November 16, 2012

Steve Crivelli
Conergy Projects Group
3550 Watt Ave., Suite 140
Sacramento, CA 95821

Subject: Biological Resource Evaluation for the Conergy Solar Project at the City of Sacramento's 28th Street Landfill

Dear Mr. Crivelli,

The purpose of this letter report is to present the results of a biological resource evaluation for the proposed Conergy Solar Project at the City of Sacramento's 28th Street Landfill. The evaluation focuses on special-status species, sensitive habitats, and other biological resources that are protected by laws and regulations. The City of Sacramento is conducting environmental review of the project pursuant to California Environmental Quality Act (CEQA) and may use this report to support its analysis. The City issued a Notice of Preparation and held a public scoping meeting in May 2012.

PROJECT DESCRIPTION

The proposed Conergy Solar Project consists of installation and operation of a solar energy facility on a portion of Sutter's Landing Park (the former 28th Street Landfill) in Sacramento, California. Energy produced from the project facilities would be transmitted to an electrical substation operated by the Sacramento Metropolitan Utility District (SMUD) for sale by SMUD as part of its operations.

The proposed project includes the installation of solar modules on the ground and on shade structures. The ground-mounted modules would be located on a portion of the park site that has been used as a stockpile site for clay and dirt used in landfill cover operations since approximately 1994. The stockpile is in active operation, with material being removed for use on the landfill site and adjacent properties. The project includes removal of all stockpiled material. The material removed would be relocated to another existing stockpile located to the east of 28th Street. The remaining stockpile site would be leveled and graded to drain. Excavation would be required for footers for the ground-mounted modules, and for footers for shade structures. Other modules would be located in the existing dog park. The shade-mounted structures would be located on the parking area east of 28th Street.

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Solar modules would consist of a collection of solar photovoltaic panels, each of which measures 5'4" x 3'3" x 1.8". Modules installed on the former stockpile portion of the site and in the dog park would be mounted on aluminum racks that support 28 panels mounted in a portrait configuration. Some modules would be mounted on existing shade structures. All modules would be mounted with a 20-degree tilt. The tilt would direct the module's surface generally to the south to obtain the highest exposure to the sun.

KEY REGULATORY ISSUES

Biological resources in California are protected and/or regulated by a variety of federal and state laws and policies. Key regulatory issues applicable to the proposed project are discussed below. Because no wetlands, water features, or sensitive natural habitats occur on the project site, wetland and water quality regulations are not discussed.

FEDERAL ENDANGERED SPECIES ACT

Pursuant to the Endangered Species Act (ESA), U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) have authority over projects that may affect the continued existence of federally listed (threatened or endangered) species. Section 9 of ESA prohibits any person from "taking" an endangered or threatened fish or wildlife species or removing, damaging, or destroying a listed plant species on federal land or where the taking of the plant is prohibited by state law. Take is defined under ESA, in part, as killing, harming, or harassing. Under federal regulations, take is further defined to include habitat modification or degradation where it actually results in death or injury to wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.

If a proposed project would result in take of a federally listed species, the project applicant must consult with USFWS before the take occurs under Section 10(a) of ESA or Section 7 of ESA if another federal agency is involved in the action. Conservation measures to minimize or compensate for the take typically is required.

CALIFORNIA ENDANGERED SPECIES ACT

Pursuant to the California Endangered Species Act (CESA), a permit from the California Department of Fish and Game (DFG) is required for projects that could "take" a species state listed as threatened or endangered. Section 2080 of CESA prohibits take of state listed species. Under CESA, take is defined as any activity that would directly or indirectly kill an individual of a species. The definition does not include “harm” or “harass” as in the federal act. As a result, the threshold for take under CESA is higher than under ESA (i.e., habitat modification is not necessarily considered take under CESA). The take of state-listed species incidental to otherwise lawful activities requires a permit, pursuant to Section 2081(b) of CESA. The state has the authority to issue an incidental take permit under Section 2081 of the California Fish and Game Code or to coordinate with USFWS during the federal process to make the federal permit also cover state-listed species.

