LIVE OAK ASSOCIATES, INC.

an Ecological Consulting Firm

HARVEST POWER TULARE PROJECT
BIOLOGICAL EVALUATION
TULARE COUNTY, CALIFORNIA

Prepared by

LIVE OAK ASSOCIATES, INC.

David Hartesveldt, B. A., Principal
Jeff Gurule, B. A., Senior Project Manager and Staff Ecologist

Prepared for

Linda Novick
Harvest Power California, LLC
6943 N. Golden State Blvd.
Fresno, CA 93722

November 30, 2012 PN 1687-01

San Jose: 6840 Via del Oro, Suite 220 • San Jose, CA 95119 • Phone: (408) 224-8300 • Fax: (408) 224-1411
Oakhurst: P.O. Box 2697 • 49430 Road 426, Suite C • Oakhurst, CA 93644 • Phone: (559) 642-4880 • Fax: (559) 642-4883
Bakersfield: 8200 Stockdale Highway, M10-293 • Bakersfield, CA 93311

EXECUTIVE SUMMARY

Live Oak Associates, Inc. (LOA) conducted an investigation of the biological resources of the Harvest Power Tulare Project site in Tulare County, California, and evaluated likely impacts to such resources resulting from development of these facilities. The following report is an analysis of impacts to the biological resources on or within the vicinity of the project. The approximately 38 acre site is located approximately two miles east of the City of Tulare. On November 16, 2012, LOA biologist Jeff Gurule surveyed the site for biotic habitats, the plants and animals occurring in those habitats, and significant habitat values that may be protected by state and federal law.

The project site consisted of an active commercial enterprise within a region dominated by agricultural land uses. The habitat/land use identified on the site is characterized as ruderal/commercial.

Any native habitats once present on the site have been heavily altered by human enterprise such that the site no longer provides suitable habitat for locally occurring special status plant and animal species. Because such species would not occur on the project site, they will not be impacted by the proposed project. Project impacts will also be absent for wildlife movement corridors, jurisdictional waters, and sensitive habitats. Project conflicts with local plans or policies regarding biological resources, including any Habitat Conservation Plans, are not apparent.

TABLE OF CONTENTS

EXECUTIVE SUMMARY I
1.0 INTRODUCTION 1
1.1 PROJECT LOCATION AND DESCRIPTION 1
1.2 REPORT OBJECTIVES 1
1.3 STUDY METHODOLOGY 3
2.0 EXISTING CONDITIONS 4
2.3 BIOTIC HABITATS/LAND USES 6
2.3.1 Commercial/Ruderal 6
2.4 SPECIAL STATUS PLANTS AND ANIMALS 7
2.5 JURISDICTIONAL WATERS 14
3.0 IMPACTS AND MITIGATIONS 15
3.1 SIGNIFICANCE CRITERIA 15
3.2 RELEVANT GOALS, POLICIES, AND LAWS 16
3.2.1 Threatened and Endangered Species 16
3.2.2 Migratory Birds 17
3.2.3 Birds of Prey 17
3.2.4 Wetlands and Other Jurisdictional Waters 17
3.3 POTENTIALLY SIGNIFICANT PROJECT IMPACTS/MITIGATION 19
3.4 LESS THAN SIGNIFICANT PROJECT IMPACTS 19
3.4.1 Disturbance to Migratory Bird Nests 19
3.4.2 Loss of Habitat for Special Status Plants 19
3.4.3 Loss of Habitat or Direct Impact to Special Status Animals Absent or Unlikely to Occur on the Site 20
3.4.4 Loss of Breeding, Nesting, Roosting, or Denning Habitat for Special Status Animals 20
3.4.5 Loss of Habitat for Special Status Animals that may Occur on the Site as Occasional or Regular Foragers but Breed Elsewhere 20
3.4.6 Project Impacts to Fish or Wildlife Movement Corridors 21
3.4.7 Disturbance to Riparian Habitat or other Sensitive Habitats 21
3.4.8 Disturbance to Waters of the United States 21
3.4.9 Local Policies or Habitat Conservation Plans 21
4.0 LITERATURE REFERENCED OR CITED 22
APPENDIX A: VASCULAR PLANTS OF THE PROJECT SITE 23
APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY OCCUR ON THE PROJECT SITE 25
APPENDIX C: SELECTED SITE PHOTOGRAPHS 29

1.0 INTRODUCTION

The technical report that follows describes the biotic resources of the Harvest Power Tulare Project site (hereafter referred to as the "project site" or "site"), and evaluates possible impacts to those resources that could result from the disposal site expansion.

