SECTION 4.2

BIOLOGICAL RESOURCES

This section provides a background discussion of the regulatory framework and the affected environment for biological resources. The regulatory framework discussion focuses on the federal, state, and local regulations that apply to plants, animals and sensitive habitats. The affected environment discussion focuses on the topography and soils, general vegetation, general wildlife, sensitive biological resources, riparian habitat and sensitive natural communities, jurisdictional waters, habitat connectivity and wildlife corridors. Information contained in this section is summarized from the *Biological Technical Report for the Campo Verde Solar Energy Project* prepared by Heritage Environmental Consultants, Inc. (Heritage 2012a) and *Campo Verde Solar Project Jurisdictional Waters Report* (Heritage 2012b). The Biological Technical Report (BTR) includes various attachments (Vegetation Mapbook, ACOE/CDFG Potentially Jurisdictional Waters Mapbook) and two appendices (Burrowing Owl Survey Report and Jurisdictional Waters). Applicable information from these documents is incorporated throughout this discussion. The Biological Technical Report and its attachments and appendices are provided on the attached CD of Technical Appendices as **Appendix C** of this SEIR.

4.2.1 REGULATORY FRAMEWORK

A. FEDERAL

Endangered Species Act

Endangered Species Act (ESA) of 1973 (16 United States Code [USC] 1531–1544), as amended, protects federally listed threatened and endangered animals and plants and provides measures for their protection and recovery. "Take" of listed animal species and of listed plant species is prohibited without obtaining a federal permit. Take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Harm includes any act that actually kills or injures fish or wildlife, including significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife. Activities that damage the habitat of (i.e., harm) listed wildlife species require approval from the United States Fish and Wildlife Service (USFWS) for terrestrial species. ESA Section 7 and Section 10 provide two pathways for obtaining authority to take listed species. The ESA also generally requires determination of critical habitat for listed species. If critical habitat has been designated, impacts to areas that contain the primary constituent elements identified for the species, whether or not the species is currently present, is also prohibited. No critical habitat occurs within the footprint of the proposed Campo Verde Battery Energy Storage System. No federally listed species were observed during surveys conducted prior to construction of the Campo Verde Solar Project in 2010, 2011 or 2012 nor are expected to occur now that the solar facility has been developed.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 (MBTA; 16 USC 703 et seq.) is a federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The number of bird species covered by the MBTA is extensive and listed at 50 Code of Federal Regulations (CFR) 10.13. The regulatory definition of "migratory bird" is broad, and includes any mutation or hybrid of a listed species and any part, egg, or nest of such birds (50 CFR 10.12). Migratory birds are not necessarily federally listed endangered or threatened species under the ESA. The MBTA, which is enforced by USFWS, makes it unlawful "by any means or in any manner, to pursue, hunt, take, capture, [or] kill" any migratory bird, or attempt such actions, except as permitted by regulation. The applicable regulations prohibit the take, possession, import, export,

transport, sale, purchase, barter, or offering of these activities, except under a valid permit or as permitted in the implementing regulations (50 CFR 21.11).

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 USC 668-668c), enacted in 1940 and as amended, prohibits anyone, without a permit issued by the USFWS, from "taking" bald and golden eagles, including their parts, nests, or eggs. The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." For purposes of these guidelines, "disturb" means: "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

Federal Water Pollution Control Act (Clean Water Act)

The Clean Water Act (CWA; 33 USC 1251 et seq.), as amended, provides a structure for regulating discharges into the waters of the U.S. Through this Act, the Environmental Protection Agency is given the authority to implement pollution control programs. These include setting wastewater standards for industry and water quality standards for contaminants in surface waters. The discharge of any pollutant from a point source into navigable waters is illegal unless a permit under its provisions is acquired. In California, the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs) are responsible for implementing the CWA. Section 404 of the CWA regulates the discharge of dredged, excavated or fill material in wetlands, streams, rivers, and other waters of the U.S. The U.S. Army Corps of Engineers (ACOE) is the federal agency authorized to issue Section 404 Permits for certain activities conducted in wetlands or other waters of the U.S. Section 401 of the CWA grants each state the right to ensure that the State's interests are protected on any federally permitted activity occurring in or adjacent to Waters of the State. In California, the RWQCBs are the agencies mandated to ensure protection of the State's waters. For a proposed project that requires an ACOE CWA Section 404 permit and has the potential to impact Waters of the State, the RWQCB will regulate the project and associated activities through a Water Quality Certification determination (Section 401).

B. STATE

California Endangered Species Act

The California Endangered Species Act of 1984 (CESA) provides a framework for the listing and protection of wildlife species determined to be threatened or endangered in California.

California Fish and Game Code 3503.5

Raptors (birds of prey) and active raptor nests are protected by the California Fish and Game Code 3503.5, which states that it is "unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird" unless authorized.

California Fish and Game Code 3503

Bird nests and eggs are protected by the California Fish and Game Code 3503, which states "it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto."

California Fish and Game Code 3513

Protects California's migratory birds by making it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame birds.

State of California Fully Protected Species

The classification of Fully Protected was the State's initial effort in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, mammals, amphibians and reptiles, birds, and mammals. Most fully protected species have also been listed as threatened or endangered species under ESA and/or California Endangered Species Act (CESA). Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

California Fish and Game Code, Section 1600, as amended

Under Section 1602 of the Fish and Game Code, the California Department of Fish and Wildlife (CDFW, formerly California Department of Fish and Game [CDFG]) regulates activities that would divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. CDFW has jurisdiction over riparian habitats (e.g., southern willow scrub) associated with watercourses. Jurisdictional waters are delineated by the outer edge of riparian vegetation or at the top of the bank of streams or lakes, whichever is wider. CDFW jurisdiction does not include tidal areas or isolated resources. Section 1602 of the Fish and Game Code requires any person who proposes a project that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake or use materials from a streambed to notify the CDFW before beginning the project. The proposed Battery Energy Storage System would not divert or obstruct any waterbody as none are present on the Project site.

Native Plant Protection Act

The Native Plant Protection Act (California Fish and Game Code Section. 1900-1913; NPPA) prohibits the taking, possessing, or sale within the state of any plant listed by CDFW as rare, threatened, or endangered. An exception to this prohibition in the Act allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify CDFW at least 10 days prior to the initiation of activities that would destroy them. The NPPA exempts from "take" prohibition "the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right of way." There are no endangered or rare native plants on the Battery Energy Storage System site.

Porter-Cologne Water Quality Control Act, as amended

The Porter-Cologne Act grants the State Water Resource Control Board (SWRCB) and the Regional Water Quality Control Board's (RWQCB) power to protect water quality and is the primary vehicle for implementation of California's responsibilities under the federal Clean Water Act. Any person proposing to discharge waste into a water of the State must file a report of waste discharge with the appropriate regional board. The Project does not propose discharge of waste into a water of the State.

C. LOCAL

Imperial County General Plan

Table 4.2-1 analyzes the consistency of the proposed project with the applicable policies relating to biological resources from the Imperial County General Plan. While this SEIR analyzes the project's consistency with the General Plan pursuant to State CEQA Guidelines Section 15125(d), the Imperial County Board of Supervisors ultimately determines consistency with the General Plan.

TABLE 4.2-1
IMPERIAL COUNTY GENERAL PLAN CONSISTENCY ANALYSIS

General Plan Policies	Consistent with General Plan?	Analysis
Open Space Conservation Policy: The County shall participate in conducting detailed investigations into the significance, location, extent, and condition of natural resources in the County. Program: Notify any agency responsible for protecting plant and wildlife before approving a project which would impact a rare, sensitive, or unique plant or wildlife habitat.	Yes	The *Biological Technical Report (BTR) for the Campo Verde Solar Energy Project* (Heritage 2012a) encompassed the proposed Battery Energy Storage System site. The BTR is a composite of several different surveys and studies that were performed in the Campo Verde Solar Project site, including the proposed +, in an effort to identify biological resources that were present and could be affected by the development of the solar facility. Since the Campo Verde Solar Project has been constructed and is now operational, the biological setting has changed from agricultural fields to solar fields and supporting equipment. While the likelihood for wildlife habitat and biological resources to be present is diminished, pre-construction avian and burrowing owl surveys will be conducted. Applicable agencies (i.e. CDFW) will be notified of the proposed Battery Energy Storage System and provided an opportunity to comment on this SEIR prior to the County's consideration of any approvals for the Project.
Land Use Element Policy: The General Plan covers the unincorporated area of the County and is not site specific, however, a majority of the privately owned land is located in the area identified by the General Plan as "Agriculture," which is also classified as important	Yes	The *Biological Technical Report for the Campo Verde Solar Energy Project* (Heritage 2012a) included a burrowing owl survey to identify biological resources that are present and could be affected by construction of the Campo Verde Solar Project. The area covered by the BTR included the area proposed for the Battery

TABLE 4.2-1
IMPERIAL COUNTY GENERAL PLAN CONSISTENCY ANALYSIS

General Plan Policies	Consistent with General Plan?	Analysis
burrowing owl habitat, typically in the berms and banks of agricultural fields. Program: Prior to approval of development of existing agricultural land either in form of one parcel or a numerous adjoining parcels equally a size of 10 acres or more shall prepare a Biological survey and mitigate the potential impacts. The survey must be prepared in accordance with the United States Fish and Wildlife and California Department of Fish and Game regulations, or as amended.		Energy Storage System. However, given the amount of time that has passed, pre-construction avian and burrowing owl surveys will be conducted prior to the start of construction of the proposed Project. Applicable agencies (i.e. CDFW) will be notified of the proposed Battery Energy Storage System. and provided an opportunity to comment on this SEIR prior to the County's consideration of any approvals for the Project.