CALIFORNIA FISH AND GAME CODE

The California Fish and Game Code identifies Fully Protected Species in Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species and do not provide for authorization of incidental take. DFG has informed nonfederal agencies and private parties that their actions must avoid take of any fully protected species.

In addition, Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (e.g., hawks, owls, eagles, and falcons), including their nests or eggs.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA applies to projects proposed to be undertaken or requiring approval by state and local governmental agencies. "Projects" are public agency actions with potential to have an impact on the physical environment. Once an activity is determined to be a "project" under CEQA, the lead agency must decide whether it is categorically or statutorily exempt. If it is not exempt, the lead agency must assess the potential for significant environmental effects to occur as a result of the project. For this analysis, thresholds of significance related to biological resources, as described below, are used to determine if a significant impact may occur. The significance criteria are based on applicable parts of Appendix G of the State CEQA Guidelines.

The project would have a significant impact on biological resources if it would:

- 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 DFG or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by DFG or USFWS;
- Have a substantial adverse effect on federally-protected wetlands, as defined by Section 404 of the Clean Water Act, through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or,
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or State conservation plan.

CITY OF SACRAMENTO'S 2030 GENERAL PLAN: ENVIRONMENTAL RESOURCES ELEMENT

The following goal and policies from the 2030 General Plan, adopted March 3, 2009 and last amended November 30, 2010, address biological resources and guide the location, design, and quality of development to protect important biological resources including wildlife habitat, open space corridors, and ecosystems (City of Sacramento, 2009).

- ***Goal ER 2.1: Natural and Open Space Protection.*** Protect and enhance open space, natural areas, and significant wildlife and vegetation in the City as integral parts of a sustainable environment within a larger regional ecosystem.
  - **Policies:**
    - ER 2.1.1 Resource Preservation. The City shall encourage new development to preserve on-site natural elements that contribute to the community's native plant and wildlife species value and to its aesthetic character.
    - ER 2.1.2 Conservation of Open Space. The City shall continue to preserve, protect, and provide access to designated open space areas along the American and Sacramento rivers, floodways, and undevelopable floodplains.
    - ER 2.1.4 Retain Habitat Areas. The City shall retain plant and wildlife habitat areas where there are known sensitive resources (e.g., sensitive habitats, special status, threatened, endangered,

candidate species, and species of concern). Particular attention shall be focused on retaining habitat areas that are contiguous with other existing natural areas and/or wildlife movement corridors.

- ER 2.1.7 Annual Grasslands. The City shall preserve and protect grasslands and vernal pools that provide habitat for rare and endangered species. If not feasible, the mitigation of all adverse impacts on annual grasslands shall comply with state and federal regulations protecting foraging habitat for those species known to utilize this habitat.
- ER 2.1.9 Wildlife Corridors. The City shall preserve, protect, and avoid impacts to wildlife corridors. If corridors are adversely affected, damaged habitat shall be replaced with habitat of equivalent value.
- R 2.1.10 Habitat Assessments. The City shall consider the potential impact on sensitive plants for each project requiring discretionary approval and shall require preconstruction surveys and/or habitat assessments for sensitive plant and wildlife species. If the preconstruction survey and/or habitat assessment determines that suitable habitat for sensitive plant and/or wildlife species is present, then either (1) protocol-level or industry-recognized (if no protocol has been established) surveys shall be conducted; or (2) presence of the species shall be assumed to occur in suitable habitat on the project site. Survey Reports shall be prepared and submitted to the City and the CDFG or the USFWS (depending on the species) for further consultation and development of avoidance and/or mitigation measures consistent with state and federal law.
- ER 2.1.11 Agency Coordination. The City shall coordinate with state and federal resource agencies (e.g., CDFG, USACE, and USFWS) to protect areas containing rare or endangered species of plants and animals.

METHODS

Biological resources on the site were evaluated by Ascent biologist Linda Leeman during a reconnaissance-level survey on October 17, 2012 with representatives from Conergy, City of Sacramento, SMUD, and Sacramento County (Parks Department) and a follow-up survey with members of the public and a staff biologist from DFG on October 25, 2012. Paper-copies of revised site design plans were provided by Conergy on October 25, 2012 that show the project footprint, including location of solar facilities and connection to SMUD's electrical substation.