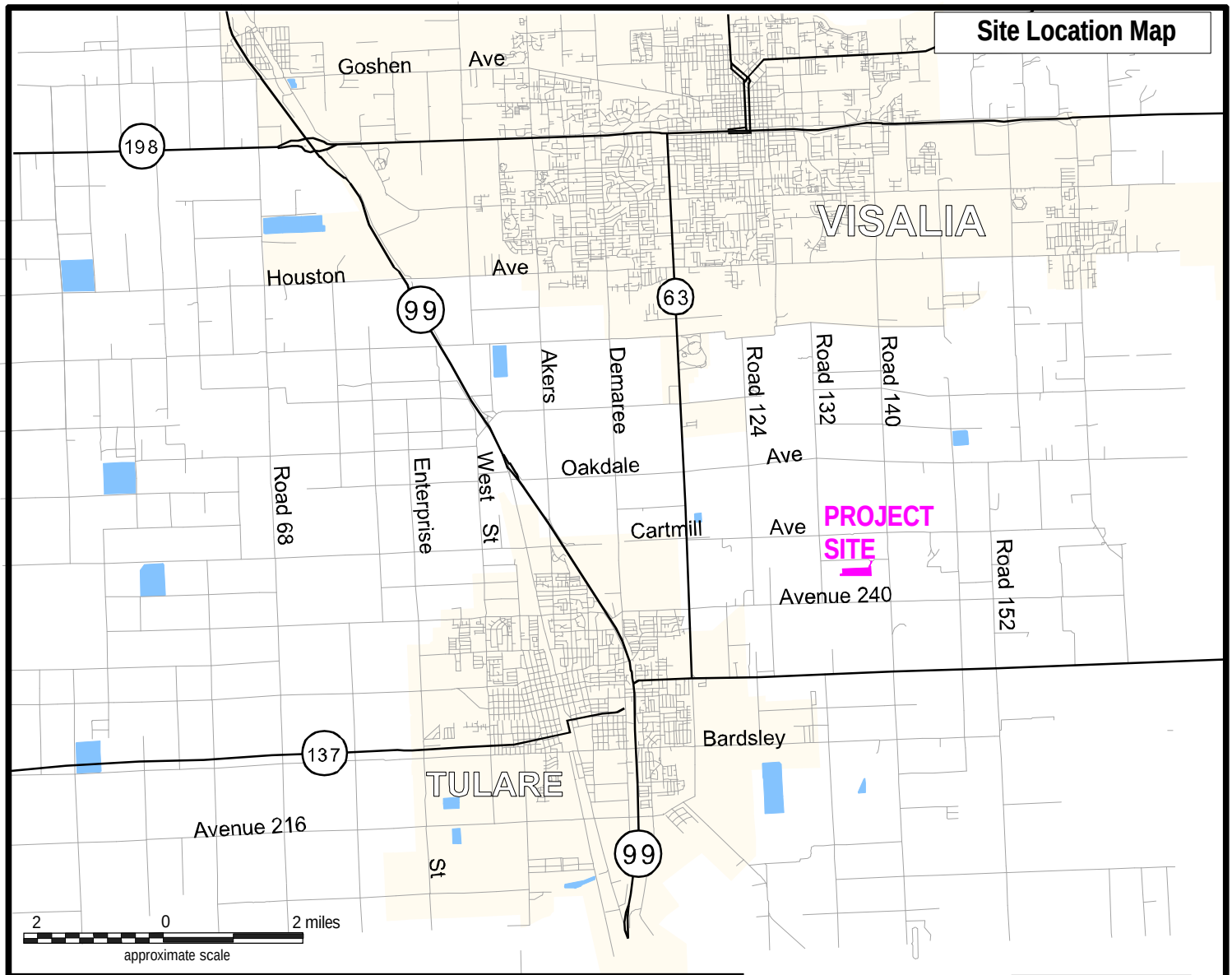
1.1 PROJECT LOCATION AND DESCRIPTION

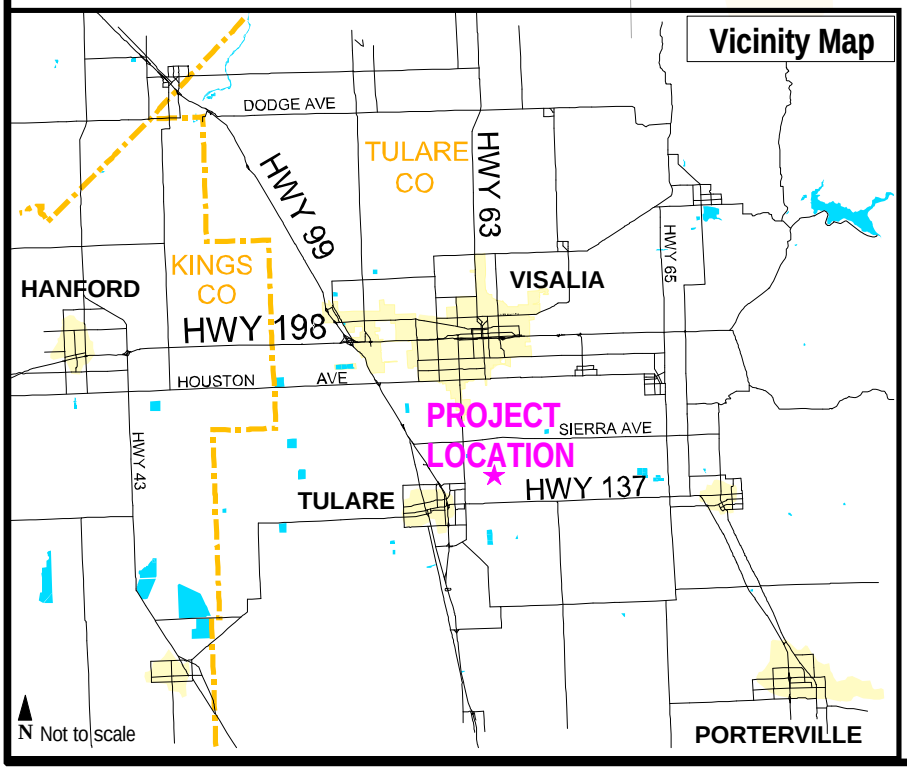
The project is located on an approximately 38 acre site within APN 150-140-016, APN 150-140-014, APN 150-140-009, and APN 150-130-004 at 24487 Road 140 in Tulare County, approximately two miles east of the City of Tulare (Figure 1). The project would entail the incorporation of an anaerobic digester and fueling station within the existing footprint of the Harvest Power commercial composting and mulching operations on the site. No tree removal or disturbance will occur during project implementation.

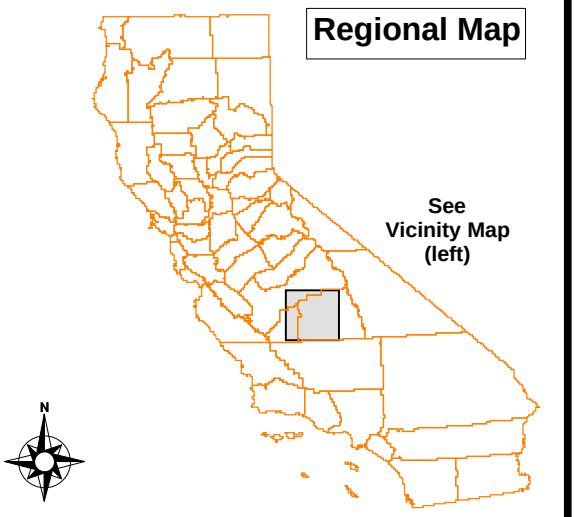
1.2 REPORT OBJECTIVES

The development of projects in Tulare County may damage or modify biotic habitats used by sensitive plant and wildlife species. In such cases, site development may be regulated by state or federal agencies, subject to provisions of the California Environmental Quality Act (CEQA), and/or covered by policies and ordinances of Tulare County. This report addresses issues related to: 1) Sensitive biotic resources occurring on the project site; 2) The federal, state, and local laws regulating such resources; and 3) Mitigation measures which may be required to reduce the magnitude of anticipated impacts and/or comply with permit requirements of state and federal resource agencies. As such, the objectives of this report are to:

- Summarize all site-specific information related to existing biological resources.
- Make reasonable inferences about the biological resources that could occur onsite based on habitat suitability and the proximity of the site to a species' known range.
- Summarize all state and federal natural resource protection laws that may be relevant to possible future site development.
- Identify and discuss project impacts to biological resources likely to occur on the site within the context of CEQA or any state or federal laws.







Live Oak Associates, Inc.

Harvest Power Tulare Facility

Site / Vicinity Map

Date	Project #	Figure #
11/29/2012	1687-01	1

- Identify avoidance and mitigation measures that would reduce impacts to a less-than-significant level (as identified by CEQA) and are generally consistent with recommendations of the resource agencies for affected biological resources.

1.3 STUDY METHODOLOGY

The analysis of impacts, as discussed in Section 3.0 of this report, is based on the known and potential biotic resources of the project site discussed in Section 2.0. Sources of information used in the preparation of this analysis included: (1) the *California Natural Diversity Data Base* (CDFG 2012), (2) the *Online Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2012), and (3) manuals, reports, and references related to plants and animals of the San Joaquin Valley region. A reconnaissance-level field survey of the project site was conducted on November 16, 2012 by LOA ecologist Jeff Gurule. The survey consisted of a tour of the site with Harvest general manager, John Jones, followed by an independent tour focused on vegetated areas. During the field visit the principal land use of the site was identified and the constituent plants and animals were noted. Comprehensive surveys for sensitive biological resources were not conducted, nor were deemed necessary, for this study. Field surveys conducted for this study were sufficient to assess the significance of possible biological impacts associated with the development plans for the project site.