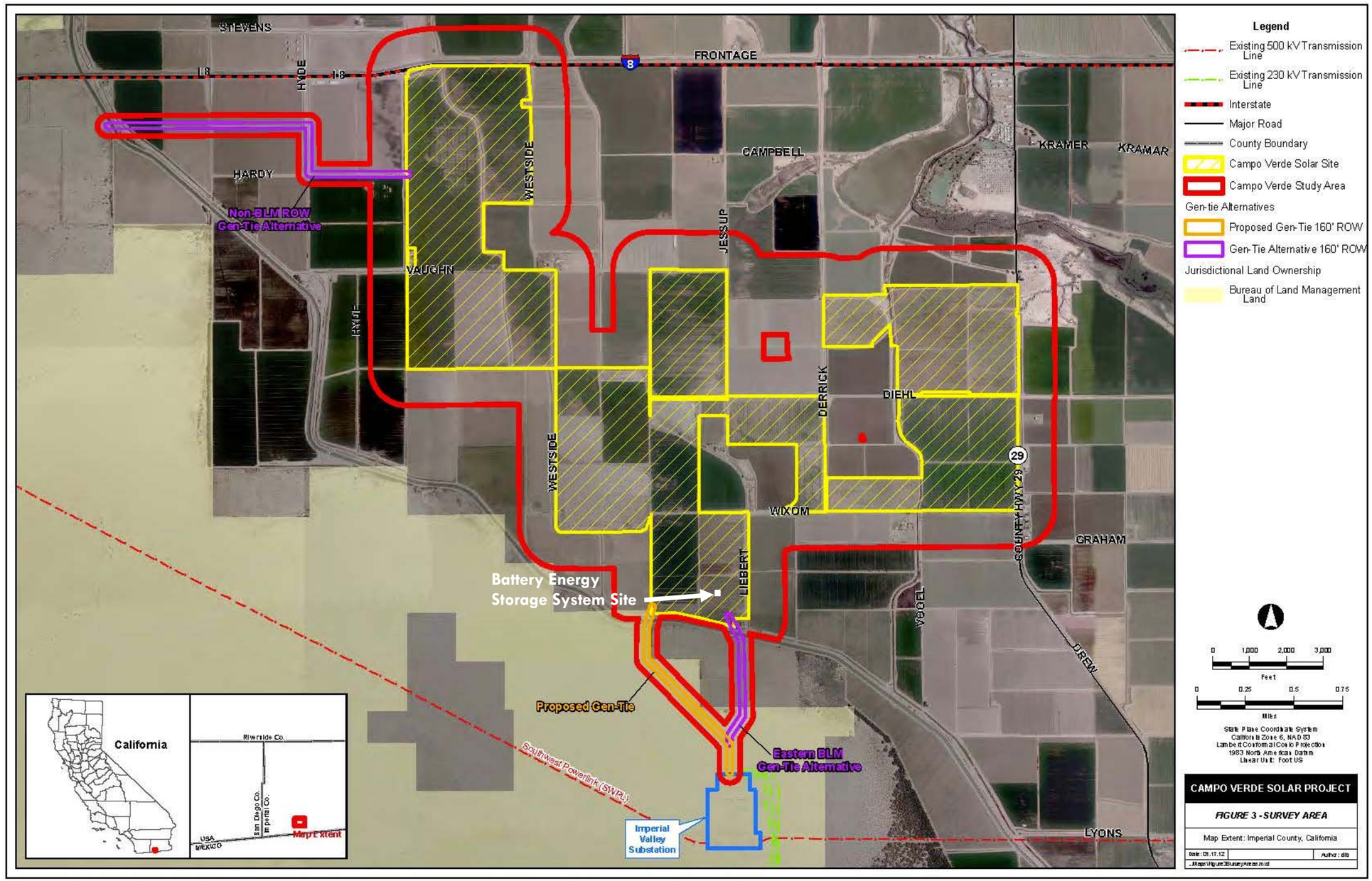
4.2.2 ENVIRONMENTAL SETTING

A. BATTERY ENERGY STORAGE SYSTEM

The survey area of the BTR included the Campo Verde Solar Project site and a 1,000-foot buffer around the site. The survey area encompassed the location of the proposed Battery Energy Storage System (**Figure 4.2-1**). In total, the survey area for most species/resources covered 4,288 acres. Some species required different survey areas which are described on a case-by-case basis. Since the surveys were conducted in 2010, 2011 and 2012, the Campo Verde Solar Project has been developed and commenced operation in October of 2013. As such, the environmental setting for the Battery Energy Storage System site consists of disturbed, developed land. The Battery Energy Storage System is situated immediately to the west of the Campo Verde Substation. Thus, there is no agricultural or desert land within the boundaries of the Campo Verde Solar Project, including the Battery Energy Storage site. However, disturbed, undeveloped lands are located to the east and south as well as to the west beyond the solar field that borders the Substation on the west. The Substation is also bordered by solar field to the north.

In the larger environmental context, the Campo Verde Solar Project, including the Battery Energy Storage System site surrounded by agricultural lands and Imperial Irrigation District (IID). infrastructure. While several IID drains were closed and removed prior to construction of the solar facility, IID canals and drains located throughout the solar field remain in use (Southern Power Company 2016).

The following sections describe the pre-construction conditions on lands associated with the Campo Verde Solar Project, including the Battery Energy Storage System, and associated buffer areas.



Source: Heritage 2012a.

FIGURE 4.2-1
CAMPO VERDE SOLAR PROJECT BIOLOGICAL SURVEY AREA INCLUDING BATTERY ENERGY STORAGE SYSTEM SITE

Topography, Soils, Drainage

The survey area is located in the Yuha Basin of the Colorado Desert between agricultural lands to the north, east and west, and native desert to the south.

The Battery Energy Storage System is located on Meloland Very Fine Sandy Loam, Wet. This soil is primarily found on flat basin floors and is formed from clay, silt, and sandy alluvium materials.

Irrigation water in the area is supplied by a complex, engineered system of concrete-lined canals or lateral canals operated and maintained by the IID. The concrete-lined canals and lateral canals are used to deliver water to multiple farm fields and typically contain water at all times except during maintenance periods. Water generally flows from south to north in the fields surrounding the Campo Verde Solar Project site; the IID drains flow to the New River which flows to the Salton Sea.

General Vegetation

The Battery Energy Storage System site is to the west of the existing Campo Verde Substation. Areas of native plants and disturbed vegetation communities occur beyond the fence surrounding the Substation. The area to the south of the Substation, north of Mandrapa Road, is covered with grasses approximately 2 to 3 feet tall. Sporadic riparian and wetland vegetation occur along portions of the Westside Main Canal. This vegetation is a mixture of native and non-native species such as arrow weed (*Pluchea serricea*) and cattails (*Typha* sp.), two native species, and tamarisk (*Tamarix ramosissima*), bitter dock (*Rumex obtusifolius*), and sprangletop (*Leptochloa* sp.).

The Battery Energy Storage System site is located on a parcel that was previously irrigated agriculture. Some native vegetation is beginning to recolonize the area around the Substation, especially to the south outside of the fence line. No sensitive species were observed during the surveys conducted by Heritage in 2010 and 2011and would not be present given the disturbed condition of the area surrounding the Substation.

General Wildlife

The BTR prepared for Campo Verde Solar Project identified a variety of wildlife species observed in and around the Campo Verde Solar Projectsurvey area which encompassed the Battery Energy Storage System site. The species were typical of disturbed and agricultural habitats, which provide cover, foraging, and breeding habitat for a variety of wildlife species. **Table 4.2-2** provides a list of all wildlife species observed in the survey area and some of the primary species are described below.

TABLE 4.2-2
WILDLIFE SPECIES OBSERVED/DETECTED IN THE
CAMPO VERDE SOLAR PROJECT BIOLOGICAL SURVEY AREA

Common Name	Scientific Name
Birds	
American Coot	*Fulica americana*
American Kestrel	*Falco sparverius*
Barn Swallow	*Hirundo rustica*
Black Phoebe	*Sayornis nigricans*
Blue-gray Gnatcatcher	*Polioptila caerulea*
Burrowing Owl	*Athene cunicularia*
California Gull	*Larus californicus*

TABLE 4.2-2
WILDLIFE SPECIES OBSERVED/DETECTED IN THE
CAMPO VERDE SOLAR PROJECT BIOLOGICAL SURVEY AREA

Common Name	Scientific Name
Cattle Egret	*Bubulcus ibis*
Cliff Swallow	*Petrochelidon pyrrhonota*
Common Ground Dove	*Columbia passerina*
Common Raven	*Corvus corax*
European Starling	*Sturnus vulgaris*
Gambel's Quail	*Callipepla gambelii*
Great-tailed Grackle	*Quiscalus mexicanus*
Greater Roadrunner	*Geococcyx californianus*
Horned Lark	*Eremophila alpestris*
Killdeer	*Charadrius vociferus*
Loggerhead Shrike	*Lanius ludovicianus*
Long-billed Curlew	*Numenius americanus*
Mourning Dove	*Zenaida macroura*
Northern Harrier	*Circus cyaneus*
Northern Mockingbird	*Mimus polyglottos*
Prairie Falcon	*Falco mexicanus*
Red-tailed Hawk	*Buteo jamaicensis*
Red-winged Blackbird	*Agelaius phoeniceus*
Rock Dove	*Columbia livia*
Rufous-crowned Sparrow	*Aimophila ruficeps*
Savannah Sparrow	*Passerculus sandwichensis*
Say's Phoebe	*Sayornis saya*
Snowy Egret	*Egretta thula*
Song Sparrow	*Melospiza melodia*
Turkey Vulture	*Cathartes aura*
Western Kingbird	*Tyrannus verticalis*
Western Meadowlark	*Sturnella neglecta*
White-crowned Sparrow	*Zonotrichia leucophrys*
White-faced Ibis	*Plegadis chihi*
White-winged Dove	*Zenaida asiatica*
Yellow-rumped Warbler (Audubon's)	*Dendroica coronata auduboni*
Mammals	
Bobcat	*Lynx rufus*
Coyote	*Canis latrans*
Desert cottontail	*Sylvilagus audubonii*

TABLE 4.2-2
WILDLIFE SPECIES OBSERVED/DETECTED IN THE
CAMPO VERDE SOLAR PROJECT BIOLOGICAL SURVEY AREA

Common Name	Scientific Name
Kangaroo rat	*Dipodomys* sp.
Round-tailed Ground Squirrel	*Xerospermophilus tereticaudus*
Reptiles	
Desert Iguana	*Dipsosaurus dorsalis*
Flat-tailed Horned Lizard	*Phrynosoma mcallii*
Gecko	*Coleonix* sp.
Western whiptail	*Cnemidophorus tigris*

Source: Heritage 2012a.

Invertebrates

The survey area contains suitable habitat for a wide variety of invertebrates. Within the agricultural fields that comprise the solar energy facility site, harvester ants (*Pogonomyrmex spp.*), grasshoppers (*Orthoptera spp.*) and flies (*Diptera spp.*) were observed regularly. Cabbage white (*Pieris rapae*) and other butterflies and moths (*Lepidoptera spp.*) were also regularly observed in all portions of the survey area.

Amphibians

Most amphibians require moisture for at least a portion of their life cycle with many requiring a permanent water source for habitat and reproduction. Terrestrial amphibians have adapted to more arid conditions and are not completely dependent on a perennial or standing source of water. These species avoid dehydration by burrowing beneath the soil or leaf litter during the day and during the dry season.

No amphibians were observed within the survey area. American Bullfrog (*Rana catasbeiana*) was observed in close vicinity to the survey area. Bullfrogs typically occupy the large drains that carry water relatively permanently. No drains are located on the Battery Energy Storage System site.

Reptiles

The diversity and abundance of reptile species varies with habitat type. Many reptiles are restricted to certain plant communities and soil types although some of these species would also forage in adjacent communities. Other species are more ubiquitous, using a variety of vegetation types for foraging and shelter. A diverse list of species of lizards and snakes could be expected to inhabit both agricultural and/or desert habitats.

No reptile species were observed in the survey area. While the Battery Energy Storage Site is highly disturbed, reptiles could access the site via holes in the chain-link fence.

Birds

The diversity of bird species varies with respect to the character, quality, and diversity of vegetation communities. Due to the homogeneity of much of the habitat within the Campo Verde Solar Project survey area, bird diversity was relatively low.

During winter avian use surveys previously conducted in the area, Western Meadowlark (*Sturnella neglecta*) was the most frequently detected species as well as the most widespread. Other frequently detected species include Horned Lark (*Eremophila alpestris*), Black Phoebe (*Sayornis nigricans*), Long-billed Curlew (*Numenius americanus*), and Song Sparrow (*Melospiza melodia*). Other widespread species include Horned Lark, Black Phoebe, and Mourning Dove (*Zenaida macroura*). Horned Larks were by far the most numerous species during the survey. Long-billed Curlews were the second most numerous species. The most commonly observed species were all common agricultural associates.

