	5
BDPMR001 1	Tortoise Pallet - Class 5	3729162	706423	14-MAR-09 1:25:45PM	Tortoise pallet, 8 cm x 20 cm	5
BDPCG006	Tortoise Pallet - Class 5	3728686	706245	15-MAR-09 1:08:20PM	Tortoise pallet, under palo verde tree, apron, greater than 24 cm width and height, no sign	5
BDPMR002	Tortoise Pallet - Class 5	3729127	706332	15-MAR-09 9:31:34AM	Tortoise pallet, 7 cm x 19 cm x 29 cm deep	5
BDPKH001	Tortoise Pallet - Class 5	3727073	707036	19-MAR-09 9:44:11AM	Possible tortoise pallet	5
BDPSC001	Tortoise Pallet - Class 5	3728549	705131	28-MAR-09 3:56:02PM	Opening faces south	5
BDPAD028	Tortoise Pallet - Class 5	3726568	708260	29-MAY-09 10:35:39AM	Tortoise pallet, 8" x 6" x 6" deep	5
BDPES001	Tortoise Pallet - Class 5	3727839	709455	31-MAY-09 14:59:04	Pallet, probably rabbit	5
BDSSD014	Tortoise Scat - Class 1	3726001	704720	04-JUN-09 8:37:59AM	Tortoise scat, 1/2" x 1" long, no glaze, medium brown	1
BDSSD005	Tortoise Scat - Class 1	3725819	706227	13-APR-09 1:38:11PM	Tortoise scat in area of live tortoise observation (BDTCG001), fresh, some sheen, medium brown, odor, 2" x 3/4", picture	1
BDSSD012	Tortoise Scat - Class 1	3726041	706033	31-MAY-09 2:41:11PM	fresh tortoise scat, dried with glas, odor, medium brown, 2 pieces, 2" x 3/4", 1 1/4" x 3/4"	1
BDSSD006	Tortoise Scat - Class 1	3729682	704427	15-APR-09 2:52:20PM	4 pieces of tortoise scat, 2", 1.5", 0.5", 0.5", width 0.5", light brown, some odor, starting to go from wet to glazed	1

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDSSD002	Tortoise Scat - Class 2	3729363	704644	02-APR-09 1:36:26PM	Tortoise scat, 6" long x 3/4" wide, shiny, medium brown, very long	2
BDSSD009	Tortoise Scat - Class 2	3728519	703741	03-MAY-09 2:01:04PM	Tortoise scat, dark brown, shiny, odor, 1" x 3/4", 1" x 3/4", 2 pieces	2
BDSCG002	Tortoise Scat - Class 2	3725958	706791	10-APR-09 2:01:23PM	Possible this year, from adult	2
BDSGL003	Tortoise Scat - Class 2	3725871	706296	13-APR-09 2:02:28PM	Four pieces of tortoise scat, dark, shiny, 1/2" wide	2
BDSAD009	Tortoise Scat - Class 2	3728629	704291	15-APR-09 2:40:39PM	Two pieces, 6 x 2 cm	2
BDSPB003	Tortoise Scat - Class 2	3729640	704133	16-APR-09 1:24:55PM	2 x 4 cm	2
BDSSD011	Tortoise Scat - Class 2	3728650	703790	04-MAY-09 4:48:06PM	Scat, 2 1/4" x 3/4", some odor, fibrous, in small drainage	2
BDSSD016	Tortoise Scat - Class 3	3725948	704730	04-JUN-09 11:15:53AM	Tortoise scat, bleached, tightly packed but eroded, 2" x 1" wide	3
BDSSD015	Tortoise Scat - Class 3	3726032	704704	04-JUN-09 8:43:10AM	Tortoise scat, 2 pieces, 3/4" wide x 1", 3/4" wide x 1", medium brown, dried, no glaze, tightly packed	3
BDSSD010	Tortoise Scat - Class 3	3729087	703783	04-MAY-09 11:14:29AM	Tortoise scat, fibrous plant material, light brown, 2" x 1/2"	3
BDSGL009	Tortoise Scat - Class 3	3729389	703810	04-MAY-09 5:23:21PM	Tortoise scat, bleached, no odor, fibrous, tightly packed, 1 1/4" x 1", in small drainage	3
BDSSC001	Tortoise Scat - Class 3	3725840	706343	12-APR-09 12:19:50PM	Tortoise scat on desert pavement	3
BDSMR001	Tortoise Scat - Class 3	3728663	706647	13-MAR-09 10:42:52AM	Tortoise scat, 70 mm long, 40 mm wide, grey, tightly packed	3
BDSAD001	Tortoise Scat - Class 3	3728661	706662	13-MAR-09 10:46:08AM	Tortoise scat, 45 mm x 20 mm, grey, tightly packed	3
BDSAD007	Tortoise Scat - Class 3	3729514	704256	15-APR-09 12:51:22PM	3.5 x 2 cm	3
BDSPB002	Tortoise Scat - Class 3	3729427	704125	16-APR-09 1:07:42PM	4 (cm?) x 20 (mm?) cm	3
BDSPB004	Tortoise Scat - Class 3	3727508	702779	16-APR-09 5:09:05PM	Tortoise scat, bleached, dried, 2 x 1 cm	3
BDSGL005	Tortoise Scat - Class 3	3729520	704245	24-APR-09 4:54:14PM	Tortoise scat, 2" x 3/4", covered in dirt	3

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDSGL006	Tortoise Scat - Class 3	3729000	704241	24-APR-09 5:16:06PM	Tortoise scat, within 50 m of active tortoise burrow (BDBAD010), 2.5" x 3/4"	3
BDSSD007	Tortoise Scat - Class 3	3729662	703963	26-APR-09 1:53:03PM	Tortoise scat, not shiny, medium brown, tightly packed, no odor, 1 1/4" x 1/2", one piece with small piece attached	3
BDSGL002	Tortoise Scat - Class 3	3729238	705431	28-MAR-09 9:22:33AM	Tortoise scat, 1 3/4" x 1/2" bleached, picture with tag	3
BDSAD004	Tortoise Scat - Class 3	3729580	704734	31-MAR-09 9:49:18AM	Large tortoise scat, ~ 1 year old, 2" long x 1" wide, picture	3
BDSCG001	Tortoise Scat - Class 3	3729654	705312	28-MAR-09 9:46:47AM	Tortoise scat, about 1 year old, with potential pallet area created by erosion under bush	3
BDSGL001	Tortoise Scat - Class 3	3729220	706614	13-MAR-09 11:33:08AM	Tortoise scat, 2 pieces, 45 mm x 15 mm, 65 mm x 15 mm	3
BDSSD008	Tortoise Scat - Class 4	3728884	703748	03-MAY-09 12:24:30PM	Tortoise scat, bleached, loose plant fiber, 2" x 3/4", in drainage	4
BDSGL008	Tortoise Scat - Class 4	3728630	703724	04-MAY-09 9:28:59AM	Tortoise scat, bleached, loose material, 2 1/4" x 1/2", in pavement, next to drainage	4
BDSSD003	Tortoise Scat - Class 4	3729317	704547	10-APR-09 12:47:14PM	Tortoise scat, very large but cigar shaped, 1" wide x 2" long, picture, bleached, eroded	4
BDSSD004	Tortoise Scat - Class 4	3729666	704461	11-APR-09 11:20:25AM	Tortoise scat, 1" x 1/2", scaly, starting to erode	4
BDSGL004	Tortoise Scat - Class 4	3725848	706300	13-APR-09 2:23:28PM	Tortoise scat, 2 1/2" x 1/2"	4
BDSAD008	Tortoise Scat - Class 4	3729514	704288	15-APR-09 1:29:04PM	3 x 3 cm	4
BDSAD003	Tortoise Scat - Class 4	3729061	706193	15-MAR-09 2:54:11PM	Tortoise scat, 4 cm long x 1.5 cm wide, becoming grey, loose	4
BDSGL007	Tortoise Scat - Class 4	3728371	704267	24-APR-09 5:42:55PM	Tortoise scat, 1" x 1/2", eroded, bleached	4
BDSAD010	Tortoise Scat - Class 5	3728611	704108	16-Apr-09	Not entered in GPS, 2 x 6 cm	5
BDSPS001	Tortoise Scat - Class 5	3727314	705780	02-JUN-09 16:41:06	In wash, caught with debris	5
BDSSC002	Tortoise Scat - Class 5	3725699	706327	12-APR-09 3:46:46PM	~ 5 cm x 2.5 cm, near carcass (BDCMR013) about 50 m away	5
BDSPB001	Tortoise Scat - Class 5	3729103	704155	15-APR-09 5:58:17PM	Bleached, loose, old tortoise scat, 2 pieces	5

IDENT	Map Label	Y_PROJ	X_PROJ	COMMENT	Description	Class
BDSSC003	Tortoise Scat - Class 5	3729612	707308	20-APR-09 1:44:35PM	In ephemeral wash	5
BSDDS014	Tortoise Scat - Class 5	3726298	708547	30-MAY-09 8:05:48AM	Tortoise scat, 2" x 3/4", loose, old, eroded	5
BDSAD005	Tortoise Scat - Class 5	3729564	704699	31-MAR-09 10:53:44AM	Very old tortoise scat, partially consumed by termites, 2" long x 1" wide	5
BDSAD006	Tortoise Scat - Class 5	3728538	704705	31-MAR-09 12:15:46PM	Tortoise scat, 1" x 1/2", old scat	5
BDSGL010	Tortoise Scat - Class 5	3725958	706016	31-MAY-09 2:36:32PM	4" long, tortoise scat, old, bleached, eroded, all grass	5
BDSSD013	Tortoise Scat - Class 5	3725614	705959	31-MAY-09 4:29:12PM	Tortoise scat, falling apart, loose, linear, 3/4" x 2", broken into two pieces	5
BDSAD001 1	Tortoise Scat - Class 5	3728942	706409	14-MAR-09 1:06:38PM	Tortoise scat, 2 years old	5
BDSMR002	Tortoise Scat - Class 5	3729301	706392	14-MAR-09 5:23:25PM	Tortoise scat, 13 mm x 30 mm, 3 + years old	5
BDSMR003	Tortoise Scat - Class 5	3729565	706290	15-MAR-09 11:16:41AM	Tortoise scat, greater than 3 years old	5
BDTSD001	Tortoise Tracks	3720218	707416	01-JUN-09 6:13:56PM	Tortoise tracks, ~6" width, in sandy drainage	

ATTACHMENT 5

WILDLIFE SPECIES DETECTED WITHIN THE BIOLOGICAL RESOURCES SURVEY AREA

ATTACHMENT 5

Wildlife Species Detected within the Biological Resources Survey Area

	Scientific Name	Common Name
INVERTEBRATES		
Order Coleoptera		Beetles
	Family Tenebrionidae	
	Eleodes sp.	darkling beetle
Order Isoptera		Subterranean termites
Order Lepidoptera		Insects and Butterflies
	Family Pieridae	
	Nathalis iole	dainty sulphur
	Pontia protodice	checkered white
	Family Lycaenidae	
	Brephidium exilis	pigmy blue
	Family Nymphalidae	
	Vanessa cardui	painted lady
	Vanessa virginiensis	Virginia lady
Order Orthoptera		Grasshoppers and Crickets
	Family Rhaphidophoridae	
	Macrobaenetes sp.	giant sand treader cricket
REPTILES		
Order Squamata		Lizards and Snakes
	Family Crotaphytidae	
	Gambelia wislizenii	long-nosed leopard lizard
	Family Eublepharidae	
	Coleonyx variegatus	western banded gecko
	Family Iguanidae	
	Dipsosaurus dorsalis	desert iguana
	Family Phrynosomatidae	
	Uta stansburiana	side-blotched lizard
	Callisaurus draconoides	zebra-tailed lizard
	*Uma scoparia**	Mojave fringe-toed lizard
	Sceloporus magister	desert spiny lizard
	Urosaurus graciosus	long-tailed brush lizard
	Phrynosoma platyrhinos	desert horned lizard
	Family Teiidae	
	Cnemidophorus tigris	western whiptail
	Family Colubridae	
	Chionactis occipitalis	western shovel-nosed snake
	Salvadora hexalepis	patch-nosed snake
	Family Viperidae	
	Crotalus cerastes	sidewinder
Order Testundines		Turtles
	Family Testudinidae	
	Gopherus agassizii[1,2]	desert tortoise
BIRDS		
Order Ciconiiformes		Herons, Storks, Ibises, and Relatives
	Family Ardeidae	
	Butorides virescens	green heron
	Family Cathartidae	
	Cathartes aura	turkey vulture