2.0 EXISTING CONDITIONS

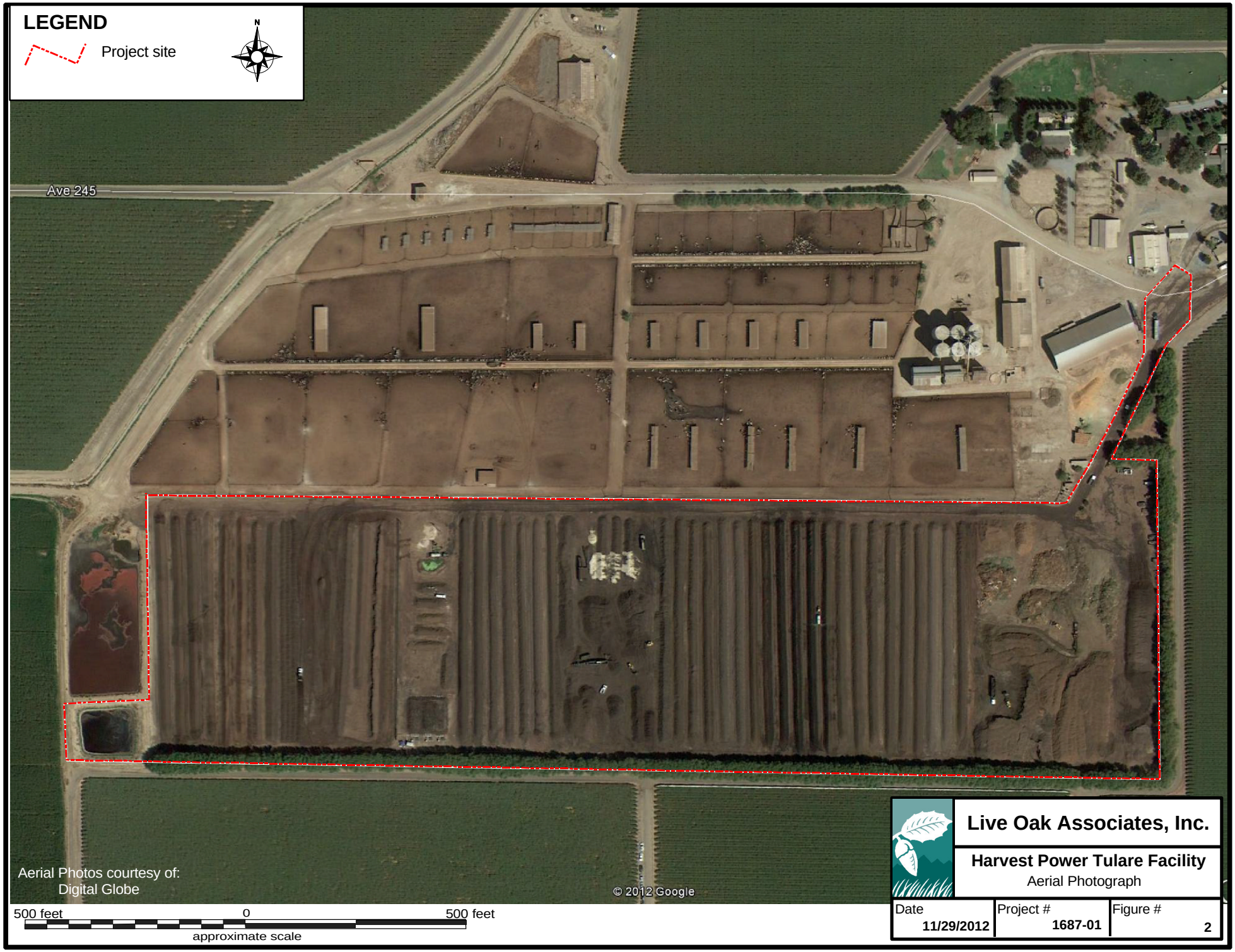
The project site is located in the San Joaquin Valley of California approximately 2.0 miles east of the City of Tulare and 11 miles west of the Sierra Nevada foothills. At the time of the survey the project site consisted of the Harvest Power Composting and Mulching commercial facility (i.e., buildings, scales, heavy equipment, material stock piles, and drainage basin) (Figure 2). The site was surrounded by a tall security/privacy fence with a row of unknown trees outside the fenced site. Any native habitats once present on the site have been completely transformed to a ruderal state by commercial enterprise. Evidence of ongoing vehicle/equipment traffic was evident across the site.

The topography of the project site is nearly level with a slight grade leading precipitation runoff to the onsite drainage basin. The elevation of the site is approximately 357 feet National Geodetic Vertical Datum (NGVD). Natural drainage features such as creeks, ponds, vernal pools, etc. are not present on the project site. A man-made drainage feature was present on the site in the form of the small drainage basin at the southwest corner. A small waterhole was present on the site used for filling water trucks that regularly spray the site.

Soils of the site have been significantly altered through grading and the addition of organic material and compaction by regular heavy equipment use such that any native soil characteristics potentially supporting sensitive biological resources have been significantly altered.

The project site is located in a region of California having a Mediterranean climate. Summers are dry and typically quite warm with daytime temperatures commonly exceeding 100° Fahrenheit. Winters are rainy and cool with daytime temperatures rarely exceeding 65° Fahrenheit. Annual precipitation in the general vicinity of the project site is highly variable from year to year with a mean annual rainfall of approximately 12 inches, most of which falls between the months of October and March. Virtually all precipitation falls in the form of rain. Stormwater infiltrates onsite soils and, when field capacity is reached, surface runoff is collected in the onsite drainage basin.

Surrounding lands are highly disturbed, consisting of vineyard to the south and east, a dairy to the west, and disced field to the west.



Live Oak Associates, Inc.

Harvest Power Tulare Facility

Aerial Photograph

Date	Project #	Figure #
11/29/2012	1687-01	2

2.3 BIOTIC HABITATS/LAND USES

One habitat/land use type was observed on the project site during the October 2012 biological field survey, characterized as "commercial/ruderal". A list of the vascular plant species observed within the project site and the terrestrial vertebrates using, or potentially using, the site are provided in Appendices A and B, respectively. Photos of the project site are presented in Appendix C.

2.3.1 Commercial/Ruderal

The commercial/ruderal habitat/land use occurring on the site is characterized by intensive commercial uses associated with the Harvest Power Composting and Mulching Facility. All lands on the project site have been disturbed to some degree by grading, scraping, heavy equipment traffic, equipment storage, product stockpiling, and building construction. Vegetation was absent from approximately 99% of the project site. Vegetation included wetland species within the detention basin and inundated waterhole, weedy upland species along portions of the fenceline, and a few scraggly landscape trees and shrubs. The onsite detention basin was inundated with a few inches of water and contained wetland vegetation. Wetland species observed in the detention basin consisted solely of salt heliotrope (*Heliotropium curassavicum*). Wetland vegetation observed in and around the waterhole consisted of floating water primrose (*Ludwigia peploides*) and watergrass (*Echinochloa crus-galli*). Upland species observed along portions of the fence line included Canada horseweed (*Erigeron canadensis*), nettle leaf goosefoot (*Chenopodium murale*), pigweed amaranth (*Amaranthus albus*), Russian thistle (*salsola tragus*), and Bermuda grass (*Cynodon dactylon*), among others. Sparse landscape vegetation consisted of a small mulberry tree (*Morus alba*) and prickly pear cactus (*Opuntia sp.*), in addition to several unknown horticultural shrubs.

The number of native animal species expected to utilize the project site is very small due to the extremely small amount of vegetation and ongoing commercial activity on the site. Amphibians using this habitat would be limited to species tolerant of human activities. Pacific chorus frogs (*Pseudacris regilla*) may occur in or around the drainage basin or waterhole. Reptile species are expected to be essentially absent from the site due to the heavy human use of the site. Species

potentially occurring in the project vicinity that may at times wander onto the project site include the western fence lizard (*Sceloporus occidentalis*), gopher snake (*Pituophis melanoleucus*), and common kingsnake (*Lampropeltis getulus*). The site provides very little foraging and cover habitat for avian species. However, year-round resident birds such as the killdeer (*Charadrius vociferus*), rock pigeon (*Columba livia*), European starling (*Sturnus vulgaris*), black phoebe (*Sayornis nigricans*), house sparrow (*Passer domesticus*), mourning dove (*Zenaida macroura*), American crow (*Corvus brachyrhynchos*), and house finch (*Carpodacus mexicanus*) could be expected to use the site from time to time. Two winter migrants, the white-crowned sparrow (*Zonotrichia leucorphrys*) and yellow-rumped warbler (*Dendroica coronata*), were observed on the site during the field survey. The western kingbird (*Tyrannus verticalis*) is a common summer migrant to agricultural lands of the region that may occasionally use portions of the site for foraging.