During spring avian use surveys in the area, Red-winged Blackbird was the most frequently detected species. Other frequently detected species include Western Meadowlark (*Sturnella neglecta*), Long-billed Curlew (*Numenius americanus*), Mourning Dove (*Zenaida macroura*), Horned Lark (*Eremophila alpestris* and Cliff Swallow (*Petrochelidon pyrrhonota*. Western Meadowlark was the most widespread species. Other widespread species includes Red-winged Blackbird, Horned Lark, Mourning Dove, Cliff Swallow, and Long-billed Curlew (*Numenius americanus*). Red-winged Blackbirds were the most numerous species during the survey. Other numerous species included Cattle Egrets (*Bubulcus ibis*) and Long-billed Curlews. The most frequently observed species during the winter surveys were common agricultural associates. Other common raptors included American Kestrel, Prairie Falcon, Burrowing Owl, and Barn Owl.

There are no trees on, or immediately adjacent to the Battery Energy Storage System site.

Mammals

Suitable mammal habitat is limited in the agricultural lands surrounding the Battery Energy Storage System site. Desert black-tailed jackrabbit (*Lepus californicus deserticola*), desert cottontail (*Sylvilagus audubonii*), round-tailed ground squirrel (*Spermophilus tereticaudus*), desert kangaroo rat (*Dipodomys deserti deserti*), and coyote (*Canis latrans*) were detected often within the survey areas through direct observation as well as burrows, tracks, and scat, though not as frequently as in native habitats. A bobcat (*Lynx rufus*) was also observed. The fence surrounding the Battery Energy Storage System should prevent larger mammals from entering the site.

Sensitive Biological Resources

Special Status Plant Species

No sensitive plant species were observed on the Campo Verde Solar Project siteor associated buffers during the surveys conducted by Heritage in 2010 and 2011. Given the limited amount of suitable native habitat and the development of the Campo Verde Solar Project, no special status plant species are present on the Battery Energy Storage System site.

Federally Listed Species

Based on the literature review, no federally-listed threatened or endangered plant species were identified as having the potential to occur within the Campo Verde Solar Project survey area which included the Battery Energy Storage System site. No federally-listed threatened or endangered species were observed during focused rare plant surveys nor are any currently present given development of the Campo Verde Solar Project.

State-listed Species

Based on the literature review, no state-listed plant species were identified as having the potential to occur within the Campo Verde Solar Project survey area which included the Battery Energy Storage Site. No state-listed species were observed on-site during focused rare plant surveys and none would be present given development of the Campo Verde Solar Project.

Priority Plant Species

Priority plant species are rare, unusual, or key species that are listed as threatened and endangered. Priority plant species are specifically plants that are included on the California Native Plant Society (CNPS) Lists 2–4.

One priority plant species was identified as having the potential to occur within the survey area: California satintail (*Imperata brevifoila*). This species is discussed below.

California satintail (Imperata brevifoila)

California satintail has been reported southeast of the Imperial Valley Substation, approximately 3 miles from the solar energy facility site. This species occurs in desert wash and riparian scrub habitats. Few desert wash habitats occur in the survey area and none on the Campo Verde Solar Project site. Given the current developed nature of the Campo Verde Solar Project, California satintail is not anticipated to occur on the Battery Energy Storage System site.

Special Status Wildlife Species

Fourteen special status wildlife species were determined to have the potential to occur within the survey area. Species whose occurrence is most pertinent within the Campo Verde Solar Project site survey area are discussed in detail below. This includes federally listed species, state listed species, and BLM sensitive species that are known to occur in the Imperial Valley, as well as California Department of Fish and Wildlife (CDFW) species of special concern that were observed during surveys.

Federally Listed Species

The following federally listed species are discussed in this section because their habitat requirements and/or potential for occurrence within the area surveyed for the Campo Verde Solar Project, including the Battery Energy Storage site.

Southwestern Willow Flycatcher

Species Profile. Southwestern Willow Flycatcher (SWFL) is federally listed as endangered. All willow flycatchers in California, including the southwestern and two other subspecies (*E. t. brewsteri* and *E. t. adastus*) are state-listed as endangered.

Critical Habitat. Critical habitat was designated for the SWFL on October 19, 2005 in San Diego County, California and in Arizona. No critical habitat was designated within Imperial County, California.

Occurrence. Because of the development of the Campo Verde Solar Project, SWFLs are not likely to nest within solar arrays, but may migrate through the area and possibly forage during migration within the arrow weed scrub and tamarisk scrub habitats associated with portions or all of Fig Drain, Diehl Drain, Wixom Drain, Dixie 3A Drain, Westside Drain, and Wormwood 7 Drain. Flycatcher vocalizations were heard during 2012 biological surveys (including protocol-level SWFL surveys) near the project area along the Westside Main Canal, however, no vegetation is present on the site of the Battery Energy Storage System site.

Two Willow Flycatcher subspecies are known to migrate through the Imperial Valley and in the vicinity of the Campo Verde Solar Project: SWFL (*Empidonax trailii extimus*) and Northwestern Willow Flycatcher (*Empidonax trailii brewsteri*). These two subspecies are nearly identical in appearance, have nearly identical vocalizations, and are, thus, nearly impossible to distinguish in the field.

Breeding SWFLs are riparian obligates, typically nesting in relatively dense riparian vegetation where surface water is present or soil moisture is high enough to maintain the appropriate vegetation characteristics. With development of the Campo Verde Solar Project, including the Substation which is adjacent to the proposed Battery Energy Storage System, the presence of vegetation with potential to support nesting has been removed. No Willow Flycatcher breeding habitat is present in the Campo Verde Solar Project survey area which included the Battery Energy Storage System site. Additionally, species occurrence records from the California Natural Diversity Database do not indicate the presence of Willow Flycatchers in the vicinity of the Campo Verde Solar Project survey area. Therefore, the available data, combined with the field surveys, indicate that there is no known suitable nesting habitat for SWFLs in or around the Campo Verde Solar Project survey area, including the Battery Energy Storage System. Furthermore, SWFLs would be expected to be present only as migrants in the vicinity of portions or all of Fig Drain, Diehl Drain, Wixom Drain, Dixie 3 Drain, Dixie 3A Drain, Dixie 3B Drain, Dixie 4 Drain, Westside Drain, Forget-Me-Not Drain 1, and Wormwood 7 Drain. These data indicate that Willow Flycatchers (*E.t. extimus*, *E.t. brewsteri* or both) migrate through the Westside Main Canal corridor and may forage in the tamarisk and arrow weed vegetation during migration. However, in order to provide the most conservative assessment, this analysis assumes SWFL are the southwestern subspecies. Potential SWFL migration habitat was identified in two locations (to the northwest and north east) approximately 2,000 feet from the Battery Energy Storage System site.

Ridgway's Rail (formerly) Yuma Clapper Rail

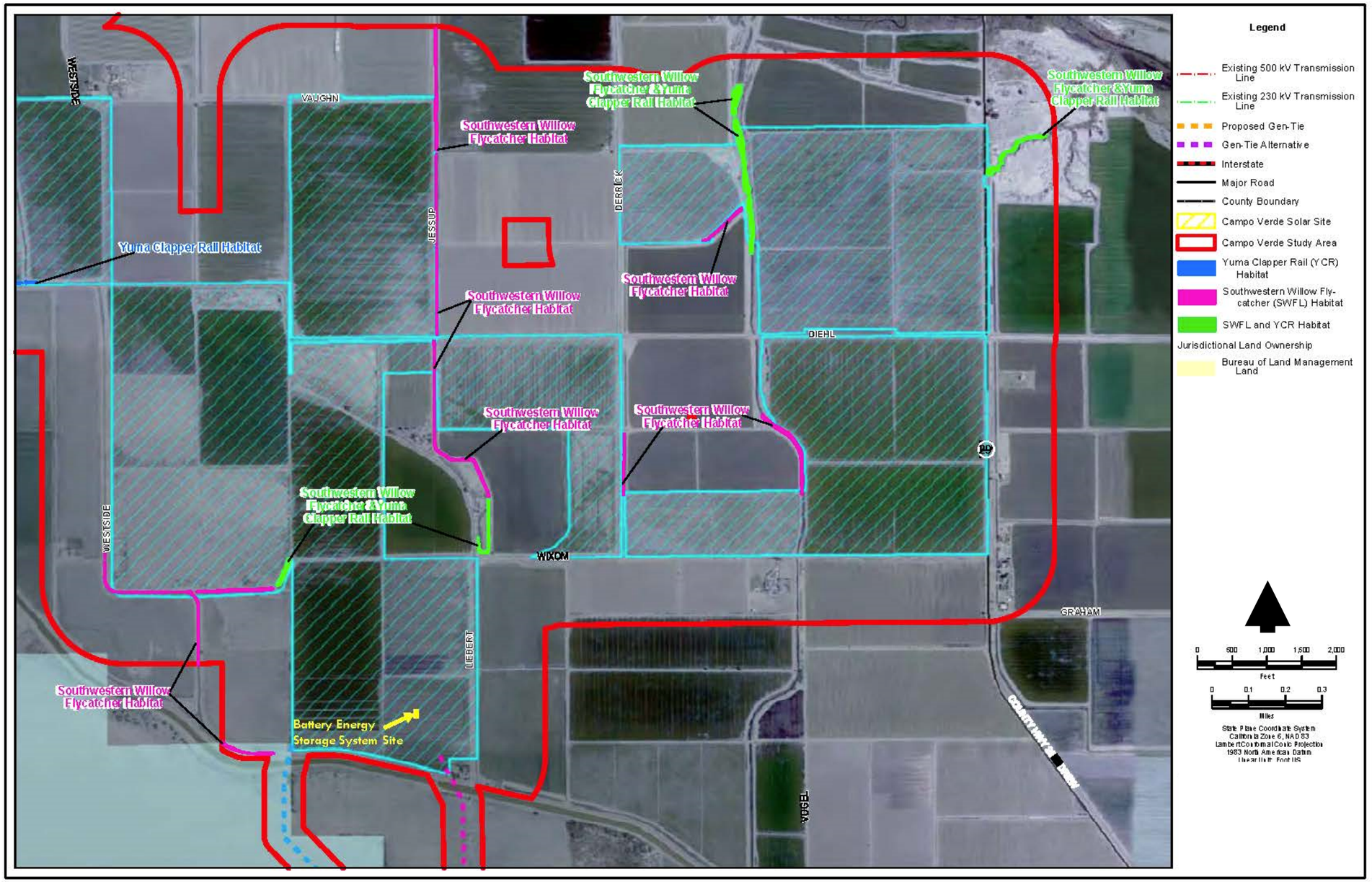
Species Profile. The Ridgeway's Rail (*Rallus obsoletus*) was federally listed as endangered March 11, 1967, under the Endangered Species Preservation Act of October 15, 1966, and state-listed as threatened February 22, 1978. Ridgeway's Rail is also protected under the MBTA and similar State laws.

Critical Habitat. No critical habitat has been designated for Ridgeway's Rail and none is proposed.

Occurrence. This species is not likely to nest within the Campo Verde Solar Project survey area. There are seven narrow patches of typha and typha/phragmites habitat in the project area associated with Fig Drain, Wixom Drain, Dixie 3A Drain, an unnamed wetland adjacent to Dixie 3A Drain, Dixie 4 Drain, Westside Drain and Wormwood 7 Drain (see **Figure 4.2-2A** and **4.2-2B**). These areas exhibit steep shelving to the water level, creating water depths deeper than those preferred by Ridgeway's Rail. They are also narrow and linear in nature. The sides of the channels are steep and would inhibit nesting, and vehicles travel the elevated hard-packed dirt roads on either side of the channels regularly. Given the lack of suitable breeding habitat within the channels and the high level of human disturbance adjacent to the channels, this species is not likely to nest within this cattail marsh vegetation.