	Scientific Name	Common Name
Order Falconiformes		Diurnal Birds of Prey
	Family Accipitridae	
	Buteo jamaicensis	red-tailed hawk
	Buteo swainsoni[2]	Swainson's hawk
	*Circus cyaneus**	northern harrier
	Family Falconidae	
	Falco mexicanus+	prairie falcon
Order Galliformes		MPheasants, Grouse, Quail and Relatives
	Family Odontophoridae	
	Callipepla gambelii	Gambel's quail
Order Charadriiformes		Shorebirds, Gulls and Relatives
	Family Charadriidae	
	Charadrius vociferus	killdeer
	Family Scolopacidae	
Order Columbiformes		Pigeons and Doves
	Family Columbidae	
	Zenaida macroura	mourning dove
Order Caprimulgiformes		Goatsuckers and Relatives
	Family Caprimulgidae	
	Chordeiles acutipennis	lesser nighthawk
Order Cuculiformes		Cuckoos and Relatives
	Family Cuculidae	
	Geococcyx californianus	greater roadrunner
Order Strigiformes		Owls
	Family Strigidae	
	*Athene cunicularia**	burrowing owl
Order Apodiformes		Hummingbirds and Swifts
	Family Apopidae	
	*Chaetura vauxi**	Vaux's swift
	Family Trochilidae	
	Calypte costae	Costa's hummingbird
Order Passeriformes		Song birds
	Family Tyrannidae	
	Myiarchus cinerascens	ash-throated flycatcher
	Sayornis nigricans	black phoebe
	Family Laniidae	
	*Lanus ludovicianus**	loggerhead shrike
	Family Corvidae	
	Corvus corax	common raven
	Family Alaudidae	
	Eremophila alpestris	horned lark
	Family Hirundinidae	
	Hirundo rustica	barn swallow
	Petrocheliodon pyrrhonota	cliff swallow
	Tachycineta bicolor	tree swallow
	*Progne subis**	purple martin
	Family Remizidae	
	Auriparus flaviceps	verdin
	Family Regulidae	
	Regulus calendula	ruby-crowned kinglet
	Family Mimidae	
	Mimus polyglottos	northern mockingbird
	Toxostoma lecontei	Le Conte's thrasher
	Family Ptilogonatidae	
	Phainopepla nitens	phainopepla
	Family Parulidae	
	Dendroica coronata	yellow-rumped warbler
	Dendroica occidentalis	hermit warbler

	Scientific Name	Common Name
	Vermivora celata	orange-crowned warbler
	Wilsonia pusilla	Wilson's warbler
	Family Emberizidae	
	Amphispiza bilineata	black-throated sparrow
	Spizella breweri	Brewer's sparrow
	Family Icteridae	
	Agelaius phoeniceus	red-winged blackbird
	Quiscalus mexicanus	great-tailed grackle
	Icterus bullockii	Bullock's oriole
	Family Fringillidae	
	Carpodacus mexicanus	house finch
MAMMALS		
Order Lagomorpha		Rabbits, Hares, and Pikas
	Family Leporidae	
	Sylvilagus audubonii	Audobon's cottontail
	Lepus californica	black-tailed jackrabbit
Order Rodentia		Rodents
	Family Heteromyidae	
	Dipodomys deserti	desert kangaroo rat
	Dipodomys merriami	Merriam's kangaroo rat
	Perognathus longimembris	pocket mouse species
	Chaetodipus sp.	pocket mouse species
	Family Scuiridae	
	Spermophilus tereticaudus	round-tailed ground squirrel
	Ammospermophilus leucurcus	antelope ground squirrel
Order Carnivora		Carnivores
	Family Canidae	
	Vulpes macrotis arsipus	desert kit fox
	Canis latrans	coyote
	Family Mustelidae	
	*Taxidea taxus**	American badger
	Family Felidae	
	Lynx rufus	bobcat
Order Artiodactyla		Even-toed Ungulates
	Family Cervidae	
	Odocoileus hemionus	mule deer

[1]Federally threatened or endangered species
[2]State threatened or endangered species
*State species of special concern
+State special animal/CDFG watch list

ATTACHMENT J

BURROWING OWL TECHNICAL REPORT

BLYTHE SOLAR POWER PROJECT
WESTERN BURROWING OWL TECHNICAL REPORT
RIVERSIDE COUNTY, CALIFORNIA

Prepared for:

Solar Millennium, LLC
1625 Shattuck Avenue
Berkeley, California 94709

Chevron Energy Solutions
A Division of Chevron U.S.A. Inc.
345 California St., 18th Floor
San Francisco, California 94104

Prepared by:

EDAW AECOM
870 Emerald Bay Route, Suite 400
South Lake Tahoe, California 96150
Phone: (530) 543-5105
Fax: (530) 543-5150
Contact: Steve Henderson

August 2009

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I. SUMMARY

Solar Millennium, LLC and Chevron Energy Solutions (Applicants) propose to develop the 1,000-megawatt (MW) Blythe Solar Power Project (BSPP or Project) that would be located in eastern Riverside County approximately 8 miles west of the City of Blythe, California (Figure 1 [all figures referred to herein are included in Attachment 1]). The primary solar energy facilities and associated construction and operations footprint are located within an approximate 7,030-acre disturbance area (Figure 2).

EDAW AECOM (EDAW) was contracted by the Applicants to perform environmental services to support the joint review process for the BSPP being undertaken by the California Energy Commission (CEC) and the Bureau of Land Management (BLM). As a component of needed environmental services, protocol surveys for western burrowing owl (*Athene cunicularia*), which is designated as a species of special concern by the California Department of Fish and Game (CDFG), were conducted to determine presence/absence, distribution and abundance, and breeding status of the species on the proposed disturbance area (area inside and outside the facility fenceline that will be disturbed by the Project), solar disturbance area (area inside the facility fenceline: solar fields, office and maintenance buildings, lay down area, drainage channels, bioremediation area, leach fields, a corridor for the transmission line, and roads), and buffer.

The purpose of this technical report is to summarize the methods and results of the 2009 western burrowing owl survey, and support the biological resources analysis in the Application for Certification. One burrowing owl was observed at an active burrow on the Project site during the survey, and 92 inactive burrows with various levels of burrowing owl sign were detected.

II. INTRODUCTION

A. Description of Project

Solar Millennium, LLC and Chevron Energy Solutions (Applicants) are proposing to construct a commercial solar thermal electric power generating facility, referred to as the Blythe Solar Power Project (BSPP or Project). The BSPP would be located in the southern California inland desert, approximately 7 miles west of the City of Blythe, in Riverside County, California. The Project would be located on a 9,400-acre right-of-way (ROW) owned by the Federal government and leased by the Applicant from the Bureau of Land Management (BLM). The Project facilities would occupy approximately 7,030 acres of the ROW (referred to as the disturbance area). The

Project would use solar parabolic trough technology to generate electricity. With this technology, arrays of parabolic mirrors collect heat energy from the sun and refocus the radiation on a receiver tube located at the focal point of the parabola. A heat transfer fluid (HTF) is heated to high temperature (750° F) as it circulates through the receiver tubes. The heated HTF is then piped through a series of heat exchangers where it releases its stored heat to generate high-pressure steam. The steam is then fed to a traditional steam turbine generator where electricity is produced.

The Project would have a nominal output of 1,000 MW, consisting of four identical and independent 250 MW power generating facilities (power units). The units would be developed in phases with construction scheduled to begin in late 2010 on the first unit; that unit would come on line in mid-2013 and subsequent units would come on line in each of the following three years.

Each power unit would have its own solar field, comprised of piping loops arranged in parallel groups, and its own power block, centrally located within the solar field. Each power block would have its own HTF pumping and freeze protection system; solar steam generator; steam turbine generator; an air-cooled condenser (ACC) for cooling; transmission lines and related electrical system; and auxiliary equipment (e.g., water treatment system, emergency generators). The Project would require a new transmission line, which is in a preliminary design stage.

Access to the BSPP would be via an existing public road heading north from the frontage road along Interstate 10 (I-10). Improvements to portions of the public road would be required. Only a small portion of the overall facility footprint would be paved, primarily the site access road, the service roads to the power blocks, and six acres of each of the 18-acre power blocks. The solar fields would remain unpaved and without a gravel surface in order to prevent mirror damage. The Project solar fields and support facilities perimeter would be secured with chain link metal-fabric security fencing and controlled access gates.

Following completion of spring 2009 surveys, several changes were made to the disturbance area limits. First, a conceptual footprint of a possible transmission line was identified (Figure 2). The final Project transmission line route has not yet been selected. The possible transmission line footprint has not yet been surveyed and, therefore, is not discussed in this report. Surveys for the possible transmission line will be conducted following selection of the final transmission line route (anticipated spring 2010).

In addition, several portions of the disturbance area, totaling approximately 180 acres, are no longer a part of the proposed Project and have been removed from the disturbance area (Figure 2). For example, an approximately 6.2-mile-long linear feature was surveyed that was subsequently removed from the disturbance area. However, because the 180 acres were included in the spring 2009 surveys, in the interest of contributing to the body of scientific information, survey results for these areas are included in this document.

B. Project Location and Setting

The Project site is located approximately 2 miles north of I-10 and 8 miles west of the City of Blythe at the far eastern end of Riverside County, California. The BLM land that includes the Project site is designated as BLM Moderate. The McCoy Mountains are located immediately west of the Project site, and the Big Maria Mountains are located several miles to the northeast.

The site is mostly flat, with elevation ranging on U.S. Geological Survey (USGS) topographical maps from a high of about 670 feet above sea level at the southwestern limits of the site to a low of about 420 feet above sea level near the southeastern site boundary (USGS 1983). The Project site slopes gently upward to the west, as it approaches the base of the McCoy Mountains. Several steep-walled canyons are present in the western portion of the Project site, though these widen and flatten as they travel farther east. The disturbance area and surrounding area are characterized by Sonoran creosote bush scrub, desert dry wash woodland, or unvegetated ephemeral dry wash habitat, with desert pavement and cobble terraces in between.

C. Purpose of Survey

The purpose of the western burrowing owl survey was to 1) determine the presence or absence, distribution and abundance, and breeding status of the species on the Project site during the 2009 survey period; and 2) support preparation of the biological resources analysis in the Project AFC, which includes quantifying potential impacts on burrowing owl and identifying appropriate avoidance, minimization, and mitigation measures, if needed.

III. BACKGROUND INFORMATION

A. Regulatory Status

Western burrowing owl is designated as a species of special concern (Priority 2 Bird Species of Special Concern) by the California Department of Fish and Game (CDFG) due to rapid habitat loss and degradation from urbanization; it is also designated as sensitive by BLM.

B. Habitat Associations

Western burrowing owl habitat consists of annual and perennial grasslands, deserts, and scrublands characterized by low-growing vegetation (Zarn 1974, California Burrowing Owl Consortium [CBOC] 1993, Haug et al. 1993). Suitable owl habitat may also include trees and shrubs if the canopy covers less than 30 percent of the ground surface (DeSante et al. 1996). Burrows are the essential component of burrowing owl habitat, and both natural and artificial burrows provide protection, shelter, and nests for burrowing owls. Burrowing owls typically use burrows made by mammals, such as kit foxes, ground squirrels, or badgers, but also may use human-made structures, such as cement culverts, cement asphalt or wood debris piles, or openings beneath cement or asphalt pavement (Collins and Landry 1977, Trulio 1994). Where the ranges of burrowing owl and desert tortoise (*Gopherus agassizii*) overlap, burrowing owls also use tortoise burrows.