Mammalian use of the site is expected to be severely limited by existing fencing and the lack of vegetation over much of the site. Rodents such as house mice (*Mus musculus*) and black rat (*Rattus rattus*) are likely attracted to refuse piles, as are raccoons (*Procyon lotor*). A few California ground squirrel (*Otospermophilus beecheyi*) burrows were found in the detention basin bank. Various bat species may forage over the site.

2.4 SPECIAL STATUS PLANTS AND ANIMALS

Several species of plants and animals within the state of California have low populations and/or limited distributions. Such species may be considered “rare” and are vulnerable to extirpation as the state’s human population grows and the habitats these species occupy are converted to agricultural and urban uses. As described more fully in Section 3.2, state and federal laws have provided the California Department of Fish and Game (CDFG) and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting the diversity of plant and animal species native to the state. A sizable number of native plants and animals have been formally designated as “threatened” or “endangered” under state and federal endangered species legislation. Others have been designated as candidates for such listing. Still others have been designated as “species of special concern” by the CDFG. The California Native Plant Society (CNPS) has developed its own set of lists of native plants considered rare, threatened, or

endangered (CNPS 2012). Collectively, these plants and animals are referred to as "special status species."

Special status species are known to occur in the vicinity of the project site (Figure 3). Special status species, and their potential to occur on the project site, are listed in Table 1. Sources of information for this table included *California's Wildlife, Volumes I, II, and III* (Zeiner et. al 1988-1990), *California Natural Diversity Data Base* (CDFG 2012), *Endangered and Threatened Wildlife and Plants* (USFWS 2012), *Annual Report on the Status of California State Listed Threatened and Endangered Animals and Plants* (CDFG 2011), and *The California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2012). This information was used to evaluate the potential for special status plant and animal species to occur onsite. It is important to note that the California Natural Diversity Data Base (CNDDB) is a volunteer database; therefore, it may not contain all known literature records.

A search of published accounts for all of the relevant special status plant and animal species was conducted for the Tulare USGS 7.5-minute quadrangle in which the project site occurs, and for the eight surrounding quadrangles (Visalia, Exeter, Cairns Corner, Woodville, Tipton, Taylor Weir, Paige, and Goshen) using the CNDDB Rarefind 2012.

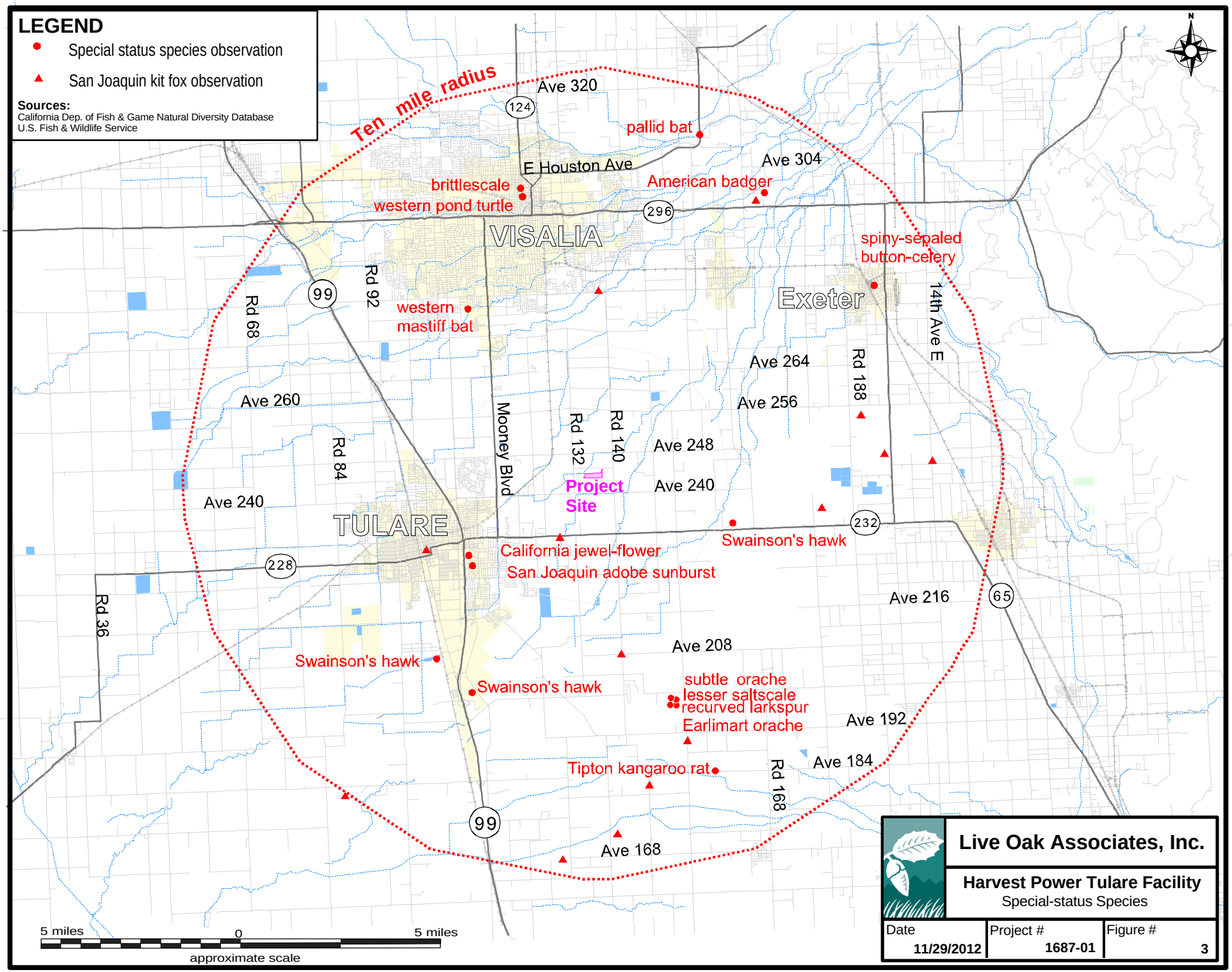

LEGEND
Special status species observation
San Joaquin kit fox observation
Sources:
California Dep. of Fish & Game Natural Diversity Database
U.S. Fish & Wildlife Service
Ten mile radius
Ave 320
124
pallid bat
E Houston Ave
Ave 304
brittlescale
western pond turtle
American badger
296
VISALIA
spiny-sepaled button-celery
Exeter
99
Rd 92
Rd 68
western mastiff bat
14th Ave E
Ave 264
Rd 188
Ave 260
Ave 256
Mooney Blvd
Rd 132
Rd 140
Ave 248
Rd 84
Project Site
Ave 240
Ave 240
TULARE
232
Swainson's hawk
California jewel-flower
San Joaquin adobe sunburst
228
Ave 216
65
Rd 36
Ave 208
Swainson's hawk
Swainson's hawk
subtle orache
lesser saltscale
recurved larkspur
Earlimart orache
Ave 192
Ave 184
Tipton kangaroo rat
Rd 168
99
Ave 168
5 miles
0
5 miles
approximate scale
Live Oak Associates, Inc.
Harvest Power Tulare Facility
Special-status Species
Date 11/29/2012
Project # 1687-01
Figure # 3

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

PLANTS (adapted from CDFG 2012 and CNPS 2012)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	*Occurrence on the Project Site
California Jewel-Flower (*Caulanthus californicus*)	FE, CE, CNPS 1B	Chenopod scrub and valley and foothill grassland. Blooms February-May.	**Absent.** Habitats required by this species do not occur onsite.
San Joaquin Adobe Sunburst (*Pseudobahia peirsonii*)	FT, CE, CNPS 1B	Occurs in grasslands of the western foothills of the Sierra Nevada in heavy clay soils of the Porterville, Cibo, Mt. Olive and Centerville series. Blooms March-April.	**Absent.** The habitat and soils occurring on project site are unsuitable for this species.