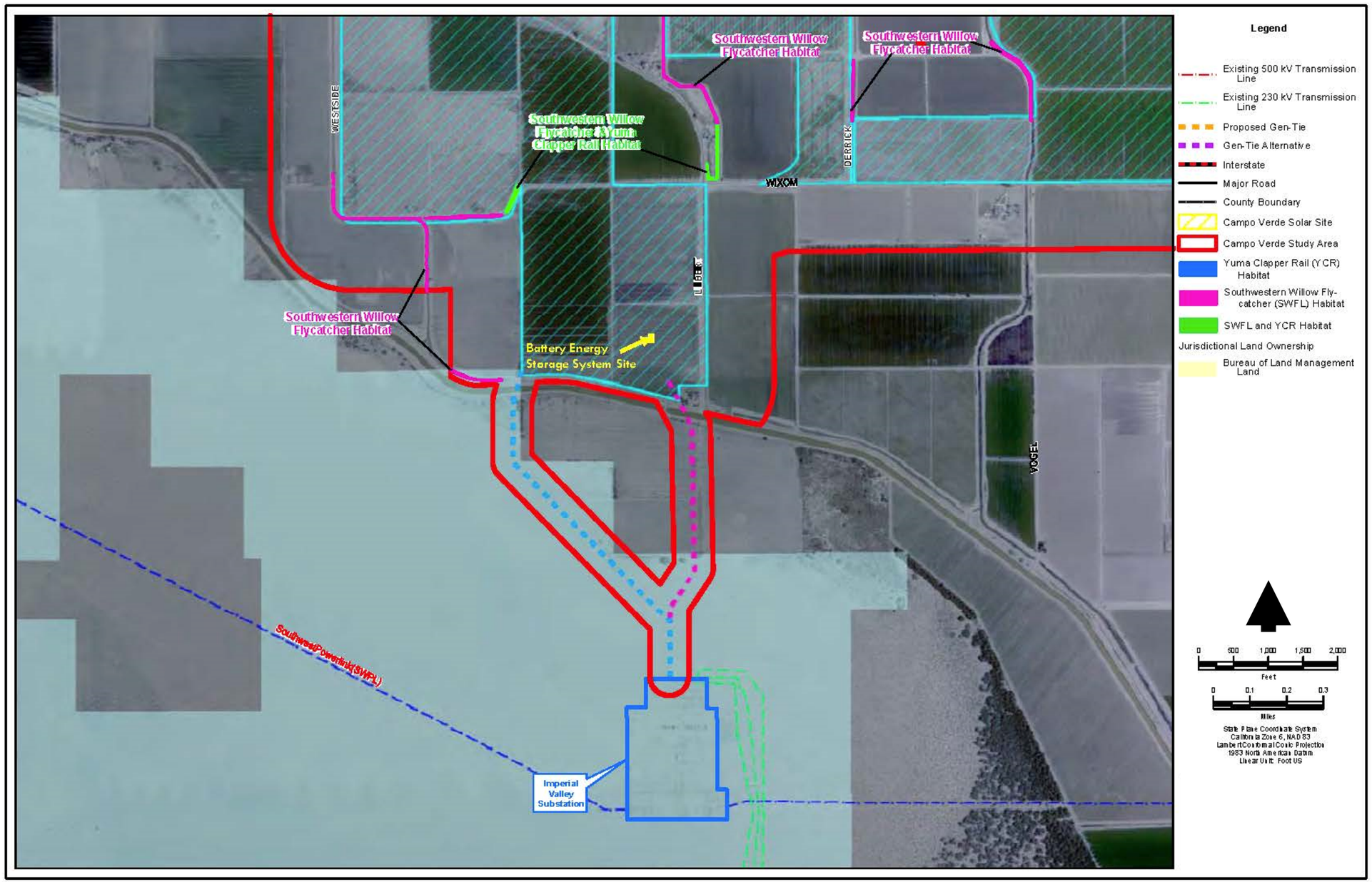
There is a low potential for Ridgeway's Rail to forage in the cattail marsh vegetation or winter in the tamarisk thickets associated with Fig Drain, Wixom Drain, Dixie 3A Drain, an unnamed wetland adjacent to Dixie 3A Drain, Dixie 4 Drain, Westside Drain and Wormwood 7 Drain. The active agricultural fields immediately adjacent to the cattail marshes provide a constant source of human disturbance in the area, and where these areas are located along the outside boundary of the Campo Verde Solar Project, these practices continue to occur.

While no habitat exists on the Battery Energy Storage System site, the nearest known location for this species is within Wixom Drain near Fig Lagoon, approximately 2.0 miles northeast of the Project site. The New River is approximately 2.3 miles northeast of the Battery Energy Storage System site and may provide the nearest suitable nesting habitat for this species. Given the distance from



Source: Heritage 2012a.

FIGURE 4.2-2A
SOUTHWESTERN WILLOW FLYCATCHER AND RIDGWAY'S RAIL HABITAT IN THE VICINITY OF THE BATTERY ENERGY STORAGE SYSTEM SITE



Source: Heritage 2012a.

FIGURE 4.2-2B
SOUTHWESTERN WILLOW FLYCATCHER AND RIDGWAY'S RAIL HABITAT IN THE VICINITY OF THE BATTERY ENERGY STORAGE SYSTEM SITE

suitable and potential nesting habitat and level of human disturbance due to agricultural practices, there is a very low potential for Ridgeway's Rail to forage within the isolated cattail marsh habitats or to winter in the tamarisk vegetation within the Campo Verde Solar Project survey area. In addition, this species was not incidentally observed during numerous biological surveys conducted in and near these habitats for the other solar projects in the area.

State Listed Species

Four state-listed wildlife species were evaluated based on their known occurrences in Imperial County: Greater Sandhill Crane (*Grus canadensis tabida*), Ridgeway's Rail, barefoot banded gecko (*Coleonyx switaki*), and Peninsular bighorn sheep. Of these species, Ridgeway's Rail and Peninsular bighorn sheep are federally listed species. Ridgeway's Rail is discussed above under "Federally Listed Species"; Peninsular bighorn sheep would not be present on the Battery Energy Storage System site given its location (i.e. former agricultural land rather than desert land). The Greater Sandhill Crane and barefoot banded gecko species are discussed below.

Greater Sandhill Crane (Grus canadensis tabida)

Species. The Greater Sandhill Crane is state-listed as threatened and is protected under the federal MBTA and similar State legal protections. This species is known to winter in Imperial County California.

Habitat. Both Greater (*Grus canadensis tabida*) and Lesser (*G. c. canadensis*) Sandhill Cranes occur in California. In southern California, it concentrates on the Carrizo Plain, San Luis Obispo County, with smaller flocks near Brawley, Imperial County, and Blythe, Riverside County. The latter two flocks may be partly, or largely, *G. c. tabida*, which formerly wintered more commonly in southern California, but which has declined greatly there and throughout its range. Outside of known wintering grounds, *G. c. tabida* is extremely rare except that it migrates over much of interior California. A few coastal sightings of Greater Sandhill Crane exist from Marin County southward, but there are no records from offshore islands. When foraging, the Greater Sandhill Crane prefers open shortgrass plains, grain fields, and open wetlands, but it may also feed on dry plains far from water. The Greater Sandhill crane feeds on grasses, forbs, especially cereal crops (newly planted or harvested); and also uses its long bill to probe in soil for roots, tubers, seeds, grains, earthworms, and insects. It will also feed on larger prey, such as mice, small birds, snakes, frogs, and crayfish.

Occurrence. The greater sandhill crane is likely to forage within the agricultural fields surrounding the Campo Verde Solar Project survey area at times during winter. However, this species was not observed during 2010 and 2011 field surveys and is not expected to breed in the Battery Energy Storage System site, given its current disturbed and developed state.

Barefoot Banded Gecko (Coleonyx switaki)

Species. The barefoot banded gecko is state-listed as threatened. Its known range occurs along the eastern face of the Peninsular Ranges in San Diego and Imperial Counties. Little information is known about its extended range or abundance.

Habitat. Habitat for the barefoot banded gecko is found in arid rocky areas on flatlands, canyons, and thornscrub, especially where there are large boulders and rock outcrops, and where vegetation is sparse. In California, this species inhabits the arid desert slopes of the eastern side of the Peninsular Ranges from Borrego Springs south to the Baja California border, and may occur at elevations from near sea level to over 2,000 feet (700 meters). An isolated population is known to occur in the Coyote Mountains of Imperial County.

Occurrence. This species was not observed during the 2010 and 2011 field surveys. Moreover, no barefoot banded geckos are expected to occur within the Campo Verde Solar Project based on a lack of suitable habitat in the form of large boulders and rocky outcrops.

CDFW Species of Special Concern

Seven BLM sensitive wildlife species were evaluated based on their presence on the BLM sensitive list within the El Centro Field Office's jurisdiction: Colorado Desert fringe-toed lizard (*Uma notata notata*), flat-tailed horned lizard (FTHL), Western Burrowing Owl (BUOW), Mountain Plover (MOPL), and pallid bat (*Antrozous pallidus*).

The following BLM sensitive species are discussed in this section because their habitat requirements and/or potential for occurrence are most pertinent to the agricultural lands surrounding the Campo Verde Solar Project and the vacant land to the south of the Battery Energy Storage System site. Colorado desert fringe-toed lizard and FTHL are discussed later in this section.

Burrowing Owl (Athene cunicularia)

Species. The BUOW is a California Species of Special Concern and a BLM sensitive species. It is protected by the MBTA and California Fish & Game Code Sections 3503, 3503.5, 3513. Nesting occurs from March through August. BUOWs typically form a pair-bond for more than 1 year and exhibit high site fidelity, reusing the same burrow year after year. The female remains inside the burrow during most of the egg laying and incubation period and is fed by the male throughout brooding. BUOWs are opportunistic feeders, consuming a diet that includes arthropods, small mammals, and birds, and occasionally amphibians and reptiles. Urbanization has greatly reduced the amount of suitable habitat for this species. Other contributions to the decline of this species include the poisoning of squirrels and prairie dogs, and collisions with automobiles. A survey effort carried out between 1991 and 1993 indicated that major population densities remain in the Central and Imperial Valleys, where this species is a year-round resident in Imperial County.

Habitat. The BUOW is primarily restricted to the western United States and Mexico. Habitat for the BUOW includes dry, open, short-grass areas often associated with burrowing mammals. In Imperial County it can be found in desert scrub, grassland, and agricultural areas, where it digs its own or occupies existing burrows.

Occurrence. During focused BUOW surveys several active burrows were observed within the Campo Verde Solar Project survey area, primarily associated with berms and ditches lining the active agricultural fields. These observances were made during the 2011 breeding season surveys and winter resident surveys in December 2011 and January 2012 (Heritage 2012d). None of the observations were near the proposed Battery Energy Storage System site nor would any be located there due to the lack of suitable areas for this species (i.e. no agricultural land or ditches in the immediate area of the Battery Energy Storage System. The Fern Canal to the east adjacent to the east side of Liebert Road and the Westside Main Canal to the south are approximately 0.20 miles from the Battery Energy Storage System site). Pre-construction surveys will be conducted to ensure that no BUOW in the vicinity of the Battery Energy Storage Site would be impacted by construction activities.

Pallid Bat (Antrozous pallidus)

Species. The Pallid bat is a Species of Special Concern and a BLM sensitive species. It is a locally common yearlong resident of low elevations throughout most of California.

Habitat. This bat occupies a variety of habitats including grasslands, shrublands, woodlands, and forests at elevations ranging from sea level up through mixed conifer forests. The species occurs most commonly in open, dry habitats and prefers rocky areas for roosting.

