4.3 BIOLOGICAL RESOURCES

Assessments of biological resources and impacts associated with the currently permitted Tajiguas Landfill Project have been addressed in the prior Tajiguas Landfill Environmental Documents. A Biological Technical Report (AECOM, 2013) and sensitive plant survey (Padre, 2013) (see Appendix D) was also prepared to analyze biological impacts specifically associated with construction and operation of the Resource Recovery Project facilities. The analyses of biological resources contained in these prior Environmental Documents and the Biological Technical Report were used to assist in the preparation of this Subsequent EIR for the Resource Recovery Project. In addition, the results of biological monitoring (Padre, 2012) of construction of the Tajiguas Landfill Phase 3A groundwater protection system (liner) in 2012 were used in preparation of this impact analysis. A more detailed discussion of biological resources and project-related impacts is provided in the Biological Technical Report prepared for the project by AECOM (Appendix E).

4.3.1 Setting

4.3.1.1 Regional Overview

The southern Santa Barbara County coastal area has a Mediterranean-type climate with warm, dry summers and mild winters. Daily and seasonal temperature variations are relatively small, with average temperatures ranging from 40 to 70 degrees Fahrenheit (°F) during the winter months and from 50 to 75 °F during the summer months (Western Regional Climate Center [WRCC], 2013). Rain occurs primarily during the winter and early spring months, averaging 16 to 29 inches per year, depending on elevation. Average precipitation during the winter ranges from 3 to 6.55 inches per month and average precipitation during the summer ranges from 0.3 to 0.75 inch per month, again depending on elevation (WRCC, 2013). Based on rainfall data since 1973 from the Tajiguas precipitation station (TAJ262) maintained by the Santa Barbara County Flood Control District, mean annual rainfall at the site is 21.8 inches.

The south-facing slopes and foothills of the region are exposed to sunlight most of the day. Moderate temperatures are sustained by marine fog and the prevailing onshore sea breezes. The prevailing wind speed is generally 5 miles per hour, although wind speed and direction are primarily functions of the location and strength of frontal storm systems that periodically move through the area.

The Tajiguas Landfill is located in Santa Barbara County, approximately 26 miles west of the City of Santa Barbara, California (Figure 3-1). The landfill is located within Range 31 West, Township 5 North, and Sections 28 and 33 of the U.S. Geological Survey 7.5' Tajiguas Quadrangle. The elevation of landfill ranges from approximately 300 to 750 feet above mean sea level and is situated on the south slope of the Santa Ynez Mountains, which are oriented in an east-west direction, parallel to the coastline. Los Padres National Forest lands abut the northern border of the landfill property, and U.S. Highway 101, the Union Pacific Railroad tracks, and the Pacific Ocean are located just south of the landfill property. The project site occurs within the existing County-owned and operated Tajiguas Landfill, a Class III non-hazardous municipal solid waste disposal facility (Figure 3-2).

The landfill is dominated by the deep north-south oriented coastal canyon of Cañada de la Pila. Pila Creek is an ephemeral stream that drains the 475-acre watershed southward to the Pacific Ocean. Historically, Pila Creek flowed east along an upper terrace and joined with Arroyo Quemado before flowing to the Pacific Ocean. Modifications resulting from the construction of the Union Pacific Railroad and U.S. Highway 101 diverted Pila Creek into culverts that flow directly south to the Pacific Ocean.

As part of the Tajiguas Landfill Reconfiguration Project, two in-channel sedimentation basins were removed and a portion of Pila Creek and a portion of a tributary to Pila Creek upstream of the in-channel sedimentation basins were modified. These drainages were diverted into a concrete-lined trapezoidal channel that captures up-canyon surface water flows and carries them along the western perimeter of the reconfigured waste footprint. The size and gradient of the channel allows the channel to also capture some of the sediment from the undisturbed upper portion of the Pila Creek watershed. The concrete-lined channel discharges into the existing subsurface 48-inch storm drain south of the reconfigured waste footprint.

Portions of Pila Creek are dry for the majority of the year, but typically support continuous flows during and immediately following significant storm events. Storm events typically occur between the months of November and April. Groundwater seeps also provide a supplemental source of water to Pila Creek but only have observable surface flow or pooling during the rainy season. These seeps were covered with fill as a part of the Pila Creek drainage modifications and a seepage/groundwater collection system (Pila Creek in-channel sump pump) was installed.

Historically, areas surrounding the landfill and many of the terraces along this section of the coast have been used for cattle grazing and agriculture for many decades. Currently, the lower reach of Cañada de la Pila within the landfill site and the adjacent floodplain has been disturbed by landfill activities (Figure 3-2). Much of the original topography within Cañada de la Pila has been altered to provide space and cover material for landfill operations and fuel breaks have been cut along slopes and ridgelines. Properties east and west of the landfill are used primarily for agriculture (i.e., avocado, citrus, and cherimoya orchards), grazing land, or are composed of natural vegetation communities. A small cluster of homes (the Arroyo Quemado Community) is located along the bluff south of the Union Pacific railroad tracks, southeast of the landfill. Cañada de la Huerta, the site of the former Shell Hercules Project, occurs immediately west of Cañada de la Pila and the landfill.

The proposed Tajiguas Resource Recovery Project facilities would largely be located within the permitted disturbance area associated with the Tajiguas Landfill. However, some of the ancillary facilities would be outside of the permitted disturbance footprint and may create new impacts to biological resources as discussed below.

4.3.1.2 Regulatory Context

Several Federal, State, and local regulations have been established to protect and conserve biological resources. The descriptions below provide a brief overview of the regulations applicable to the resources that occur within or adjacent to the landfill site, and their respective requirements.

Federal Regulations and Standards

Federal Endangered Species Act (ESA) (U.S.C Title 16, Chapter 35, Sections 1531-1544). Enacted in 1973, the ESA provides for the conservation of threatened and endangered species and their habitat. The Act prohibits the "take" of threatened and endangered species except under certain circumstances and only with authorization from the U.S. Fish and Wildlife Service (USFWS) through a permit under Section 4(d), 7, or 10(a) of the Act. Under the ESA, "take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The ESA requires federal agencies to make a finding on all federal actions, including approval by an agency of a public or private action, as to the potential to jeopardize the continued existence of any listed species. As there is no Federal nexus for the project, Section 10 of the ESA applies, and a habitat conservation plan would be required for any potential take of listed species.

Migratory Bird Treaty Act (U.S.C Title 16, Chapter 7, Subchapter Sections 703-712). Congress passed the Migratory Bird Treaty Act (MBTA) in 1918 to prohibit the pursuit, hunt, kill, capture, possession, purchase, barter, or transport of native migratory birds, or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA. The USFWS has jurisdiction over migratory birds. No permit is issued under the MBTA; however, landfill operations should be conducted to avoid take of migratory birds.

Federal Water Pollution Control Act (Clean Water Act), 1972 (U.S.C Title 33, Ch.26, SubCh. I-VI). The Federal Water Pollution Control Act was first passed by Congress in 1948. The Act was later amended and became known as the Clean Water Act (CWA). The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the U.S. It gives the U.S. Environmental Protection Agency ( ) the authority to implement pollution control programs, including setting wastewater standards for industry and water quality standards for contaminants in surface waters. The CWA makes it unlawful for any person to discharge any pollutant from a point source into navigable waters, without a permit under its provisions. CWA Section 404 permits are issued by the U.S. Army Corps of Engineers (USACE) for dredge/fill activities within wetlands or non-wetland waters of the U.S. CWA Section 401 certifications are issued by the RWQCB for activities requiring a federal permit or license which may result in discharge of pollutants into waters of the U.S.

State Regulations and Standards

California Fish and Game Code. The California Fish and Game Code, administered by the California Department of Fish & Wildlife (CDFW) regulates the taking or possession of birds, mammals, fish, amphibian, and reptiles, as well as natural resources such as wetlands and waters of the state. It includes Streambed Alteration Agreement regulations (Sections 1600-1616), as well as provisions for legal hunting and fishing, and tribal agreements for activities involving take of native wildlife.

California Endangered Species Act and California Native Plant Protection Act (California Fish and Game Code, Division 3, Chapter 1.5, Sections 2050-2115). This Act generally parallels the main provisions of the Federal ESA and is administered by the CDFW. California Endangered Species Act (CESA) prohibits take of any species that the California Fish and Game Commission determines to be a threatened or endangered species. CESA allows for take incidental to otherwise lawful development projects upon approval from the CDFW. Under the California Fish and Game Code, "take" is defined as to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.

California also has identified wildlife species of special concern. These species are rare, restricted in geographic distribution, or declining throughout their geographic range. Having been so designated, sensitive species are also considered in resource planning and management. The rare designation applies to plants only and includes those plants that are not threatened or endangered, but that could become eligible due to decreasing numbers or further restrictions to habitat. Any project-related impacts to State-listed species may require an incidental take permit under CESA.

Porter-Cologne Water Quality Control Act (California Water Code, Division 7, Sections 13000-14958). This Act provides for statewide coordination of water rights and water quality regulations. The Act established the California State Water Resources Control Board as the statewide authority and nine separate RWQCBs to oversee water quality on a day-to-day basis at the regional/local level. Proposed discharges of waste that would affect State waters would require filing a Report of Waste Discharge and the issuance of waste discharge requirements or waiver of the waste discharge requirements and potentially a National Pollution Discharge Elimination System (NPDES) permit from the RWQCB.

Local Regulations and Standards

Santa Barbara County Comprehensive Plan. The Santa Barbara County Comprehensive Plan includes three elements related to the protection of biological resources: Land Use Element, Conservation Element, and Environmental Resources Management Element. The Land Use Element includes policies to protect hillsides and watersheds; streams and creeks; and flood hazard areas. The Conservation Element discusses sensitive species and communities and provides recommendations for their management. The Environmental Resources Management Element summarizes and presents environmental factors, including biological resources that occur within the County, to be used in evaluating proposals for open space preservation. No permit is issued under these elements of the County's Comprehensive Plan; however, the proposed project would need to comply with the relevant policies and elements noted above.

Santa Barbara County Environmental Thresholds and Guidelines Manual. The County's Environmental Thresholds and Guidelines Manual (County 1992, updated 2015 ~~2008~~) provides impact assessment guidance and establishes criteria for determining the significance of potential biological impacts under CEQA. No permit is issued under the County's Environmental Thresholds and Guidelines Manual; however, the proposed project is evaluated with respect to these thresholds and guidelines in this Subsequent EIR.

Municipal Code and Ordinances. Article IX Chapter 35 of the Santa Barbara County Code considers deciduous oak trees (including valley oak and blue oak) at least 4 inches in diameter at breast height as protected trees. County Ordinance no. 4491 considers live oak trees (including coast live oak) at least 8 inches in diameter at breast height as protected trees.

Draft Gaviota Coast Plan. The Plan was developed by the County Planning and Development Department and released in February 2013 (revised in December 2013 as the Board of Supervisors Initiation Draft). The Tajiguas Landfill, including the project site is located within the planning area. The Gaviota Coast Plan would update the County Comprehensive Plan and Coastal Land Use Plan, and provide policy direction for land use issues. Planning Commission hearings were conducted from June through September 2013 to solicit public input. As of June 2014, the Gaviota Coast Plan has not been adopted.

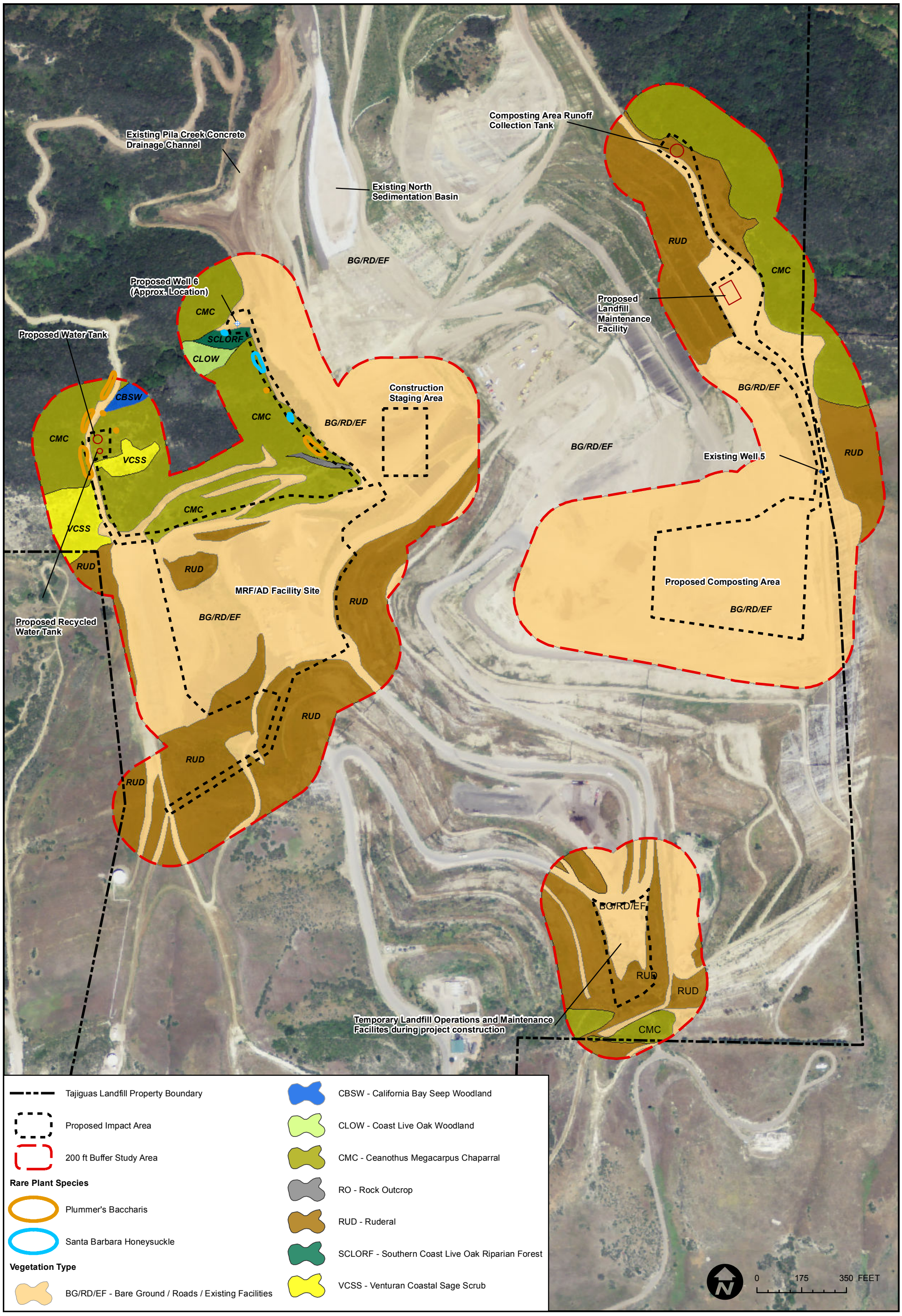
The Plan includes a resources stewardship chapter that describes biological resources along the Gaviota coast and sets forth policies to protect and, where possible, enhance those resources, proposes actions to achieve those policies, and outlines development standards. Biological resources addressed in the Resources Stewardship chapter include environmentally sensitive habitats, wetlands, wildlife corridors, riparian vegetation, natural stream channels, and other specific areas.