4-2

Information on sensitive biological resources previously recorded in the project area was collected through a search of the California Natural Diversity Database (CNDDB) and review of existing documentation pertaining to biological resources in the area, including Biological Resource Assessment for the 28th Street Solar Photovoltaic Farm (2011) and Functions and Values Associated with the 28th Street Landfill Tree Removal Mitigation Project (2012).

The CNDDB is a statewide database, managed by DFG that is continually updated with the location and condition of the state's rare and declining species and habitats. Although the CNDDB is the most current and reliable tool available for tracking records of occurrences of special-status species, it contains only those records that have been reported to DFG. Therefore, it is possible that a rare plant or animal could be present in the project area, but not documented in the CNDDB.

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ENVIRONMENTAL SETTING

The project is located near the terminus of 28th Street at Sutter's Landing Park in the City of Sacramento. Railroad tracks are to the south, Sutter's Landing Park is to the east, the American River Parkway is to the north, and private land is to the west. The area was part of the City's 28th Street Landfill, which was closed pursuant to a closure plan in 1997. The closure involved capping the site and grading the site to drain properly.

The project site is composed of three areas—an existing parking lot, a fenced dog park, and a clean dirt stockpile area (Exhibit 1). The parking lot and dog park are developed and do not provide habitat for native plant or wildlife species. A few landscaping trees are planted at the dog park, but most of the dog park is unvegetated. The stockpile area has been used by the City to store and remove clean dirt for almost 20 years. Dirt is deposited or removed as needed. It is also regularly maintained. For instance, occasionally the stockpile is re-contoured to provide safe access or disked to remove weeds. A gravel access road forms the northern border of the area and informal dirt roads are created to access the stockpile when needed. Vegetation in the stockpile area include non-native grass and weed species, including perennial pepperweed (*Lepidium latifolia*), milk thistle (*Silybum marianum*), yellow star-thistle (*Centaurea solstitialis*), field hedge parsley (*Torillis arvensis*), prickly lettuce (*Lactuca serriola*), California burclover (*Medicago polymorpha*), Bermuda grass (*Cynodon dactylon*), and ripgut grass (*Bromus diandrus*). No trees or shrubs are present on the stockpiled dirt. One elderberry shrub is growing along the chain link fence at the southern boundary of the stockpile area. Another elderberry shrub is present north of the gravel access road (see Exhibit 1).

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Wildlife observed in the stockpile area include western meadowlark (*Sternus neglecta*), western scrub-jay (*Aphelocoma californica*), killdeer (*Charadris vociferus*), and black-tailed jackrabbit (*Lepus californicus*). An American kestrel (*Falco sparverius*) was observed flying over the area. No ground squirrel colonies or other obvious sign of burrowing animals were observed on the site. Except for the stockpiled dirt, which is periodically disked and/or re-contoured, the soils on the site are compacted.

5-2

SPECIAL-STATUS SPECIES

Special-status species are plants and animals in the following categories:

- Listed or proposed for listing as threatened or endangered under federal ESA or candidates for possible future listing;
- Listed or candidates for listing by the State of California as threatened or endangered under CESA;
- Listed as Fully Protected under the California Fish and Game Code;
- Animals identified by DFG as species of special concern;
- Plants considered by DFG to be "rare, threatened or endangered in California" (California Rare Plant Ranks of 1A, presumed extinct in California; 1B, considered rare or endangered in California and elsewhere ; and 2, considered rare or endangered in California but more common elsewhere). Note, that while these ranking do not afford the same type of legal protection as ESA or CESA, the uniqueness of these species requires special consideration under CEQA;
- Considered a locally significant species, that is, a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA §15125 (c)) or is so designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G); or
- Otherwise meets the definition of rare or endangered under CEQA §15380(b) and (d).