Occurrence. The entire survey area offers foraging opportunities for this species. The nearest reported location for the pallid bat is approximately 22 miles west of the Campo Verde Solar Project. Roosts are not known to occur in the Campo Verde Solar Project survey area. However, there is no suitable roosting habitat within or near the Campo Verde Solar Project survey area, including the Battery Energy Storage System site.

California Species of Special Concern and Fully Protected Species

Three species that are classified as CDFW Species of Special Concern were observed within the survey area or were observed during surveys for nearby projects; Loggerhead Shrike, Crissal Thrasher (*Toxostoma crissale*), and LeConte's Thrasher (*T. lecontei lecontei*). Golden Eagle (*Aquila chrysaetos*), a CDFW Fully Protected Species, and protected under the Bald and Golden Eagle Protection Act, MBTA, and Fish & Game Code Sections 3503, 3503.5, and 3513, was also observed near the project area. The following discussions evaluate the potential for occurrence of California Species of Special Concern and Fully Protected Species withng the Campo Verde Solar Project survey area.

Loggerhead Shrike (Lanius ludovicianus)

Species. The Loggerhead Shrike is a CDFW Species of Special Concern and is a year-round resident in Imperial County.

Habitat. The Loggerhead Shrike inhabits most of the continental United States and Mexico and is a year-round resident of southern California. The Loggerhead Shrike prefers open habitat with perches for hunting and fairly dense shrubs for nesting. In southern California, Loggerhead Shrikes inhabit grasslands, agricultural fields, chaparral, and desert scrub.

Occurrence. Loggerhead Shrikes were observed regularly within the Campo Verde Solar Project survey area. The agricultural habitats associated with the areas surrounding the Campo Verde Solar project are suitable foraging habitat for this species. No Loggerhead Shrike nests were identified, though the species may nest in mesquite or tamarisk habitats in the vicinity of Battery Energy Storage System site.

Crissal Thrasher (Toxostoma crissale)

Species. The Crissal Thrasher is a CDFW Species of Special Concern and is a year-round resident in Imperial County.

Habitat. A resident of southeastern California deserts, it is still fairly common in the Colorado River Valley but local and uncommon elsewhere. This species occupies dense thickets of shrubs or low trees in desert riparian and desert wash habitats. This species forages mostly on the ground, especially between and under shrubs. It uses its bill to dig in friable soil and to probe in litter.

Occurrence. This species has been observed within mesquite thickets associated with nearby projects. The active agricultural areas surrounding the Campo Verde Solar Project do not support suitable nesting or foraging habitat for this species due to the lack of suitable vegetation and the lack of loose, friable soils for foraging. Crissal Thrashers were not observed within the Campo Verde Solar Project survey area, including the Battery Energy Storage System site, during the 2010 and 2011 surveys. Based on development of the Campo Verde Solar Project including the Substation, none would be expected to occur on the Battery Energy Storage System site.

Le Conte's Thrasher (Toxostoma lecontei lecontei)

Species. The Le Conte's Thrasher is a CDFW Species of Special Concern and a year-round resident in Imperial County.

Habitat. Le Conte's Thrasher is an uncommon to rare, local resident in southern California deserts from southern Mono County south to the Mexican border, and in western and southern San Joaquin Valley. It occurs primarily in open desert wash, desert scrub, alkali desert scrub, and desert succulent shrub habitats. Le Conte's Thrasher may also occur in Joshua tree woodlands with scattered shrubs.

Occurrence. This species was observed within desert wash vegetation associated with a nearby project. The active agricultural areas within the Campo Verde Solar Project survey area do not support suitable nesting or foraging habitat for this species due to the lack of suitable vegetation and the lack of loose, friable soils for foraging. LeConte's Thrashers were not observed within the survey area during the 2010 and 2011 surveys and would not be present given that the Campo Verde Solar Project has been developed.

Golden Eagle (Aquila chrysaetos)

Species. Golden eagle occurs throughout the United States and is a rare resident in San Diego County and Imperial Counties.

Habitat. Golden Eagles nest on cliffs of all heights and in large trees in open areas, rugged, open habitats with canyons and escarpments are used most frequently for nesting. Alternative nest sites are maintained, and old nests are reused. Golden Eagles build large platform nests, often 3 meters (approximately 10 feet) across and 1 meter (approximately 3 feet) high, of sticks, twigs, and greenery.

This species forages over large areas of grassland, desert, and open chaparral or sage scrub where they primarily prey upon rabbits, ground squirrels and prairie dogs. Golden Eagles forage close to and far from their nests, i.e. < 6 kilometers from the center of their territories, but have been observed to move 9 kilometers (approximately 5.5 miles) from the center of their territories in favorable habitat. These distances may be greater in xeric habitats.

Occurrence. Golden Eagles are infrequently sited foraging over agricultural lands in the Imperial Valley in Imperial County. A Golden Eagle was observed foraging over the Mount Signal Drain and adjacent agricultural fields during surveys associated with a nearby project, approximately 4.5 miles southeast of the Imperial Valley Substation. No previous records of this species were identified within the Project vicinity. There is natural and manmade nesting habitat for Golden Eagle in the regional vicinity (mountains to the northwest and south in Mexico). Prior to development, the Campo Verde Solar Project site provided low quality foraging habitat for the species.

No suitable nesting habitat is present within the now developed Campo Verde Solar Project or the immediate vicinity. Therefore, Golden Eagles are not expected to nest within the Campo Verde Solar Project survey area, including the Battery Energy Storage System site.

Riparian Habitat or Sensitive Natural Communities

Special status natural communities are those communities "that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects." There are several riparian habitats associated with the large irrigation drains present within the Campo Verde Solar Project survey area (**Figure 4.2-3**) in proximity to the Battery Energy Storage System site. These communities include common reed marsh, cattail marsh, tamarisk thicket, and disturbed wetland. None of these communities are considered to be special status communities. There are no other special status communities present within the Campo Verde Solar Project survey area.

Jurisdictional Waters

A jurisdictional delineation was conducted to determine the extent of ACOE, CDFW, and RWQCB resources within the Campo Verde Solar Project survey area. The Campo Verde Solar Project survey area for potentially jurisdictional waters was comprised of the solar energy facility site. A 200-foot buffer area was surveyed and analyzed for this resource. The Drainage Report was submitted to the ACOE and CDFW in February 2012. The potentially jurisdictional ACOE and CDFW waters near the Battery Energy Storage System site are depicted in **Figure 4.2-4**.

ACOE Jurisdictional Waters

Wetlands

No wetlands were identified in the portion of the Campo Verde Solar Project survey area that encompasses the Battery Energy Storage System site.

Non-wetland Waters of the U.S.

Non-wetland waters within the Campo Verde Solar Project consisting of larger irrigation canals and drains were removed to accommodate development of the solar field. These features were formerly used for agricultural irrigation (supply and drainage), but are now dry.

CDFW Jurisdictional Waters

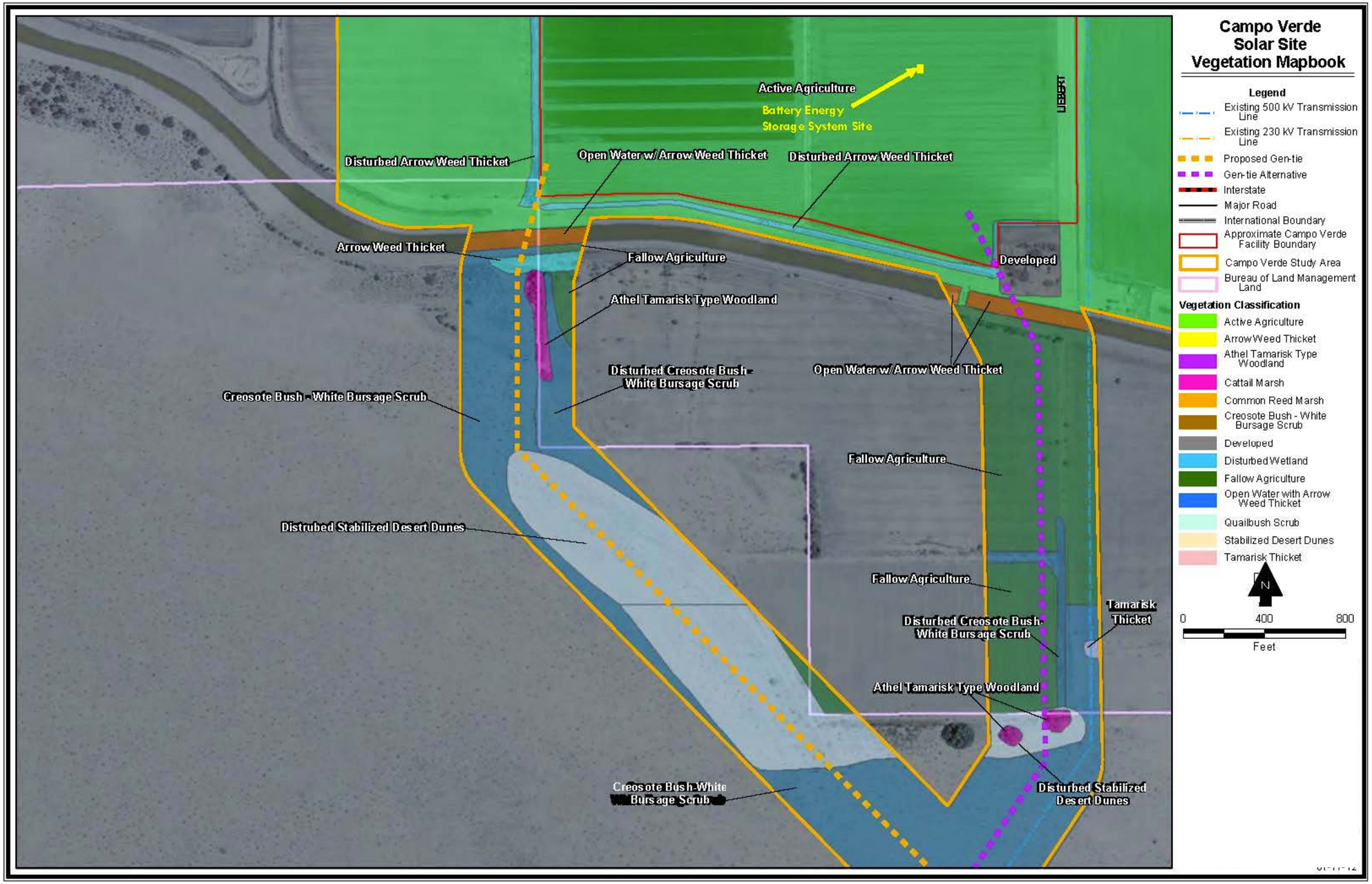
CDFW generally takes jurisdiction of all stream features including drains and canals. The CDFW jurisdiction extends from the top of bank to the opposite top of bank on these features or the limits of riparian vegetation if this vegetation extends beyond the top of the banks. Wetlands need to only fulfill one of the three aforementioned ACOE (hydrology, hydric soils, wetland vegetation) criteria to be considered CDFW jurisdictional wetlands.

Under Section 1600 of the CDFG Code, CDFW jurisdiction includes "…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…" Canals, aqueducts, irrigation ditches, and other means of water conveyance can also be considered streams if they support aquatic life, riparian vegetation or stream dependent terrestrial benefit.