C. Population Status

Burrowing owls in California are generally nonmigratory and most abundant in the Central and Imperial Valleys, primarily in agricultural areas (Center for Conservation Biology et al. 2003). Small, scattered populations occur in the Mojave Desert. Although the burrowing owl population in the southern desert region is primarily resident (i.e., present year-round), some migration from northern populations to this area occurs during winter (Center for Biological Diversity et al. 1993 citing Garrett and Dunn 1981). Seasonal non-migration movements and shifts in burrow use by juveniles and adults within a region also occur. Population density seems to be correlated with prey availability, particularly small mammals (Klute et al. 2003).

California Natural Diversity Data Base (CNDDB) reports 132 occurrences of the western burrowing owl in Riverside County, concentrated in the west and west-central portions of the county. Prior to Project surveys conducted in 2009, and surveys conducted concurrently for the proposed Palen Solar Power Plant (22 miles to the west), the only documented recent western

burrowing owl occurrences in eastern Riverside County are located outside the disturbance area near Blythe, California (Center for Conservation Biology et al. 2003). As of 2002, Higson (cited by Center for Conservation Biology et al. 2003) characterized the western burrowing owl population near Blythe as "sparse" and estimated a maximum of 12 to 14 pairs in the summer and two wintering pairs. CNDDB reports six occurrences of western burrowing owl near Blythe; five were documented in 2002 and one was documented in 1987. The next closest records to the disturbance area are approximately 22 miles to the west at the proposed Palen Solar Power Plant site (two breeding pairs and their juveniles were documented during surveys conducted in 2009 by EDAW AECOM), and 80 miles to the west in west-central Riverside County.

IV. SURVEY METHODOLOGY

Burrowing owl surveys were performed according to the protocol established by the California Burrowing Owl Consortium (CBOC 1993) and accepted by CDFG. The CBOC protocol requires that the disturbance area, as well as a 492-foot (150-meter) buffer surrounding the disturbance area, be surveyed according to the CBOC protocol. Additionally, CEC requires a habitat evaluation within a 1-mile buffer surrounding the disturbance area. In summary, the CBOC protocol involves three phases of surveys: Phase I is a habitat assessment to determine if suitable habitat for burrowing owl exists on site; Phase II involves mapping all potential burrowing owl burrows; and Phase III involves four repeat presence/absence focused surveys during the breeding season, and, if there are no detections, during the wintering season as well.

On February 15 and 16, 2009, Project biologists Arthur Davenport, Shelly Dayman, Charles German, Katie Hall, Gregg Lukasek, and Milo Rivera assessed the proposed Project site for burrowing owl habitat (Phase I of the CBOC protocol). A burrow survey (Phase II of the CBOC protocol) was conducted in conjunction with focused surveys for desert tortoise from March through May 2009, during which the entire disturbance area was surveyed by walking linear transects spaced 32.8 feet (10 meters) apart. Additional Phase II burrow surveys were conducted within the 492-foot buffer by surveying along line transects spaced at 98-foot intervals. Two additional CEC-recommended transects within the 1-mile buffer were also surveyed for suitable burrowing owl burrows in conjunction with desert tortoise protocol surveys. These transects were located at 3,960-foot (3/4-mile) and 5,280-foot (1-mile) intervals from and parallel to the edge of the disturbance area. Phase II burrow surveys were conducted by surveyors walking slowly and systematically along transects and, when visibility was limited, between transects, while visually searching for burrowing owls, their sign, and potentially suitable burrows. All burrowing owl observations, sign, and potentially suitable burrows (regardless of sign presence) were mapped using GPS units and recorded on datasheets. Phase II burrow data also included the

type of burrow if known (e.g., kit fox [*Vulpes macrotis*], desert tortoise), a GPS identity code, and the type of burrowing owl sign observed.

Project biologists Rob Conohan, Vick Germany, Elizabeth Gruenstein, Katie Hall, Steve Henderson, Mike Ireland, Joshua Meidav, Jason Phillips, Julie Roth, Hildie Spautz, and Dana Terry conducted Phase III surveys (western burrowing owl presence/absence surveys, census, and mapping) during the peak breeding season (April 15 to July 15, as defined in the CBOC protocol). Phase III surveys were initiated on April 15, 2009, and were completed on June 15, 2009. Phase III surveys consisted of a minimum of four site visits completed on separate days. During the initial Phase III site visit, all burrows mapped during the Phase II survey were carefully examined for burrowing owl sign. The disturbance area and 492-foot buffer were surveyed three additional times during the breeding season to determine burrowing owl presence, focusing on burrows and burrow complexes with burrowing owl sign. Where possible, biologists scanned for owls using binoculars or spotting scopes at a distance from burrows. However, due to the terrain and long distance of most burrows from roads or other fixed observation locations, surveyors typically approached the burrows on foot, carefully verifying presence or absence of burrowing owls on their approach. All Phase III survey data were recorded on data forms (Attachment 2). Data recorded included survey visit number (1 to 4), weather conditions (temperature, wind, precipitation, cloud cover), dimensions and characteristics of all burrows surveyed (height, width, estimated depth, single burrow or complex), presence or absence of owl sign (e.g., feathers, prey remains, pellets, whitewash), burrow occupancy status (active, inactive), notes on any burrowing owl detections (e.g., abundance, age, sex, behavior), and other wildlife species observed.

All burrowing owl observations and old or fresh burrowing owl sign were recorded on datasheets and mapped with GPS units. Old sign primarily included pellets that were bleached, desiccated, and disintegrated; and whitewash remnants that were sparse and partially eroded. In several cases, whether old whitewash remnants were from burrowing owls or other bird species was unknown; those signs were recorded as potential burrowing owl sign.

Survey Limitations

As noted above, no protocol western burrowing owl surveys were conducted of a transmission route because the Project's transmission line route has not been finalized. This additional survey work will be conducted when the route is selected and the results provided to the regulatory agencies and other stakeholders.

Protocol surveys for western burrowing owl were conducted in the disturbance area and 492-foot buffers during the 2009 breeding season only. However, owl abundance and patterns of use in the disturbance area during the non-breeding season cannot be determined from these survey results. The burrowing owl population in the southern desert region is primarily resident (i.e., present year-round); however, some migration from northern populations to this area occurs during winter (Center for Biological Diversity et al. 1993 citing Garrett and Dunn 1981). Seasonal non-migration movements and shifts in burrow use by juveniles and adults within a region also occur. The results of the 2009 burrowing owl protocol survey suggest considerable variability in their use of and abundance in the disturbance area among years and possibly seasons. Also, as recommended in the CBOC protocol and by CDFG, Phase III surveys were initiated on April 15. However, western burrowing owl breeding can be initiated as early as February, particularly in desert populations. Therefore, nesting attempts could have been initiated and not detected in 2009 before Phase III surveys were initiated.

V. RESULTS

The entire disturbance area and buffer is considered suitable western burrowing owl foraging and nesting habitat, as assessed on February 15 and 16, 2009, per Phase I of the CBOC protocol. Numerous (1,019) burrows potentially suitable for use by burrowing owls were detected and mapped throughout the disturbance area and 492-foot (150-meter) buffer. Potentially suitable burrows consisted of abandoned badger and kit fox burrows, desert tortoise burrows, and burrows of other unidentified fossorial mammals. A prevalence of small mammal burrows and a large arthropod population were noted during the Phase I assessment, indicating that a prey base for burrowing owls is present.

Figure 3 displays the locations of western burrowing owls observed, active burrows (i.e., occupied by burrowing owls), and other locations where sign or potential sign were observed during surveys. One burrowing owl was observed at a burrow during desert tortoise and western burrowing owl Phase II surveys on March 18, 2009, in the western-central area of the disturbance area (Figure 3). This active burrow had abundant and recent burrowing owl sign and was located adjacent to another burrow with sign; however, no burrowing owls were observed there subsequently during Phase III surveys. Because western burrowing owl breeding can be initiated as early as February, particularly in desert populations, it is unknown whether this burrowing owl attempted to nest at this location in 2009 prior to initiation of focused Phase III surveys. Also, on March 12, one burrowing owl was observed within the disturbance area near its western edge during vegetation surveys (Figure 3); this portion of the disturbance area was outside the burrowing owl Phase II and III survey area. No burrowing owls were documented

within the disturbance area or 492-foot (150-meter) buffer during Phase III surveys, although signs of previous burrowing owl use were present throughout these areas.

A total of 92 burrows with various levels of burrowing owl sign were detected during the Phase II and Phase III surveys. The disturbance area and 492-foot (150-meter) buffer are composed of either Sonoran creosote bush scrub, desert dry wash woodland, or unvegetated ephemeral dry wash habitat, with desert pavement and cobble terraces in between. Vegetation within the desert dry wash woodland is composed primarily of creosote (*Larrea tridentata*), ironwood (*Olneya tesota*), blue palo verde (*Parkinsonia florida*), and native annual grasses, while the desert scrub is predominantly vegetated with creosote. Suitable burrows were regularly distributed throughout most of the scrub habitat, which is relatively flat and sparsely vegetated and consists of loose sandy soils. Within the entire disturbance area and buffer, burrows with signs of previous use by burrowing owl are present at a relatively low density, but are regularly distributed throughout except for the far western portion. The far western portion of the disturbance area, at the base of the McCoy Mountains, is characterized by steep, rocky canyons, desert wash, and hard desert pavement and cobble terrace substrate, and contains few burrows suitable for nesting burrowing owls. This is probably due to the relative difficulty for fossorial mammals to excavate burrows in such hard substrate. Despite the sparseness of suitable burrows in the western portion of the disturbance area, three suitable burrows in the southwestern portion of the 492-foot buffer, located within 100 feet of each other on the side of a steep, rocky canyon, had signs of heavy use by burrowing owls prior to the 2009 breeding season.

The presence of inactive burrows with burrowing owl sign, particularly those with abundant old sign, suggests that the disturbance area may have been used previously by western burrowing owls for breeding. Also, western burrowing owls may use a range of different satellite burrows irregularly during the breeding and non-breeding seasons. Many of the suitable burrows appeared to have sign that was severely degraded and left in previous seasons, implying that the 92 burrows with sign represent multiple seasons of burrowing owl use across the site. The length of time that burrowing owl sign can remain visible on the landscape is not known and is expected to vary with local precipitation, wind patterns, soil moisture, and other abiotic and biotic factors. Due to the generally dry conditions at the site, burrowing owl sign may persist for multiple seasons. The majority of these burrows also had relatively small amounts of burrowing owl sign, indicating that 1) owls only used them for a brief period before vacating, or 2) previous use may have been more extended or regular but much of the original sign has disappeared. If the small amount of sign at most burrows is a function of only temporary or infrequent use by western burrowing owls, the site may be used more during migration or other seasonal

movements, or during winter. A low density of western burrowing owl on the Project site is consistent with the documented general abundance of burrowing owls in the surrounding region.

Table 1 includes a list of wildlife species detected during the Phase III protocol surveys (western burrowing owls were detected during Phase II surveys only). Two special status wildlife species were detected: loggerhead shrike (*Lanius ludovicianus*), which is designated as a species of special concern by CDFG; and desert kit fox (*Vulpes macrotis arsipus*), a State protected furbearing mammal (California Code of Regulations).