4.3.1.3 Site-Specific Setting

This section is based on review of biological studies and environmental documents prepared for other projects in the area, the Biological Assessment (Hunt & Associates, 2001) prepared for 01-EIR-05 for the Tajiguas Landfill Expansion Project, the Biological Assessment/Biological Technical Report prepared for the Tajiguas Landfill Reconfiguration and Baron Ranch Restoration project, and the Biological Technical Report prepared for the proposed project (see Appendix E). For the purposes of this impact analysis, a Study Area has been identified, which consists of areas of proposed ground disturbance including a 200 foot buffer.

Vegetation Communities and Flora

Historically, vegetation in the north-south oriented coastal canyon of Cañada de la Pila in which the landfill is situated consisted of dense riparian forest and woodland vegetation, steep canyon slopes with dense chaparral and sage scrub vegetation, and coastal terraces with sage scrub and grassland vegetation. Currently, the lower reach of Cañada de la Pila and the adjacent floodplain have been disturbed by landfill activities (see Figure 4.3-1). Much of the original topography within Cañada de la Pila has been altered as part of the Reconfiguration Project, to provide space and cover material for landfill operations and fuel breaks have been cut along slopes and ridgelines.



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Tajiguas Resource Recovery Project

VEGETATION COMMUNITIES AND RARE PLANT LOCATIONS IN THE STUDY AREA
FIGURE 4.3-1

Back of Figure 4.3-1

The Study Area occurs almost entirely in previously disturbed areas of the landfill with little to no native vegetation. In all, eight vegetation communities and land cover types occur within the Study Area: California bay seep woodland, *Ceanothus megacarpus* chaparral, coast live oak woodland, southern coast live oak riparian forest, Venturan coastal sage scrub, bare ground/roads/existing facilities, rock outcrop, and ruderal (see Table 4.3-1; Figure 4.3-1). The distribution of vegetation communities is influenced by parent soil type, slope, aspect, exposure, and land use history. The three largest components of the proposed project (MRF, AD Facility, and composting area) occur entirely within the bare ground/roads/existing facilities land cover type associated with active landfill operations. Other proposed project components, such as the water and wastewater tanks and mechanics building, and associated utilities trenching, occur within or in close proximity to areas of native vegetation.

Table 4.3-1. Vegetation Communities within the Study Area and Direct Impact Area

Vegetation Community/Land Cover Type	Study Area (Acres)	Direct Impact Area (Acres)
California bay seep woodland[1]	0.22	--
Ceanothus megacarpus chaparral	16.99	1.07
Coast live oak woodland[1]	0.39	--
Southern coast live oak riparian forest[1]	0.28	--
Venturan coastal sage scrub	1.62	--
Bare ground/roads/existing facilities	58.61	21.18
Rock outcrop	0.10	0.02
Ruderal	26.78	2.24
Total	**103.99**	**24.51**

[1]Sensitive vegetation community identified by Holland (1986) and/or County (2015 ~~2008~~)

Based on botanical surveys conducted by Padre Associates in spring 2013, a total of 116 plant species were recorded within the Study Area, with 73 species (63 percent) encountered considered native and the remaining 43 species (37 percent) considered non-native and/or naturalized into the area. Sensitive plant species observed or potentially occurring in the Study Area are discussed in Table 4.3-2.

Fauna

The majority of the Study Area is of low to moderate value for wildlife species, due to the dominance of disturbed, ruderal, and developed lands. However, as presented in Table 4.3-1, other native vegetation communities do occur in the Study Area and provide habitat value for wildlife. Chaparral and coastal sage scrub communities can provide habitat for a variety of wildlife species for food and cover. Rock outcrops can provide valuable habitat for a variety of wildlife for cover, foraging, perching, nesting, and denning. Woodland communities can provide food, water, thermal cover, escape, nesting, and migration and dispersal corridors for an abundance of wildlife. Ruderal land and bare ground provides relatively little value to most wildlife species because these areas are devoid of vegetation or are vegetated with annual weedy plant species of limited food, water, and cover value. Sensitive wildlife species observed or potentially occurring in the proposed project site are discussed in the following sections.

Invertebrates. The distribution of invertebrates is generally defined by the presence of their larval food plants and suitable habitat and environmental conditions. Within the Study Area, chaparral, coastal sage scrub, woodland, rocky outcrops, and riparian forest all provide important habitat, water and dispersal corridors for many invertebrate species. Thirteen butterfly species have been observed in the vicinity of the landfill (ERA, 2008), including monarch butterfly (*Danaus plexippus*). Monarch butterfly roost sites are known from blue gum (*Eucalyptus globulus*) groves at the mouth of Arroyo Quemado (Meade, 1999). Although these roost sites are in the vicinity of the landfill, no roost sites have been observed and only small numbers of individual monarchs have been observed foraging within the landfill property.

Fish. Pila Creek does not provide adequate surface water duration or permanence to support native fish populations. However, prior to their removal in 2009, the in-channel sedimentation basins supported introduced non-native large-mouth bass. Due to the removal of these basins and conversion of a portion of Pila Creek to a concrete channel, fish habitat does not currently exist in Cañada de la Pila.

Amphibians. All amphibians require moisture for at least a portion of their life cycle, with many requiring a permanent water source for habitat and reproduction. Some terrestrial amphibian species have adapted to more arid conditions and are not completely dependent on a perennial or standing source of water. Three amphibian species were detected during surveys of the landfill reconfiguration area in 2007 and 2008, including two fairly common and widespread species, western toad (*Bufo boreas*) and Pacific treefrog (*Hyla regilla*), and one sensitive species, California red-legged frog (*Rana draytonii*). In addition, the Monterey salamander (*Ensatina eschscholtzi*i) has been observed near the basins during a biological survey preceding basin maintenance.

The California red-legged frog is a federally listed threatened species and is discussed in greater detail in the following sections. Note that implementation of the approved Landfill Reconfiguration Project, including removal of the in-channel sedimentation basins, and management of the north (out-of-channel) sedimentation basin has removed virtually all amphibian breeding habitats from the landfill site.

Reptiles. Many reptile species are restricted to certain vegetation communities and soil types, although certain species will occur in a variety of habitats and environmental conditions. Many species occurring in open areas use rodent burrows and rocky outcroppings for foraging opportunities and for cover and protection from predators and extreme weather conditions. During surveys of the landfill reconfiguration area in 2007 and 2008, reptiles observed included such common species as side-blotch lizard (*Uta stansburiana*), western fence lizard (*Sceloporus occidentalis*), alligator lizard (*Elgaria multicarinatus*) and California whipsnake (*Masticophis lateralis lateralis*). Western pond turtle (*Emys marmorata*) was observed during monitoring of construction of the Reconfiguration Project.

Other reptile species observed during previous surveys adjacent to the Study Area include western skink (*Eumeces skiltonianus*) and terrestrial garter snake (*Thamnophis elegans*) (Hunt & Associates 2001). Two-striped garter snake (*Thamnophis hammondii*) was observed in a sedimentation basin by Padre Associate's biologists as part of the sedimentation basin maintenance monitoring in 2006 and during a botanical survey in June 2008. The two-striped garter snake is considered a species of special concern by CDFW. Implementation of the Reconfiguration Project, including removal of the in-channel sedimentation basins, and management of the north (out-of-channel) sedimentation basin has removed virtually all prey (fish and amphibians) for two-striped garter snake from the landfill site.

Birds. The diversity of bird species varies in a given area with respect to the diversity and quality of vegetation communities. Many of the native habitat communities in the Study Area vicinity are of high quality with minimal disturbances. Coastal sage scrub, woodland, riparian habitats, chaparral, freshwater marsh, and open water can all support a large number of bird species. Many raptor and passerine species will use the large trees associated with woodlands and riparian habitats for nesting activities and other bird species will use these areas for foraging, cover and dispersal opportunities.

During the surveys of the landfill reconfiguration area conducted in 2007 and 2008, a total of 40 bird species were detected, which include year-round residents, winter or summer visitors, or fall/spring migrants. Common birds observed within the Study Area and the immediate vicinity included turkey vulture (*Cathartes aura*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), California thrasher (*Toxostoma redivivum*), western scrub jay (*Aphelocoma californica*) and Nuttall's woodpecker (*Picoides nuttallii*). Several special-status bird species have the potential to occur in the Study Area, and are discussed in Table 4.3-3.

Mammals. Vegetation communities (coastal sage scrub, chaparral, riparian and oak woodlands) surrounding the landfill provide high quality cover, foraging habitat, and denning sites for a variety of mammals. Relatively common species that have been observed, detected by sign, or are expected to occur within the vicinity of the landfill include desert cottontail (*Sylvilagus audubonii*), Botta's pocket gopher (*Thomomys bottae*), coyote (*Canis latrans*), bobcat (*Felis rufus*), grey fox (*Urocyon cinereoargenteus*), mule deer (*Odocoileus hemionus*), dusky-footed woodrat (*Neotoma fuscipes*), striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*) and Virginia opossum (*Didelphis virginiana*). A number of bat species may use any portion of the landfill site as foraging habitat, and there is a potential for some bat species to roost within the rock outcrops in the Study Area. Several special-status mammal species have the potential to occur in the Study Area, and are discussed in Table 4.3-3.

Sensitive Biological Resources

Several sensitive vegetation communities, plant species, wildlife species, and wetland resources are known to occur or have the potential to occur within the Study Area, as identified and/or detected during biological studies and surveys that were conducted for the proposed project and the Reconfiguration Project. Local, state, and federal agencies regulate these sensitive biological resources and require an assessment of their presence or potential presence to be conducted in the Study Area prior to the approval of the proposed landfill reconfiguration.

The California Natural Diversity Data Base (CNDDB), administered by the CDFW, provides an inventory of plant and animal species as well as vegetation communities, which are considered sensitive by state and federal resource agencies, academic institutions, and conservation groups such as the California Native Plant Society (CNPS).

In general, the principal reason an individual taxon (species, subspecies, or variety) is considered sensitive is the documented or perceived decline or limitation of its population size or geographical extent and/or distribution resulting in most cases from habitat loss. In addition, wildlife movement corridors or linkages are considered sensitive by local, state, and federal resource and conservation agencies because these corridors allow wildlife to move between adjoining open space areas that are becoming increasingly isolated and fragmented due to the existing rugged terrain combined with expanding urbanization or changes in vegetation (Beier and Loe 1992).

The following sections present the sensitive vegetation communities, plant and wildlife species, and wildlife corridors that are either known to occur or potentially occur in the Study Area or the immediate vicinity. The potential for these resources to occur is based on field surveys, query of the CNDDB, knowledge of the species distribution, and the known presence of suitable habitat and/or other requisite components. These sensitive biological resources are identified and discussed in the following sections.

Sensitive Vegetation Communities. Sensitive vegetation communities are vegetation assemblages, associations, or sub-associations that support or potentially support sensitive plant or wildlife species, have experienced cumulative losses within the region, have relatively limited distribution, or have particular value to wildlife. Typically, sensitive vegetation communities are considered sensitive whether or not they have been disturbed. Sensitive vegetation communities are regulated by various local, state, and federal resource agencies. The CNDDB provides an inventory of vegetation communities that are considered sensitive by state and federal resource agencies, academic institutions, and conservation groups such as CNPS.

Determination of the level of sensitivity is based on the classification by resource agencies and Holland (1986). In addition, the County's Environmental Thresholds and Guidelines Manual (County 1992, updated 2015 ~~2008~~) and the County's Comprehensive Plan Conservation Element (1979, amended 2003) lists additional vegetation communities that are not typically considered sensitive by other resource agencies, such as coast live oak woodland and perennial grassland but are considered sensitive locally.