Generally speaking, most canals, head and tail ditches do not support riparian habitat. Larger drains, however, typically do support some riparian habitat and are often considered state jurisdictional. Drainage features were considered potentially jurisdictional if they exhibited naturally occurring bed and bank, riparian vegetation potentially providing wildlife habitat, and/or evidence of regular flow.

As previously noted, water conveyance infrastructure extending through the Campo Verde Solar Project were removed to accommodate development of the solar field. However, two features near the Battery Energy Storage System site, but outside the boundaries of the Campo Verde Solar Project, continue to convey water: the Fern Canal approximately 0.20 mile to the east, on the east side of Liebert Road; and the Westside Main Canal approximately 0.20 mile to the south.

The Fern Canal (Feature #33 on **Figure 4.2-4**) is lined with concrete and flows from the Westside Main Canal (Feature #91 on **Figure 4.2-4**) to multiple lateral canals and head ditches. No riparian vegetation is present along much of the Fern Canal. The Westside Main Canal flows from the All-American Canal and conveys water year-round to multiple canals, laterals canals and head ditches.



Source: Heritage 2012a.

FIGURE 4.2-3
VEGETATION MAP OF BATTERY ENERGY STORAGE SYSTEM SITE

Some riparian vegetation is present along much of the Westside Main Canal, mostly arrow weed. Both the Fern Canal and the Westside Main Canal are considered potentially jurisdictional by both the ACOE and the CDFW (Heritage 2012b p.19, 38 and 39). However, there are no jurisdictional waters on the Battery Energy Storage System site (**Figure 4.2-3**).

Habitat Connectivity and Wildlife Corridors

Wildlife movement corridors and habitat linkages are areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Corridors are generally local pathways connecting short distances usually covering one or two main types of vegetation communities. Linkages are landscape level connections between very large core areas and generally span several thousand feet and cover multiple habitat types.

Avian species are able to move freely throughout the Campo Verde Solar Project Site, including the Battery Energy Storage System site, and are not restricted to a specific corridor or linkage. Although fences, overhead lines and solar structures can present barriers, terrestrial wildlife larger than the openings in the chain-link fence may still access the site. However, larger species would be prevented from moving through the Campo Verde Solar Project. The Battery Energy Storage System site is within the boundaries of the chain-link fence that surrounds the Campo Verde Solar Project site.

4.2.3 IMPACTS AND MITIGATION MEASURES

A. STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines, as listed in Appendix G. The project would result in a significant impact to biological resources if it would result in any of the following:

a) 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 the California Department of Fish and Game or U.S. Fish and Wildlife Service?

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

d) Interfere substantially with the movement of any 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?

e) Conflict with any local policies or ordinances protecting biological resource, such as a tree preservation policy or ordinance?

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Source: Heritage 2012b.

FIGURE 4.2-4
POTENTIAL JURISDICTIONAL WATERS IN THE VICINITY OF THE CAMPO VERDE BATTERY ENERGY STORAGE SYSTEM SITE

B. METHODOLOGY

Field Surveys

The survey area encompassed the entire Campo Verde Solar Project, including the proposed Battery Energy Storage System site, as well as buffer areas that varied for several surveys (General Biological Survey, Focused Rare Plant Survey, Burrowing Owl Survey, Jurisdictional Delineation) based on the target species and included 4,201 acres of private land.

General Biological Survey

Habitat assessments and general biological surveys of the Campo Verde Solar Project site were conducted on May 5 and September 30, 2010, March 28 through April 5, 2011, and October 23 through 27, 2011. The focus of these surveys was twofold: 1) to document the botanical resources and potentially jurisdictional state and federal waters and wetlands, and 2) to document suitable threatened, endangered, and sensitive wildlife species habitats on the proposed Campo Verde Solar Project site, including the proposed Battery Energy Storage System. The field surveys were conducted by surveying naturally vegetated areas with public access on foot and surveying the remainder of the area from public roads. The earthen drains and canals on the Campo Verde Solar Project site were surveyed for indications of wetland vegetation and wildlife use. High quality aerial photography was used to map habitats and other features in areas that couldn't be accessed from public roads. These areas were examined with binoculars and vegetation communities were interpreted and mapped on the aerials.

Focused Rare Plant Survey

Fall rare plant surveys were performed on October 23 and 24, 2011 in accordance with the Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. The survey was conducted during the traditional blooming periods of several fall-blooming, sensitive species to occur in the area of the Campo Verde Solar Project site. Spring rare plant surveys were conducted for several nearby projects in the same corridor and those data were available and used for this analysis. Surveys for spring ephemeral species were conducted during traditional blooming periods of species known or potentially occurring within the survey area (March to May, 2012).

Private lands were evaluated for suitability to support rare plants; it was determined that the private lands (which include the site of the proposed Battery Energy Storage System) have been intensively cultivated for decades, which has resulted in a change to the natural soil profile and limited potential for growth of native plants. As such, it has been determined that the private lands (which include the site of the proposed Battery Energy Storage System) do not support suitable habitat for rare plants. The natural vegetation along the Westside Main Canal and the adjacent canals and drains was also surveyed to assess potential to support rare plants.

Rare plant surveys of the fallow agricultural areas were not conducted because these areas were determined to have no potential to support sensitive rare plants at the time of fall survey. Fall-germinating and blooming ephemeral plant species were absent from the undisturbed native habitats (e.g. public lands between the Imperial Valley Substation and the Westside Main Canal) due to the lack of sufficient summer and early fall rains for seed germination. Spot field checks of the disturbed native habitats in the private agricultural lands north of the Westside Main Canal also revealed the absence of fall germinating and blooming ephemeral plant species. The absence of these species in higher quality native habitats led to the conclusion that these species were also absent from the previously cultivated habitats because fall germinating species did not sprout in this portion of the Yuha Desert in the fall of 2011. These low quality habitats were surveyed in the spring of 2012.

A database search using the California Natural Diversity Database (CNDDB) RareFind indicated that five rare plant species are known from the project vicinity: brown turbans (*Malperia tenuis*) a CNPS List 2.3 species, hairy stickleaf (*Mentzelia hirsutissima*) a CNPS List 2.3 species, fairy duster (*Calliandra eriophylla*) a CNPS List 2.3 species; rock nettle (*Eucnide rupestris*) a CNPS List 2.2 species and Thurber's pilostyles (*Pilostyles thurberi*) a CNPS List 4.3 species. In addition, other sensitive species known to potentially occur within the Campo Verde Solar Project area were included in the survey.

Phenology (i.e. natural phenomena) of common species at the time of the survey was used to verify that the survey was conducted within the period when rare plants would be observable. Shape files depicting survey area boundaries were uploaded onto GPS units. Transect locations were determined using Universal Transverse Mercators (UTMs). Track logs depicting transects were recorded on the GPS units.

Focused Burrowing Owl Surveys

BUOW surveys were conducted following California Burrowing Owl Consortium *Burrowing Owl Survey* Protocol *and Mitigation Guidelines* and CDFG's *Staff Report on Burrowing Owl Mitigation* (CDFG 2012).

Phase I and Phase II surveys of the Campo Verde Solar Project site were conducted simultaneously by qualified biologists during the 2011 breeding season (March-April). The Phase I habitat assessments determined that most of the study area contains suitable BUOW habitat, thus Phase II burrow surveys were conducted. New pre-construction surveys would be conducted for the Battery Energy Storage System to ensure that no burrows are present along the Fern Canal (east of Liebert Road) or the Westside Main Canal in the vicinity of the Project site.

Jurisdictional Delineation

The Campo Verde Solar Project site was evaluated for drainage features during field visits performed on April 4 - 5, 2011, October 25 - 27, 2011 and December 19 - 20, 2011. Additional information was gathered using a Geographic Information System (GIS) and aerial imagery. Determinations regarding the potential jurisdictional status of the various features located within the Campo Verde Solar Project area, including the Battery Energy Storage System, are based on the applicable regulations and associated guidance documents as well as on personal communications with the US Army Corps of Engineers (ACOE) and Magdalena Rodriguez, Wildlife Biologist, from the California Department of Fish and Wildlife (CDFW). A Preliminary Jurisdictional Determination for the Campo Verde Solar Project, which encompassed Battery Energy Storage Site, was also submitted to the ACOE during the first quarter of 2012. No drainage features align through the proposed Project site.

Literature Review

Determination of the potential occurrence for listed, sensitive, or noteworthy species is based upon: known ranges and habitat preferences for the species; species occurrence records from the California Natural Diversity Database (CNDDB); the BLM Special Status plant and wildlife species website; and species occurrence records from other sites in the vicinity of the Campo Verde Solar Project survey area.

Additional resources that were consulted included: the Biological Technical Report for the Imperial Solar Energy Center West; Biological Technical Report for the Imperial Solar Energy Center South; the Biological Technical Report for the Centinela Solar Energy Project; Draft Environmental Impact Report/Environmental Assessment for the Centinela Solar Energy Project; and the Draft Environmental Impact Statement for the SES Solar Two.

C. ISSUES SCOPED OUT

CEQA Appendix G Environmental Checklist Form criterion "f" was scoped out because Imperial County does not have an adopted Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP). Thus, no conflict with an HCP or NCCP would occur in association with implementation of the Battery Energy Storage System.

D. PROJECT IMPACTS AND MITIGATION MEASURES

Impacts to Special-Status Species – Plants

Impact 4.2.1 The proposed Battery Energy Storage System site has been previously disturbed in association with construction of the Campo Verde Solar Project. The Project site is currently undeveloped and vacant with some grasses and vegetation present. Because the site has been previously scraped and leveled, **no impacts** to special status plant species are expected to occur in association with Project construction, operation or decommissioning.

The Battery Energy Storage System site consists of disturbed land that is currently not developed with any solar facilities. The site contains some grasses and weeds, but is not irrigated or otherwise watered during the year, aside from rain. Based on past disturbance both historically as agricultural land and currently as part of the Campo Verde Solar Project, no special status plant species are expected to occur on the Battery Energy Storage System site and **no impact** is identified during Project construction, operation or decommissioning.

View of Substation looking east from inside the Campo Verde Solar Project site. Grasses and vegetation are present on the Battery Energy Storage System site.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.

Impacts on Special Status Species – Birds (SWFL)

Impact 4.2.2 Habitat for the SWFL is approximately one-half mile from the proposed Battery Energy Storage System site. Based on this distance, impacts to SWFL as a result of project construction, operation or decommissioning are considered **less than significant**.

The Battery Energy Storage System will be installed to the west of the Campo Verde Substation in an area that has been graded and fenced. No suitable migration habitat is present on or in the vicinity of the Battery Energy Storage Site. IID canals and drains remain through the Campo Verde

Solar Project site, but are not in the immediate vicinity of the Battery Energy Storage Site. Thus, potential for nesting habitat in the vicinity of the Battery Energy Storage System site is low.

Noise from heavy equipment may cause short-term avoidance by SWFL of small areas of foraging habitat near construction and decommissioning activities on vacant lands to the west and south of the Battery Energy Storage System site. These would be short-term impacts given the brief amount of time (likely two weeks or less SWFL may forage in the vicinity of the Battery Energy Storage System site during migration). All work in the immediate vicinity of potentially suitable SWFL habitat will be conducted during daylight hours.

Generally, noise from the construction and decommissioning of the Battery Energy Storage System is expected to be 55.9 dBA at a distance of 800 feet from the nearest property line (refer to Table 4.6-6 in Section 4.6, Noise). These noise levels could potentially impact SWFL if they are foraging in areas surrounding the Substation during migration.