Table 1
Wildlife Species Detected During Phase III Burrowing Owl Surveys

Common Name	**Scientific Name**
Reptiles	
Zebra-tailed lizard	*Callisaurus draconoides*
Western whiptail	*Cnemidophorus tigris*
Sidewinder	*Crotalus cerastes*
Great basin collared lizard	*Crotaphytus bicinctores*
Desert iguana	*Dipsosaurus dorsalis*
Long-nosed leopard lizard	*Gambelia wislizenii*
Desert horned lizard	*Phrynosoma platyrhinos*
Gopher snake	*Pituophis catenifer*
Common side-blotched lizard	*Uta stansburiana*
Birds	
White-throated swift	*Aeronautes saxatalis*
Red-tailed hawk	*Buteo jamaicensis*
Gambel's quail	*Callipepla gambelii*
Cactus wren	*Campylorhynchus brunneicapillus*
Whip-poor-will	*Caprimulgus vociferus*
Turkey vulture	*Cathartes aura*
Killdeer	*Charadrius vociferous*
Lesser nighthawk	*Chordeiles acutipennis*
American crow	*Corvus brachyrhynchos*
Common raven	*Corvus corax*
Greater roadrunner	*Geococcyx californianus*

Common Name	Scientific Name
Horned lark	*Eremophila alpestris*
American kestrel	*Falco sparverius*
Barn swallow	*Hirundo rustica*
Loggerhead shrike	*Lanius ludovicianus*
Northern mockingbird	*Mimus polyglottos*
Ash-throated flycatcher	*Myiarchus cinerascens*
MacGillivray's warbler	*Oporornis tolmiei*
Black-tailed gnatcatcher	*Polioptila melanura*
Rock wren	*Salpinctes obsoletus*
Say's phoebe	*Sayornis saya*
Tree swallow	*Tachycineta bicolor*
Violet-green swallow	*Tachycineta thalassina*
Thrasher species	*Toxostoma* spp.
Western kingbird	*Tyrannus verticalis*
Cassin's vireo	*Vireo cassinii*
Wilson's warbler	*Wilsonia pusilla*
White-winged dove	*Zenaida asiatica*
Mourning dove	*Zenaida macroura*
Mammals	
Coyote	*Canis latrans*
Kangaroo rat	*Dipodomys* spp.
Black-tailed jackrabbit	*Lepus californicus*
Round-tailed ground squirrel	*Spermophilus tereticaudus*
Audubon's cottontail	*Sylvilagus audubonii*
Desert kit fox	*Vulpes macrotis arsipus*

VI. REFERENCES CITED

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ATTACHMENT 1

FIGURES

Map Location

1 inch = 40 miles

0 40 80 Miles

Blythe Solar Power Project
Western Burrowing Owl
Technical Report

Figure 1
Regional Map

Source: ESRI; AECOM 2009

Solar Millennium

AECOM

Date: August 2009

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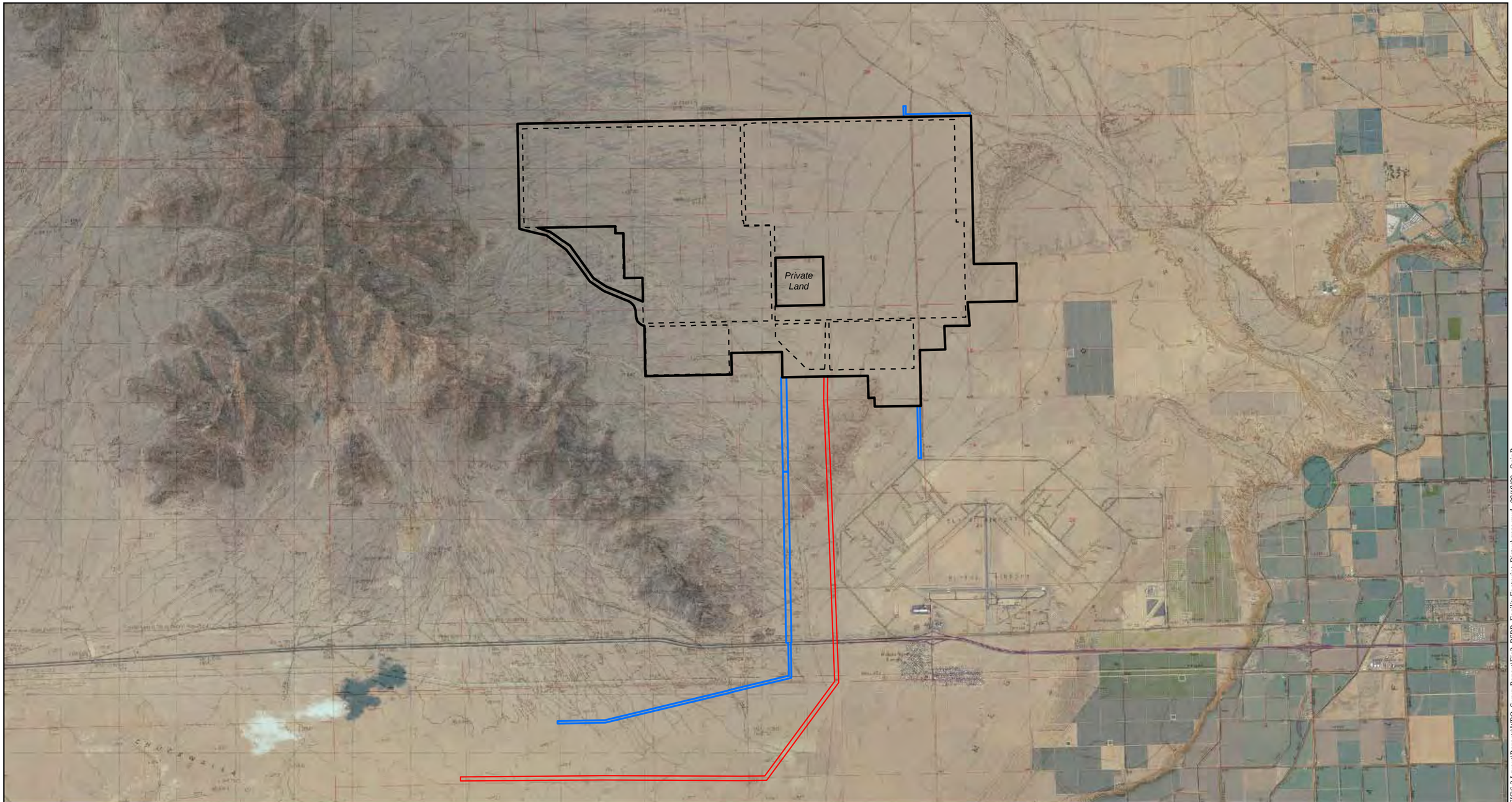

Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Disturbance Area (Surveyed - No Longer a Part)

Source: NAIP 2005; AECOM 2009

N
W E
S

1 in = 1 miles

0 1 2 Miles

Blythe Solar Power Project
Western Burrowing Owl
Technical Report

Figure 2
Facility Footprint and
Disturbance Area

Solar Millennium

AECOM

Date: August 2009

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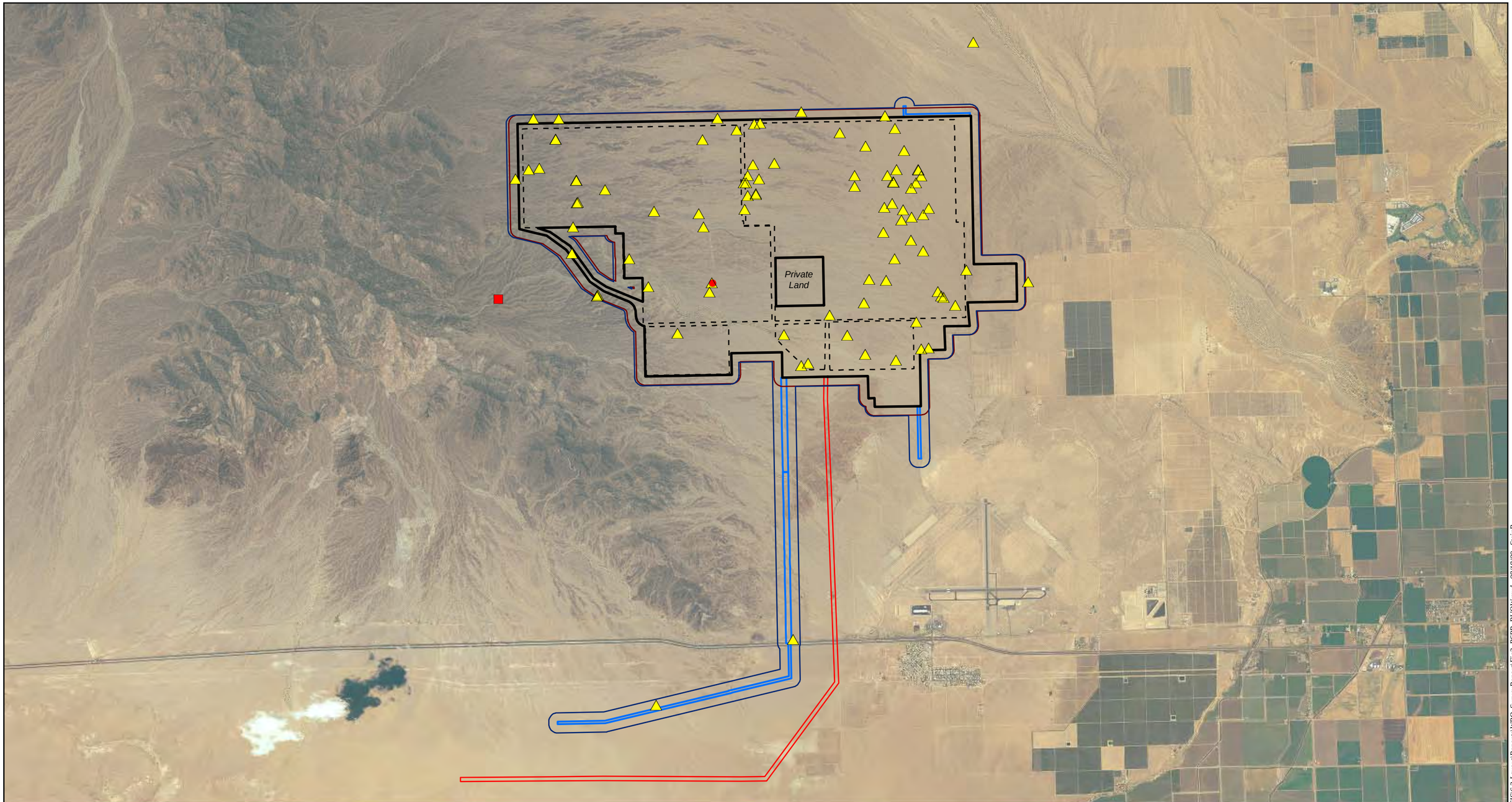

Map Location

Legend

- Disturbance Area
- Facility Footprint
- Possible Transmission Line Route
- Former Disturbance - No Longer Proposed

Western Burrowing Owl Observations

- Western Burrowing Owl and Active Burrow
- Western Burrowing Owl
- Burrow with Sign

Burrowing Owl Survey Buffer

- CBOC 492-foot
- Former CBOC 492-foot

Source: NAIP 2005; EDAW 2009; AECOM 2009;

N W E S

1 in = 1 miles

0 1 2 Miles

Blythe Solar Power Project
Western Burrowing Owl
Technical Report

Figure 3
Burrowing Owl Observations

Solar Millennium

AECOM

Date: August 2009

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ATTACHMENT 2

WESTERN BURROWING OWL SURVEY DATA FORM

BURROWING OWL (BUOW) FIELD SURVEY DATA SHEET

Project: SM **Site: _____** **Date: _____**

Survey Type (Phase 2/3)	GPS Unit	Surveyor(s)

	Time	Temp (°F)	Wind (Beaufort)	Precip.	Cloud Cover (%)
Start					
End					

Potential BUOW Burrows:

Map Sheet	Burrow ID (GPS IDENT Code*)	New Burrow? (Y/N)	Burrow complex?[1] (Y/N)	GPS Coordinates for New Burrows (NAD 83 Zn 11N)	Visit #	Burrow Width and Height (in.)	Est. Burrow Depth (in.)	BUOW or Sign Present[2] (list all that apply)	Burrow Status[3] (A, PA, IA)	Comments (Note burrow/complex characteristics and sign condition [fresh, etc.]. List photo references here. If present, # owls, pair status, age, sex, etc. and go to page 3.)