No special-status plant species are expected to occupy the project site, because of a lack of suitable habitat. Three special-status wildlife species, valley elderberry longhorn beetle, burrowing owl, and Swainson's hawk, have the potential to be present on the project site or to use it occasionally and are discussed in more detail below (Table 1). 6-2

Valley Elderberry Longhorn Beetle

Valley elderberry longhorn beetle is federally listed as threatened. Although the USFWS proposed the beetle for delisting in October 2012, it continues to be legally protected by ESA until USFWS issues a final ruling. Valley elderberry longhorn beetle is endemic to the Central Valley of California and is only found in association with its host plant, elderberry (*Sambucus* ssp.). The beetle spends most of its life in the larval stage, living within the stems of an elderberry plant, and feeding on pith. Frequently, the only exterior evidence of the elderberry's use by the beetle is an exit hole created by the larva just prior to the pupal stage. The life cycle takes one or two years to complete. Adult emergence is from late March through June, about the same time the elderberry produces flowers.

Two elderberry shrubs were identified on and immediately adjacent to the property containing the stockpile area (Exhibit 1). Both shrubs have stems greater than 1-inch diameter and are considered potential habitat for valley elderberry longhorn beetle. The shrubs are growing at the edges of the property containing the project site, but are not on the stockpiled dirt. The first is located north of the stockpile near the access road on the site, more than 100 feet from the proposed solar panels. The second elderberry shrub is located on the fenceline to the south of the stockpile area adjacent to the railroad tracks, and is also 100 feet from the proposed solar panels.

Burrowing Owl

Burrowing owl is a California Species of Special Concern. Burrowing owl habitat is characterized by low-growing vegetation and may include annual and perennial grasslands and arid scrublands. Burrows are an essential component of burrowing owl habitat. Burrowing owls typically use burrows made by mammals such as ground squirrels or badgers, but may also use artificial structures such as cement culverts; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement. They can also create their own burrows if soil conditions are suitable. The breeding season for burrowing owls is from approximately February 1 to August 31. Burrowing owls may make local movements or small migrations during the non-breeding season, but still require burrows for shelter and protection from predators.

The CNDDB contains a record of burrowing owl from 1974 near Elvas and 51st Street approximately 1.5 miles to the southeast of the project site (CNDDB 2012). Burrowing owl has been sighted on private property to the west of the project site, but no breeding pairs have been detected on the project site (Steele, pers. comm.). 6-1

No ground squirrel burrows, burrowing owl, or their sign (e.g., pellets, whitewash) were observed on or adjacent to the site. A small pile of granite slabs, concrete curbs, and other debris are located north of the site on an asphalt pad, but it did not appear to provide suitable shelter due to the open ends of crevices formed by the pile. The vegetation along the edges of the stockpiled dirt was at least 24 inches tall, was dominated by yellow star-thistle, and is not suitable for burrowing owl. The stockpile, itself, is not suitable for burrowing owl because of the disturbance from regular stockpile maintenance, soil deposition, or soil removal. Therefore, the stockpile has very low habitat value for burrowing owl, and it is unlikely the owl would use the stockpile site during the breeding or non-breeding season. 6-3

Source: Ascent Environmental 2012

Exhibit 1

Project Site

ASCENT ENVIRONMENTAL

Swainson's Hawk

Swainson's hawk is state listed as threatened. Swainson's hawks typically are found in California only during the breeding season (March–September) and generally begin to arrive in the Central Valley in March. Nesting territories are usually established by April, with incubation and rearing of young occurring through June. Most Swainson's hawk leave the Central Valley by late August to mid-September to migrate to South America. Nesting pairs frequently return to the same nest site for multiple years. Sacramento, Yolo, Solano, and San Joaquin Counties support the largest concentration of nesting Swainson's hawks in California.

Swainson's hawks are most commonly present in grassland, low-shrubland, and agricultural habitats that include large trees for nesting. Nests are found in riparian woodlands, roadside trees, trees along field borders, and isolated trees. In the Central Valley, the Swainson's hawk population is correlated with agricultural production that creates conditions where abundant prey is available in large tracts of foraging areas (Estep 2008). However, Swainson's hawks can also be found in areas undergoing urbanization (e.g., City of Elk Grove), if sufficient nesting and foraging habitat remains available (Estep 2009).