Operational activities are not likely to adversely impact any SWFL that may forage within migration habitats adjacent to the Battery Energy Storage System site. Noise will be minimal during operations and no exterior lighting is proposed as part of the Battery Energy Storage System. Therefore, operational activities are not expected to provide a significant source of disturbance to avian species, including SWFL, outside of the Battery Energy Storage System site. Overall, impacts to SWFL as a result of construction, operation and decommissioning of the Battery Energy Storage System are considered **less than significant**.

Mitigation Measures

None Required.

Significance After Mitigation

Not Applicable.

Impacts on Special Status Species – Birds (Ridgway's Rail)

Impact 4.2.3 The nearest habitat for Ridgway's Rail is almost one-half mile from the Battery Energy Storage System. Based on this distance, impacts to Ridgway's Rail as a result of construction, operation and decommissioning of the Battery Energy Storage System are considered **less than significant**.

Construction of the proposed Battery Energy Storage System is unlikely to have an adverse impact on Ridgeway's Rail. The nearest known occurrence of this species based on the 2012 survey was approximately 2.0 miles north of the Battery Energy Storage System site. Potential Ridgway's Rail habitat in the area of the Battery Energy Storage System is limited, isolated and of poor quality. No potential foraging or wintering habitat will be removed during construction or grading of the Battery Energy Storage System site nor will Ridgeway's Rail experience any habitat loss.

Potential for Ridgeway's Rail to forage or winter in the cattail marsh or common reed marsh vegetation associated with the Fig Drain, Wixom Drain, Dixie 3A Drain, an unnamed wetland adjacent to Dixie 3A Drain, Dixie 4 Drain, Westside Drain and Wormwood 7 Drain is low and these features are not located on or immediately adjacent to the Battery Energy Storage System site.

Temporary light and noise from heavy equipment during construction and decommissioning is unlikely to impact Ridgeway's Rail given the low potential for this species to forage or winter adjacent to and/or within the Campo Verde Solar Project site, including the Battery Energy Storage System site. Work will be conducted primarily during daylight hours and no night work is proposed.

In general, noise from the construction and decommissioning of the Battery Energy Storage System is expected to be 55.9 dBA at a distance of 800 feet from the nearest property line (refer to Table

4.6-6 in Section 4.6, Noise). Although it is unlikely that Ridgeway's Rail forages or winters in the small habitat patches near the Battery Energy Storage System site, construction noise could potentially impact this species if it is present.

Any noise generated during operations will be minimal, and the level of human disturbance is not expected to increase significantly above the operational activities that are currently taking place and will continue to take place as part of the Campo Verde Solar Project. Therefore, operational activities are not expected to affect Ridgeway's Rail.

The Battery Energy Storage System does not include earthen detention basins to manage stormwater flows. The existing basin to the north of the Project site in Block 1 of the Campo Verde Solar Project, directly north of the Battery Energy Storage System site, has been sized to account for the proposed Project. No indirect effects to Ridgeway's Rail foraging habitat or wintering habitat along the with Fig Drain, Wixom Drain, Dixie 3A Drain, an unnamed wetland adjacent to Dixie 3A Drain, Dixie 4 Drain, Westside Drain or Wormwood 7 Drain are expected to occur as a result of run-off.

Unpaved roads exist adjacent to the Fig Drain, Wixom Drain, Dixie 3A Drain, an unnamed wetland adjacent to Dixie 3A Drain, Dixie 4 Drain, Westside Drain and Wormwood 7 Drain. These roads provide access to these facilities and no additional grading beyond standard maintenance of the Campo Verde Solar Project site access roads adjacent to potential foraging or winter habitat is anticipated. Impacts to these habitats resulting from sedimentation are not expected to occur. Because downstream flows are expected to be maintained at current levels, effects to downstream Ridgeway's Rail habitat are not anticipated. Overall, impacts to Ridgway's rail in association with construction, operation and decommissioning of the proposed Battery Energy Storage System are considered **less than significant**.

Mitigation Measures

None Required.

Significance After Mitigation

Not Applicable.

Impacts on Special Status Species – Birds (Greater Sandhill Crane)

Impact 4.2.4 The Battery Energy Storage System is proposed on vacant, undeveloped land that has been disturbed in association with the Campo Verde Solar Project. No foraging habitat for Greater Sandhill Crane would be removed in association with construction, operation and decommissioning of the Project. Therefore, impacts to Greater Sandhill Crane are considered **less than significant.**

Greater Sandhill Cranes may forage during the winter in the active agricultural habitats surrounding the Campo Verde Solar Project. Given the large amount of potentially suitable foraging habitat in the immediate vicinity of the Campo Verde Solar Project (including the Battery Energy Storage System site) and the Imperial Valley, it is unlikely that the loss of this potentially suitable foraging habitat would significantly impact wintering Greater Sandhill Cranes.

Noise from heavy equipment during construction and decommissioning is not expected to adversely modify the behavioral patterns of foraging Sandhill Cranes given the vast amount of foraging habitat in the immediate vicinity of the survey area. Construction will be conducted during daylight hours. The Sandhill Crane is a diurnal species and is not expected to be active at night.

Generally, noise from the construction and decommissioning of the Battery Energy Storage System is expected to be 55.9 dBA at a distance of 800 feet from the nearest property line (refer to Table

4.6-6 in Section 4.6, Noise). While the Sandhill Crane is relatively tolerant of disturbance on its wintering grounds, noise during construction has the potential to impact this species.

Operational activities are unlikely to affect Sandhill Cranes that may be foraging adjacent to the Battery Energy Storage System site during the winter. Noise during operations will be minimal and no exterior lighting is proposed as part of the Battery Energy Storage System. General operational activities that may be conducted within the Battery Energy Storage System site include equipment inspection and/or repairs and weed abatement activities. These operational activities are anticipated to be at a similar level of intensity as the former agricultural operations and are not expected to affect the behavioral patterns of Sandhill Cranes if present near the Battery Energy Storage System site. Overall, impacts to Greater Sandhill Crane in association with construction, operation and decommissioning of the proposed Battery Energy Storage System are considered **less than significant.**

Mitigation Measures

None Required.

Significance After Mitigation

Not Applicable.

Impacts on Special Status Species – Birds (MOPL)

Impact 4.2.5 The Battery Energy Storage System is proposed on vacant land that has been disturbed in association with the Campo Verde Solar Project. No foraging habitat is present for the MOPL the Battery Energy Storage System site. Therefore, impacts to MOPL during construction, operation and decommissioning of the Project are considered **less than significant.**

The risk of death or injury to MOPL resulting from construction, operation and decommissioning of the Battery Energy Storage System is unlikely for the following reasons:

- This species does not nest within the Campo Verde Solar Project survey area or in the Imperial Valley; therefore, there is no risk of destroying nests or eggs, harming chicks, or discouraging parents from returning to the nest.
- The species is naturally evasive and will readily move out of harm's way to avoid construction activities. They would likely find suitable fields nearby for foraging.
- Foraging habitat has been permanently removed on the Campo Verde Solar Project site, including the Battery Energy Storage System site; therefore, MOPLs would not attempt to forage on the Battery Energy Storage site and there would be no risk of collision with storage equipment.

The MOPL is protected under the MBTA. As such, it is unlawful to kill this species. Therefore, the Applicant must avoid killing MOPL and employ avoidance measures necessary to avoid killing or injuring any MOPL.

Light and noise from heavy equipment during construction and decommissioning is expected to be of short duration and should not adversely modify the behavioral patterns of foraging MOPL in the region given the vast amount of foraging habitat in the immediate vicinity of the Campo Verde Solar Project survey area. Construction and decommissioning will occur during daylight hours. MOPL is a diurnal species and is not expected to be active at night.

Generally, noise from the construction and decommissioning of the Battery Energy Storage System is expected to be 55.9 dBA at a distance of 800 feet from the nearest property line (refer to Table 4.6-6 in Section 4.6, Noise). While the MOPL is relatively tolerant of disturbance on its wintering

grounds, noise could potentially impact this species during the brief periods when plovers may forage within the fields to the east of the Battery Energy Storage System site (approximately one-quarter mile away).

Operational activities are unlikely to affect MOPLs that may be foraging in the agricultural field to the east of the Battery Energy Storage System during the winter. Noise during operations will be minimal and no external lighting is proposed as part of the Battery Energy Storage System. General operational activities that may be conducted within the Battery Energy Storage System site include equipment inspection and/or repairs and weed abatement activities. These operational activities are anticipated to be at a similar level of intensity as the former agricultural operations and are not expected to affect the overall behavioral patterns of MOPLs if present near the Battery Energy Storage System site.

MOPL is only active during daylight hours and no collisions with battery equipment are anticipated as these features will be visible, and therefore avoidable, if MOPLs are actively moving in and around the Battery Energy Storage System site. Therefore, operational activities would have less than significant impact on MOPL foraging within or adjacent to the survey area.

Large avian predators such as ravens (genus *Corvus*), Loggerhead Shrikes (*Lanius ludovicianus*), and Prairie Falcon (*Falco mexicanus*) may be drawn to the Battery Energy Storage System site during construction due to the increase in food sources such as garbage cans as well nesting/perching areas on the perimeter fence. This potential increase in avian predators may indirectly affect MOPL within and adjacent to the Battery Energy Storage System site.

No indirect effects to MOPL due to herbicide use are anticipated. The timing and formula of any herbicide used for control of weeds will be in accordance with the Weed Management Plan which will conform to resource agency standards to minimize impacts to sensitive biological resources. Overall, impacts to MOPL in association with construction, operation and decommissioning of the proposed Battery Energy Storage System are considered **less than significant**.

Mitigation Measures

None Required.

Significance After Mitigation

Not Applicable.

Impacts on Special Status Species – Raptors (BUOW)

Impact 4.2.6 The Battery Energy Storage System site has been disturbed in association with development of the Campo Verde Solar Project and does not contain features which would be suitable habitat for Burrowing owl. The potential exists for BUOW to be present along the Fern Canal and Westside Main canal. However, these features are set-back from the Battery Energy Storage System site. Therefore, impacts to BUOW during construction, operation and decommissioning are considered **less than significant.**

BUOW surveys conducted during 2012 in association with development of the Campo Verde Solar Project indicated that active burrows were present along the Fern Canal to the east of Liebert Road as well as the Westside Main Canal to the south. Both features are set back approximately 0.2 miles at their closest point from the Battery Energy Storage System site. Pre-construction BUOW surveys will be conducted along these features within 14-days prior to initiation of initial grading and clearing in accordance with the CDFG *Burrowing Owl Survey Protocol and Mitigation*

Guidelines. The surveys will ensure that any owls that may be present are protected from Project traffic and construction activities.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.

Impacts on Special Status Species – Raptors (Golden Eagles)

Impact 4.2.7 The Battery Energy Storage System site has been disturbed in association with development of the Campo Verde Solar Project. Suitable nesting habitat for Golden Eagle is not present within the Battery Energy Storage System site nor would foraging habitat be affected as a result of implementing the proposed Project. Therefore, impacts to Golden Eagles during construction, operation and decommissioning are considered **less than significant**.

Suitable Golden Eagle nesting habitat is not present within the Battery Energy Storage System site and Golden Eagles are not expected to nest within the Project site. However, there are habitat features in the vicinity of the Project site that could be conducive to eagle use and foraging. Furthermore, occasional foraging may occur on the Campo Verde Solar Project site, including the Battery Energy Storage System site. Suitable foraging habitat has been removed by the Campo Verde Solar Project. However, the amount of habitat that has been removed is minimal compared to the amount of suitable foraging habitat available in and around the Imperial Valley. In addition, prey availability in agricultural habitats is low compared to the surrounding native desert. Thus, the loss of habitat as a result of the Campo Verde Solar Project, including the Battery Energy Storage System, is unlikely to disturb Golden Eagles that may occasionally use the area for foraging. Incidental observations within the valley suggest that the most suitable foraging habitat within the agricultural lands may be the larger IID-maintained drains. No large drains would be removed to accommodate construction of the Battery Energy Storage System.