* **IDENT Code:** the unique 8-digit code that identifies the individual burrow or burrow complex within the project site (e.g., PBBSD001). See page 4 for nomenclature and codes.

[1] **Does the Burrow ID represent a complex of multiple burrows? Y = Yes**, multiple burrows forming a complex are represented by this IDENT Code; **N = No**, only one burrow is represented by this IDENT Code.

[2] **BUOW or Sign: O-**Owl, **W-**Whitewash, **P-**Pellets, **T-**BUOW Tracks, **B-**Bones (from degraded pellets), **F-**Feathers, **Pr-**prey remains, **Ef-**Eggshell fragments, **St-**Sticks, **NONE-**no sign detected.

[3] **Burrow Status: A = Active** (live owl observed at burrow, or sign of recent use; fresh sign), **PA = Potentially Active** (evidence of previous, but not recent, use; old sign), **IA = Inactive** (no evidence of use by burrowing owls, but is of suitable size for occupancy).

Reviewed by surveyor (initials, date):_____ ***Approved by team leader (initials, date):_____***

Project: SM Site:_____ Date: _____ Surveyor: _____ GPS Unit: _____

BUOW Detections:

Map Sheet	Detection ID (GPS IDENT Code*)	GPS Coordinates (NAD 83 Zn 11N)	Associated Burrow ID (GPS IDENT Code*), if applicable	# of BUOWs Detected	Sex (M/F/Unk.)	Age (A/J/Unk.)	Behavior**	Comments (include habitat description within 50 m; identify owl pairs; reproductive status)

*__IDENT Code:__ the unique 8-digit code that identifies the detection within the project site (e.g., PBBSD001). See page 4 for nomenclature and codes.

**__Behavior__ (e.g., courtship, copulation, foraging, resting, alarm, territorial, parental, juvenile, etc.)

Other Species Detected (list ALL wildlife species and sensitive plants detected. For special-status, record IDENT Code, GPS Coordinates, and relevant notes [e.g., nesting]):

Comments/Notes:

Reviewed by surveyor (initials, date):_____ Approved by team leader (initials, date):_____

Beaufort Wind Scale (http://www.geography-site.co.uk/pages/physical/climate/beaufort.html)

Beaufort Number	Wind Speed (mph)	Indicator
1	0-3	Smoke rises vertically to slight ripples; essentially no wind
2	4 to 7	Leaves rustle, wind felt on face and wind vanes moved by wind
3	8 to 12	Leaves and small twigs in constant motion. Wind can extend a lightweight flag.
4	13 to 18	Moves small branches and will raise dust and loose paper.
5	19 to 24	Small trees in leaf will begin to sway
6	25 to 31	Whistling can be heard in phone wires. Large branches are in motion. Umbrellas used with difficulty.
7	32 to 38	Whole trees in motion. Inconvenience felt when walking against the wind.

For GPS Entry and Field Mapping of Burrowing Owl and other Sensitive Resources

1. Place a dot on the map in the general vicinity of the observation of burrowing owls, unmapped (new) potential burrows, sign, and other special-status species.
2. Use the following IDENT CODE nomenclature to record the detection on your data sheet, GPS, and field map.

Example ---"PBBSH001" where P=Palen (Site Identifier), BB=burrowing owl burrow (Detection Type), SH=Steve Henderson (Surveyor Identifier), 001=Observation #.

Site Identifier: Palen=P; Blythe=B; Ridgecrest=R

Detection Type Codes:

Burrowing Owl	**Desert Tortoise**	**Other Bird Species**	**Mammals**
BL=live burrowing owl	DL= live desert tortoise	WK=White-tailed kite, KN=nest	KB=Kit fox burrow
BB=confirmed BUOW burrow	DB=burrow	CO=Cooper's hawk, ON=nest	GL=American badger live
BF=feather	DS=scat	SW=Swainson's hawk, SN=nest	GB=American badger burrow
BP=pellets	DC=carcass	FE=Ferruginous hawk, FN=nest	ML=Mojave ground squirrel live
BO=other (describe)	DT=tracks	GE=Golden eagle, EN=nest	SL=Bighorn sheep live
	DP=desert tortoise pallet	LS=Loggerhead shrike, LN=nest	SC=Bighorn sheep carcass
	DO=other (describe)	LT=Le Conte's thrasher, HN=nest	BA=Bat roosting sites
		NH=Northern harrier, NN=nest	MA=Mammal burrow
	Other Herps	**BT=Bendire's thrasher, BN=nest**	
	MF=Mojave fringe-toed lizard	CT=Crissal thrasher, CN=nest	**Other**
		GF=Gilded flicker, GN=nest	BC=Barrel cactus
		GW=Gila Woodpecker, WN=nest	OO=Other, specify in notes
		PR=Prairie falcon, RN=nest	
		PE=Peregrine falcon, PN=nest	
		NE=Unknown bird nest	

ATTACHMENT K

REGULATORY AGENCY CORRESPONDENCE

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

In Reply Refer To:
FWS-ERIV-09B0186-09SL0577

MAR 19 2009

Cecilia Meyer Lovell
EDAW Inc.
1420 Kettner Boulevard, Suite 500
San Diego, California 92101

Subject: Request for Information on Endangered and Threatened Species in the Vicinity of the Proposed Solar Millennium Blythe Project, Riverside County, California

Dear Ms. Lovell:

This letter responds to your March 2, 2009, letter (received March 4, 2009) requesting information on species of concern, including federally-listed or proposed species, or designated or proposed critical habitats that may occur in and around the Solar Millennium Blythe project solar thermal power generating facility being proposed on Bureau of Land Management (BLM) lands.

Section 7 of the Endangered Species Act of 1973 (Act), as amended, requires Federal agencies to consult with the U.S. Fish and Wildlife Service (Service) should it be determined that their actions may affect federally listed threatened or endangered species. Section 9 of the Act prohibits the "take" (*e.g.*, harm, harassment, pursuit, injury, kill) of federally listed wildlife. "Harm" is further defined to include habitat modification or degradation where it kills or injures wildlife by impairing essential behavioral patterns including breeding, feeding, or sheltering. Take incidental to otherwise lawful activities can be authorized under sections 7 (Federal consultations) and 10 (habitat conservation plans) of the Act.

If a proposed project is authorized, funded, or carried out by a Federal agency and may affect a listed species, then the Federal agency must consult with us on behalf of the applicant, pursuant to section 7 of the Act. During the section 7 process, measures to avoid and minimize project impacts to listed species and their habitat will be identified and incorporated into a biological opinion that includes an incidental take statement that exempts incidental take by the Federal agency and applicant.

TAKE PRIDE IN AMERICA

At this time, no candidate species occur within the vicinity of the proposed project. However, it appears that the federally-threatened desert tortoise (*Gopherus agassizii*) may occur on and/or in the vicinity of the proposed project. While we do not have site-specific species information for the proposed project area, federally-designated critical habitat for the desert tortoise (Chuckwalla Unit) is located south of the proposed project. Therefore, we recommend that you seek assistance from a biologist familiar with the habitat conditions and associated species, particularly desert tortoise, in and around the project site to assess the potential for direct, indirect and cumulative impacts likely to result from the proposed activity.

We also recommend that, for the 2009 field season, you conduct desert tortoise surveys following the Service's 1992 *Field Survey Protocol For Any Non-Federal Action That May Occur Within The Range Of The Desert Tortoise* and that all potentially suitable tortoise habitat in the action area associated with the proposed project be surveyed. The "action area" is defined by regulation as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR §402.02). This analysis is not limited to the "footprint" of the action nor is it limited by the Federal agency's authority. Rather, it is a biological determination of the reach of the proposed action on listed species. Subsequent analyses of the environmental baseline, effects of the action, and levels of incidental take are based upon the action area.

Please also note that there may be BLM and State sensitive species concerns in this area. Therefore, we recommend that you contact the BLM and the California Department of Fish and Game to obtain lists of sensitive species that may occur in the vicinity of the proposed project and to determine which species may require surveys pursuant to the National Environmental Policy Act and California Environmental Quality Act.

Should you have any questions regarding this letter, survey protocols for federally-listed species, or your responsibilities under the Act, please call Tannika Engelhard of my staff at (760) 431-9440.

Sincerely,

for Karen A. Goebel
Assistant Field Supervisor

Enclosure

cc:
Kim Nicol, California Department of Fish and Game, Bermuda Dunes Field Office
Mark Massar, Bureau of Land Management, North Palm Springs Field Office

Federally Listed Species
Which Occur or May Occur on or Near the Proposed Solar Millennium Blythe Project, Riverside County, California

Common Name	Scientific Name	Status
REPTILES		
desert tortoise	*Gopherus agassizii*	T, CH

E: endangered
T: threatened
CH: critical habitat

EDAW | AECOM

EDAW Inc
1420 Kettner Boulevard, Suite 500, San Diego, California 92101
T 619.233.1454 F 619.233.0952 www.edaw.com

February 20, 2009

Julie Vance
California Department of Fish and Game
1234 East Shaw Avenue
Fresno, CA 95630

Dear Ms. Vance:

Subject: Biological Survey Methodologies for the Solar Millennium Projects

On behalf of Solar Millennium, LLC, EDAW/AECOM is submitting to the California Department of Fish and Game (CDFG) the attached summary of biological resource survey studies and methodologies for Solar Millennium's three proposed solar thermal power plant sites in the Mojave and Colorado Desert areas of California. The three plant sites include the Ridgecrest site located south of Ridgecrest in Kern County, the Palen and Blythe plant sites located near Desert Center and Blythe, respectively.

The AECOM Team is undertaking technical surveys and studies necessary to support Applications for Certification (AFC) submittals and related environmental documentation to be provided to the California Energy Commission (CEC) and the Bureau of Land Management (BLM). These studies will also be used to develop environmental baseline information to support applications to other federal, state, and local agencies.

Key to obtaining the approvals described above is the collection of data concerning the occurrence and distribution of biological resources on the three project sites. The biological site surveys and data collection must, of course, take into account the physical characteristics of the project sites, the life histories of the target species, and the guidelines and protocols promulgated by the resource agencies.

The data resulting from these surveys will be used for characterizing existing biological resource conditions on the project sites. Some modifications to solar plant component configurations may occur as a result of survey findings. The survey results will of course also be used to make determinations regarding project impacts, to formulate mitigation requirements, and to provide specific data needs of reviewing agencies.

A conference call meeting was held with representatives of CDFG, the US Fish and Wildlife Service (USFWS), the BLM, Solar Millennium, LLC, and the AECOM team on February 11, 2009. At that time EDAW/AECOM provided a summary of the biological surveys and protocols proposed for each of the three plant sites. After some discussion of the proposed survey protocols, it was requested by the agencies that a written summary of the survey methodologies, together with more detailed mapping of the proposed projects, be submitted. This letter provides the materials requested during the February 11, 2009 meeting.

In submitting this information, it is our hope to gain timely review and comment by CDFG and the other resource management agencies that participated in the meeting. It is Solar Millennium's desire to

share its expectations and comments in the planning stage for these studies so that the ensuing study bases and work products reflect the Department's input. This review, and ultimate survey protocol concurrence, is critical to meeting temporal requirements of various surveys and project delivery schedules.

During our call on February 11th, it was indicated that the agencies would review these materials during the week of February 23rd. It was further indicated that combined feedback from the agencies would be received during the first week in March. I will be contacting you shortly to establish a forum for receiving your feedback.

Please do not hesitate to contact me if I can provide any needed information in the interim.