Three sensitive vegetation communities with a total area of approximately 0.89 acres occur within the Study Area. However, these vegetation communities do not occur within the project impact area.

- California bay seep woodland: 0.22 acres;
- Coast live oak woodland: 0.39 acres; and
- Southern coast live oak riparian forest: 0.28 acres.

Sensitive Plants. For purposes of this analysis, plant species are considered sensitive if they are (1) listed or proposed for listing by state or federal agencies as threatened or endangered; (2) on List 1B (considered endangered throughout its range) or List 2 (considered endangered in California but more common elsewhere) of the CNPS *Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2013); or (3) considered rare, endangered, or threatened by the State of California or other local conservation organizations or specialists.

The County of Santa Barbara Environmental Thresholds and Guidelines Manual (County 1992, updated 2015 ~~2008~~) also considers native specimen trees to be important and impacts to these trees can be potentially significant. Native specimen trees are defined for biological assessment purposes as mature trees that are healthy and structurally sound and have grown into the natural stature particular to the species.

Table 4.3-2 discusses sensitive plant species that have the potential to occur within or adjacent to the Study Area. This Table also includes species that are known historically from the region but are not expected to occur within the Study Area based on a lack of suitable habitat. No Federally or State-listed plant species are known from the Study Area. However, three plant species which are considered sensitive by the State, CNPS, or Santa Barbara County; Plummer's baccharis (*Baccharis plummerae* ssp. *plummerae*), Santa Barbara honeysuckle (*Lonicera subspicata* var. *subspicata*), and Hoffmann's nightshade (*Solanum xanti* var. *hoffmannii*), have been observed within or adjacent to the Study Area during rare plant surveys conducted for the project, or previous surveys conducted for the Reconfiguration Project (Padre Associates Inc., 2006; Hunt and Associates, 2001; ERA, 2008; Padre ~~County~~, 2009b~~8~~). The location of sensitive plants within the Study Area is provided in Figure 4.3-1. Note that native trees do not occur within the project impact area.

Table 4.3-2. Sensitive Plant Species Known or Potentially Occurring within the Study Area

Scientific Name	Common Name	Status	Status at Study Area
Antirrhinum nuttallianum	Nuttall's snapdragon	Locally sensitive	Habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent
Aphanisma blitoides	Aphanisma	CNPS List 1B	No known historical records in area, habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent
Arctostaphylos refugioensis	Refugio manzanita	List 1B	Habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent
Aristida adscensionis	Triple-awned grass	Locally sensitive	Habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent
Atriplex coulteri	Coulter's saltbush	List 1B	No known historical records in area, habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent
Atriplex serenana var. *davidsonii*	Davidson's saltscale	List 1B	Habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent
Baccharis plummerae ssp. plummerae	Plummer's baccharis	List 4, locally sensitive	Approximately 18 plants found within the Study Area, with 8 within the project impact area. 40 plants were planted at Baron Ranch as mitigation for removal of up to 30 plants associated with the Landfill Reconfiguration Project
Calandrinia breweri	Brewer's calandrinia	List 4	Low quality habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent
Calochortus catalinae	Catalina mariposa lily	List 4	Approximately 25 plants found in the Study Area (west borrow area) in 2009, plants were removed as part of planned landfill expansion, bulbs and seed were collected and planted at Baron Ranch
Calochortus fimbriatus	Late-flowered mariposa lily	List 1B	Habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent
Calystegia collina ssp. *venusta*	South Coast Range morning glory	List 4	No known historical records in area, species not found during 2013 botanical surveys of the Study Area, considered absent
Centromadia parryi ssp. *australis*	Southern tarplant	List 1B	No known historical records in area, species not found during 2013 botanical surveys of the Study Area, considered absent
Cheilanthes cooperae	Cooper's lip fern	Locally sensitive	Habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent
Cornus sericea ssp. *occidentalis*	Creek dogwood	Locally sensitive	Habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent

Table 4.3-2. Continued

Scientific Name	Common Name	Status	Status at Study Area
Deinandra increscens ssp. *villosa*	Gaviota tarplant	SE, FE, List 1B	No known historical records in area, species not found during 2013 botanical surveys of the Study Area, considered absent
Dichondra occidentalis	Western dichondra	List 4	Low quality habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent
Dudleya blochmaniae ssp. *blochmaniae*	Blochman's dudleya	List 1B	No known historical records in area, species not found during 2013 botanical surveys of the Study Area, considered absent
Erigeron sanctarum	Saint's daisy	List 4	No known historical records in area, species not found during 2013 botanical surveys of the Study Area, considered absent
Eriodictyon capitatum	Lompoc yerba santa	FE, SR, List 1B	No known historical records in area, species not found during 2013 botanical surveys of the Study Area, considered absent
Erysimum suffructescens	Suffructescent wallflower	List 4	No known historical records in area, species not found during 2013 botanical surveys of the Study Area, considered absent
Galium cliftonsmithii	Santa Barbara bedstraw	List 4	Low quality habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent
Horkelia cuneata ssp. *puberula*	Mesa horkelia	List 1B	Low quality habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent
Juglans californica var. *californica*	Southern California black walnut	List 4	Habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent
Lasthenia conjugens	Contra Costa goldfields	FE, List 1B	No known historical records in area, species not found during 2013 botanical surveys of the Study Area, considered absent
Lepidium virginicum var. *robinsonii*	Robinson's peppergrass	List 1B	Habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent
Lilium humboldtii ssp. *ocellatum*	Ocellated Humboldt lily	List 4	Habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent
Lonicera subspicata subspicata	Santa Barbara honeysuckle	List 1B, locally sensitive	Approximately 7 plants found within the project impact area. 40 plants were planted at Baron Ranch as mitigation for removal of 13 plants associated with the Reconfiguration Project
Malacothrix saxatilis var. *saxatilis*	Cliff aster	List 4, locally sensitive	*Malacothrix saxatilis* var. *tenuifolia* is common in the Study Area, var. *saxatilis* was not found during focused surveys, considered absent
Mimulus aurantiacus var. *lompocense* (=*Diplacus lompocense*)	Lompoc monkeyflower	Locally sensitive	No known historical records in area, species not found during 2013 botanical surveys of the Study Area, considered absent
Polygala cornuta var. *fishiae*	Fish's milkwort	List 4	Habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent

1 **Table 4.3-2. Continued**

Scientific Name	Common Name	Status	Status at Study Area
Quercus dumosa	Nuttall's scrub oak	List 1B	Habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent
Ribes amarum ssp. *hoffmannii*	Bitter gooseberry	List 3	Habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent
Sanicula hoffmannii	Hoffmann's sanicle	List 4	Habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent
Scrophularia atrata	Black-flowered figwort	List 1B	No known historical records in area, species not found during 2013 botanical surveys of the Study Area, considered absent
Senecio aphanactis	Rayless ragwort	List 2	Habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent
Solanum xanti var. *hoffmannii*	Hoffmann's nightshade	Locally sensitive	Not found within the Study Area. 190 plants were planted at Baron Ranch as mitigation for removal of 30 plants associated with the Reconfiguration Project
Thelypteris puberula var. *sonorensis*	Sonoran maiden fern	List 2	Reported from Arroyo Hondo, 0.5 miles to the west (CNDDB, 2013), low quality habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent
Thermopsis macrophylla	Santa Ynez false-lupine	SR, List 1B	Habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent
Zygadenus fremontii var. *inezianus*	Camas lily	Locally sensitive	Habitat present but species not found during 2013 botanical surveys of the Study Area, considered absent

Status Key

FE:	Federally-listed as Endangered
List 1B:	California Native Plant Society (CNPS), plants Rare, Threatened or Endangered in California and elsewhere
List 2:	CNPS, plants Rare, Threatened or Endangered in California, but more common elsewhere
List 3:	CNPS, plants about which we need more information, a review list
List 4:	CNPS, plants of limited distribution, a watch list
Locally sensitive:	Sensitive Plants of Santa Barbara County (Wiskowski, 1988)
SE:	California-listed as Endangered
SR:	California-listed as Rare

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Sensitive Wildlife. For purposes of this Subsequent EIR, wildlife species are considered sensitive if they are (1) listed or proposed for listing as threatened or endangered by the under the Federal or California ESA; (2) designated as California fully protected by CDFW; (3) raptors (birds of prey) and active raptor nests protected by the California Fish and Game Code 3503.5; (4) designated as a California species of special concern by CDFW; and/or (5) designated as locally important species.

Table 4.3-3 summarizes all sensitive wildlife species that are known or have the potential to occur within or adjacent to the Study Area and the project impact area. Appendix E provides additional information concerning the sensitive wildlife species that have the potential to occur within the Study Area.

California red-legged frogs were historically observed on the Tajiguas landfill property utilizing two man-made in-channel sedimentation basins that were formerly present in the Pila Creek channel, a groundwater seep area in the creek, and the north sedimentation basin to the east of Pila Creek. The in-channel basins provided the only breeding habitat and were managed according to the 2003 USFWS Biological Opinion for the California Red-legged Frog Management Plan and Sedimentation Basin Work Plan. No other areas of Pila Creek were identified as providing breeding habitat (ERA, 2008a) due to the ephemeral/intermittent nature of creek flows and the lack of suitable pools.

Table 4.3-3. Sensitive Wildlife Species Known to Occur or May Occur within the Project Impact Area

Scientific Name	Status	Potential for Occurrence within Impact Area
Invertebrates		
Danaus plexippus Monarch butterfly	SA (roosts)	Single individuals observed in landfill area during surveys conducted for 01-EIR-05 (Hunt and Associates, 2001), but no suitable roosting habitat in Study Area
Fish		
Oncorhynchus mykiss irideus Southern steelhead	FE/CSC	Reported from Arroyo Hondo 0.6 miles to the west (Stoecker, et al., 2002), all fish habitat removed as part of Reconfiguration Project, considered absent
Eucyclogobius newberryi Tidewater goby	FE/CSC	Reported from mouth of Arroyo Quemado (CNDDB, 2013), all fish habitat removed as part of Reconfiguration Project, considered absent
Gila orcuttii Arroyo chub	CSC	Reported from Refugio Creek 3.5 miles to the east (Ingamells, personal observation, 2007), all fish habitat removed as part of Reconfiguration Project, considered absent

1 **Table 4.3-3. Continued**

Scientific Name	Status	Potential for Occurrence within Impact Area
Amphibians and Reptiles		
Rana draytonii California red-legged frog	FT/CSC	Present prior to the removal of the in-channel sedimentation basins in 2009 and relocation of the population to Baron Ranch, not seen at the Tajiguas Landfill property ~~since~~ from April 2012 to December 2014. Since that time, one adult was observed on December 15, 2014 and one juvenile was observed on June 11, 2015, both in the channelized portion of upper Pila Creek
Taricha torosa torosa Coast Range newt	CSC	Reported from Refugio Creek 3.5 miles to the east (Ingamells, personal observation, 2007), no suitable habitat within Study Area, not observed during past field surveys of the landfill site, considered absent
Anniella pulchra pulchra Silvery legless lizard	CSC	Low quality habitat located near Study Area, not observed during past field surveys of the landfill site, considered absent
Emys marmorata Western pond turtle	CSC	Reported from upper Pila Creek during implementation of the Reconfiguration Project, no suitable habitat within Study Area, considered absent
Phrynosoma blainvillii Coast horned lizard	CSC	Reported from Santa Ynez Peak 10 miles to the northeast (Hunt and Associates, 2001), low quality habitat within Study Area, not observed during past field surveys of the landfill site, considered absent
Salvadora hexalepis virgultea Coast patch-nosed snake	CSC	Reported from Refugio Pass 5 miles to the northeast (Jennings & Hayes, 1994), low quality habitat within Study Area, not observed during past field surveys of the landfill site, considered absent
Thamnophis hammondii Two-striped garter snake	CSC	Found within and adjacent to the in-channel sedimentation basins, basins were removed in 2009, no suitable habitat within Study Area, considered absent
Birds		
Accipiter cooperii Cooper's hawk	WL (nesting)	Observed in landfill area during surveys conducted for 01-EIR-05 (Hunt and Associates, 2001), but not observed during subsequent field surveys of the landfill site, low quality habitat present, may occur within Study Area
Accipiter striatus Sharp-shinned hawk	WL (nesting)	Not observed during field surveys conducted for past SEIRs and basin maintenance, low quality habitat within Study Area, does not breed in the region, but may forage within Study Area
Aquila chrysaetos Golden eagle	WL/CFP (nesting & wintering)	Low quality habitat within Study Area, not reported in the region and not observed during past field surveys of the landfill site, considered absent
Buteo regalis Ferruginous hawk	WL (wintering)	Reported from El Capitan State Beach 6.5 miles to the east, suitable habitat within Study Area, not observed during past field surveys of the landfill site, does not breed in the region, but may forage within Study Area in winter

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1 **Table 4.3-3. Continued**

