H. T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

MEMORANDUM

PROJECT# 3164-01

TO: Ms. Karli Grigsby
David J. Powers & Associates
1871 The Alameda, Suite 200
San Jose, CA 95126

FROM: Max Busnardo, M.S.
Associate Restoration Ecologist

DATE: 3 May 2011

SUBJECT: **City of San Jose Sewer Interceptor Project: Abbreviated Biotic Study**

As requested by the City of San Jose (City), this technical memorandum provides H. T. Harvey & Associates' assessment of the potential impacts to sensitive biotic resources from the proposed City of San Jose Sewer Interceptor Project (project). This memorandum was prepared for use in the preparation of the project's California Environmental Quality Act (CEQA) documentation.

PROJECT DESCRIPTION

The City of San Jose proposes to upgrade a portion of its current sewer infrastructure by replacing the existing West Interceptor, beginning upstream at the intersection of Commercial Street and North 5th Street, with a new interceptor. The existing West Interceptor is approximately 112 years old, and has exceeded its functional lifespan. A new junction structure will be required at the intersection of Commercial Street and North 5th Street, in order to hydraulically connect the existing Large and East Interceptors with the proposed sewer. The alignment continues west approximately 350 ft along Commercial Street until intersecting a new junction box, constructed at the intersection of Commercial and North 4th Street in order to hydraulically connect the proposed interceptor with the Large Interceptor. The proposed interceptor then turns north and travels for approximately 4,200 ft along the alignment of North 4th Street. The proposed interceptor also intersects the existing West Interceptor south of U.S. 101, where a new junction box is required to enable the crossing. The sewer then turns east and continues under U.S. 101 for approximately 450 ft.

The invert elevations of the proposed interceptor lie approximately 4 to 6 ft above the invert elevation of the existing Large Interceptor. Typical depth of cover over the proposed interceptor is approximately 9 ft.

The project site is located in a heavily urbanized area of San Jose, CA (Figure 1). The work alignment extends from the intersection of Commercial Street and North 5th Street, west approximately 350 ft along Commercial Street to the intersection of Commercial and North 4th Street, approximately 4,200 ft along North 4th Street, and east under U.S. 101 for approximately 450 ft. The area is characterized by extensive hardscape including multi-lane roads, highways 880 and 101, large parking lots, and industrial and commercial buildings. Vegetation in the project area is primarily composed of ornamental, landscape trees and shrubs planted along roads, buildings, and parking areas. The project has incorporated standard tree protection measures and will avoid the removal of all landscape trees (Romer 2011. pers. comm.).

EXISTING BIOTIC CONDITIONS

METHODS

H. T. Harvey & Associates wildlife ecologist Nellie Thorngate, M. S. and plant ecologist Catherine Roy, M. S. characterized the existing biotic conditions within the project site including the presence and distribution of biotic habitats, regulated habitats, and special-status species. This assessment involved a review of relevant background information combined with reconnaissance-level surveys conducted on 4 June 2010. We reviewed information concerning threatened, endangered, or other special-status species that may occur in the project region from the following sources:

- California Natural Diversity Database (CNDDB) and its associated species accounts (CNDDB 2010)
- U.S. Fish and Wildlife Service's (USFWS) web site (http://www.fws.gov/sacramento/es/spp_list.htm).
- *California Native Plant Society(CNPS) Inventory of Rare and Endangered Plants of California* (CNPS 2010)
- *Jepson Manual* (Hickman 1993)
- Relevant scientific literature, technical databases, and resource agency reports

A search of the CNDDB was conducted for published accounts of special-status plant and wildlife species occurring in the project quadrangle (San Jose West), and the 8 surrounding quadrangles (San Jose East, Santa Teresa Hills, Los Gatos, Castle Rock Ridge, Cupertino, Mountain View, Milpitas, and Calaveras Reservoir.

After characterizing the existing biotic conditions, we then carefully reviewed the proposed project's construction documents to assess biotic impacts. Our survey also included an assessment of street and ordinance trees that might be impacted by project activities.