Sincerely,

William Graham
Principal

bill.graham@edaw.com
ph. 619.233.1454

Protocal Trans Letter 2 20 09.doc

Proposed Survey Protocols for the Solar Millennium Parabolic Trough Solar Thermal Power Projects 2009

Desert Tortoise

- Surveys will be conducted according to the U.S. Fish and Wildlife Service (USFWS) *Field Survey Protocol For Any Federal Action That May Occur Within the Range of the Desert Tortoise* (January 1992), and modified to exclude the survey of Zone of Influence transects, as recommended by Ray Bransfield of the USFWS, Ventura Field Office. The rationale for this modification is that ZOI transect surveys would not provide much additional information for the forthcoming Section 7 consultation process, and that effects to the tortoise would be addressed through the consultation process. Although this recommendation was specific to the Ridgecrest site, the Solar Millennium project team is proposing that this modification to the standard survey methodology be applied to all three sites (i.e., applied to the Ridgecrest, Palen, and Blythe sites), since all would be going through similar consultation processes, and the projects are located on lands under the jurisdiction of the BLM. Although the CDFG has raised concerns regarding indirect effects of potential increases in raven and other predator populations due to the use of evaporation ponds in the project design, it should be noted that all three sites, with the possible exception of one unit at the Blythe site, will be using dry cooling, and that evaporation ponds will not be used in conjunction with dry cooling. There will be stormwater retention ponds, but they will hold water only for a few days of the year, and thus should not affect raven populations. Therefore, the Solar Millennium team is proposing that no ZOI transect surveys be conducted (including forgoing ZOI surveys along the CEC 0.75-mile and 1.0-mile buffer transects).
- Habitat assessments will be initiated in February and will be conducted by qualified biological teams. A Presence-or-Absence Survey (100 percent survey) over the entire project area will be conducted. Surveys will be initiated in mid-March, after it has been determined that desert tortoises are active and will continue roughly until the end of May.
- Intensive Surveys will be conducted at the completion of focused surveys to determine survey quality.
- While conducting biological surveys, all tortoise sign (live tortoises, shells, bones, scutes, limbs, scat, burrows, pallets, tracks, egg shell fragments, drinking sites etc.) will be mapped using GPS units and on field maps (scale 1”=200’). Other sensitive biological resources will be mapped during desert tortoise focused surveys (see General Biological Survey Details below).

Burrowing Owl

- Biologists will conduct focused surveys for the western burrowing owl (*Athene cunicularia)* according to the *BURROWING OWL SURVEY PROTOCOL AND MITIGATION GUIDELINES* prepared by The California Burrowing Owl Consortium (April 1993).
- The habitat assessment (Phase I Survey) for burrowing owl will be conducted in February by qualified biologists. The project site and surrounding 500’ buffer zone will be evaluated for the suitability for burrowing owl. Suitable habitat will be mapped in the field using high resolution field maps and GPS units. Any burrowing owls or burrowing owl sign observed during the Phase I survey will be recorded and mapped.
- The Phase II Burrow Survey will be initiated in mid-March and will be conducted concurrently with focused desert tortoise surveys. The burrow survey will consist of pedestrian transects spaced at

a maximum of 10 meters apart within suitable desert tortoise habitat and in any areas not suitable for tortoise may extend up to 30 meters. Biologists conducting tortoise surveys will map any burrowing owls, potential burrowing owl burrows and burrowing owl sign.

- Phase III surveys (burrowing owl surveys, census and mapping) will be initiated at the height of the breeding season (April 15th until July 15th) and will continue until all potential burrowing owl locations have been visited on four separate survey periods. Potential burrowing owl locations will be viewed initially using the vehicle as a blind (if possible) and in all cases, will be surveyed by biologists approaching the burrows on foot. Burrows will be assessed for any fresh burrowing owl activity and sign. Any sensitive species observed during these surveys will be recorded.

Mohave Ground Squirrel (Ridgecrest Site Only)

- Protocol-level surveys to be conducted per CDFG's Mohave Ground Squirrel Survey Guidelines (revised January 2003). Since the site acreage is greater than 180 acres a specialized survey methodology will need to be developed through consultation with CDFG, the project proponent and the lead agency
- The Ridgecrest site consists of monotypic creosote bush scrub that is generally open with large patches of shrubless areas. Preliminary analysis of the site by MGS expert Bill Vanherweg indicates that the site consists of marginal MGS habitat due to the scarcity of food plants.
- EDAW proposes to that MGS surveys consist of one trapping grid per Section of land (4 grids) plus two additional grids along the CEC buffers (at 0.75 and 1 mile from the outer edge of the proposed disturbance footprint) for a total of 6 grids. No trapping is proposed within the MGS Conservation Area south of Brown Road. All of the linear features for this site are within the site footprint, so no trapping grids are proposed for these items.

Botanical Surveys

Rare plant surveys will be conducted according to CNPS Survey Guidelines.

- Vegetation mapping of plant footprints and linear project features (per Holland 1986)
- Vegetation mapping of 1-mile buffer around plant footprint 1,000-foot buffer along linear features, per the *California Energy Commission – Recommended Biological Resources Field Survey Guidelines for Large Solar Projects* (May 2007)
- Focused surveys for special-status species (see species table provided separately)

General Biological Survey Details

While conducting surveys for desert tortoise, burrowing owl and rare plants, biologists will also be looking for and recording occurrences of other sensitive and listed wildlife species.

- **Burrowing Owl Burrow Data** – Phase II of the Burrowing Owl survey (mapping potential burrowing owl burrows) is to be conducted concurrently with the Desert Tortoise focused survey by the biologists conducting the desert tortoise survey. All potential burrowing owl burrows and any potential burrowing owl sign, including owl observations, white wash, pellets, feathers etc. will be recorded
- **Desert Tortoise Training** – All surveyors will be given Desert Tortoise Awareness training.
- **Rare Plants –** All surveyors will be briefed on potential rare plants within their survey area, including descriptions and photographs/drawings. Biologists will record co-ordinates and take

photographs of any potential occurrences of rare plants and communicate this information to an EDAW botanist for verification immediately.

- **Other Special Status Wildlife Species** – During desert tortoise, rare plant and burrowing owl surveys, any of the following biological resources will be noted and locations recorded:
    - Any observations of sensitive and/or listed mammal species sign including but not limited to:
        - Potential bat roosting sites – caves, abandoned buildings, cliffs etc.
        - Nelson's bighorn sheep or sign
        - American badger
        - Mojave ground squirrel
        - Desert kit fox burrows
    - Any observations of Mojave fringe-toed lizard (in dunes)
    - Any observations of sensitive and/or listed bird species including but not limited to:
        - Loggerhead shrike
        - LeConte's thrasher
        - Bendire's thrasher
        - Crissal's thrasher
        - Gilded flicker
        - Gila woodpecker
        - Raptors
            - Northern harrier
            - White-tailed kite
            - Cooper's hawk
            - Peregrine falcon
            - Prairie falcon
            - Swainson's hawk
            - Golden eagle
            - Ferruginous hawk

-----Original Message-----
From: Shelley_Ellis@ca.blm.gov [mailto:Shelley_Ellis@ca.blm.gov]
Sent: Friday, March 06, 2009 2:42 PM
To: Graham, Bill
Subject: RE: Surveys

Hi Bill,
The agencies had a conference call and determined various small changes to your proposed surveys. Kim Nicol from CA DFG will send the finalized survey requirements to Solar Millennium early next week . I believe the '92 ZOI's are not necessary, as Ray mentioned at the conference call that you attended at the BLM. BLM requires bird Point Counts on proposed solar sites, but that will be covered in the information that you receive on Monday (hopefully, on Monday) from CA DFG. So I was a bit premature in saying anything so soon.

Thanks, Shelley

Shelley Ellis
BLM Wildlife Biologist
300 S. Richmond
Ridgecrest
CA 93555
760-384-5426

"Graham, Bill"<Bill.Graham@edaw.com>To <Shelley_Ellis@ca.blm.gov>
03/06/2009 01:54 PM
Subject RE: Surveys

Shelley:

Some clarification please. In your subsequent email you indicated our proposed survey methodologies were acceptable, but here you indicate a need to follow the complete protocol. Our proposed methodology would incorporate CEC buffers but not complete 92 protocol ZOIs. We're OK either way but I just need clarification, as we start on Monday.

Regards,

Bill G.

-----Original Message-----
From: Shelley_Ellis@ca.blm.gov [mailto:Shelley_Ellis@ca.blm.gov]
Sent: Tuesday, March 03, 2009 3:03 PM
To: Graham, Bill
Subject: Surveys

Hi Bill,

I called Ray Bransfield with USFWS, and we concluded that you need
To follow the 1992 tortoise survey protocol. Do you have any questions about the botany survey? I can get you the BLM protocol, which I'm hoping is similar to the CEC protocol. We are not aware of any BLM special

status plant species there. The area needs to be 100% surveyed for burrowing owls, their burrows, and sign. They usually nest a little later than this. But they generally use the old burrows from previous years. The only other biological survey is the Mojave Ground Squirrel. For that, you need to talk to CA DFG. They never contacted me. BLM will defer to whatever they require. This is a list of all the plants we are aware of that occur on our BLM lands. Let me know if you need other information.

(See attached file: Plants_Checklist_0107.doc)

Thanks, Shelley

Shelley Ellis
BLM Wildlife Biologist
300 S. Richmond
Ridgecrest
CA 93555
760-384-5426

-----Original Message-----
From: Larry_LaPre@ca.blm.gov [mailto:Larry_LaPre@ca.blm.gov]
Sent: Tuesday, March 10, 2009 3:18 PM
To: lflapre@ca.blm.gov
Cc: Colin_Grant@blm.gov; Christopher_Otahal@ca.blm.gov;
Mark_Massar@ca.blm.gov; Shelley_Ellis@ca.blm.gov; Jesse_Irwin@ca.blm.gov
Subject: message to consulting biologists re bird studies

This message has several biologists listed as bcc recipients.

As you know, BLM is requiring bird point count surveys on solar sites as part of the baseline environmental information. For many years BLM and other agencies have used bird abundance and diversity as a general measure of the quality and productivity of a particular site. In addition, knowing the birds present will help later with compliance with the Migratory Bird Treaty Act, which disallows destruction of any active bird nests.

Colin Grant and I have had many calls from consulting biologists about the methodology, which follows Ralph et al 1992, with some modifications. The general guidelines are provided In the attachment below.

Since I spoke to you, BLM has decided that:

1. Point count duration is 10 minutes. This will prevent double-counting and allow the surveys to be completd before 9 AM or so, at least before it gets too hot.

2. BLM will be flexible on the locations of each point count transect. The requirement is one per square mile. On a ten square mile site, the ten transects do not have to be evenly spaced within each section. They should be put in the best areas for birds or the areas most representative of each vegetation community type.

3. BLM will be flexible on the time period for completing the spring surveys. The requirement is March and April, but the surveys can continue into May if you can't meet the early schedule or if it is better to do so because of late-nesting species. The flexibility is with the word "consecutive."

Stick to the time period, the transect length, the transect spacing and the count circle radius so that the studies from each site are comparable.

Thank you for your efforts in obtaining environmental baseline information which will assist BLM in evaluating the solar applications.

(See attached file: BLM Solar Facility Point Count Protocol.docx)

Dr. Larry LaPre
District Wildlife Biologist
California Desert District
Bureau of Land Management
22835 Calle San Juan de los Lagos
Moreno Valley, CA 92553
Phone: (951) 697-5218
Fax: (951) 697-5299
E-mail: llapre@ca.blm.gov

-----Original Message-----
From: Shelley_Ellis@ca.blm.gov [mailto:Shelley_Ellis@ca.blm.gov]
Sent: Tuesday, March 03, 2009 3:03 PM
To: Graham, Bill
Subject: Surveys

Hi Bill,

I called Ray Bransfield with USFWS, and we concluded that you need to follow the 1992 tortoise survey protocol. Do you have any questions about the botany survey? I can get you the BLM protocol, which I'm hoping is similar to the CEC protocol. We are not aware of any BLM special status plant species there. The area needs to be 100% surveyed for burrowing owls, their burrows, and sign. They usually nest a little later than this. But they generally use the old burrows from previous years. The only other biological survey is the Mojave Ground Squirrel. For that, you need to talk to CA DFG. They never contacted me. BLM will defer to whatever they require. This is a list of all the plants we are aware of that occur on our BLM lands. Let me know if you need other information.