Prey abundance and accessibility are the most important features determining the suitability of Swainson's hawk foraging habitat. Agricultural operations (e.g., mowing, flood irrigation) have substantial influence on the accessibility of prey and, thus, create important foraging opportunities. Swainson's hawks feed primarily on small rodents, but also consume insects and birds.

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There are no known Swainson's hawk nests within one mile of the project site. There are 26 reported Swainson's hawk nests within five miles of the project site and an additional 66 nests within 10 miles (CNDDB 2012). Not all of these nesting territories may be active in a given year. Most of these records are located in agricultural areas in eastern Yolo County or riparian woodland habitat along the Sacramento and American Rivers, where extensive areas of foraging habitat are located nearby. Swainson's hawk are not expected to nest on or immediately adjacent (within 500 feet) of the project site because of the lack of suitable nest trees. The project site, itself, does not provide valuable habitat for foraging (as described further below), but Swainson's hawk could fly over the site and forage in adjacent grassland areas.

IMPACT EVALUTION

SPECIAL-STATUS SPECIES

Valley Elderberry Longhorn Beetle

The project has been designed to avoid adverse effects to valley elderberry longhorn beetle by preserving a 100-foot buffer around the dripline of elderberry shrub #2. Elderberry shrub #1 is more than 100 feet from the project site. No ground-disturbing activities would occur within 100 feet of the elderberry shrubs and, therefore, no impacts to valley elderberry longhorn beetle are expected to occur.

Burrowing Owl

8-2

Because the project site does not provide suitable habitat for the formation of burrows, it is unlikely that burrowing owl would nest or shelter during the nonbreeding season on the project site. Therefore, no impacts to burrowing owl are expected to occur.

Swainson's Hawk

Swainson's hawk are not expected to nest on or immediately adjacent of the project site due to a lack of suitable nesting habitat. While not specifically defined in the definition of take under CESA, loss of essential foraging habitat can result in the direct or indirect loss of breeding territories and reproductive potential leading to

further population declines, and thus can potentially be included in the definition of take. However, most habitat-related impacts on the Swainson's hawk are addressed through CEQA.

Swainson's hawk is strongly associated with agricultural areas that provide suitable foraging habitat. The suitability of foraging habitat for Swainson's hawk is based on (1) the patch size of the habitat, (2) prey abundance, and (3) prey accessibility. Swainson's hawk tend not to use small patches of foraging habitat and prefer to forage over large areas in non-fragmented landscapes (Estep 2008). Abundance of prey, particularly of meadow vole (*Microtus californicus*), pocket gopher (*Thomomys bottae*), as well as other small rodents, including deer mouse (*Peromyscus californicus*) and house mouse (*Mus musculus*), is an important component of suitable foraging habitat for Swainson's hawk (Estep 1989). Foraging areas with low vegetative cover is also important so that Swainson's hawks are able to access the ground and capture prey. Agricultural practices or vegetation management can also influence suitability of foraging habitat. Commonly, Swainson's hawks will follow mowers and tractors, capturing prey that is visible after vegetation cover has been reduced or small mammals have been injured (Estep 1989). 9-1

Vegetation types that provide foraging habitat for Swainson's hawk because they support prey species populations and their management creates foraging opportunities include hay, grain, and row crops; irrigated pasture; seasonal wetlands; and uncultivated grassland habitats. Fields lacking adequate prey populations (e.g., flooded rice fields) or those that are inaccessible to foraging birds (e.g., vineyards and orchards) are rarely used (Estep 1989).

Although Swainson's hawks may fly over the area and it is possible that they could forage on the site if a prey item was visible, the stockpile area of the project site does not meet the criteria of having suitable non-fragmented habitat, prey abundance, and prey accessibility. The stockpile area is relatively small (approximately 7 acres) and is bound by railroad tracks and existing development associated with the 28th Street Landfill and Sutter's Landing Park. Although the American River Parkway is close to the site and other open space is nearby, the site is in close proximity to residential houses, roadways, and active railroad tracks. The vegetation is absent or very sparse on the stockpiled dirt. The habitat conditions are not likely to support sufficient populations of prey species for Swainson's hawk (e.g., voles, pocket gophers, mice). Along the edges of the site, the vegetation is tall (20+ inches) and weedy (e.g., milk thistle, yellow star- thistle, perennial pepperweed), which would deter Swainson' s hawk from successfully capturing prey. In addition, the use of the site as a dirt stockpile creates periodic disturbance that would not promote stable rodent populations or conditions where Swainson's hawks can gain access to prey. In conclusion, development of the solar project would not have a substantial adverse effect on foraging habitat for Swainson's hawk or substantially reduce the survival or reproductive productivity of nesting pairs in the region. Therefore, no significant effects to Swainson's hawk would occur. 9-2