Scientific Name	Status	Potential for Occurrence within Impact Area
Circus cyaneus Northern harrier	CSC (nesting)	Reported from Santa Barbara Ranch 10 miles to the east (URS, 2006), suitable habitat within Study Area, not observed during past field surveys of the landfill site, but may forage within Study Area
Elanus leucurus White-tailed kite	CFP	Observed in landfill area during surveys conducted for 01-EIR-05 (Hunt and Associates, 2001), but not observed during subsequent field surveys of the landfill site, could occur within Study Area
Pandion haliaetus Osprey	WL (nesting)	Reported from Santa Barbara Ranch 10 miles to the east (URS, 2006), no suitable habitat within Study Area, not observed during past field surveys of the landfill site, considered absent
Falco columbarius Merlin	WL (wintering)	Low quality habitat within Study Area, not reported in the region and not observed during field surveys, considered absent
Falco mexicanus Prairie falcon	WL (nesting)	Low quality habitat within Study Area, not reported in the region and not observed during past field surveys of the landfill site, considered absent
Falco peregrinus anatum American peregrine falcon	CFP	Reported from Santa Barbara Ranch 10 miles to the east (URS, 2006), no suitable habitat within Study Area, not observed during past field surveys of the landfill site, considered absent
Lanius ludovicianus Loggerhead shrike	CSC	Observed in landfill area in September 2008, and during biological monitoring in 2012, suitable habitat present, could occur within Study Area
Eremophila alpestris actia *California horned lark*	WL	Observed in landfill area during surveys conducted for 01-EIR-05 (Hunt & Associates, 2001), no suitable habitat within Study Area, considered absent
Vireo bellii pusillus Least Bell's vireo	FE/SE	Not reported in region, a habitat suitability assessment conducted in June 2008 by Jim Greaves determined this species is not anticipated to occur at the landfill site
Dendroica petechia brewsteri Yellow warbler	CSC (nesting)	Observed during biological monitoring in 2012 of Phase 3A liner installation, likely a transient as suitable habitat is not present, considered absent from Study Area
Icteria virens Yellow-breasted chat	CSC (nesting)	Reported from Refugio Creek 3.5 miles to the east (Lehman, 1994), no suitable habitat present, considered absent
Aimophila ruficeps canescens Southern California rufous-crowned sparrow	WL	Observed during biological monitoring in 2012 of Phase 3A liner installation, suitable habitat present, could occur within Study Area
Ammodramus savannarum Grasshopper sparrow	CSC	Reported from Santa Barbara Ranch 10 miles to the east (URS, 2006), no suitable habitat within Study Area, not observed during past field surveys of the landfill site, considered absent
Mammals		
Antrozous pallidus Pallid bat	CSC	Santa Barbara Natural History Museum specimen from Las Cruces 5.2 miles to the northwest, low quality roosting habitat (crevices) occurs within Study Area, could be present

Table 4.3-3. Continued

Scientific Name	Status	Potential for Occurrence within Impact Area
Corynorhinus townsendii pallescens Townsend's big-eared bat	CSC	Santa Barbara Natural History Museum specimen from Monte Vista School 21.8 miles to the east, no roosting habitat within Study Area, considered absent
Eumops perotis californicus Western mastiff bat	CSC	Upper Honda Canyon 25 miles to the west-northwest (Pierson et al., 2002), low quality roosting habitat (crevices) occurs within Study Area, could be present
Nyctinomops macrotis Big free-tailed bat	CSC	One specimen reported from Santa Barbara (CNDDB, 2013), generally very rare in California, low quality roosting habitat (crevices) occurs within Study Area, could be present
Bassariscus astutus Ringtail	CFP	Observed in landfill area during surveys conducted for 01-EIR-05 (Hunt and Associates, 2001), suitable habitat within Study Area, may be present
Neotoma lepida intermedia San Diego desert woodrat	CSC	Observed in landfill area during surveys conducted for 01-EIR-05 (Hunt and Associates, 2001), reported from Union Pacific Railroad right-of-way 1 mile to the southwest (CNDDB, 2013), low quality habitat within Study Area, may be present
Taxidea taxus American badger	CSC	Reported from Arroyo Hondo watershed 1.1 miles to the west (CNDDB, 2013), low quality habitat occurs in Study Area, could be present

Status Key: CFP: Fully protected under the California Fish and Game Code
CSC: California Species of Special Concern
WL: Watch List (CDFW)
FE: Federally-listed as Endangered
FT: Federally-listed as Threatened
SE: California-listed as Endangered

Since 2009, monitoring of California red-legged frogs within the Pila Creek drainage has been conducted as a part of the California Red-legged Frog Management Plan, which was developed as part of the Tajiguas Landfill Reconfiguration and Baron Ranch Restoration Project, and required to be implemented as a condition of the 2009 Biological Opinion issued for the Tajiguas Landfill Reconfiguration Project. The 2009 Biological Opinion authorizes the collection and relocation of California red-legged frogs from Pila Creek to USFWS-approved pools in Arroyo Quemado, on the Baron Ranch where restoration activities continue to be implemented to enhance/expand California red-legged frog habitat. These relocations occurred initially when the in-channel sedimentation basins were pumped dry prior to excavation, and when California red-legged frogs were encountered during biological surveys conducted following rain events during construction activities associated with the Reconfiguration Project.

A summary of California red-legged frog surveys and relocations follows:

- In 2009, 17 adult and approximately 1,114 larval and 1,689 metamorph California red-legged frogs were captured and relocated to Arroyo Quemado;

- In 2010, 11 individual adults were captured at the landfill and relocated to Arroyo Quemado, 6 of these had returned to the landfill from Arroyo Quemado;
- In 2011, 3 adults were captured at the landfill and relocated to Arroyo Quemado; ~~and~~
- From February through April 2012, 16 juveniles were found within a small seep area within the Pila Creek channel and relocated to Arroyo Quemado. These frogs were found prior to Phase 3A liner construction, which included removal of the seep and conversion of a portion of Pila Creek to a concrete channel. California red-legged frogs were not observed during Phase 3A and 3B liner construction;
- Ten focused CRLF surveys were conducted within the Tajiguas Landfill Reconfiguration area during the 2012/2013 wet season, and none were found;
- Five focused CRLF surveys were conducted within the Tajiguas Landfill Reconfiguration area during the 2013/2014 wet season, and none were found; and
- Twenty-two focused surveys for CRLF were conducted within the Tajiguas Landfill Reconfiguration area during the 2014/2015 wet season, and only two were found (one adult, one juvenile), and both were relocated to Arroyo Quemado.

Construction of the Reconfiguration Project resulted in the removal of the existing sources of standing water on the landfill that may provide potential habitat for the California red-legged frog. The two in-channel sedimentation basins that provided suitable breeding habitat were removed from Pila Creek to allow for the reconfiguration of the waste footprint. The groundwater seep was removed, and the natural Pila Creek channel was modified and reconstructed as a concrete-lined trapezoidal channel as part of the permitted Reconfiguration Project.

In addition, the north sedimentation basin (formerly the out-of-channel sedimentation basin) was reconstructed and concrete-lined to facilitate sediment removal and a free-draining skimmer system has been installed that reduces the amount of time water is retained in the basin. Previously, the basin ponded water until it was physically pumped. Since these changes have been implemented, very few ~~no~~ California red-legged frogs have been observed during biological surveys conducted at the landfill. However, the fact that California red-legged frogs were found consistently for several years after all breeding habitat was removed (in-channel sedimentation basins) indicates that the landfill site may located within a migration/dispersal corridor for this species.

Habitat Connectivity and Wildlife Corridors

Wildlife movement corridors or linkages are considered sensitive by local, state, and federal resource and conservation agencies because these corridors allow wildlife to move between adjoining open space areas offsetting the effects of isolation as open space becomes increasingly fragmented from urbanization, rugged terrain, or changes in vegetation (Beier and Loe 1992).

Multiple studies have concluded that many wildlife species in developed and fragmented areas would not likely persist over time because isolation through fragmentation would prohibit the infusion of new individuals and genetic information (MacArthur and Wilson 1967; Soule 1987; Harris and Gallagher 1989; Bennett 1990). However, wildlife corridors mitigate the effects of this fragmentation by (1) allowing wildlife to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk of catastrophic stochastic events (such as fire or disease) on population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs (Noss 1983; Farhig and Merriam 1985; Simberloff and Cox 1987; Harris and Gallagher 1989).

Wildlife movement activities typically fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, or individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover).

Large open space areas that have few or no man-made or naturally occurring physical constraints to wildlife movement may not have wildlife corridors but may still be large enough to maintain viable populations of species; provide adequate food, water, and cover; and provide a variety of travel routes (canyons, ridgelines, trails, riverbeds, and others) without the movement of wildlife into other large open space areas. However, once an open space area becomes constrained and/or fragmented as a result of urban encroachment, the remaining linkage area that connects the larger open space areas can act as a corridor as long as it provides adequate space, cover, food, and water and does not contain obstacles or distractions (e.g., man-made noise, lighting) that would generally hinder wildlife movement.

The Study Area is generally comprised of steep graded hillsides, dirt and paved roads, ruderal areas devoid of vegetation, and other development associated with landfill operations. These developed and active portions of the Tajiguas Landfill provide little value to resident and transitory wildlife.

The Study Area includes small portions of the ridgelines east and west of Cañada de la Pila (potable water tank/recycled water tank site, composting area runoff collection tank site), and could be used by wildlife moving through the area. However, these areas provide little cover and are adjacent to active portions of the landfill, which may limit movement to nighttime hours.

In contrast, the majority of the land east and west of the landfill (Arroyo Hondo, Arroyo Quemado) contains native riparian, woodland, and chaparral vegetation that provide a source of food, water, and cover for resident and transitory wildlife. These drainages and undeveloped ridgelines likely serve as travel routes for wildlife moving between the coast and the upper reaches of the Cañada de la Pila and the Santa Ynez Mountains north of the Study Area. Therefore, the value of the Study Area as a movement corridor for wildlife is considered low.

Wetlands and Jurisdictional Waters

U.S. Army Corps of Engineers. In accordance with Section 404 of the CWA, the USACE has regulatory authority over the discharge of dredged or fill material into waters of the U.S. (including non-wetland waters of the U.S. and wetlands). Federal jurisdiction is dependent on a demonstrated nexus between the subject water feature and navigable waters or interstate commerce. The USACE and EPA define wetlands as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions" (USACE 1987).

California Department of Fish and Wildlife. In accordance with Sections 1600 to 1616 of the Fish and Game Code, the CDFW regulates activities that would divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. The CDFW exerts jurisdiction over all waters of the State, such as streams and rivers (measured from bank to bank) and any riparian vegetation associated with the waters.

Regional Water Quality Control Board. The RWQCB is the primary agency responsible for protecting water quality in California. The RWQCB regulates discharges to surface waters under Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act. The RWQCB's jurisdiction extends to all waters of the State and to all waters of the U.S. as considered jurisdictional by the USACE. The RWQCB also regulates isolated wetlands, e.g., vernal pools that are not regulated by the USACE.

County of Santa Barbara. The County has adopted the following wetland definition:

1. At least periodically, the land supports predominantly hydrophytes (i.e. plants adapted to moist areas),

2. The substrate is predominantly undrained hydric soil, and

3. The substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year (Cowardin et al., 1979; County 1992, updated 2015 ~~2008~~).

Presence within Study Area. The Study Area, which includes a 200 feet-wide buffer around the proposed impact area, is comprised of active portions of the landfill and adjacent areas, primarily ridgelines. The concrete-lined portion of Pila Creek occurs within the study area, but no streams or other drainage features occur within the project impact area. Based on a preliminary inspection, jurisdictional waters (including wetlands) do not occur within the project impact area. .

4.3.2 Impact Analysis and Mitigation Measures

4.3.2.1 Thresholds of Significance

The criteria for determining significant impacts on biological resources were developed in accordance with Section 15065(a) and Appendix G of the State CEQA Guidelines and the Santa Barbara County Environmental Thresholds and Guidelines Manual ~~Biological Resources Section~~ (Santa Barbara County 1992, updated 2015 ~~2008~~).

CEQA Guidelines Section 15065(a)

A project may have a significant impact on the environment if the project has the potential to (1) substantially degrade the quality of the environment, (2) substantially reduce the habitat of a fish or wildlife species, (3) cause a fish or wildlife population to drop below a self-sustaining level, (4) threaten to eliminate a plant or animal community, and/or (5) reduce the number or restrict the range of an endangered, rare, or threatened species.

An evaluation of whether an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. A substantial impact is an impact that diminishes, or results in the loss of, a sensitive biological resource or that significantly conflicts with local, State, or Federal resource conservation plans, goals, and/or regulations. Sometimes impacts can be locally adverse, but not significant. In such a case, the impacts may result in an adverse alteration of a local biological resource, but they may not substantially diminish or result in the permanent loss of an important resource on a population- or region-wide basis.

CEQA Guidelines Appendix G

Implementation of the proposed project may have potentially significant adverse impacts on biological resources if it would result in any of the following:

- Have a substantial adverse impact, 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 CDFW or the USFWS;
- Have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFW or the USFWS;
- Have a substantial adverse impact on State or federally protected wetlands as defined by USACE, CDFW, RWQCB, or California Coastal Commission, including but not limited to marsh, 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; and/or
- Conflict with the provisions of any adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan, or other approved local, regional, or State HCP.