(See attached file: Plants_Checklist_0107.doc)

Thanks, Shelley

Shelley Ellis
BLM Wildlife Biologist
300 S. Richmond
Ridgecrest, CA 93555
760-384-5426

-----Original Message-----
From: Shelley_Ellis@ca.blm.gov [mailto:Shelley_Ellis@ca.blm.gov]
Sent: Tuesday, March 03, 2009 3:19 PM
To: Graham, Bill
Subject: your survey protocols

Bill,

I looked again at the protocol attachment you e-mailed for the biological surveys, and those protocols will be fine as far as BLM is concerned.

Thanks, Shelley

Shelley Ellis
BLM Wildlife Biologist
300 S. Richmond
Ridgecrest, CA 93555
760-384-5426

Re: Solar Millennium Projects Biological Survey Protocols
From: Graham, Bill
Sent: Tuesday, July 28, 2009 11:31 AM
To: MeyerLovell, Cecilia
Subject: FW: Solar Millennium Projects Biological Survey Protocols

Bill Graham
Principal
D +1 619.764.6806 M +1 619.302.7426
New email: bill.graham@aecom.com
EDAW AECOM
1420 Kettner Boulevard, Suite 500
San Diego CA 92101 USA
T +1 619.233.1454 F +1 619.233.0952
www.edaw.com www.aecom.com

From: David Hacker [mailto:DHACKER@dfg.ca.gov]
Sent: Tuesday, March 17, 2009 4:00 PM
To: Julie Vance; Kimberly Nicol; Graham, Bill
Cc: Holly_Roberts@blm.gov; shelley_ellis@ca.blm.gov; Ryork@energy.state.ca.us; Luttrell, Mark; Ray_Bransfield@fws.gov; Tannika_Engelhard@fws.gov; Jessie Audette
Subject: RE: Solar Millennium Projects Biological Survey Protocols

Mr. Graham:

As we discussed on the February 10, 2009 WebEx meeting with CEC, DFG, BLM, and the USFWS, any predetermined mitigation under the West Mohave Plan pertains to BLM policy only. The State incidental take authorization requirement would be to "fully mitigate" the impacts of the Mohave ground squirrel taking, including all impacts on the species (14 CCR § 783.4). The location of those impacts relative to Brown Road would be important only if Brown Road is the boundary between areas of different habitat values. We look forward to working with you and your biologists to determine whether this is the case.

For Mohave ground squirrel survey methods, we've made recommendations in a forthcoming letter. The gist of it is that the proposed survey methods (1 trap grid per 640 acres) would be insufficient to determine absence, and that inferring presence based on habitat suitability and the nearby occurrences is an option. Trapping at the standard one grid per 80 acres is still an option as well. If you decide to forego trapping and pursue incidental take authorization, we'll work with you to develop mitigation based solely on habitat value. Please feel free to call with any questions.

Dave Hacker
Staff Environmental Scientist
California Department of Fish and Game
3196 South Higuera St., Suite A
San Luis Obispo, CA 93401
805.594.6152

>>> "Graham, Bill" <Bill.Graham@edaw.com> 3/13/2009 5:44 PM >>>

Kim:

Thank you very much for forwarding this joint agency review of our proposed biological survey protocols for the Solar Millennium projects at Ridgecrest, Palen and Blythe. We will implement this direction immediately in most cases. There are a few areas where we need some additional discussion. I summarize our understanding and short-term action items below, organized by species:

Desert Tortoise

We appreciate your collective acceptance of our DTO survey methodology. This will essentially conform to the 1992 USFWS protocol with the exception of ZOI surveys. We will survey the CEC required buffers.

We will endeavor to ensure that there are no violations of Section 9 of the ESA during survey activity.

We will forward you a complete list of desert tortoise surveyors, both EDAW AECOM employees and independent contractors, on Monday.

Burrowing Owl

It is our understanding that you desire additional detail regarding the criteria utilized for determining burrowing owl habitat. We will forward additional information concerning this issue shortly for the review of CDFG, BLM, and USFWS. You (Kim Nicol) will be our primary contact for any additional discussion of burrowing owl survey protocol.

You are correct in that, in the referenced passage, "desert tortoise" should be replaced with "burrowing owl."

Mojave Ground Squirrel

It is understood that the other agencies will defer to CDFG regarding MGS survey protocols. After discussions with senior CDFG staff, our thinking has changed regarding this issue. It is understood that MGS mitigation for the portion of the Ridgecrest site south of Brown Road, as a result of this areas location within the Western Mojave Plan's MGS Conservation Area, is predetermined. On remaining portions of the site, our current thinking is that a negotiated mitigation based on mutual assessment of habitat quality is appropriate. This strategy is largely a result of our being informed that negative survey results would not necessarily be regarded as evidence of a lack of MGS occupation.

Dave Hacker of CDFG will be our primary contact regarding MGS issues.

Botanical Surveys

It is understood that there is concurrence with the proposed botanical survey protocol, with the following additions:

1) Succulents/yucca/Joshua Trees/barrel cactus are to be mapped and counted. This will facilitate later salvage.

2) BLM sensitive species will be photodocumented.

General Biological Survey Details

There is general concurrence with our protocols.

All surveyors will attend Tortoise Awareness Training. It is understood that absolutely no handling of DTO is required.

Point Count Bird Surveys

Point Count Bird Surveys were not originally proposed by EDAW AECOM. We intend to have additional discussions with BLM concerning whether these surveys are in fact warranted. It is understood that resolution must be obtained in the very near future as a result of survey windows.

The instructions included regarding the point count surveys are noted. We have subsequently received additional direction from Larry LaPre; it is our understanding that he will be the primary point of contact regarding point count surveys. We have had several discussions with Dr. LaPre, and in the process have reached agreement regarding some modifications (e.g., count locations per transect, duration of each point count, etc.) to the methodology. Our assumption is that, should these surveys be implemented, surveys conducted in accordance with Dr. LaPre's instructions will be acceptable to the BLM.

Please contact me if the above differs from your understanding in any respect.

William Graham
Principal, Planning & Environment
EDAW D 619.764.6806 C 619.302.7426bill.graham@edaw.com

From: Kimberly Nicol [mailto:KNICOL@dfg.ca.gov]
Sent: Tue 3/10/2009 9:32 AM
To: Julie Vance; Graham, Bill
Cc: shelley_ellis@ca.blm.gov; David Hacker; Ryork@energy.state.ca.us; Luttrell, Mark; Ray_Bransfield@fws.gov; Tannika_Engelhard@fws.gov; Jessie Audette

Subject: Re: Solar Millennium Projects Biological Survey Protocols

Bill,

This email serves as a joint agency response to Solar Millennium’s request for review of their proposed biological survey protocols. The proposed survey protocol document, “Proposed Survey Protocols for the Solar Millennium Parabolic Trough Solar Thermal Power Projects, 2009” was provided to representatives of the following agencies via email on February 20, 2009, for review and concurrence: California Department of Fish and Game (CDFG), California Energy Commission (CEC), U.S. Bureau of

Land Management (BLM), and U.S. Fish and Wildlife Service (FWS). The following agency review and concurrence applies to Solar Millennium's Ridgecrest, Palen, and Blythe project sites only.

DESERT TORTOISE
CDFG, BLM, and FWS concur with the proposed protocol for this species. CEC also concurs with the proposed protocol with the addition of the following requirement:

? CEC Data Adequacy Regulations require project applicants to ".. . include a list of species actually observed and those with a potential to occur within 1 mile of the project site and 1000 feet from the outer edge of linear facility corridors".

Please note the FWS' concurrence on the survey protocol design does not authorize the take of desert tortoises. Take, as described in section 9 of the Endangered Species Act of 1973 (ESA), as amended, and the FWS' regulations is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harassment is defined by the FWS as intentional or negligent action that creates the likelihood of injury to listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is further defined by the FWS to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering (50 CFR 17.3). Also note that, pursuant to the ESA and its implementing regulations, desert tortoises may not be handled in any manner without prior ESA authorization.

To ensure the quality of the protocol survey, we recommend that you provide the names and qualifications of the surveyors to FWS, CDFG, and BLM for review prior to initiating surveys.

BURROWING OWL
CEC, BLM, and FWS defer to CDFG regarding survey protocol for this species. CDFG has the following comments on the proposed survey protocol:

? The survey protocol should describe what criteria will be used to determine suitable burrowing owl habitat. This should be presented to CDFG, CEC, and BLM, prior to initiating the surveys.
? The proposed survey protocol states "The burrow survey will consist of pedestrian transects spaced at a maximum of 10 meters apart within suitable desert tortoise habitat and in any areas not suitable for tortoise may extend up to 30 meters." Should this say within suitable burrowing owl habitat? It is not clear why Phase II surveys would only occur in suitable tortoise habitat and not burrowing owl habitat.

Solar Millennium should contact Kim Nicol of CDFG for additional discussion on the survey protocol for burrowing owl.

MOHAVE GROUND SQUIRREL

CEC, BLM, and FWS defer to CDFG regarding survey protocols for this species. Solar Millennium should contact Dave Hacker of CDFG Region 4 for additional discussion on the survey protocol for this species at the Ridgecrest project site.

BOTANICAL SURVEYS
CDFG, CEC, and FWS concur with the proposed botanical survey protocols. BLM also concurs with the proposed protocols with the addition of the following:

? Solar Millennium should abide by BLM guidance/requirements regarding mapping/surveying for succulents/yucca/barrel cactus. If solar development of any of the sites is approved, BLM will require salvage and transplantation of the succulents. A count of the number of barrel cacti, Joshua trees, or Mojave yuccas should be compiled.
? BLM requests photographic documentation of any BLM sensitive species found.

GENERAL BIOLOGICAL SURVEY DETAILS
CDFG, CEC, BLM, and FWS concur with the proposed survey protocols/actions outlined in this section with the following clarifications/additions:

Desert Tortoise Training: please ensure that all surveyors attending Desert Tortoise Awareness training are aware that handling of desert tortoise during protocol surveys is not authorized and implementation of the survey protocol, as described by Solar Millennium does not require handling of desert tortoises in any manner.

Other Special Status Wildlife Species: BLM requires point count bird surveys on all solar development sites on their lands using the following protocol:
-one point count transect per square mile
-eight point count locations per transect
-point counts must be 250 meters apart
-one day a week for four consecutive weeks between March and April (breeding)
-one day a week for four consecutive weeks between November and January (wintering)
-each point count will be twenty minutes long with a 100 meter radius
-concentrate on areas where there will be birds (washes, high vegetation areas, ect)
-point counts will be conducted between 5-9 am Solar Millennium should contact the local BLM office for additional discussion on the bird survey protocol.

If you have any questions, please feel free to contact the above people.

Kim

Kimberly A. Nicol
Environmental Program Manager
Department of Fish and Game
Inland Deserts Region
78078 Country Club Dr. Suite 109

Bermuda Dunes, CA 92203
(760) 200-9178
(760) 200-9358 fax

>>> "Graham, Bill" <Bill.Graham@edaw.com> 2/20/2009 6:38 PM >>>
Julie:

A cover letter and a memo summarizing the biological survey methodologies and protocols are attached. During the web meeting last week, you also requested more detailed site plans. These maps will be forwarded on Monday.