BIOTIC HABITATS

Developed/Landscaped

Vegetation. The Project area is composed of a mixture of developed hardscape and associated landscaping. Hardscape includes all paved surfaces including road, parking lots, buildings and sidewalks. Vegetation in this community comprises intentionally planted and maintained landscaping which includes a mixture of street trees, shrubs, and grass which is typically maintained by irrigation. The only naturally occurring plants species that we observed at the site were limited to non-native, weedy species such as wild oats (*Avena fatua*), Italian thistle (*Carduus pycnocephalus*), bristly ox tongue (*Picris echiodes*), and yellow sweet clover (*Melilotus officinalis*). These species are found in ruderal patches along North 4th Street where the landscaping is not frequently maintained. These areas include the shoulders of the I-880

underpass, open fields between Rosemary Street, and Gish Street, and the fields West of Archer Street and East of HWY 101.

A variety of street trees and shrubs border the South side of North 4th Street, and both sides of Commercial Street. Common street trees observed on the site included London planetree, (*Platanus x acerifolia*), tree of heaven (*Ailanthus altissima*), white alder (*Alnus rhombifolia*), and chitalpa (*Chitalpa tashkentensis*). Street trees here are typically young, ranging in size from approximately 10-20" DBH, and approximately 10-25 ft tall. The largest and most mature trees are located on the South side of North 4th Street, between the I-880 underpass and Commercial Street. These include mature white alders growing approximately 30-50 ft tall with a 25-32" DBH, and mature olive (*Olea europea*) trees growing to heights of approximately 15-20 ft. A variety of landscape shrubs were observed on the project site toward the Western end of North 4th Street bordering the hotel, and other properties. These include escallonia (*Escallonia sp.*), photinia (*Photinia fraseri*) and oleander (*Nerium oleander*). At the western portion of the project site, south of North 4th Street and just east of HWY 101, there is a large grouping of oleander (10-15ft tall), mixed with pine (*Pinus sp.*) and various other volunteer shrubs, forming a dense stand bordering the street.

Wildlife. Developed habitats primarily support common, urban-adapted wildlife species, and overall wildlife abundance and diversity are low. Likewise, landscaped habitats are used sparingly by most wildlife species, largely because of the uniform, open nature of most landscaping, and regular disturbances due to landscape maintenance and use. However animals living in adjacent habitats and migratory birds often exploit foraging opportunities offered by landscaped habitats, and shrub and tree landscape components may offer sufficient cover for nesting birds and mammals. Common butterflies such as cabbage whites (*Pieris rapae*), as well as honeybees (*Apis mellifera*) and other common invertebrate species, are expected to forage on the flowering shrubs and trees at the site. No bird nests were observed in any of the landscape vegetation, but a few common bird species including northern mockingbirds (*Mimus polyglottos*), American crows (*Corvus branchyrhynchos*), bushtits (*Psaltriparus minimus*), black phoebes (*Sayornis nigricans*), and nonnative house sparrows (*Passer domesticus*) and rock pigeons (*Livia columbia*) were observed utilizing vegetation within the project alignment. Common urban-associated mammals, including nonnative black rats (*Rattus norvegicus*), are likely to shelter in the vegetation within the project alignment, and the ubiquitous Brazilian free-tailed bat may occasionally forage in the area or roost on buildings immediately adjacent to the project footprint in small numbers.

SPECIAL-STATUS PLANT AND ANIMAL SPECIES

Figures 2 and 3 provide maps of CNDDB's special-status plant and animal species records within a 5-mi radius of the site.

Special-status Plant Species

The California Native Plant Society identifies 69 special-status plant species known to occur in the vicinity of the project site. CNDDB lists 6 special-status species as historically occurring within a 5-mile radius of the project site. However, all of these species require specific edaphic conditions or habitat types that are not present within the project area because the entire project

site has been heavily disturbed and is maintained as development and landscaping. Therefore, special-status plant species are absent from the Project site and protocol-level surveys for special-status plant species are not recommended for the project.