Other special status plants listed by CNPS

Species	Status	Habitat	*Occurrence on the Project Site
Heartscale (*Atriplex cordulata var. cordulata*)	CNPS 1B	Occurs in cismontane woodland and valley and foothill grassland of the San Joaquin Valley; blooms April–October.	**Absent.** Historic and current commercial use of the site has rendered it unsuitable for this species.
Earlimart orache (*Atriplex cordulata var. erecticaulis*)	CNPS 1B	Occurs in valley and foothill grasslands between 131 and 328 feet. Blooms Aug.-Sep.	**Absent.** Historic and current commercial use of the site has rendered it unsuitable for this species.
Brittlescale (*Atriplex depressa*)	CNPS 1B.2	Occurs in relatively barren areas with alkaline clay soils in chenopod scrub, playas, valley grasslands, and vernal pools of the Central Valley.	**Absent.** Historic and current commercial use of the site has rendered it unsuitable for this species.
Lesser Saltscale (*Atriplex minuscula*)	CNPS 1B	Occurs in cismontane woodland and valley and foothill grassland of the San Joaquin Valley; blooms May–October.	**Absent.** Historic and current commercial use of the site has rendered it unsuitable for this species.
Subtle Orache (*Atriplex subtilis*)	CNPS 1B	Occurs in valley and foothill grasslands of the San Joaquin Valley. Blooms August-October.	**Absent.** Historic and current commercial use of the site has rendered it unsuitable for this species.
Recurved Larkspur (*Delphinium recurvatum*)	CNPS 1B	Chenopod scrub, cismontane woodlands, and alkaline soils of valley and foothill grasslands. Blooms March-May.	**Absent.** Historic and current commercial use of the site has rendered it unsuitable for this species.
Spiny-Sepaled Button Celery (*Eryngium spinosepalum*)	CNPS 1B	Vernal pools and wetland swales of Fresno and Tulare Counties. Blooms in April-May	**Absent.** Historic and current commercial use of the site has rendered it unsuitable for this species.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

ANIMALS (adapted from CDFG 2012 and USFWS 2012)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	*Occurrence on the Project Site
Vernal Pool Fairy Shrimp (*Branchinecta lynchi*)	FT	Vernal pools of California's Central Valley.	**Absent.** Vernal pools required by this species are absent from the project site.
Vernal Pool Tadpole Shrimp (*Lepidurus packardi*)	FE	Primarily found in vernal pools of California's Central Valley.	**Absent**. Vernal pool habitat required by this species is absent from the project site.
Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*)	FT	Mature elderberry shrubs of California's Central Valley and Sierra Foothills.	**Absent.** Elderberry shrubs, the obligate habitat required by this species, are absent from the project site and surrounding lands.
California Tiger Salamander (*Ambystoma californiense*)	FT , CSC	Found primarily in annual grasslands. Breeds in vernal/ seasonal pools or perennial pools which lack fish or bullfrogs. Requires rodent burrows for refuge.	**Absent.** Historic and current commercial use of the site has rendered it unsuitable for this species. Breeding pools required by this species are absent from the project site and surrounding land. Furthermore, the project site is well south of this species' known range (CNDDB 2012).
Blunt-Nosed Leopard Lizard (*Gambelia silus*)	FE, CE, CP	Frequents grasslands, alkali meadows and chenopod scrub of the San Joaquin Valley.	**Absent.** Historic and current commercial use of the site has rendered it unsuitable for this species.
Swainson's Hawk (*Buteo swainsoni*)	CT	Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah. Requires adjacent suitable foraging areas such as grasslands or alfalfa fields supporting rodent populations.	**Unlikely.** At most this species may occasionally pass over the site while foraging or during migration. Suitable foraging and nesting habitat is absent from the project site. The nearest recorded observation is approximately 3.4 miles to the southeast (CNDDB 2012).
Tipton Kangaroo Rat (*Dipodomys nitratoides nitratoides*)	FE, CE	Chenopod scrub and alkali grasslands of the Tulare Basin from Fresno County in the north to Kern County in the south.	**Absent.** Historic and current commercial use of the site has rendered it unsuitable for this species.
San Joaquin Kit Fox (*Vulpes macrotis mutica*)	FE, CT	Frequents desert alkali scrub and annual grasslands and may forage in adjacent agricultural habitats. Utilizes enlarged (4 to 10 inches in diameter) ground squirrel burrows as denning habitat.	**Absent.** Historic and current commercial use of the site has rendered it unsuitable for this species.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

ANIMALS – cont'd.

State Species of Special Concern

Species	Status	Habitat	*Occurrence on the Project Site
Western Spadefoot (*Spea hammondii*)	CSC	Primarily occurs in grasslands, but also occurs in valley and foothill hardwood woodlands. Requires vernal pools or other temporary wetlands for breeding.	**Absent.** Vernal pools required by this species are absent from the project site and surrounding lands.
Western Pond Turtle (*Emys marmorata*)	CSC	Ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Requires basking sites of sandy banks or grassy open fields for egg laying.	**Absent.** Aquatic habitat in the form of the onsite retention basin and watering hole provide unsuitable habitat for this species.
Northern Harrier (nesting) (*Circus cyaneus*)	CSC	Frequents meadows, grasslands, open rangelands, freshwater emergent wetlands; uncommon in wooded habitats.	**Unlikely.** At most this species may occasionally pass over the site while foraging or during migration. Intensive commercial activity on the site has eliminated foraging opportunity for this species. Nesting habitat is absent from the project site.
White-tailed Kite (nesting) (*Elanus leucurus*)	FP	Open grasslands and agricultural areas throughout central California.	**Unlikely.** At most this species may occasionally pass over the site while foraging or during migration. Intensive commercial activity on the site has eliminated foraging opportunity for this species. Continual human disturbance of the site has also eliminated the likelihood of this species nesting in adjacent trees.
Mountain Plover (*Charadrius montanus*)	CSC	Forages in short grasslands and freshly plowed fields of the Central Valley.	**Absent.** Historic and current commercial use of the site has rendered it unsuitable for this species. This species has not been documented in this portion of Tulare County.
Burrowing Owl (*Athene cunicularia*)	CSC	Frequents open, dry annual or perennial grasslands, deserts, and scrublands characterized by low growing vegetation. Dependent upon burrowing mammals, most notably the California ground squirrel, for nest burrows.	**Absent.** Historic and current commercial use of the site has rendered it unsuitable for this species.
Loggerhead Shrike (*Lanius ludovicianus*)	CSC	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low herbaceous cover. Can often be found in cropland.	**Unlikely.** At most this species may occasionally pass over the site while foraging or during migration. Intensive commercial activity on the site has eliminated foraging opportunity for this species. Continual human disturbance of the site has also eliminated the likelihood of this species nesting in adjacent trees.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

ANIMALS – cont'd.