Other Special-Status Species

No other special-status plants or wildlife are expected to be affected by the project.

Riparian and Other Sensitive Natural Communities

There are no riparian habitats or other sensitive natural communities on the project site. No sensitive natural community identified in local or regional plans, policies, regulations, or by DFG or USFWS would be affected by the proposed solar project.

Federally Protected Wetlands

There are no wetlands or other waters of the United States on the project site. There would be no impact on federally protected wetlands from the proposed solar project.

Wildlife Movement

Wildlife corridors are features that provide connections between two or more areas of habitat that would otherwise be isolated and unusable. Often drainages, creeks, or riparian areas are used by wildlife as movement corridors as these features can provide cover and access across a landscape. Although the project site is open space, it does not contain any important wildlife corridors because it lacks vegetative cover and is within an area of human disturbance. The American River corridor to the north of the project site would remain accessible for wildlife movement through the area. Development of the site would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

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Conflict with Local Policies or Ordinances

10-2

The proposed project would not conflict with City of Sacramento General Plan policies protecting biological resources. The project site is within the Central City Community Plan area of the City's General Plan and land use was designated as Parks and Recreation. Development of the site for the solar project would not preclude that land use.

Conflict with Adopted Habitat Conservation Plans

The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved conservation plan as the project site has not been identified as an important conservation area in any approved conservation plan.

CONCLUSION

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The proposed solar photovoltaic project, as described in the site plans provided by Conergy, would not have any significant environmental impacts on biological resources.

Thank you for the opportunity to assist the Conergy Projects Group with biological resources support for the solar project at the City of Sacramento's 28th Street Landfill. Please let me know if we can be of further assistance to you.

Sincerely,

Linda W. Leeman

Linda W. Leeman
Senior Biologist

cc: Project File (12010066.01)

REFERENCES

California Natural Diversity Database (CNDDB). 2012. Geographic Information System database search for 10-mile radius of project site. Biogeographic Data Branch, California Department of Fish and Game, Sacramento, California. November 9, 2012.

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Estep, J. A. 1989. *Biology, movements, and habitat relationships of the Swainson's Hawk in the Central Valley of California, 1986-87*. California Department of Fish and Game, Nongame Bird and Mammal Section Report.

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Estep Environmental Consulting. 2009 (January). *The Distribution, Abundance, and Habitat Associations of the Swainson's Hawk (*Buteo swainsoni*) in the City of Elk Grove, California*. Prepared for the City of Elk Grove.

Steele, Dale. 2012. Personal communication with Linda Leeman of Ascent Environmental, Inc. October 25, 2012.