Special-status Animal Species

We identified 26 special-status animal species known to occur in the vicinity of the sewer interceptor alignment based on the current CNDDB 2010 record (Figure 3). However, the project site is unsuitable for each of these species due to a lack of suitable habitat. The project alignment runs through a highly developed area in central San Jose, as described above. It lacks sensitive habitats that tend to support special-status wildlife species such as wetlands, riparian habitats, or oak woodlands. Moreover, the site is isolated from suitable habitat for special-status wildlife species and from wildlife movement corridors by multi-lane roads and highways including HWY 101 and I-880, and by extensive residential and commercial development. The following bullet list provides the rationale for why specific special-status wildlife species identified in the CNDDB as occurring in the vicinity of the project are judged as absent from the project site:

- The project site lacks the serpentine soils and associated plants that serve as host plants for the Bay checkerspot butterfly (*Euphydryas editha bayensis*), and the site lies outside of the currently known distribution for this species. The Zayante band-winged grasshopper (*Trimerotropis infantilis*) is found only in the Zayante sandhills in the Santa Cruz Mountains, so the project site is well outside of the known distribution of the species.

- Because the site lacks any bodies of water, the 2 special-status fish species that could occur in the vicinity, Central California Coast coho salmon (*Oncorhynchus kisutch*) and Central California Coast steelhead (*Oncorhynchus mykiss irideus*), are absent from the site.

- The lack of seasonal pools, ponds, streams, or other fresh water bodies in the project alignment precludes the presence of vernal pool tadpole shrimp (*Lepidurus packardi*), breeding California tiger salamanders (*Ambystoma californiense*) and breeding California red-legged frogs (*Rana draytonii*), foothill yellow-legged frogs (*Rana boylii*) and western pond turtles (*Actinemys marmorata*). The site does not offer suitable breeding habitat for western pond turtles, and the nearest documented populations are separated from the project alignment by high volume roads and highways. California red-legged frogs have been extirpated as a breeding species from the Santa Clara Valley floor and remnant breeding populations are confined to higher elevations and the nearest recent records are more than 5 mi from the site. California tiger salamanders could potentially disperse across the site from established populations in the vicinity. However, the nearest recent records of these species are 5 mi or more distant from the project alignment, and this species has not been documented dispersing more than 2 mi from breeding sites. In addition, the highly developed nature of the landscape surrounding the site and the heavy human use, including extensive traffic, would pose a major barrier to special-status amphibians and reptiles dispersing onto the site. These species are therefore considered absent from the site.

- The lack of salt marsh habitat in the project area precludes the presence of California clapper rails (*Rallus longirostris obsoletus*), California black rails (*Laterallus jamaicensis*), Alameda song sparrows (*Melospiza melodia pusillula*), salt marsh harvest mice (*Reithrodontomys raviventris*) and salt marsh wandering shrews (*Sorex vagrans halicoetes*). The lack of riparian habitat or extensive patches of blackberry, grain crops, or thistle preclude the presence of San Francisco common yellowthroats (*Geothlypis trichas sinuosa*) and tricolored blackbird (*Agelaius tricolor*) breeding colonies; the "special concern" designation for these species applies to nesting. The absence of sandy beaches, sandy riverbeds, or salt pannes excludes western snowy plovers (*Charadrius alexandrinus*) and California least terns (*Sternula antillarum browni*) from occupying the area.

- Peregrine falcons (*Falco peregrinus anatum*) may occasionally be seen in the area, but the site supports no cliffs, trees, or buildings tall enough to provide suitable nesting habitat for the species. The site lacks the open grassy areas necessary to support white-tailed kites (*Elanus leucurus*), northern harriers (*Circus cyaneus*), and golden eagles (*Aquila chrysaetos*); although these species may occasionally fly over the area, there is no habitat within the project alignment for them to exploit. Similarly, there are no large grassy or ruderal areas with ground squirrel colonies that provide habitat for burrowing owls (*Athene cunicularia*). Black swifts (*Cypseloides niger*) nest under waterfalls or on beach cliffs, neither of which are present in the project area.