State Species of Special Concern

Species	Status	Habitat	*Occurrence on the Project Site
Tricolored Blackbird (*Agelaius tricolor*)	CSC	Breeds near fresh water, primarily emergent wetlands, with tall thickets. Forages in grassland and cropland habitats.	**Possible.** The site provides possible foraging habitat; breeding habitat is absent.
Pallid Bat (*Antrozous pallidus*)	CSC	Roosts in rocky outcrops, cliffs, and crevices with access to open habitats for foraging. May also roost in caves, mines, hollow trees and buildings.	**Possible.** This species may forage over the site; roosting habitat is absent.
Townsend's Western Big-Eared Bat (*Corynorhinus townsendii*)	CSC	Primarily a cave-dwelling bat that may also roost in buildings. Occurs in a variety of habitats.	**Possible.** This species may forage over the site; roosting habitat is absent.
Western Mastiff Bat (*Eumops perotis* ssp. *californicus*)	CSC	Frequents open, semi-arid to arid habitats, including conifer, and deciduous woodlands, coastal scrub, grasslands, palm oasis, chaparral and urban. Roosts in cliff faces, high buildings, trees and tunnels.	**Possible.** This species may forage over the site; roosting habitat is absent.
American Badger (*Taxidea taxus*)	CSC	Found in drier open stages of most shrub, forest and herbaceous habitats with friable soils.	**Absent.** Historic and current commercial use of the site has rendered it unsuitable for this species.

***Explanation of Occurrence Designations and Status Codes**

Present: Species observed on the sites at time of field surveys or during recent past.
Likely: Species not observed on the site, but it may reasonably be expected to occur there on a regular basis.
Possible: Species not observed on the sites, but it could occur there from time to time.
Unlikely: Species not observed on the sites, and would not be expected to occur there except, perhaps, as a transient.
Absent: Species not observed on the sites, and precluded from occurring there because habitat requirements not met.

STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FPE	Federally Endangered (Proposed)	CR	California Rare
FC	Federal Candidate	CP	California Protected
		CSC	California Species of Special Concern

CNPS	California Native Plant Society Listing		
1A	Plants Presumed Extinct in California	3	Plants about which we need more information – a review list
1B	Plants Rare, Threatened, or Endangered in California and elsewhere	4	Plants of limited distribution – a watch list
2	Plants Rare, Threatened, or Endangered in California, but more common elsewhere		

2.5 JURISDICTIONAL WATERS

Jurisdictional waters include rivers, creeks, and drainages that have a defined bed and bank and which, at the very least, carry ephemeral flows. Jurisdictional waters also include lakes, ponds, reservoirs, and wetlands. Such waters may be subject to the regulatory authority of the U.S. Army Corps of Engineers (USACE), the CDFG, and the California Regional Water Quality Control Board (RWQCB). See Section 3.2.4 of this report for additional information.

Aquatic and wetland areas associated with the onsite excavated drainage basin and waterhole, which are engineered elements of the existing commercial operations of the site, are isolated from any natural drainages and other potential jurisdictional waters; therefore, these areas do not fall under the jurisdiction of the USACE, CDFG, or RWQCB.

3.0 IMPACTS AND MITIGATIONS

3.1 SIGNIFICANCE CRITERIA

Approval of general plans, area plans, and specific projects is subject to the provisions of CEQA. The purpose of CEQA is to assess the impacts of proposed projects on the environment before they are carried out. CEQA is concerned with the significance of a proposed project's impacts. For example, a proposed development project may require the removal of some or all of a site's existing vegetation. Animals associated with this vegetation could be destroyed or displaced. Animals adapted to humans, roads, buildings, pets, etc., may replace those species formerly occurring on the site. Plants and animals that are state and/or federally listed as threatened or endangered may be destroyed or displaced. Sensitive habitats such as wetlands and riparian woodlands may be altered or destroyed.

Whenever possible, public agencies are required to avoid or minimize environmental impacts by implementing practical alternatives or mitigation measures. According to Section 15382 of the CEQA Guidelines, a significant effect on the environment means a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest."

Specific project impacts to biological resources may be considered "significant" if they 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 California Department of Fish and Game or U.S. Fish and Wildlife Service.

- 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 Game or U.S. Fish and Wildlife Service.

- 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.

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

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

Furthermore, CEQA Guidelines Section 15065(a) states that a project may trigger the requirement to make "mandatory findings of significance" if the project has the potential to:

> "Substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened species, or eliminate important examples of the major periods of California history or prehistory."

3.2 RELEVANT GOALS, POLICIES, AND LAWS

3.2.1 Threatened and Endangered Species

State and federal "endangered species" legislation has provided the CDFG and the USFWS with a mechanism for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Species listed as threatened or endangered under provisions of the state and federal endangered species acts, candidate species for such listing, state species of special concern, and some plants listed as endangered by the California Native Plant Society are collectively referred to as "species of special status." Permits may be required from both the CDFG and USFWS if activities associated with a proposed project will result in the "take" of a listed species. "Take" is defined by the state of California as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill" (California Fish and Game Code, Section 86). "Take" is more broadly defined by the federal Endangered Species Act to include "harm" (16 USC, Section 1532(19), 50 CFR, Section 17.3). Furthermore, the CDFG and the USFWS are responding agencies under CEQA. Both agencies review CEQA documents in order to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

3.2.2 Migratory Birds

State and federal laws also protect most birds. The Federal Migratory Bird Treaty Act (16 U.S.C., scc. 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

3.2.3 Birds of Prey

Birds of prey are also protected in California under provisions of the State Fish and Game Code, Section 3503.5, which states that it is "unlawful to take, possess, or destroy any birds in the order *Falconiformes* or *Strigiformes* (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by the CDFG.

3.2.4 Wetlands and Other Jurisdictional Waters

Natural drainage channels and adjacent wetlands may be considered "Waters of the United States" (hereafter referred to as "jurisdictional waters") subject to the jurisdiction of the USACE. The extent of jurisdiction has been defined in the Code of Federal Regulations but has also been subject to interpretation of the federal courts. Jurisdictional waters generally include:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
- All interstate waters including interstate wetlands.
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce.
- All impoundments of waters otherwise defined as waters of the United States under the definition.
- Tributaries of waters identified in the bulleted items above.

As determined by the United States Supreme Court in its 2001 *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (SWANCC) decision, channels and wetlands isolated from other jurisdictional waters cannot be considered jurisdictional on the basis of their use, hypothetical or observed, by migratory birds. Similarly, in its 2006 consolidated *Carabell/Rapanos* decision, the U.S. Supreme Court ruled that a significant nexus between a wetland and other navigable waters must exist for the wetland itself to be considered a navigable and therefore jurisdictional water.

The USACE regulates the filling or grading of jurisdictional waters under the authority of Section 404 of the Clean Water Act. The extent of jurisdiction within drainage channels is defined by "ordinary high water marks" on opposing channel banks. All activities that involve the discharge of fill into jurisdictional waters are subject to the permit requirements of the USACE. Such permits are typically issued on the condition that the applicant agrees to provide mitigation that result in no net loss of wetland functions or values. No permit can be issued until the RWQCB issues a certification (or waiver of such certification) that the proposed activity will meet state water quality standards.

The filling of isolated wetlands, over which the USACE has disclaimed jurisdiction, is regulated by the RWQCB. It is unlawful to fill isolated wetlands without filing a Notice of Intent with the RWQCB. The RWQCB is also responsible for enforcing National Pollution Discharge Elimination System (NPDES) permits, including the General Construction Activity Storm Water Permit. All projects requiring federal money must also comply with Executive Order 11990 (Protection of Wetlands).