11-1

Table 1. Special-Status Species With Potential to Occur on the Project Site					
Species	Legal Status[1]			Habitat	Potential for Occurrence[2]
	ESA	CESA	Other		
PLANTS					
Sanford's arrowhead *Sagittaria sanfordii*	--	--	1B.2	Marshes and swamps. Blooms May–October.	Unlikely to occur on the project site due to a lack of suitable habitat.
Woolly rose-mallow *Hibiscus lasiocarpos var. occidentalis*	--	--	1B.2	Marshes and swamps (freshwater). Blooms June-September.	Unlikely to occur on the project site due to a lack of suitable habitat.
INVERTBRATES					
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	T	--	--	Elderberry shrubs below 3,000 feet in elevation, typically in riparian habitats.	Could occur. One elderberry shrub is present on the project site. A second elderberry shrub is located adjacent to the project site.
Vernal pool fairy shrimp *Branchinecta lynchi*	T	--	--	Vernal pools and other seasonal wetlands in valley and foothill grasslands.	Unlikely to occur on the project site due to a lack of suitable seasonal wetlands or vernal pools.
Vernal pool tadpole shrimp *Lepidurus packardi*	E	--	--	Vernal pools and other seasonal wetlands in valley and foothill grasslands.	Unlikely to occur on the project site due to a lack of suitable seasonal wetlands or vernal pools.
FISH					
Chinook salmon - Central Valley spring-run ESU *Oncorhynchus tshawytscha*	T	T	--	Sacramento River and tributaries.	No potential to occur because no aquatic habitat is present on project site.
Chinook salmon - Sacramento River winter-run ESU *Oncorhynchus tshawytscha*	E	E	--	Sacramento River below Keswick Dam.	No potential to occur because no aquatic habitat is present on project site.
Sacramento splittail *Pogonichthys macrolepidotus*	--	--	SSC	Endemic to the lakes and rivers of the Central Valley, but now confined to the Delta, Suisun Bay & associated marshes.	No potential to occur because no aquatic habitat is present on project site.
REPTILES					
Giant garter snake *Thamnophis gigas*	T	T	--	Freshwater marsh and low gradient streams. Has adapted to drainage canals & irrigation ditches.	Unlikely to occur on the project site due to a lack of suitable aquatic habitat on or adjacent to the site.
BIRDS					
Bank swallow *Riparia riparia* (nesting)	--	T	--	Colonial nester; nests primarily in riparian and other lowland habitats. Requires vertical banks/cliffs with fine-textured/sandy soils to dig nesting hole.	Unlikely to occur on the project site due to a lack of suitable nesting or foraging habitat.

Table 1. Special-Status Species With Potential to Occur on the Project Site					
Species	Legal Status[1]			Habitat	Potential for Occurrence[2]
	ESA	CESA	Other		
Burrowing owl *Athene cunicularia* (burrow sites)	--	--	SSC	Nests and forages in grasslands, agricultural lands, open shrublands, and open woodlands with existing ground squirrel burrows or friable soils.	Because this species has been reported in the project vicinity, thorough evaluation of the site conditions were conducted. Evaluation concluded that burrowing owl is unlikely to occur on the project site due to lack of suitable habitat for burrows.
Loggerhead shrike *Lanius ludovicianus* (nesting)	--	--	SSC	Forages and nests in grasslands, shrublands, and open woodlands.	Unlikely to nest on the project site due to a lack of shrubs or trees for nesting habitat. May forage in the vicinity.
Northern harrier *Circus cyaneus* (nesting)	--	--	SSC	Nests and forages in grasslands, agricultural fields, and marshes.	Unlikely to nest on the project site due to a lack of suitable cover of grassland habitat. May forage in the vicinity.
Purple martin *Progne subis* (nesting)	--	--	SSC	Nests in cavities in woodlands and also in weep holes under bridges and over-passes. Several breeding colonies known from within Sacramento metropolitan area.	Unlikely to occur on the project site due to a lack of suitable nesting or foraging habitat.
Swainson's hawk *Buteo swainsoni* (nesting)	--	T	--	Forages in grasslands and agricultural lands; nests in riparian and isolated trees.	Unlikely to nest on the project site due to a lack of suitable nest trees. Because this species has been reported in the project vicinity, thorough evaluation of the site conditions were conducted. Evaluation concluded that Swainson's hawk is unlikely to forage onsite because it does not provide required components of foraging habitat.
Tricolored blackbird *Agelaius tricolor* (nesting)	--	--	SSC	Forages in agricultural lands and grasslands; nests in marshes, riparian scrub, and other areas that support cattails or dense thickets of shrubs.	Unlikely to occur on the project site due to a lack of suitable nesting or foraging habitat.
White-tailed kite *Elanus leucurus* (nesting)	--	--	FP	Forages in grasslands and agricultural fields; nests in riparian zones, oak woodlands, and isolated trees.	Unlikely to nest on the project site due to a lack of suitable cover of grassland habitat. May forage in the vicinity.