Santa Barbara County Environmental Thresholds and Guidelines Manual Biological Resources

General Impacts. Disturbance to habitats or species may be significant, based on substantial evidence in the record (not public controversy or speculation), if they substantially impact significant resources in the following ways:

- Substantially reduce or eliminate species diversity or abundance;
- Substantially reduce or eliminate quantity or quality of nesting areas;
- Substantially limit reproductive capacity through losses of individuals or habitat;
- Substantially fragment, eliminate, or otherwise disrupt foraging areas and/or access to food sources;
- Substantially limit or fragment range and movement (geographic distribution or animals and/or seed dispersal routes); and/or

- Substantially interfere with natural processes, such as fire or flooding, upon which the habitat depends.

Wetland Impact Assessment Guidelines. The following types of project-created impacts may be considered significant:

- Projects which result in a net loss of important wetland area or wetland habitat value, either through direct or indirect impacts to wetland vegetation, degradation of water quality, or would threaten the continuity of wetland-dependent animal or plant species are considered to have a potentially significant effect on the environment.
- Projects which substantially interrupt wildlife access, use and dispersal in wetland areas would typically be considered to have potentially significant impacts.

Riparian Impact Assessment Guidelines. The following types of project-related impacts may be considered significant:

- Direct removal of riparian vegetation.
- Disruption of riparian wildlife habitat, particularly animal dispersal corridors and or understory vegetation.
- Intrusion within the upland edge of the riparian canopy (generally within 50 feet in urban areas, within 100 feet in rural areas, and within 200 feet of major rivers listed in the previous section), leading to potential disruption of animal migration, breeding, etc. through increased noise, light and glare, and human or domestic animal intrusion.
- Disruption of a substantial amount of adjacent upland vegetation where such vegetation plays a critical role in supporting riparian-dependent wildlife species (e. g., amphibians), or where such vegetation aids in stabilizing steep slopes adjacent to the riparian corridor, which reduces erosion and sedimentation potential.
- Construction activity which disrupts critical time periods (nesting, breeding) for fish and other wildlife species.

Native Grassland Habitat Impact Assessment Guidelines

- For purposes of resource evaluation in Santa Barbara County, a native grassland is defined as an area where native grassland species comprise 10 percent or more of the total relative cover.
- Removal or severe disturbance to a patch or patches of native grasses less than one-quarter acre, which is clearly isolated and is not a part of a significant native grassland or an integral component of a larger ecosystem, is usually considered insignificant.

Impact Assessment Guidelines for Woodlands and Forest Habitat Areas. Project-created impacts may be considered significant due to changes in habitat value and species composition such as the following: (1) Habitat fragmentation. (2) Removal of understory. (3) Alteration to drainage patterns. (4) Disruption of the canopy (5) Removal of a significant number of trees that would cause a break in the canopy or disruption in animal movement in and through the woodland.

Native Tree Impact Assessment. In general, the loss of 10 percent or more of the trees of biological value on a project site is considered potentially significant.

4.3.2.2 Approved Tajiguas Landfill Expansion Project

The following summarizes the impacts to biological resources identified in 01-EIR-05 for the Tajiguas Landfill Expansion Project (see Section 3.4.3).

1. The Tajiguas Landfill Expansion Project would ultimately disturb a total of 71 acres of vegetation communities, including 38 acres of mature chaparral, 5 acres of degraded coastal sage scrub, 4 acres of coast live oak woodland, 16 acres of non-native grassland and 7 acres of ruderal/landscaping vegetation. The loss of these habitats was considered a significant and unavoidable impact (Class I). Despite mitigation (BIO-7, requiring native revegetation at a 3:1 ratio[1]) proposed to minimize this impact, residual impacts were expected to remain significant.
2. Excavation and construction activities associated the Tajiguas Landfill Expansion Project were anticipated to result in disturbance from increased human activity and lead to the establishment of invasive, nonnative vegetation. This was considered a significant but mitigable impact (Class II).
3. Within the approved Tajiguas Landfill Expansion Project footprint, impacts to 100 to 150 mature coast live oak trees were anticipated. A tree replacement program and protective measures during construction (BIO-3 and BIO-4 of 01-EIR-05) would potentially reduce the severity of this impact, but residual impacts were expected to remain significant (Class I).
4. Loss of occupied habitat for three sensitive plant species (Plummer's baccharis, Hoffmann's nightshade and Santa Barbara honeysuckle) would occur within the landfill expansion area. Although mitigation provided by 01-EIR-05 (BIO-1) would minimize impacts to sensitive plants, residual impacts were expected to remain significant (Class I).

[1] The replacement ratio in this mitigation measure was modified from 1:1 to 3:1 during certification of 01-EIR-05 and the Board of Supervisors approval of the Tajiguas Landfill Expansion Project.

5. The Tajiguas Landfill Expansion Project would lead to abandonment or avoidance of foraging and/or breeding habitat by several sensitive bird and mammal species that occur in adjacent foothill habitats, as a result of increased human presence/activities. Mitigation (BIO-9 in 01-EIR-05, minimize night lighting) was proposed to reduce this impact, but residual impacts were expected to remain significant (Class I).

6. The Tajiguas Landfill Expansion Project would result in the increased attraction of nuisance birds, such as various gull species and American crows. Artificially increased populations of these nuisance birds can exert additional pressure on other wildlife species through increased competition for limited habitat areas, such as wetlands and open water, and increased predatory pressure on a variety of species, such as songbirds and California red-legged frogs. This was considered a significant but mitigable impact (Class II); implementation of proposed mitigation measures (primarily NUI-2 in 01-EIR-05, bird management) was expected to reduce this impact to below a level of significance.

7. Nine sensitive wildlife species were known to occur within the Tajiguas Landfill Expansion Project area (three mammals, five birds and one amphibian), and 30 additional species were considered to have potential to occur. The project was expected to impact one federally listed species, the California red-legged frog. These impacts are associated with on-going maintenance activities within the sedimentation basins. A California Red-legged Frog Management Plan, as required by mitigation measure BIO-8 of 01-EIR-05, has been developed to reduce these impacts and continues to be implemented; however, residual impacts were considered significant and unavoidable (Class I).

8. Impacts from the Tajiguas Landfill Expansion Project were expected to adversely affect mountain lion and ringtail through loss of habitat and increased human presence; these impacts were considered significant but mitigable (Class II); mitigation proposed (BIO-7, BIO-9 and BIO-10 in 01-EIR-05) for these species was expected to reduce the impacts to below a level of significance.

9. The removal of suitable habitat for the San Diego woodrat, due to the more sedentary nature of this species, was expected to be a significant and unavoidable impact of the Tajiguas Landfill Expansion Project. Though this would be partially offset by mitigation measures (BIO-5 in 01-EIR-05: surveys and relocation of woodrats), residual impacts were expected to remain significant (Class I).

10. Impacts to four sensitive bird species (California horned lark, loggerhead shrike, Cooper's hawk and white-tailed kite) known from the site would include removal of habitat used for foraging and, potentially, breeding. Due to the abundance of habitat remaining in the vicinity of the Tajiguas Landfill Expansion Project, and the lower sensitivity status of these species, the impacts would be considered significant but mitigable. The proposed revegetation during phased closure of the landfill would reduce impacts to the sensitive bird species to less than significant (Class II).

11. The Tajiguas Landfill Expansion Project was considered to have potential indirect impacts to the tidewater goby, which has been found in the adjacent Arroyo Quemado and Arroyo Hondo. These impacts may occur as a result of increased sedimentation and predation by gulls. Potential impacts to the goby were considered significant but mitigable. Implementation of mitigation measures provided by 01-EIR-05 (BIO-6 and NUI-2) were expected to reduce potential impacts to less than significant levels (Class II).

12. The Tajiguas Landfill Expansion Project was projected to potentially remove food plants (e.g., milkweed) for the monarch butterfly. This was considered a potentially significant, but mitigable, impact. Implementation of mitigation measures provided by 01-EIR-05 (BIO-11) was expected to reduce potential impacts to monarchs to less than significant levels (Class II).

4.3.2.3 Approved Tajiguas Landfill Reconfiguration and Baron Ranch Restoration Project

The following summarizes the impacts to biological resources identified in 08EIR-00000-00007 (see Section 4.4.2.3) for the Tajiguas Landfill Reconfiguration and Baron Ranch Restoration Project (Reconfiguration Project).

1. The Reconfiguration Project would result in the permanent loss of 4.1 acres of sensitive vegetation communities and 4.2 acres of other native vegetation communities and potentially indirectly reduce the quality of these habitats in adjacent areas. The loss of these habitats was considered a significant and unavoidable impact (Class I). Despite mitigation (MM BIO-1[a], Restoration Plan implementation; MM BIO-1[b], minimization of impacts to adjacent areas; and MM BIO-1[c], control of highly invasive plants), residual impacts were considered significant and unavoidable.

2. The Reconfiguration Project would result in the additional loss of individuals of three species of sensitive plants (Plummer's baccharis, Santa Barbara honeysuckle, and Hoffmann's nightshade). Although mitigation provided by MM BIO-1(a) would minimize impacts to sensitive plants, residual impacts were expected to remain significant (Class I).

3. The Reconfiguration Project would result in the loss of specimen native trees. Although mitigation provided by MM BIO-1(a) and MM BIO-1(b) would minimize impacts to specimen native trees, residual impacts were expected to remain significant (Class I).

4. The filling of Pila Creek related to the Reconfiguration Project would result in the loss of 0.30 acres of USACE-defined wetlands and 5.03 acres of CDFW/RWQCB/County-defined wetlands. The implementation of MM BIO-1(a) and MM BIO-1(b) of 08EIR-00000-00007 was expected to reduce impacts to less than significant levels (Class II).

5. The Reconfiguration Project would result in mortality and habitat loss for common wildlife species. These impacts were considered adverse but less than significant (Class III) because the proposed landfill reconfiguration was not expected to reduce these wildlife populations below self-sustaining levels. However, MM BIO-5(a) (replacement water source) and MM BIO-5(b) (night lighting) were proposed to further address impacts to common wildlife.

6. The removal of the in-channel sedimentation basins and adjacent native habitats related to the Reconfiguration Project would result in loss of breeding and foraging habitat and potentially result in direct impacts to individual threatened California red-legged frogs from Pila Creek. Despite mitigation (MM BIO-6, California Red-legged Frog Management Plan implementation), residual impacts were considered significant and unavoidable (Class I).

7. The Reconfiguration Project would result in habitat loss that would adversely affect the San Diego desert woodrat. The incremental project impact was determined to be a significant but mitigable impact (Class II), through implementation of MM BIO-7 (San Diego desert woodrat relocation). Consistent with the approved Landfill Expansion Project, residual impacts were considered significant and unavoidable.

8. The Reconfiguration Project would result in habitat loss that would adversely affect American badger and ringtail. Removal of active dens during the breeding period was determined to be a potentially significant impact (Class II). This potential impact was mitigated with the implementation of MM BIO-8 (American badger and ringtail surveys) and residual impacts were determined to be less than significant.

9. The Reconfiguration Project would adversely affect two-striped garter snake. The proposed filling of the in-channel basins would result in the loss of several individuals and affect the long-term persistence of the local population, which was considered a potentially significant impact (Class II). This impact was mitigated with the implementation of MM BIO-9 (two-striped garter snake relocation), which would reduce residual impacts to a less than significant level.

10. The Reconfiguration Project would result in removal of the in-channel basins, which would eliminate potential habitat for the western pond turtle in Pila Creek. This was determined an adverse impact, but less than significant (Class III). Although mitigation was not required, MM BIO-10 (western pond turtle relocation) was implemented to avoid potential impacts to the species.

11. Habitat loss resulting from the Reconfiguration Project could significantly affect raptors including the white-tailed kite, Cooper's hawk, red-tailed hawk, and great horned owl, which was determined to be a Class II impact. Impacts were reduced to a less than significant level through the implementation of MM BIO-11 (avoidance of raptor breeding period).

12. Habitat loss resulting from the Reconfiguration Project would adversely affect raptors including the sharp-shinned hawk, ferruginous hawk, Swainson's hawk, northern harrier, osprey, merlin, and American peregrine falcon. This impact was determined to be less than significant (Class III).

13. Vegetation removal resulting from the Reconfiguration Project could significantly affect other sensitive birds and nesting migratory birds, which was considered to be a significant impact (Class II). This impact was reduced to a less than significant level through the implementation of MM BIO-13 (avoidance of migratory bird breeding period).

14. The removal of trees and rock outcrops resulting from the Reconfiguration Project could eliminate habitat for sensitive bat species. The project would permanently eliminate habitat for bat maternity roosts and had the potential to result in direct mortality of individual bats. Any permanent or temporary impacts of occupied maternity roosts were determined to be a significant impact (Class II). This impact was reduced to a less than significant level through the implementation of MM BIO-14 (avoidance of bat maternity colonies).

15. The filling of Pila Creek resulting from the Reconfiguration Project may adversely affect habitat connectivity and wildlife corridors. However, this impact was determined to be less than significant (Class III).

4.3.2.4 Proposed Tajiguas Resource Recovery Project

The following impact analysis addresses each of the proposed project components including the MRF, AD Facility, composting area, energy facility, tanks, Well 6, water pipelines, power lines and landfill maintenance building.

Impact TRRP BIO-1: Implementation of the proposed project would result in the permanent loss of approximately 3.33 acres of non-native and native vegetation communities within the project impact area which would be an adverse but less than significant biological impact – Class III Impact.

Implementation of the proposed project would result in the permanent loss of approximately 3.33 acres of vegetation communities (see Table 4.3-1 and Figure 4.3-1). This loss includes 1.09 acres of native vegetation communities/cover types (*Ceanothus megacarpus* chaparral and rock outcrops) and 2.24 acres of ruderal areas dominated by non-native plant species.