Regards,

William Graham
Principal, Planning & Environment
EDAW
D 619.764.6806 C 619.302.7426
bill.graham@edaw.com
EDAW
1401 Kettner Blvd., Ste. 500
San Diego, CA 92101
T 619.233.1454 F 619.233.0952

ATTACHMENT L

LIST OF CUMULATIVE PROJECTS

Attachment L
List of Cumulative Projects

Project Name	Location/Jurisdiction	Shown on Figure 14?	Project Description	Biological Resources that Occur or Potentially Occur Onsite
Chevron/Solar Millennium, Blythe Solar Power Project (CACA 048811)	West of Blythe, to the north of the Interstate 10 corridor in Riverside County, California	Yes	The Blythe Solar Power Project is a 1,000 MW solar thermal project using parabolic trough technology; the plant's output will be generated by four identical 250 MW plants. The project is proposed on a 9,560-acre BLM ROW north of I-10 and approximately eight miles west of Blythe; approximately 7,251 acres of this total will be disturbed. The Project will include a 6.1-mile 500 kV transmission line to interconnect with the regional grid at the planned Midpoint Substation south of I-10. Construction is scheduled to begin at the end of 2010 and one 250 MW unit will come line in each of 2013, 2014, 2015, and 2016; the total construction period is estimated at 69 months. Construction employment is expected to average approximately 604 workers and to peak at approximately 1,000 workers. Total operational employment will be approximately 300 (75 per plant).	Special status species on the site include desert tortoise, and burrowing owl.
Optisolar (subsequently acquired by First Solar), Desert Quartzite Solar Farm (CACA 49377)	South side of I-10 approximately eight miles southwest of the City of Blythe in eastern Riverside County	Yes	The Desert Quartzite project is a 601 MW solar photovoltaic power generating facility, proposed on public lands on a 7,724-acre site (total size of BLM right of way [ROW] application). The site would interconnect to the proposed Midpoint Substation, which is proposed for a location adjacent to the Desert Quartzite facilities, thus there would be essentially no offsite transmission line. The existing Devers Palo Verde #1 transmission line runs through the southern portion of the Desert Quartzite site. The Mule Mountain Area of Critical Environmental Concern (ACEC) is adjacent to the south of the site. The Plan of Development (POD), indicates that facilities will be laid out to provide a "reasonable" buffer between the project and the ACEC. The total graded area that will contain all facilities is expected to be approximately 150 acres, about two percent of the total ROW area. The POD indicates that historic cultural resources may occur within the project area, but that no	The site is characterized as desert bush scrub and dry desert wash woodlands, and the special-status desert tortoise (DT) is found onsite in what is described as low-quality (Class III) DT habitat.

Project Name	Location/Jurisdiction	Shown on Figure 14?	Project Description	Biological Resources that Occur or Potentially Occur Onsite
			studies had yet been performed. The POD indicates a three to four year construction schedule, but does not indicate expected construction start or operational dates. Construction might start in mid-2010 and the facility might come on line in roughly 2013 to 2014. The POD indicates an average workforce of 250 (peak of 400-500). The operational workforce is expected to be approximately 10 workers.	
Optisolar (subsequently acquired by First Solar), Desert Sunlight Solar Farm (CACA 048649)	North of Desert Center	Yes	The DSSF will be a 550 MW solar photovoltaic (PV) electrical generating facility on BLM land with a ROW that would cover over 25,000 acres. This ROW would encompass both the generating facilities and an approximately XX-mile transmission corridor to interconnect the facilities with the regional grid at Southern California Edison's (SCE) planned Red Bluff Substation south of the plant site. The POD indicates a three-year construction schedule with an average workforce of 250 (peak of 400-500). The operational workforce is expected to be approximately 10 workers.	Special status species found on the site include desert tortoise (although it is considered low quality tortoise habitat), Western burrowing owl (WBO), desert kit fox, and Le Conte's thrasher.
Bullfrog Green Energy LLC, Mule Mountain Solar Project (CACA 49097)	South of I-10 west of Blythe (and adjacent to the Desert Quartzite Solar Farm site discussed above).	Yes	The Mule Mountain Project is a 500 MW concentrating PV power generating facility proposed on 6,629 acres of BLM-managed land. The project is to be developed in three separate, approximately 170 MW phases. The POD indicated that there were several transmission options under consideration, one of them being the planned Midpoint Substation close to the site. Approximately nine percent of the total site acreage would be impacted by project development. As indicated in the POD (Bullfrog, 2009) construction of the first 170 MW phase in planned for early 2011 and to continue until complete construction of the third phase in mid-2013. Because of the phased construction schedule, construction labor is estimated to be no more than 35-50 workers; a very small (less than 20) operational work force will be needed.	Primary identified special-status species are the Colorado fringe-toed lizard and perhaps WBO.

Project Name	Location/Jurisdiction	Shown on Figure 14?	Project Description	Biological Resources that Occur or Potentially Occur Onsite
Genesis Solar LLC, Genesis Solar Energy Project (CACA 48880)	Approximately two miles north of I-10 and 25 miles west of Blythe	Yes	This project is proposed to be developed on a 4,640-acre BLM ROW. Formerly known the Ford Dry Lake Project, the facility would be a 250 MW solar thermal generating facility utilizing parabolic trough technology. The POD indicates an assumed December 2010 project approval date (by both BLM and the CEC) and a 25-month construction schedule. The expected facility footprint is expected to be 1,800 acres of the 4,640-acre ROW; the project will include a four-mile offsite natural gas pipeline and a 5.5-mile transmission line, interconnecting with the currently under-construction Blythe Energy Center to Julian Hinds transmission line. The construction work force is expected to average 650 and peak at 950 workers; operating phase employment is estimated at 65.	The Project has performed DT and WBO surveys as well as other biological surveys; and identified special-status species include Mojave and Colorado fringe toed lizards, loggerhead shrike, WBO, short-eared owl, prairie falcon, and northern harrier. No live DTs were found but there were burrows and bones on the site and tracks and carcasses in the surrounding Zones of Influence.
enXco, Mule Mountain Soleil Project (CACA 49488)	North of I-10 and 10 miles west of Blythe.	Yes	The Mule Mountain Soleil project is a 200 MW solar photovoltaic generating facility. The site is proposed on a 2,100-acre BLM (including 40 acres for the transmission line ROW), with the project expected to disturb 1,640 acres of this total. Approximately 10 percent of the site would be cleared; other vegetation over 18 inches in height would be removed to ensure clearance for the PV panels (which are built low to the ground). The project is expected to come online in a phased manner of a 12-24 –month period with the first phase completed in late 2013; the entire project is to be completed by the end of 2014 to coincided with the planned startup of the Devers Palo Verde #2 transmission line. The construction workforce is expected to average 200 workers and peak at 500.	The site is expected to contain desert tortoise and Gila woodpecker, based on limited literature research only.
enXco, McCoy Soleil Project (CA 049490)	Approximately 10 miles north of Blythe	Yes	This is a 300 MW solar project using Solar Reserve's power tower technology. The project is proposed on a total BLM ROW of 13,959 acres (plus 136 acres for the transmission line). The project would include a 14-mile transmission line to the proposed Midpoint Substation south of I-10. The	The site is mostly creosote bush scrub and several special-status plants are considered possible on the site, including desert

Project Name	Location/Jurisdiction	Shown on Figure 14?	Project Description	Biological Resources that Occur or Potentially Occur Onsite
			project would involve a 2.5 square-mile heliostat (mirror) field with all the heliostats focused on a central 600-foot tall tower, of which the top 60 feet is the solar receiver. The sun's heat energy is used to power a conventional steam turbine; this Solar Reserve technology includes the use of molten salt for thermal storage which extends the time period during the day that the solar energy can generate electricity for the grid beyond the daytime hours. The project would temporarily disturb a total of 1911 acres during construction and 1808 acres permanently. Project construction is expected to take 30 months with commercial operation timed to coincide with the planned Devers Palo Verde #2 transmission line online date at the end of 2013. Construction manpower is expected to average approximately 250 and peak at 400-500. Operational manpower is estimated at 44 personnel. Access would be through the existing Arlington Mine Road.	tortoise and Harwood's milkvetch.
enXco, Desert Lily Soleil Project (CACA 49492)	Six miles north of Desert Center	Yes	This is a 100 MW photovoltaic power plant proposed on 1,216 acres of BLM ROW. The project would involve a 5-8 mile transmission line (an additional nearly 400 acres of BLM ROW) to the planned SCE substation near Desert Center [now referred to as the Red Bluff Substation]. According to the POD, the project would begin construction early in 2012 and become operational at the end of 2013. The construction workforce would average about 100 workers with a peak of approximately 300; 12 people would be required to operate and maintain the facility. Access to the site would be from Rice Road.	At the time of POD submittal, preliminary environmental studies were underway but no results were available; desert tortoise and the Coachella milkvetch were identified as special status species of concern.
Bullfrog Green Energy LLC, Big Maria Vista Solar Project (CACA 049702)	Approximately 12 miles northwest of Blythe	Yes	This 500 MW concentrated PV project is proposed on a total BLM ROW of 23,040 acres. The Project is proposed to be built in three 167 MW phases with each phase requiring a nine-month construction period. The three phases are expected to complete construction in early 2011, 2012, and 2013 respectively and common online in the middle of the same years. A total of approximately 1,200 acres is expected to be directly impacted by the project, about four percent of	The special status species considered likely to be encountered include the Colorado Desert fringe toed lizard, Palm Springs pocket mouse, Palm Springs round-tailed ground squirrel, as well as

Project Name	Location/Jurisdiction	Shown on Figure 14?	Project Description	Biological Resources that Occur or Potentially Occur Onsite
			the total ROW area. The project is expected to require a construction workforce of 35-50 and an operational work force of less than 20. The POD indicated that several transmission options are still under consideration.	desert tortoise and burrowing owl.
Chuckwalla Solar I LLC, Chuckwalla Solar I Project (CACA 048808)	Approximately one mile north of Desert Center, north of I-10	Yes	Chuckwalla Solar I is a 200 MW concentrated photovoltaic power plant. The Project is proposed on a 4083-acre BLM ROW and would be developed in several phases. The project plans to start construction at the beginning of 2011 and complete the first 25 MW phase in June 2011, the second 25 MW phase in December 2011, and two more 25 MW phases in June and December of 2012. The final 100 MW phase would be completed at the end of 20123. The project's point of interconnection with the regional grid would be at a new switchyard on the site that taps into an existing SCE 161 kV line site that crosses the site. The facility footprint would be approximately 125 acres. Construction employment would average approximately 150 workers and peak at as many as 250. Operation will require approximately 10 employees.	The site's dominant plant communities are desert dry wash woodland and Sonoran desert scrub. A biological resource assessment found no Federal or State threatened or endangered plant or wildlife species. No desert tortoises or ferruginous hawks were observed, but focused surveys are planned for DT, and the Coachella milkvetch and desert unicorn plants.
Solel, Mojave Solar Park/Desert Lily Project (CACA 049494)	Adjacent to the eastern boundary of Joshua Tree National Park and State Highway 177	Yes	The Mojave Solar Park (also referred to as "Desert Lily"), is proposed for a roughly 4,000-acre BLM ROW. The project will be a parabolic trough solar thermal facility with power output expected to be 500 MW, although the POD indicates that size and design were not finalized at the time of POD submittal. The facility solar fields (rows of parabolic mirrors) would cover approximately 3,000 acres. The facility would include a 10-mile natural gas pipeline and an 11-mile transmission line. Peak labor requirements were estimated at 1,800 with an average of approximately 800.	The site is described as being desert creosote brush.
7 Energy, Blythe Airport Solar 1 Project	East of the Solar Millennium Blythe project	No	This is a solar photovoltaic power generating facility being developed on 640 acres of property owned by the Blythe Airport. It currently is "in the environmental stages and anticipating a pretty aggressive construction timetable. ***<<Need additional info from applicant>>***	***<<Need additional info>>***

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Eagle Crest Energy Company, Eagle Crest Pumped Hydroelectric Storage Project (FERC Project 12509)	Eagle Mountain iron ore mine north of Desert Center, which is no longer in operation	No	In June 2009, Eagle Crest Energy (ECE) filed its Final Application with the Federal Energy Regulatory Commission for the proposed Eagle Mountain Pumped Storage project. The project would use off-peak energy to pump water from the lower reservoir to the upper reservoir during periods of low electrical demand and generate on-peak energy by conveying water from the upper to the lower reservoir through turbine generator units during periods of high electrical demand. The upper and lower reservoirs would be formed from existing mining pits; the facility would generally provide up to 1,300 MW. The project would involve a 13.5-mile transmission line to the planned Red Bluff Substation near Desert Center. Project construction is expected to take four years beginning in 2012. Peak construction would involve about 500 people.	<<***Need additional info***>>