Table 1. Special-Status Species With Potential to Occur on the Project Site

Species	Legal Status[1]			Habitat	Potential for Occurrence[2]
	ESA	CESA	Other		
MAMMALS					
American badger *Taxidea taxus*	--	--	SSC	Grasslands and savannas with friable soils and rodent prey populations.	Unlikely to occur on the project site due to a lack of suitable habitat.

[1] Legal Status definitions:
ESA and CESA:
E Endangered
T Threatened
Other:
FP Fully Protected (legally protected under the California Fish and Game Code)
SSC Species of Special Concern (not formally protected, but considered under CEQA)
1B.2 Plant species considered rare or endangered in California and elsewhere and fairly endangered in California (20 to 80% of occurrences are threatened) (not formally protected, but considered under CEQA)
[2] **Potential for Occurrence Definitions**
Unlikely to occur: Species is unlikely to be present on the project site due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.
Could occur: Suitable habitat is available at the project site; however, there are little to no other indicators that the species might be present.
Likely to occur: Habitat conditions, behavior of the species, known occurrences in the project vicinity, or other factors indicate a relatively high likelihood that the species would occur at the project site.
Known to occur: The species, or evidence of its presence, was observed at the project site during reconnaissance surveys, or was reported by others.
Source: CNDDB 2012, Ascent 2012

1-1 Dale Steele
There should be information on the removal of this stockpile to the adjacent Dellar property which was underway & the site of relocation for the bulk of the landfill stockpile. Existing site conditions on this property should be part of the project description too.

1-2 Dale Steele
The stockpile has been completely leveled and graded now (11/30/12) including adjacent land on the park that was not part of the stockpile. Previously, stockpile site disturbance was very infrequent and the stockpile was covered with ruderal vegetation. It is bare ground now.

4-1 Dale Steele
Additional and more up to date biological information is available from the Friends of the Riverbanks website which document wildlife species nesting and foraging activities within the project area and adjacent lands.
http://www.friendsoftheriverbanks.org/whats-there.html

4-2 Dale Steele
Not breeding season and nesting species foraging activities are not as active in the area. Less chance of detection.

5-1 Dale Steele
Minimal activity has been noted at the stockpile in recent years. Are there records of previous activities described here?

5-2 Dale Steele
A white-tailed kite was also observed during the site visit.

6-1 Dale Steele
The site of this previous BUOW observation was covered by the stockpile material moved onto the Dellar property. This action should be considered as part of the solar project.

6-2 Dale Steele
White-tailed kites & Northern Harriers are also known to use the project & adjacent areas for foraging and are commonly seen foraging there. Loggerhead shrikes and Peregrine falcons have been recorded on Sutter's Landing Park previously too.

6-3 Dale Steele
Ground squirrels were common on the Dellar property prior to the current stockpile transfer there. Ground squirrels are still present on adjacent portions of the property.

8-1 Dale Steele
SWHA have nested directly across the American River and upstream from the project area in recent years. These nesting pairs have foraged within the project area and adjacent lands on a daily basis.

8-2 Dale Steele
It is not possible to determine from the information provided whether any owls were impacted by the relocation of stockpiled soil onto the Dellar property.

9-1 Dale Steele
The landfill mound has been documented to provide adequate habitat and prey for successful SWHA nesting in recent years.

9-2 Dale Steele
What about the potential to disrupt documented SWHA foraging on adjacent areas on Sutter's Landing Park during solar site construction and maintenance activities?

10-1 Dale Steele

The Friends of Sutter's Landing Park (FOSL) long range vision for Sutter's Landing Park includes the revegetation and establishment of native vegetation in areas to be altered by the proposed project. The purpose of this vegetation would be to enhance wildlife habitat and provide connectivity with adjacent areas along the river. The solar project will limit this opportunity.

10-2 Dale Steele

This statement is not adequate based on existing information regarding wildlife foraging and movement on Sutter's Landing Park including the project area.

10-3 Dale Steele

This survey was not conducted during the appropriate time of year or with consideration for existing information about wildlife resources use at the site. A more complete review and survey is needed.

11-1 Dale Steele

I also referenced the species list on the FORB website which documents the presence of several sensitive species within the project area and adjacent lands.