Historical records and results of the BTR analysis indicate that impacts to eagles as a result of the Campo Verde Solar Project, including the Battery Energy Storage System, are unlikely due to the low numbers of eagles that may use the area for foraging. Additionally, the amount of suitable foraging habitat (1,852 acres) that has been removed by the Campo Verde Solar Project, inclusive of the Battery Energy Storage System site is small relative to the amount of habitat available in and around the Imperial Valley. This loss of habitat would not represent a significant impact to Golden Eagles given the vast amounts of suitable foraging habitat in the surrounding vicinity and in the Imperial Valley (essentially all agricultural lands) and the relative infrequence with which the species has been observed in the Campo Verde Solar Project survey area and vicinity. Therefore, impacts to Golden Eagle in association with construction, operation and decommissioning of the Battery Energy Storage System are considered **less than significant**.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.

Impacts on Special Status Species – Mammals (Pallid Bats and California Leaf-nosed Bats)

Impact 4.2.8 The Battery Energy Storage System site has been disturbed in association with development of the Campo Verde Solar Project. Implementation of the proposed Battery Energy Storage System would not remove suitable foraging habitat for Pallid bats and California leaf-nosed bats. Therefore, impacts to Pallid bats and California leaf-nosed bats during construction, operation and decommissioning are considered **less than significant.**

Development of the Campo Verde Solar Project, including the Battery Energy Storage System resulted in the permanent disturbance of approximately 1,379 acres of potentially suitable foraging habitat. This disturbance has reduced, but not totally eliminated, the quality of the foraging habitat for Pallid bats and California leaf-nosed bats. Foraging opportunities remain present in the larger drains and canals that support prey populations for both species within the Campo Verde Solar Project site, but outside of the Battery Energy Storage System site. Given the large amount of suitable foraging habitat in the immediate vicinity of the Campo Verde Solar Project and the Imperial Valley (essentially all agricultural lands), as well as the continued foraging opportunities on the Campo Verde Solar Project site, implementation the Battery Energy Storage System would result in less than significant impacts to the Pallid bat and the California leaf-nosed bat during construction, operation and decommissioning.

Mitigation Measures

Less than significant.

Significance After Mitigation

Not applicable.

Impacts on Special Status Species – Reptiles (FTHL)

Impact 4.2.9 The Battery Energy Storage System site has been disturbed in association with development of the Campo Verde Solar Project. As a result, no habitat for FTHL is present within the boundaries of the Battery Energy Storage System site. Therefore, impacts to this FTHL during construction, operation and decommissioning are considered **less than significant**.

The proposed Battery Energy Storage System site is located outside of the Yuha MA in proximity to active agricultural fields. As disturbed land, the Battery Energy Storage System site does not provide habitat for FTHL. Therefore, no impacts to FTHL would occur in association with the Battery Energy Storage System and this impact is considered **less than significant.**

Mitigation Measures

None required.

Significance After Mitigation

Not applicable

Substantial Adverse Effect on Riparian Habitat or Other Sensitive Natural Community

Impact 4.2.10 The Battery Energy Storage System site has been disturbed in association with development of the Campo Verde Solar Project and does not contain riparian habitat or special status communities. Therefore, **no impact** to riparian habitat or other sensitive natural community would occur in association with construction, operation or decommissioning of the Battery Energy Storage System.

Special status natural communities were mapped as part of the surveys prepared for the Campo Verde Solar Project site, including the Battery Energy Storage System site. The area encompassing the Battery Energy Storage System site has been disturbed and is currently vacant. A chain-link fence surrounds the Campo Verde Solar Project site to prevent access from intruders and large animals. No sensitive species or special status natural communities are located on the Battery Energy Storage System site or in the immediate vicinity. Thus, none would be disturbed during construction, operation and decommissioning of the Battery Energy Storage System. No impact would occur.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.

Substantial Adverse Effect on Federally Protected Wetlands

Impact 4.2.11 The Battery Energy Storage System site has been disturbed in association with development of the Campo Verde Solar Project and does not contain any waters that are considered potentially jurisdictional. Therefore, **no impact** to federally protected wetlands would occur in association with construction, operation or decommissioning of the Battery Energy Storage System.

As shown in **Figure 4.2-3**, the Battery Energy Storage System site does not contain any features that are considered potentially jurisdictional waters. The closest features to the site are approximately 0.20 mile away and include the canal to the east of Liebert Road (Feature 33 – Fern Canal) and the Westside Main Canal to the south. However, neither of these features was considered a jurisdictional water. Thus no impact to jurisdictional or federally protected wetlands would occur during construction, operation or decommissioning in association with implementation of the Battery Energy Storage System.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.

Interfere with Migratory Fish or Wildlife Movement/Impede Native Wildlife Nursery Sites

Impact 4.2.12 The Battery Energy Storage System is proposed within the boundaries of the Campo Verde Solar Project. This area is currently surrounded by a chain-link fence that inhibits the ability of medium and large mammals to move through the site. No change in wildlife movement would occur in association with construction, operation or decommissioning of the proposed Project. Therefore, this impact is considered **less than significant**.

Wildlife movement corridors are considered sensitive by resource and conservation agencies. A chain-link perimeter fence currently surrounds the Substation and Campo Verde Solar Project. The fence would impact the ability of medium and large mammals to access the Project site, but would allow small mammals, birds and lizards to move through the site. The fence should not inhibit of movement of medium and large mammals through the Yuha Basin or surrounding agricultural lands. No impact to nursery sites is anticipated. Therefore, impacts with regard to interference with wildlife movement and wildlife nursery sites in association with construction, operation and decommissioning of the Battery Energy Storage System are considered **less than significant**.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.

Conflict with Local Policies or Ordinances Protecting Biological Resources

Impact 4.2.13 Implementation of the Battery Energy Storage System is not anticipated to conflict with any local policies or ordinances protecting biological resources during construction, operation or decommissioning. Therefore, this impact is considered **less than significant**.

The Imperial County General Plan Open Space Conservation Policy requires detailed investigations to be conducted to determine the significance, location, extent, and condition of natural resources in the County. If any rare, sensitive, or unique plant or wildlife habitat would be impacted by a project, the County must notify the agency responsible for protecting plant and wildlife before approving the project. Consistent with this policy, appropriate studies have been prepared for the Campo Verde Solar Project that included the Battery Energy Storage System site. These studies were referenced in preparing the analysis in this section.

Likewise, the Imperial County General Plan Land Use Element Policy notes that the majority of the privately owned land in the County is designated "Agriculture," which is also the predominate area where BUOWs create habitats. Consistent with this policy, pre-construction surveys for BUOW will be conducted. No impact would occur relative to the policies of the Imperial County General Plan.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.

4.2.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

A. CUMULATIVE SETTING

The cumulative setting includes the areas containing biological resources within the Imperial County region. Development anticipated as part of the cumulative condition is reflected in the land uses shown on the County's General Plan Land Use Map, and the Past, Present and Probable Large-Scale Solar Projects in the vicinity of the Campo Verde Battery Energy Storage System Project as identified in Table 3.0-1 in Chapter 3.0, Introduction to the Environmental Analysis and Assumptions Used. Future proposed and planned development would change the intensity of land uses in Imperial County. Future growth under cumulative conditions may result in biological and natural resources impacts, including loss of natural habitats and associated species.

B. CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Impacts to Biological Resources

Impact 4.2.14 Implementation of the proposed Battery Energy Storage System is included in the footprint of the Campo Verde Solar Project. Cumulative impacts on special status species, sensitive natural communities, and protected waters within the Campo Verde Solar Project site were previously assessed and mitigation measures were identified. No new impacts would occur as a result of the Battery Energy Storage System. Therefore, cumulative impacts are considered **less than cumulatively considerable.**

Construction

Given the development of the Campo Verde Solar Project and the disturbed and developed nature of the Battery Energy Storage System site next to the Campo Verde Substation, construction activities are not expected to result in cumulative impacts on federal and/or state listed species, including FTHL, BUOW, nesting raptors, migratory birds, sensitive vegetation communities and jurisdictional waters.

BUOWs are relatively widespread throughout the Imperial Valley. Cumulative projects may impact BUOWs through direct impacts to BUOWs and their burrows. It is anticipated that many of the cumulative projects would also have indirect impacts to BUOWs through conversion of foraging habitat, such as creosote bush-white bursage scrub vegetation and agricultural fields. With implementation of a pre-construction survey, the proposed Battery Energy Storage System, when combined with the cumulative projects, would not result in a cumulatively considerable impact to BUOW.

Raptors are known to occur in the Project vicinity and throughout Imperial County. A pre-construction avian survey would be conducted of the Project site and surrounding vicinity. If raptors are present, construction activities would be required to avoid the raptor nesting season. If it is not feasible to avoid nesting season, an approved biologist will conduct a pre-construction clearance survey, which would include a 500-foot no-work buffer zone around any raptor nest until the fledglings leave the nest. This measure is standard for all cumulative projects. With implementation of a buffer zone, the proposed Project, when combined with the cumulative projects, would not result in a cumulatively considerable impact to nesting raptors.

The proposed Battery Energy Storage System and cumulative projects could have direct impacts on migratory birds as a result of vehicle strikes, nest crushing, or collisions. Indirect impacts may occur from noise and lighting impacts, making mating calls hard to hear or frightening birds from foraging activities. A Bird and Bat Conservation Strategy (BBCS) has been prepared for the Campo Verde Solar Project. The BBCS outlines conservation measures for construction and O&M activities that would reduce potential impacts to bird populations and will be developed by the applicant in conjunction with and input from the USFWS. With implementation of the BBCS, the proposed Project, when combined with the cumulative projects, would not result in a cumulatively considerable impact to migratory birds.

The proposed Battery Energy Storage System would have no impact on jurisdictional waters. Any cumulative project that results in an impact to jurisdictional waters would be required to implement avoidance, minimization, and compensatory mitigation to reduce the proposed project impact on jurisdictional waters in accordance with federal and state law. With implementation of mitigation measures, the proposed project, when combined with the cumulative projects, would not result in a cumulatively adverse impact to jurisdictional waters.

Operations and Maintenance

As described above, the construction phase of the Battery Energy Storage System is anticipated to have less than significant impacts to biological resources based on the location of the Project site (i.e. adjacent to the Campo Verde Substation). Impacts that could occur during the operational phase are currently on-going and include lighting and traffic generated by any night time maintenance. However, the light and traffic generated during the night would be similar to the agricultural activities associated with harvesting alfalfa after dark. These impacts would be minimal and would not cumulatively affect any biological resources during the operations and maintenance phase of the Battery Energy Storage System.

Decommissioning

Decommissioning impacts would be similar to those described with regard to construction.

Mitigation Measures

None required.

Significance After Mitigation

Following implementation of the mitigation measures identified above, impact to biological resources including special status birds, special status raptors, nesting raptors, FTHL, Colorado desert fringe-toed lizard, riparian habitat or other sensitive natural community and federally protected wetlands and jurisdictional waters) would be reduced to less than significant levels. Cumulative impacts would be **less than cumulatively considerable** following mitigation.

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