CDFG has jurisdiction over the bed and bank of natural drainages and lakes according to provisions of Section 1601 and 1602 of the California Fish and Game Code (2003). Activities that would disturb these waters are regulated by the CDFG via a Streambed Alteration Agreement. Such an agreement typically stipulates that certain measures will be implemented which protect the habitat values of the drainage in question.

3.3 POTENTIALLY SIGNIFICANT PROJECT IMPACTS/MITIGATION

The project considered in this evaluation of impacts to biological resources is the operational expansion of the currently operating Harvest Power Composting and Mulching Facility. The proposed expansion includes the construction of an anaerobic digester and a fueling station within the footprint of the current commercial operation area. The current level of site disturbance, which includes the operation of heavy equipment across the site on a regular basis, has rendered the site unsuitable for all but the most disturbance-tolerant species. As a result, potentially significant impacts to biological resources from project development are absent.

3.4 LESS THAN SIGNIFICANT PROJECT IMPACTS

3.4.1 Disturbance to Migratory Bird Nests

Potential Impacts. It is unlikely that any native bird species nest on the project site, due to the continual human disturbance of the site and paucity of woody vegetation on the site. Several small, inactive bird nests were observed in trees adjacent to the site. No stick nests were observed in trees adjacent to the site. Since no trees will be removed during project implementation and existing disturbance levels from ongoing facility operations are extremely high, project implementation is not expected to significantly raise the level of disturbance to nesting birds in the project vicinity

Mitigation. Since native bird species are not expected to nest on the site and are not expected to be adversely impacted from project construction, mitigations are not warranted.

3.4.2 Loss of Habitat for Special Status Plants

Potential Impacts. Nine special status vascular plant species are known to occur in the vicinity of the project site (see Table 1). These plant species are absent from the site due to current land use practices. Therefore, the proposed project would have no impact on regional populations of these special status plant species.

Mitigation. Mitigation measures are not warranted.

3.4.3 Loss of Habitat or Direct Impact to Special Status Animals Absent or Unlikely to Occur on the Site

Potential Impacts. Of the 20 special status animal species potentially occurring in the region, 16 species would be absent or unlikely to occur on the site due to unsuitable habitat conditions created by current land use practices. These include the vernal pool fairy shrimp, vernal pool tadpole shrimp, valley elderberry longhorn beetle, California tiger salamander, blunt-nosed leopard lizard, Swainson's hawk, Tipton kangaroo rat, San Joaquin kit fox, mountain plover, western spadefoot, western pond turtle, burrowing owl, northern harrier, whit-tailed kite, loggerhead shrike, and American badger. Since there is little to no likelihood that these species would use the site, disturbance from future development of the project site would have no effect on these species.

Mitigation. No loss of habitat or direct impact to these special status animals would occur; therefore, no mitigations are warranted.

3.4.4 Loss of Breeding, Nesting, Roosting, or Denning Habitat for Special Status Animals

Potential Impacts. Breeding, nesting, roosting, or denning habitat for special status animals is absent from the project site.

Mitigation. The loss of nesting, roosting, and denning habitat for special status animals is considered absent. Therefore, no mitigations are warranted.

3.4.5 Loss of Habitat for Special Status Animals that may Occur on the Site as Occasional or Regular Foragers but Breed Elsewhere

Four species may occasionally utilize the site for foraging. These species include the tricolored blackbird, pallid bat, Townsend's western big-eared bat, and western mastiff bat. The project site does not provide regionally important foraging habitat for these species. In fact, much more suitable habitats are abundant throughout the region. The project would not significantly reduce the amount or quality of foraging habitat currently available on the site. Considerable habitat suitable for foraging will continue to be available for these species on other lands within the region following development of the project. Furthermore, the project is not expected to result in

direct harm to any individuals of these species. Therefore, project development will result in a less than significant impact on these species.

Mitigation. The loss of foraging habitat for special status animals is considered a less than significant impact and the project will not result in direct harm to individuals of these species. Therefore, no mitigations are warranted.

3.4.6 Project Impacts to Fish or Wildlife Movement Corridors

Potential Impacts. The project site does not serve as a fish or wildlife movement corridor. The established fencing would further restrict the movement of wildlife through the site.

Mitigation. Because this project will result in no effect on regional fish or wildlife movements, mitigation measures are not warranted.

3.4.7 Disturbance to Riparian Habitat or other Sensitive Habitats

Potential Impacts. No riparian or sensitive habitats occur on or adjacent to the project site.

Mitigation. Mitigations are not warranted.

3.4.8 Disturbance to Waters of the United States

Potential Impacts. Aquatic and wetland areas associated with the onsite drainage basin and waterhole are functioning elements of the current facilities operations and are isolated from any natural drainages and other potential jurisdictional waters. Therefore, these areas do not fall under the jurisdiction of the USACE, CDFG, or RWQCB.

Mitigation. Impacts to Waters of the U.S. are absent from the project site; no mitigation is required.

3.4.9 Local Policies or Habitat Conservation Plans

Potential Impacts. It appears that all future development within the project area would be in compliance with the provisions of Tulare County General Plan polices related to biological resources. No known Habitat Conservation Plans are in effect for the area.

Mitigation. No mitigations are warranted.

4.0 LITERATURE REFERENCED OR CITED

_____. 2002. California fish and game code. Gould Publications. Binghamton, NY.

_____. 2011. Annual report on the status of California state listed threatened and endangered animals and plants. The Resources Agency, Sacramento, CA.

_____. 2011. California natural diversity database. Special Animals Report. July 2011.

_____. 2012. California natural diversity database. The Resources Agency, Sacramento, CA.

California Native Plant Society. 2012. Inventory of Rare and Endangered Vascular Plants of California (online: http://cnps.site.aplus.net/cgi-bin/inv/inventory.cgi).

U.S. Corps of Engineers. 1987. Corps of Engineers wetlands delineation manual. Department of the Army.

Zeiner, David C., William F. Laudenslayer, Kenneth E. Mayer and Marshal White. Ed. 1988. California's wildlife, volume I, amphibians and reptiles. Department of Fish and Game. Sacramento, CA. 272 pp.

_____. 1988. California's wildlife, volume II, birds. Department of Fish and Game. Sacramento, CA. 731 pp.

_____. 1988. California's wildlife, volume III, mammals. Department of Fish and Game. Sacramento, CA. 407 pp.

APPENDIX A: VASCULAR PLANTS OF THE PROJECT SITE

APPENDIX A: VASCULAR PLANTS OF THE PROJECT SITE

The plants species listed below were observed on the Harvest Power Composting and Mulching Facility during surveys conducted by Live Oak Associates, Inc. on November 16, 2012. The U.S. Fish and Wildlife Service wetland indicator status of each plant has been shown following its common name.