Although Venturan coastal sage scrub and *Ceanothus megacarpus* chaparral are not considered sensitive by Holland (1986) or the County within inland areas (1992, updated 2015 ~~2008~~), impacts to these vegetation communities were considered significant and unavoidable in 01-EIR-05 for the Tajiguas Landfill Expansion Project. The level of significance was based on the size (approximately 71 acres) of the native habitat impacted, the loss of the buffer from landfill activities that these communities afforded wildlife, and the reduction in areas available for wildlife species particularly those that are habitat specialists or require a large home range. The proposed project would impact 1.07 additional acres of *Ceanothus megacarpus* chaparral. Due to the small area of anticipated permanent loss of this common native vegetation community, permanent impacts are considered adverse but less than significant.

Impact TRRP BIO-2: Construction activities may adversely affect sensitive vegetation located adjacent to the direct impact area – Class II Impact.

Construction activities may cause indirect temporary impacts within 0.89 acres of sensitive vegetation communities (0.22 acre of California bay seep woodland, 0.39 acre of coast live oak woodland, and 0.28 acre of southern coast live oak riparian forest) identified within 200 feet of the direct impact area. These temporary impacts may include increased fugitive dust, introduction of invasive or weedy species, soil erosion, and run-off which could compromise plant respiration, photosynthesis, and growth.

Mitigation Measures:

MM TRRP BIO-1: Construction Requirements.

- To prevent inadvertent damage to sensitive vegetation adjacent to work areas, the construction disturbance area shall be clearly delineated on the project construction plans and in the field by staking, fencing, or equivalent methods. Field delineation shall occur prior to beginning ground-disturbing activities or vegetation removal.
- RRWMD shall monitor the project area and, where feasible, control infestations of plants identified as highly invasive by the California Invasive Plant Council. Invasive plants shall not be planted at project facility sites for erosion control or other uses.
- Throughout construction, exposed soil within active construction areas shall be periodically wetted to prevent excessive fugitive dust from drifting into adjacent areas.
- In construction areas where excessive erosion may occur, soil shall be stabilized through the use of appropriate measures such as silt fencing, straw wattles, and/or hydroseeding.

Plan Requirements and Timing: These measures shall be included in the project's plans and specifications, and implemented during the entire construction period for each proposed facility.

Monitoring: RRWMD shall ensure these measures are fully implemented during the construction period.

Residual Impacts: Implementation of ***MM TRRP BIO-1*** would reduce biological resources **Impact TRRP BIO-2** to a level of less than significant.

Impact TRRP BIO-3: Construction activities would result in an adverse but less than significant direct loss of wildlife habitat and adverse but less than significant impact to wildlife habitat located adjacent to the direct impact area – Class III Impact.

The proposed project would result in the permanent loss of 3.33 acres of habitat for common wildlife species during clearing and grubbing prior to construction, primarily near the western and eastern ridges of Cañada de la Pila. Common wildlife species (especially small mammals and reptiles with low mobility) may be inadvertently killed or injured during construction activities, though many birds and large mammals that have higher mobility are less likely to be crushed during the construction of proposed facilities.

Project construction activities would result in indirect temporary impacts to wildlife habitat and common wildlife species, such as increased fugitive dust, elevated noise levels, and increased human activity within and adjacent to the Resource Recovery Project facility sites. However, storage of construction materials and staging of equipment would not affect wildlife or wildlife habitats because these types of project activities would be limited to existing disturbed landfill areas. Indirect construction-related impacts to common wildlife species are considered an adverse but less than significant impact because the project would affect only a small amount of native habitat, other undeveloped areas of the landfill property and neighboring properties are available for use by common wildlife species, and the project is not expected to reduce common wildlife populations below self-sustaining levels.

Impact TRRP BIO-4: Construction activity may significantly affect nesting migratory birds and/or raptors – Class II Impact.

Construction activities during the nesting season could directly impact active nests or cause abandonment or failure of nests, which would be inconsistent with the MBTA and Section 3503.5 of the California Fish and Game Code. Nesting birds affected may include special-status species, such as Cooper's hawk and southern California rufous-crowned sparrow. It should be noted that construction activities would occur in areas already subject to significant noise and dust from existing landfill operations, and the species present are likely to be habituated to the existing noise environment.

Mitigation Measures:

MM TRRP BIO-2: Breeding Bird Protection.

- Clearing and grubbing of areas of native habitat or areas immediately adjacent to native habitat shall avoid the migratory bird and raptor breeding season (February 1 to August 15).
- If construction in these areas cannot be avoided during this period, a nest survey within the area of impact and a 200 foot buffer for passerines and any available raptor nesting areas within 500 feet shall be conducted by a qualified biologist no earlier than 14 days and no later than 5 days prior to any native habitat removal or ground disturbance to determine if any nests are present.
- If an active nest is discovered during the survey, a buffer of 200 feet for migratory birds or 500 feet for raptors (or as determined by the biologist based on a field assessment) would be established around the nest. No construction activity may occur within this buffer area until a biologist determines that the nest is abandoned or fledglings are adequately independent from the adults.

Plan Requirements and Timing: The survey shall be conducted by a qualified biologist and the measures shall be included in the project's plans and specifications, and implemented during the entire construction period for each proposed facility.

Monitoring: RRWMD shall ensure these measures are fully implemented during the construction period.

Residual Impacts: Implementation of ***MM TRRP BIO-2*** would reduce biological resources **Impact TRRP BIO-4** to a level of less than significant.

Impact TRRP BIO-5: Project construction activities would result in a less than significant loss of special-status plant species – Class III Impact.

As indicated in Table 4.3-2 and presented in Figure 4.3-1, approximately 15 individuals of two sensitive plant species occur within the project impact area, eight Plummer's baccharis and seven Santa Barbara honeysuckle. Ten additional Plummer's baccharis are located near the water tanks site, but would be avoided. The eight Plummer's baccharis that would be removed are located along the pipeline/power line alignment to proposed Well no. 6. These individuals are part of a group of plants that are within the disturbance footprint of the Reconfiguration Project and were assumed to be removed as part of that project.

Although the plants have not yet been removed, impacts to these plants were mitigated through planting and maintenance of 30 plants at the Baron Ranch. The seven Santa Barbara honeysuckle plants to be removed have already been offset through planting 40 individuals at Baron Ranch as mitigation for loss of 13 plants as part of the Reconfiguration Project. Therefore, loss of these plants has already been mitigated and impacts would be less than significant.

Impact TRRP BIO-6: Project construction activities would result in an adverse but less than significant loss of California red-legged frog upland dispersal habitat – Class III Impact.

California red-legged frogs have been known to occur within the immediate vicinity of the project impact area (ERA 2008, Padre Associates, Inc. 2012), primarily within Pila Creek prior to its channelization and within the sedimentation basins prior to their removal. As part of the Reconfiguration Project and included in the USFWS Biological Opinion, California red-legged frogs were relocated from the landfill site to Arroyo Quemado east of the landfill. However, the authority to relocate frogs is granted by the Biological Opinion for the Reconfiguration Project and only permitted for specified reconfiguration activities and will expire when that project is completed.

Compensation for the loss of California red-legged frog habitat at the landfill as a result of the Reconfiguration Project has been provided through habitat restoration and enhancements at Baron Ranch and through the proposed protection in-perpetuity of approximately 30 acres of occupied habitat in the Arroyo Quemado watershed.

The in-channel sedimentation basins were removed, the north sedimentation basin (formerly the out-of-channel basin) was reconstructed and modified to minimize ponding of water, seeps within Pila Creek were removed, and Pila Creek was channelized as part of the Reconfiguration Project. These actions have resulted in the removal of breeding habitat, and permanent or semi-permanent water sources suitable for California red-legged frog. Upland habitat surrounding former habitat locations has also been substantially modified. California red-legged frogs have only rarely been observed at the Tajiguas Landfill during numerous focused surveys conducted since 2012. ~~not been observed at the landfill during surveys conducted during the 2012/2013 rainy season; the last observation of California red-legged frog occurred on April 19, 2012 (Padre Associates, Inc. 2012).~~

California red-legged frogs are present in Arroyo Quemado and Arroyo Hondo and the landfill site is within a potential dispersal corridor between these two known locations. The proposed project would permanently remove a small amount of upland native vegetation on the western ridge of Cañada de la Pila that California red-legged frogs may pass through during their movement from one habitat area to another. It is recognized that California red-legged frogs may travel through various habitat types when dispersing to and from breeding habitat without apparent regard to vegetation type or topography (Bulger et al. 2003). Due to the lack of permanent or semi-permanent water near any of the proposed facility locations, the frogs would only be expected as transients.

The removal of this native vegetation would expand the area of exposed ground for frogs to cross during overland movement, increasing the chances of predation. However, impacts to the California red-legged frog would be considered less than significant considering the very low likelihood of the presence of a California red-legged frog within these upland areas and the small amount of proposed native vegetation removal.

Impact TRRP BIO-7: Construction-related loss of habitat may result in an adverse but less than significant reduction in foraging opportunities for transient special-status birds - Class III Impact.

Sharp-shinned hawk, ferruginous hawk, northern harrier, white-tailed kite and loggerhead shrike have been observed at the landfill site or vicinity and may forage within the project impact area. Impacts to these species are considered less than significant due to the small area of habitat removal as compared to their typical foraging area, and the lack of suitable nesting habitat at the landfill site.

Impact TRRP BIO-8: Project-related habitat loss could adversely affect American Badger and Ringtail – Class II Impact.

American Badger

Based on numerous field surveys conducted as part of preparation of 01-EIR-05 and 08EIR-0000-00007, American badger has not been detected within the landfill property. However, this species was evaluated to have a moderate to high potential to occur based on known distribution of the species and suitable habitat within the Study Area. The proposed project would result in the loss of 1.07 acres of foraging, breeding, and natal denning habitat such as open sage scrub and chaparral.

Because this species is mobile and can avoid construction activities, direct and indirect impacts to this species are not anticipated unless clearing and grubbing occurs during the natal denning period (March through August) when the species is less mobile. Disturbance of occupied natal dens or direct mortality of individual badgers during clearing, grubbing and construction would be considered an adverse and significant impact.

Ringtail

The ringtail has not been directly detected within the project impact area; however, the species was evaluated to have a high potential to occur based on detection of this species within Cañada de la Pila (Hunt and Associates, 2001), known distribution of the species, and suitable habitat within the Study Area. The proposed project would result in the loss of 1.07 acres of foraging, breeding, and natal denning habitat which may include rock recesses, tree hollows, logs, snags, abandoned burrows, or woodrat nests. Because this species is mobile and can avoid construction activities, direct and indirect impacts to this species are not anticipated unless clearing and grubbing occurs during the breeding and natal denning period (February through August) when the species is less mobile. Disturbance of occupied natal dens or direct mortality of individual ringtails during clearing, grubbing and construction would be considered an adverse and significant impact.

Mitigation Measure ***MM TRRP BIO-3*** provides for pre-construction surveys of the impact area immediately prior to construction activities to maximize detection and relocation of these animals.

Mitigation Measures:

MM TRRP BIO-3: American Badger and Ringtail Surveys. Prior to any ground disturbing construction activities within the badger or ringtail natal denning period (February to August), the area scheduled for clearing and grubbing shall be surveyed for American badger and ringtail. If a badger or ringtail den is observed a qualified biologist shall monitor the den to determine if it is an active or an abandoned den. If the biologist determines that the den is not active, the biologist shall dismantle the den immediately and the construction activity can be initiated. If the biologist determines that the den is an active natal den, the biologist shall mark the den and establish a buffer (300 feet or as determined appropriate by the biologist based on field conditions) surrounding the active den. No ground disturbing work shall take place within this buffer. The biologist shall monitor the active den until the den is abandoned. Once abandoned, the den shall be filled/dismantled and construction activities can commence.

Plan Requirements and Timing: These measures shall be included in the project's plans and specifications. Surveys shall be conducted by a qualified biologist familiar with American badger and ringtail prior to clearing of native vegetation, if the clearing occurs during the period from February to August.

Monitoring: RRWMD shall monitor for compliance. The biologist shall submit a report to RRWMD regarding the result of the pre-disturbance surveys and the relocation efforts following destruction of the den.

Residual Impacts: With avoidance of the breeding period or survey and avoidance of active breeding dens, impacts to American badgers and ringtails associated with the proposed project are unlikely to substantially affect the local populations and residual impacts would be less than significant.

Impact TRRP BIO-9: Project-related habitat loss could significantly impact the San Diego desert woodrat – Class II Impact.

San Diego desert woodrat is known to occur in rock crevices in mature chaparral north of the approved landfill footprint (Hunt and Associates, 2001), and woodrat nests (unidentified species) have been previously identified within the area affected by landfill reconfiguration. San Diego desert woodrats could be affected by habitat removal and by direct mortality due to the limited mobility of this species. The proposed project would directly and permanently eliminate a small area (1.07 acres) of nesting and foraging habitat for this species during clearing, grubbing, and infrastructure construction. Habitat loss and/or direct mortality associated with construction of the proposed project would represent a significant but mitigable biological impact.

Mitigation Measures:

MM TRRP BIO-4: San Diego Desert Woodrat Relocation.

- Prior to initial clearing and grubbing in areas of previously-undisturbed native habitat, the area shall be surveyed for the San Diego desert woodrat.
- Prior to initiation of construction, any woodrat nests considered active would be dismantled to entice occupants to leave the area and build new nests outside of the project impact area. Dismantling is recommended during the fall, following the breeding season to minimize the potential to affect reproduction and/or cause increased mortality to the species.