OBL - Obligate
FACW - Facultative Wetland
FAC - Facultative
FACU - Facultative Upland
UPL - Upland
+/- - Higher/lower end of category
NR - No review
NA - No agreement
NI - No investigation

AMARANTHACEAE – Pigweed Family		
Amaranthus albus	Pigweed Amaranth	FACU
ASTERACEAE – Sunflower Family		
Erigeron canadensis	Canada Horseweed	FACU
Erigeron bonariensis	Flax-leaved Horseweed	FACU
Sonchas oleraceus	Sow Thistle	UPL
BORAGINACEAE – Borage Family		
Sisymbrium irio	London Rocket	UPL
BRASICACEAE – Mustard Family		
Heliotropium curassavicum	salt heliotrope	FACU
CACTACEAE – Cactus Family		
Opuntia sp.	Prickly Pear	UPL
CHENOPODIACEAE – Goosefoot Family		
Chenopodium murale	Nettle Leaf Goosefoot	FACU
Salsola tragus	Russian Thistle	FACU
MALVACEAE – Mallow Family		
Malva sp.	Mallow	UPL
MORACEAE – Mulberry Family		
Morus alba.	Mulberry	FACU
ONAGRACEAE – Willowherb Family		
Ludwigia peploides	Floating Water Primrose	OBL
POACEAE – Grass Family		
Cynodon dactylon	Bermuda Grass	FACU
Echinochloa crus-galli	Watergrass	FACW

APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY OCCUR ON THE PROJECT SITE

APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY OCCUR ON THE PROJECT SITE

The species listed below are those that may reasonably be expected to use the habitats of the project site routinely or from time to time. The list was not intended to include birds that are vagrants or occasional transients. Terrestrial vertebrate species observed in or adjacent to the Harvest Power Composting and Mulching Facility during surveys conducted by Live Oak Associates, Inc. on November 16, 2012 have been noted with an asterisk.

CLASS: AMPHIBIA (Amphibians)
ORDER: SALIENTIA (Frogs and Toads)
FAMILY: HYLIDAE (Treefrogs and relatives)
Pacific Chorus Frog (*Pseudacris regilla*)

CLASS: REPTILIA (Reptiles)
ORDER: SQUAMATA (Lizards and Snakes)
SUBORDER: SAURIA (Lizards)
FAMILY: PHRYNOSOMATIDAE
Western Fence Lizard (*Sceloporus occidentalis*)
SUBORDER: SERPENTES (Snakes)
FAMILY: COLUBRIDAE (Colubrids)
Gopher Snake (*Pituophis melanoleucus*)
Common Kingsnake (*Lampropeltis getulus*)

CLASS: AVES (Birds)
ORDER: CICONIIFORMES (Herons, Storks, Ibises and Relatives)
FAMILY: ARDEIDAE (Herons and Bitterns)
Great Blue Heron (*Ardea herodias*)
Great Egret (*Ardea alba*)
Snowy Egret (*Egretta thula*)
ORDER: FALCONIFORMES (Vultures, Hawks, and Falcons)
FAMILY: ACCIPITRIDAE (Hawks, Old World Vultures, and Harriers)
Red-tailed Hawk (*Buteo jamaicensis*)
FAMILY: FALCONIDAE (Caracaras and Falcons)
American Kestrel (*Falco sparverius*)
ORDER: CHARADRIIFORMES (Shorebirds, Gulls, and relatives)
FAMILY: CHARADRIIDAE (Plovers and relatives)
Killdeer (*Charadrius vociferus*)
FAMILY: COLOPACIDAE (Sandpipers and Relatives)
Greater Yellowlegs (*Tringa melanoleuca*)
ORDER: COLUMBIFORMES (Pigeons and Doves)
FAMILY: COLUMBIDAE (Pigeons and Doves)
*Rock Pigeon (*Columba livia*)
Eurasian Collared Dove (*Streptopelia decaocto*)
Mourning Dove (*Zenaida macroura*)

ORDER: APODIFORMES (Swifts and Hummingbirds)
FAMILY: TROCHILIDAE (Hummingbirds)
Anna's Hummingbird (*Calypte anna*)
ORDER: PASSERIFORMES (Perching Birds)
FAMILY: TYRANNIDAE (Tyrant Flycatchers)
*Black Phoebe (*Sayornis nigricans*)
Say's Phoebe (*Sayornis saya*)
Western Kingbird (*Tyrannus verticalis*)
FAMILY: CORVIDAE (Jays, Magpies, and Crows)
Western Scrub Jay (*Aphelocoma coerulescens*)
American Crow (*Corvus brachyrhynchos*)
Common Raven (*Corvus corax*)
FAMILY: HIRUNDINIDAE (Swallows)
Cliff Swallow (*Hirundo pyrrhonota*)
FAMILY: TROGLODYTIDAE (Wrens)
House Wren (*Troglodytes aedon*)
FAMILY: MIMIDAE (Mockingbirds and Thrashers)
Northern Mockingbird (*Mimus polyglottos*)
FAMILY: STURNIDAE (Starlings)
European Starling (*Sturnus vulgaris*)
FAMILY: MOTACILLIDAE (Wagtails and Pipits)
American Pipit (*Anthus rubescens*)
FAMILY: PARULIDAE (Wood Warblers and Relatives)
*Yellow-rumped Warbler (*Dendroica coronata*)
FAMILY: EMBERIZIDAE (Wood Warblers, Sparrows, Blackbirds, and relatives)
Lark Sparrow (*Chondestes grammacus*)
Savannah Sparrow (*Passerculus sandwichensis*)
*White-crowned Sparrow (*Zonotrichia leucophrys*)
FAMILY: ICTERIDAE (Blackbirds, Orioles and Allies)
Tricolored Blackbird (*Agelaius tricolor*)
Red-winged Blackbird (*Agelaius phoeniceus*)
Brewer's Blackbird (*Euphagus cyanocephalus*)
FAMILY: PASSERIDAE (Old World Sparrows)
House Finch (*Carpodacus mexicanus*)
House Sparrow (*Passer domesticus*)

CLASS: MAMMALIA (Mammals)
ORDER: DIDELPHIMORPHIA (Marsupials)
FAMILY: DIDELPHIDAE (Opossums)
Virginia Opossum (*Didelphis virginiana*)
ORDER: CHIROPTERA (Bats)
FAMILY: PHYLLOSTOMIDAE (Leaf-nosed Bats)
Southern Long-nosed Bat (*Leptonycteris curasoae*)
FAMILY: VESPERTILIONIDAE (Evening Bats)
Yuma Myotis (*Myotis yumanensis*)

California Myotis (*Myotis californicus*)
Western Pipistrelle (*Pipistrellus hesperus*)
Big Brown Bat (*Eptesicus fuscus*)
Western Red Bat (*Lasiurus borealis*)
Hoary Bat (*Lasiurus cinereus*)
Pallid Bat (*Antrozous pallidus*)

FAMILY: MOLOSSIDAE (Free-tailed Bat)

Western Mastiff Bat (*Eumops perotis* ssp. *californicus*)
Brazilian Free-tailed Bat (*Tadarida brasiliensis*)

ORDER: RODENTIA (Rodents)

FAMILY: SCIURIDAE (Squirrels, Chipmunks, and Marmots)

California Ground Squirrel (*Otospermophilus beecheyi*)

FAMILY: GEOMYIDAE (Pocket Gophers)

Botta's Pocket Gopher (*Thomomys bottae*)

FAMILY: MURIDAE (Old World Rats and Mice)

Norway Rat (*Rattus norvegicus*)
House Mouse (*Mus musculus*)

ORDER: CARNIVORA (Carnivores)

FAMILY: PROCYONIDAE (Raccoons and relatives)

Raccoon (*Procyon lotor*)

APPENDIX C: SELECTED SITE PHOTOGRAPHS

Photo 1: Area proposed for digester construction. Area regularly disturbed by heavy equipment such as the equipment in background.

Photo 2: Area proposed for CNG fueling station.

Photo 3: Detention basin. One of the few areas supporting vegetation.

Photo 4: Waterhole used for filling water trucks that regularly spray the site. Compost row pile in background.

Photo 5: Fencing along the south and east side of the site with adjacent trees hanging over fence. Compost piles at left.

Photo 6: Large machine that regularly traverses nearly the entire site turning compost row piles..