Plan Requirements and Timing: These measures shall be included in the project's plans and specifications. Surveys and nest dismantling (if needed) shall be conducted immediately prior to clearing of native vegetation.

Monitoring: The biologist shall submit a report to RRWMD regarding the result of the pre-disturbance surveys and of the relocation efforts following dismantling of the nest.

Residual Impacts: Impacts to San Diego desert woodrat associated with the proposed project are unlikely to substantially affect the local population and residual impacts would be less than significant.

Impact TRRP BIO-10: Project-related removal of trees and rock outcrops may eliminate and/or disturb habitat for sensitive bat species – Class II Impact.

Four bat species listed as CDFW species of special concern (pallid bat, Townsend's big-eared bat, western mastiff bat, and big free-tailed bat) were determined to have a moderate potential to roost and/or forage within the Study Area (see Table 4.3-3). In general, habitat modifications resulting from implementation of the Reconfiguration Project, particularly the reduction of available surface water at the landfill, and the elimination of the riparian corridor in the lower portion of the Pila Creek drainage have diminished the potential that these bats would utilize the project impact area.

The proposed project would result in the removal of 0.02 acres of rock outcrop within the utility corridor to the proposed Well no. 6 site. The rock outcrop is part of a rock cliff face that occurs along a ridge perpendicular to the channelized portion of Pila Creek. Because the area of rock outcrop that would be impacted is low to the ground and close to the active disturbance of the landfill, it is unlikely that it would serve as a location for bat day roosting as day roost sites are typically more cryptic and protected. Higher parts of the rock outcrop or trees with cavities within the Study Area may be more suitable as bat day roost locations. The rock outcrop may be used for night roosts, which are resting areas between foraging flights.

While bats are not likely to roost in the project impact area and no known roosts are present within the Study Area, construction activities may result in temporary disturbance and/or permanent habitat loss. Substantial disturbance of maternal roosts would be considered an adverse and significant impact.

Mitigation Measures:

MM TRRP BIO-5: Avoidance of Bat Maternity Colonies.

- Removal of rock outcrops and construction of project-related facilities in the vicinity of potential bat habitat such as trees and rock outcrops shall avoid the peak breeding season (May 1 to August 15), unless a bat survey by a qualified biologist is completed to determine presence or absence of maternity colonies. Bat surveys shall be conducted no longer than a week prior to any construction in the vicinity of such habitat.
- If no maternity colonies are observed, construction can proceed without restriction.
- If active bat maternity colonies are discovered during the survey, a buffer of 500 feet shall be established around the bat maternity colonies. No construction activity may occur within this buffer area until a biologist determines that the young are independent of the adults.

Plan Requirements and Timing: These measures shall be included in the project's plans and specifications. Surveys shall be conducted prior to removal of rock outcrops or construction work adjacent to bat habitat, when construction work is planned for the peak bat breeding period.

Monitoring: RRWMD shall monitor compliance with the measure.

Residual Impacts. Implementation of these mitigation measures would reduce impacts to bat maternity colonies (**Impact TRRP BIO-10**), and residual impacts would be less than significant.

Impact TRRP BIO-11: Operation of the proposed project may result in an adverse but less than significant impact to common wildlife species – Class III Impact.

Habitat quality adjacent to project facilities would be reduced through the encroachment of landfill infrastructure (i.e., tanks and associated pipelines). Project-related operations would generate noise, dust, mobile equipment activity and odors, and may reduce the habitat value of adjacent areas to common wildlife species. However, the habitat area affected would be small (a few acres) and approximately 200 acres would remain available on the landfill property for use by these common species.

Operation of the project would result in indirect and permanent impacts to wildlife primarily due to the increase in the amount and duration of human activity at the landfill. The MRF and AD Facility would require additional personnel and operated 24 hours per day, seven days per week. Waste delivery would only occur during the existing landfill operating hours; however, MRF processing, operation of the AD Facility and energy facility, and off-site transport of recyclable materials would occur during the evening. Increased motor vehicle activity at night may also result in increased mortality to wildlife from vehicle collisions. Vehicles driving off-road and vehicles driving during rainy conditions may also increase the potential for wildlife road kill incidents at the landfill.

Increased human activity, lighting, and noise may result in more secretive species further avoiding areas of active operations within habitat areas surrounding project facilities, particularly at night. Conversely, the night lighting may attract additional insects that could be preyed upon by nocturnal species such as bats.

MSW and SSOW would be off-loaded and contained within the enclosed MRF and AD Facility, respectively, and, as such, would not provide an additional attractant to opportunistic nocturnal species such as the striped skunk (*Mephitis mephitis*), common raccoon (*Procyon lotor*), and Virginia opossum (*Didelphis virginiana*), which may prey on other sensitive wildlife, or diurnal opportunists such as gulls, though they are currently controlled under a falconry program. Overall, operational impacts to common wildlife are expected to be less than significant, due to the small area of wildlife habitat affected.

Impact TRRP BIO-12: Operation of the proposed project may significantly impact transient California red-legged frogs – Class II Impact.

As discussed in Section 4.3.1.3, removal of all breeding habitat was conducted as part of the Reconfiguration Project, and very few California red-legged frogs have ~~not~~ been observed at the landfill since April 2012. California red-legged frogs are present in Arroyo Quemado and Arroyo Hondo and the landfill is located between these two known locations, within dispersal distance. Due to the disturbed and relatively barren nature of the landfill site and lack of breeding habitat, California red-legged frogs are not expected to inhabit the landfill, including proposed facility sites. However, ~~there is a small potential that~~ California red legged frogs may be present while making overland dispersal movements, which typically occur at night and/or during or following rain events.

Currently, nighttime activities do not occur at the landfill. With implementation of the project, nighttime activities would occur at the operations deck area in association with operation of the MRF and AD Facility, including use of the paved roads between the landfill entrance and the MRF/AD Facility site by employees and for transport of commodities from the MRF. California red-legged frogs have not been observed at the proposed MRF and AD Facility sites, or on paved roads between the landfill entrance and the operations deck during past nighttime surveys. However, when aquatic habitat was present in the back canyon area (prior to implementation of the Reconfiguration Project) frogs were infrequently observed on unpaved back canyon roads north of the operations deck.

The potential for California red-legged frogs to be present in the vicinity of project operations is considered low. However, if present, conflicts with equipment activity and motor vehicle use may occur (particularly at night) and direct impacts (crushing) to transient frogs would be potentially significant.

The proposed project would marginally increase storm water flow into Pila Creek and/or the existing north sedimentation basin during rain events due to additional run-off from project facility sites. However, these flows would only occur during storm events or immediately following storm events. Therefore, these flows are not expected to provide sufficient water to support breeding by California red-legged frog. In addition, the north sedimentation basin is equipped with a skimmer to maintain minimum water levels. Therefore, project-related storm water discharges are not anticipated to attract California red-legged frog to the landfill.

Mitigation Measures:

MM TRRP BIO-6: Avoidance and Minimization Measures for California Red-legged Frog and Sensitive Mammal Species.

- Lighting used on the project facilities shall be of low intensity, low glare design and shall be hooded to direct the light downward and prevent spill-over onto adjacent undisturbed habitat areas.
- Use of artificial lighting shall be minimized and used on an as needed basis.
- To reduce hazards to wildlife that may ingest or become trapped by debris, portable fences shall continue to be used to limit the spread of litter on the working face of the landfill and around project facilities.
- Litter shall be collected on a regular basis (Litter Control Program, see Section 3.5.9.2).
- Vehicles travelling on the landfill shall observe posted speed limits at all times.

- Nighttime motor vehicle travel within the landfill shall be limited to established paved roads and parking areas.
- Nighttime vehicle access and operational activities shall be limited to paved areas surrounding and south of the MRF and AD Facility. Access to back canyon area of the landfill property shall be restricted to daylight hours, unless access is required by landfill personnel in response to an emergency.
- Worker environmental awareness training shall be provided to all personnel prior to project implementation, including information on potential sensitive biological resources at the landfill site.
- Prior to project implementation in previously undisturbed areas, the area scheduled for clearing shall be surveyed by a qualified biologist familiar with all of the sensitive species with the potential to occur at the landfill site. In the event that sensitive species are identified, a buffer around the individual shall be established and the individual shall be monitored until it leaves the construction area.
- Project-related construction in undisturbed areas and in the back canyon area (e.g., for installation of Well 6) shall be limited to daylight hours.
- A biologist shall monitor construction activities during initial ground disturbance in previously undisturbed native plant communities. The biologist shall have the authority to stop work and shall immediately contact the RRWMD if unintended effects to sensitive species occur.

Plan Requirements and Timing: These measures shall be included in the project's plans and specifications and in the contractual agreements with the project vendor. Surveys shall be conducted prior to or during construction, or during project operation, as indicated.

Monitoring: RRWMD shall monitor compliance with the measures.

Residual Impacts. Implementation of these mitigation measures would reduce impacts to California red-legged frog, and residual impacts would be less than significant.

Impact TRRP BIO-13: Operation of the proposed project may significantly impact ringtail, San Diego desert woodrat and American badger – Class II Impact.

As discussed above for California red-legged frog, the project would result increase daytime activity and introduce nighttime activity at the landfill site. Mortality of ringtail, San Diego desert woodrat and American badger may occur as a result of increased equipment and motor vehicle activity, especially at night. These impacts are considered potentially significant.

Mitigation Measures:

Implementation of Mitigation Measure ***MM TRRP BIO-6*** would reduce the potential for project-related mortality of these sensitive mammal species.

Residual Impacts. Implementation of these mitigation measures would reduce impacts to sensitive mammals to a level of less than significant.

Impact TRRP BIO-14: The project-related construction disturbance and habitat loss may result in an adverse but less than significant impact on habitat connectivity and wildlife corridors – Class III Impact.

The majority of the land within, north, and west of the Study Area provides suitable habitat and cover, and may be used by wildlife moving between the coastal foothills and the Santa Ynez Mountains north of the Study Area. Wildlife movement along Cañada de la Pila is currently constrained by the recently completed concrete channel and spillway, active portions of the landfill, and culverts at the landfill access road, U.S. Highway 101, and the Union Pacific Railroad.

Proposed facility sites are located within or immediately adjacent to active areas of the landfill, which is composed of steep graded hillsides, dirt and paved roads, ruderal areas devoid of vegetation, and other outbuildings associated with active landfill operations. These developed and active portions of the Tajiguas Landfill provide little value to resident and transient wildlife. Construction of the proposed project would incrementally encroach on potential wildlife movement corridors, the coastal canyons of Arroyo Hondo to the west and Arroyo Quemado and Baron Ranch to the east.

Habitat restoration activities occurring at Baron Ranch as mitigation for impacts from the Reconfiguration Project likely benefit wildlife movement by enhancing the cover along and immediately adjacent to Arroyo Quemado, which provides relatively unobstructed connectivity between the coastal foothills and the Santa Ynez Mountains. Due to the distance and topographic separation between project facility sites and these corridors (at least 1,800 feet), construction-related habitat loss and disturbance would not significantly reduce the value of Arroyo Hondo and Arroyo Quemado as potential wildlife movement corridors.

Impact TRRP BIO-15: Operation of the proposed project may result in an adverse but less than significant impact on habitat connectivity and wildlife corridors – Class III Impact.

Operation of the proposed project would involve increased equipment and motor vehicle activity and night lighting, and introduce nighttime operations to the landfill site. As discussed above, proposed facility sites are located within developed and active portions of the Tajiguas Landfill and provide little value to resident and transient wildlife. However, project-related activities may incrementally encroach on potential wildlife movement corridors, such as the adjacent coastal canyons of Arroyo Hondo to the west and Arroyo Quemado and Baron Ranch to the east. Project-related impacts to these potential movement corridors are considered less than significant due to distance and topographic separation between project facility sites and these corridors (at least 1,800 feet).

Relocated Landfill Facilities

Operations facilities (primarily portable offices) may be temporarily relocated during the project construction period to an area north of the landfill top deck or to the southern portion of the landfill. Landfill equipment maintenance facilities would be relocated to the area north of the landfill top deck (see Figure 3-4). These facilities would be located within and adjacent to existing disturbed areas of the landfill property and activities in these areas would occur during daylight hours. Therefore, construction and use of these relocated facilities would not result in any additional impact to biological resources.

4.3.2.5 Proposed Tajiguas Resource Recovery Project with Optional Comingled Source Separated Recyclables (CSSR) Component

The optional CSSR element would add an additional 10,000 square feet to the MRF building. Additionally, the number of employees on the site would increase by 20 during the day and there would be additional deliveries of recyclable materials and transport of sorted materials off-site after processing. The additional 10,000 sf of building area would on the operation deck within the same disturbance footprint associated with the project. Therefore, there would be no increase in habitat loss or construction–related disturbance. Because the additional building area would be within the proposed project disturbance area, additional impacts to biological resources due to the increases in noise, dust and equipment activity would be minimal. The additional 20 employees would increase vehicle traffic and human activity at the site, but would occur during the day when wildlife conflicts are less common. Overall, a small increase in operational impacts to wildlife would occur, but would not alter the significance level of these impacts as identified in Section 4.3.2.4 above.

4.3.2.6 Extension of Landfill Life Impacts

Impact TRRP BIO-16: Project-related extension of life of the Tajiguas Landfill would extend biological impacts further in time – Class I Impact (delay in the landfill cover revegetation and for continued abandonment and avoidance of foraging and breeding habitat by sensitive wildlife), Class II (indirect impacts to ringtail and mountain lion due to human activity), and Class III (invasive plants, nuisance birds and common wildlife).

As discussed in Section 3.4, the project-related increase in diversion of MSW would result in extending the active life of the landfill by approximately 10 years and delaying full closure and revegetation of the landfill. Although phased closure activities including restoration of areas to native habitat would occur during this time, landfill operational activities would continue to occur in areas analyzed in the prior Environmental Documents. No new disturbance or direct biological impacts (i.e., vegetation, habitat or sensitive plant species removal) would occur due to the potential extension of the landfill life and operations. However, indirect biological impacts associated with ongoing landfill operations (noise, dust, equipment operations and human activity) including impacts to habitat from introduction of invasive plants (Class II), abandonment or avoidance of foraging and breeding habitat by sensitive birds and mammals due to landfill operations and human activity (Class I), increased attraction of nuisance birds (Class II) and impacts to mountain lion and ringtail due to increased human presence (Class II) (see Section 4.3.2.2, Impacts 2, 5, 6, 8) would be extended.

In addition, disturbance and mortality to common wildlife species (Class III) (see Section 4.3.2.3, Impact 5) would continue further in time as compared to closure of landfill in approximately 2026 in the absence of the proposed project. These indirect impacts would continue to be minimized through implementation of mitigation measures (erosion control, nighttime lighting control, litter control, creek setback) as discussed in Sections 4.3.2.2 and 4.3.2.3.

4.3.2.7 Decommissioning Impacts

Impact TRRP BIO-17: Decommissioning activities would result in indirect impacts to adjacent native vegetation and wildlife habitat, and temporarily affect California red-legged frog dispersal habitat – Class III Impact.

Removal of project facilities (buildings, percolate tanks, bio-filters, buried pipelines, etc.) would occur within the project impact area as shown in Figure 4.3-1. Therefore, no additional native vegetation or wildlife habitat would be removed. Indirect impacts to adjacent sensitive vegetation would be much less than identified for construction (see **Impact TRRP BIO-2**) because this vegetation is located near Well 6 and the recycled water and potable water tanks, and these project facilities would not be affected by decommissioning activities.

Decommissioning activities would temporarily affect potential California red-legged frog dispersal habitat, similar to construction activities as discussed under **Impact TRRP BIO-6**. However, this species is very rarely observed during biological monitoring conducted for all wet season construction work at the Landfill. Since the intensity and total activity associated with decommissioning would be less than construction, similar to **Impact TRRP BIO-6**, decommissioning impacts are considered less than significant.

4.3.2.8 Cumulative Impacts of the Tajiguas Resource Recovery Project

The proposed project would incrementally contribute to cumulative impacts to biological resources when considered with other planned projects in the region (see Section 3.6).

Impact TRRP BIO-CUM-1: Implementation of the project combined with other cumulative projects could result in significant impacts to transient California red-legged frogs – Class I Cumulative Impact; Project Contribution – Not Considerable with Mitigation (Class II).

In addition to the proposed project, several other projects are located in areas supporting California red-legged frog, and may also adversely impact habitat for this species or movement of transient individuals, including:

- ~~Las Varas/Edwards Ranch: impacts to California red-legged frog may include temporary habitat disturbance associated with bridge construction at Gato Creek (less than 0.1 acres), and encroachment of development along drainages;~~
- Paradiso del Mar: a proposed utilities crossing and trail construction at Eagle Canyon Creek would impact this species;
- Santa Barbara Ranch: impacts to California red-legged frog include temporary habitat disturbance associated with construction of a bridge over Tomate Canada Creek (less than 0.1 acres), and encroachment of development along drainages (URS, 2006);
- Refugio Road Bridges: impacts to California red-legged frog include temporary habitat disturbance and possibly construction-related mortality during bridge construction; ~~and~~

- Baron Ranch Trail extension: transient California red-legged frogs in Arroyo Quemado may be adversely affected by trail construction; and
- Lower Baron Ranch Trail improvements: trail realignment and bridge construction may adversely affect California red-legged frogs in Arroyo Quemado.

It should be noted that mandated creek setbacks (typically 100 feet) for development projects in rural areas and project specific monitoring, mitigation measures required through the CEQA review process or the endangered species permit process would reduce help impacts from these cumulative projects. Due to past sightings of transient California red-legged frog at the landfill site and the project-related increase in equipment and motor vehicle activity, the project would incrementally contribute to potentially significant impacts to the California red-legged frog.

However, implementation of Mitigation Measure ***MM TRRP BIO-6*** would reduce the project-specific impacts and the project's contribution to the cumulative impact would not be considerable.

Impact TRRP BIO-CUM-2: Implementation of the project combined with other cumulative projects could result in significant direct and indirect cumulative loss of native plant communities, sensitive habitats and sensitive plants – Class II Cumulative Impact; Project Contribution – Not Considerable with Mitigation (Class II).

The proposed project would result in the permanent loss of 1.09 acres of native vegetation (*Ceanothus megacarpus* chaparral and rock outcrops), and indirect temporary impacts within 0.89 acres of sensitive vegetation communities (0.22 acre of California bay seep woodland, 0.39 acre of coast live oak woodland, and 0.28 acre of southern coast live oak riparian forest). In addition, approximately 15 individuals of two sensitive plant species would be removed (Plummer's baccharis and Santa Barbara honeysuckle). Several other projects may also adversely impact these resources through construction activities in native habitats, introduction of invasive species, and native vegetation removal as a result of fuel management activities, including:

- San Jose Creek Bikeway: loss of sensitive native riparian vegetation;
- El Capitan Canyon campground expansion: loss of coastal sage scrub and Santa Barbara honeysuckle;
- ~~Las Varas/Edwards Ranch: loss of native vegetation and wildlife habitats;~~
- Paradiso del Mar: loss of about 3 acres of native vegetation and wildlife habitats;

- Santa Barbara Ranch: impacts to several special-status plant species, potentially including Santa Barbara honeysuckle and Plummer's baccharis, and loss of 146 acres of wildlife habitat (mostly annual grassland);
- Zacara Ranch Development: loss of native vegetation;
- Baron Ranch Trail extension: loss of native vegetation, including *Ceanothus megacarpus* chaparral;
- Hollister Avenue Bridge Replacement: loss of native riparian vegetation;
- Refugio Road Bridges: loss of native riparian vegetation; and
- Development of single family dwellings along the Gaviota Coast which may require localized vegetation removal and brush clearance to reduce fire hazards.

Given the biological sensitivity of the Gaviota Coast region, the cumulative effect from the construction of these projects could be potentially significant. Restoration/replacement of sensitive habitats and plants impacted by the cumulative projects would likely be required as a part of their respective CEQA analyses and the area and sensitivity of native vegetation that would be removed by the proposed project is low.

However, indirect impacts to sensitive vegetation and wildlife habitat may be significant. Implementation of Mitigation Measure ***MM TRRP BIO-1*** would reduce the project-specific impacts and the project's contribution to the cumulative impact would not be considerable and the overall impact would be reduced to a level of less than significant (Class II).

Impact TRRP BIO-CUM-3: Implementation of the project combined with other cumulative projects could result in a significant loss of foraging habitat for special-status birds – Class II Cumulative Impact; Project Contribution – Not Considerable (Class III).

Project-related habitat removal may adversely affect foraging opportunities for sharp-shinned hawk, ferruginous hawk, northern harrier, white-tailed kite and loggerhead shrike. Several other proposed or pending projects may also adversely these species including:

- San Jose Creek Bikeway: loss of riparian foraging habitat for special-status birds;
- El Capitan Canyon campground expansion: loss of potential foraging habitat for special-status birds;
- ~~Las Varas/Edwards Ranch: habitat loss and indirect impacts associated with development;~~
- Paradiso del Mar: loss of about 30 acres of vegetation, mostly suitable for foraging by special-status bird species;

- Santa Barbara Ranch: loss of 146 acres of grassland foraging habitat for sensitive raptors;
- Zacara Ranch Development: loss of native vegetation potentially suitable for special-status birds;
- Hollister Avenue Bridge Replacement: loss of native riparian vegetation potentially suitable for special-status birds;
- Refugio Road Bridges: loss of native riparian vegetation potentially suitable for special-status birds; and
- Baron Ranch Trail extension: loss of native vegetation potentially suitable for special-status birds.

Therefore, the cumulative impact would be potentially significant and would be subject to project specific mitigation measures implemented for each of the cumulative projects. Loss of foraging habitat associated with the Resource Recovery Project would be minimal, and the incremental contribution to the cumulative impact would not be considerable.

Impact TRRP BIO-CUM-4: Implementation of the project combined with other cumulative projects could result in a significant impacts to American badger and ringtail – Class II Cumulative Impact; Project Contribution – Not Considerable with Mitigation (Class II).

Project-related construction activities may result in disturbance of occupied natal dens and cause direct mortality of badgers and/or ringtails. In addition, project-related increases in activity at the landfill site (especially at night) may adversely impact these species. Several other projects may adversely impact these species through habitat loss or disturbance of occupied dens, including:

- San Jose Creek Bikeway: loss of riparian foraging habitat for ringtail;
- El Capitan Canyon campground expansion: removal of coastal sage scrub habitat suitable for badger;
- ~~Las Varas/Edwards Ranch: badger reported from Gato Canyon, loss of suitable habitat and indirect impacts associated with development;~~
- Paradiso del Mar: loss of about 12 acres of suitable grassland habitat for badger;
- Santa Barbara Ranch: loss of 146 acres of grassland foraging habitat for badgers;
- Zacara Ranch Development: loss of native vegetation potentially suitable for badger and ringtail; and
- Baron Ranch Trail extension: loss of suitable chaparral habitat for badger and ringtail.

Given the number of projects affecting habitat in the Gaviota Coast region, the cumulative effect of these projects would be potentially significant. Avoidance and habitat replacement measures for the cumulative projects would likely be required as a part of their respective CEQA analyses. Implementation of Mitigation Measures ***MM TRRP BIO-3*** and ***MM TRRP BIO-6*** would reduce the project-specific impacts and the project's contribution to the cumulative impact would not be considerable and the overall impact would be reduced to a level of less than significant.

Impact TRRP BIO-CUM-5: Implementation of the project combined with other cumulative projects could result in a permanent loss and significant degradation of San Diego desert woodrat habitat – Class II Cumulative Impact; Project Contribution – Not Considerable with Mitigation (Class II).

The proposed project would permanently remove a small area (1.07 acres) of nesting and foraging habitat for this species during clearing, grubbing, and infrastructure construction. In addition, project-related increases in activity at the landfill site (especially at night) may adversely impact San Diego desert woodrat. Several other projects may adversely impact habitat for this species, including:

- El Capitan Canyon campground expansion: removal of coastal sage scrub habitat suitable for San Diego desert woodrat;
- ~~Las Varas/Edwards Ranch: loss of suitable habitat and indirect impacts associated with development;~~
- Paradiso del Mar: loss of about one acre of suitable coastal sage scrub habitat;
- Santa Barbara Ranch: loss of 0.32 acres of suitable coastal scrub habitat; and
- Baron Ranch Trail extension: loss of chaparral habitat suitable for San Diego desert woodrat.

Given the number of projects affecting habitat in the Gaviota Coast region, the cumulative effects of these projects would be potentially significant. Avoidance, relocation and habitat replacement measures for the cumulative projects would likely be required as a part of their respective CEQA analyses. Implementation of Mitigation Measures ***MM TRRP BIO-4*** and ***MM TRRP BIO-6*** would reduce the project-specific impacts and the project's contribution to the cumulative impact would not be considerable and the overall impact would be reduced to a level of less than significant.

Impact TRRP BIO-CUM-6: Implementation of the project combined with other cumulative projects could result in a significant loss and/or disturbance of roosting habitat for sensitive bat species – Class II Cumulative Impact; Project Contribution – Not Considerable with Mitigation (Class II).

The project would result in the loss of 0.02 acres of rock outcrops suitable for crevice-roosting bats, and construction-related disturbance of adjacent roosting and foraging habitats. Several other projects may adversely impact these species through habitat loss or disturbance of roosting habitat, including:

- San Jose Creek Bikeway: no bats reported from the affected bridges, but construction may disrupt bat foraging;
- Hollister Avenue Improvements: project would affect the Atascadero Creek bridge, which may support roosting bats;
- ~~Las Varas/Edwards Ranch: habitat loss and development-related disturbance may disrupt bat foraging and roosting;~~
- Santa Barbara Ranch: habitat loss and development-related disturbance may disrupt bat foraging and roosting;
- Hollister Avenue Bridge Replacement: disturbance of a potential night roost for local bat populations;
- Sandspit Road Bridge Replacement: disturbance of a potential night roost for local bat populations; and
- Baron Ranch Trail extension: may result in loss or disturbance of suitable roosting habitat.

The abundance and distribution of bats in the Gaviota Coast region is poorly known, and the cumulative effects of these projects may be potentially significant. Avoidance and habitat replacement measures for the cumulative projects would likely be required as a part of their respective CEQA analyses. Implementation of Mitigation Measure ***MM TRRP BIO-5*** would reduce the project-specific impacts and the project's contribution to the cumulative impact would not be considerable and the overall impact would be reduced to a level of less than significant.