- Trees within the project alignment could support occasional roosting non-special-status bat species, including hoary bats (*Lasiurus cinereus*), but these species are not expected to occur in any numbers in the project area, and would not be substantially impacted by project activities. The project site lacks suitable caves, mines, crevices, or large trees with cavities for roosting pallid bats (*Antrozous pallidus*) or Townsend's big-eared bats (*Corynorhinus townsendii*), the two special-status bat species identified as occurring in the project vicinity.

REGULATED HABITATS

Regulated habitats are habitat types that are protected by federal, state, regional, and/or local laws. Such habitats require permits from governing agencies if they are to be disturbed, altered, or lost. The most commonly regulated habitats are aquatic habitats including oceans, rivers, streams, ponds, and wetlands, which fall under the jurisdiction of the U. S. Army Corps of Engineers and/or the California Department of Fish and Game (CDFG), as well as regional and local governments in some circumstances. Riparian habitats fall under the jurisdiction of the CDFG.

No regulated habitats occur within the project alignment.

BIOTIC IMPACTS AND MITIGATION

OVERVIEW

The CEQA and the CEQA Guidelines provide guidance in evaluating project impacts and determining which impacts will be significant (Remy et al. 1999). Under CEQA Guidelines section 15065 (Mandatory Findings of Significance), a project's effects on biotic resources are deemed significant where the project would:

- substantially reduce the habitat of a fish or wildlife species
- cause a fish or wildlife population to drop below self-sustaining levels
- threaten to eliminate a plant or animal community
- reduce the number or restrict the range of an endangered, threatened, or rare species

In addition to the section 15065 criteria that trigger mandatory findings of significance, Appendix G of the CEQA Guidelines provides a checklist of other potential impacts to consider when analyzing the significance of project effects. The impacts listed in Appendix G of the CEQA Guidelines may or may not be significant, depending on the level of the impact. For biological resources, these impacts include whether the project would:

a) have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service

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

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

d) interfere substantially with the movement of any 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

e) conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance

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

The following section addresses potential impacts to biotic resources resulting from the proposed project.

BIOTIC IMPACT ASSESSMENT ASSUMPTIONS

The project has incorporated standard tree protection measures and will avoid the removal of all landscape trees (Romer 2011. pers. comm.).

LESS THAN SIGNIFICANT IMPACTS

Impacts to Nesting and Foraging Habitat for Certain Non-special-status Bird Species

Large London plane trees, alders, eucalyptus, and other trees along the project alignment provide potential nesting habitat for several regionally abundant raptor species including red-tailed hawks, Cooper's hawks, and red-shouldered hawks. Landscape trees and shrubs within the project alignment provide potential nesting and foraging habitat for many species of migratory birds. Project construction will occur in close proximity to numerous landscape trees and shrubs and some landscape vegetation may be pruned to facilitate construction. Such construction impacts to bird nesting and foraging habitat could reduce the availability of nesting/foraging sites and/or result in nest abandonment. However, trees and shrubs in heavily urbanized places such as the project area are limited in their value to breeding and foraging raptors and migratory birds. Additionally, the bird species with some potential to breed and forage in the project area are widely distributed regionally and can utilize trees and shrubs located outside the project area; and few birds and no bird nests were observed along the project alignment during the reconnaissance survey. Impacts to bird nesting and foraging habitat would not result in substantial reductions in available nesting sites for populations of common raptor and migratory bird species or reductions in regional populations of these species. Therefore, the project's potential impacts to bird nesting and foraging habitat is less-than-significant under the CEQA.

While less-than-significant under the CEQA, nesting bird impacts would violate the Migratory Bird Treaty Act and the California Fish and Game Code. Measures to avoid the risk of impacts to protected bird species under these regulations are provided in Appendix A.

LITERATURE CITED

[CNDDB] California Natural Diversity Data Base. 2010. Rarefind. California Department of Fish and Game.

[CNPS] California Native Plant Society. 2010. Inventory of Rare and Endangered Plants of California (7th edition). Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor. http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi.

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PERSONAL COMMUNICATIONS

Romer, A. 2011. Personal Communications Between Andy Romer of AECOM and Karli Grigsby of David Powers & Associates on 28 March 2011.

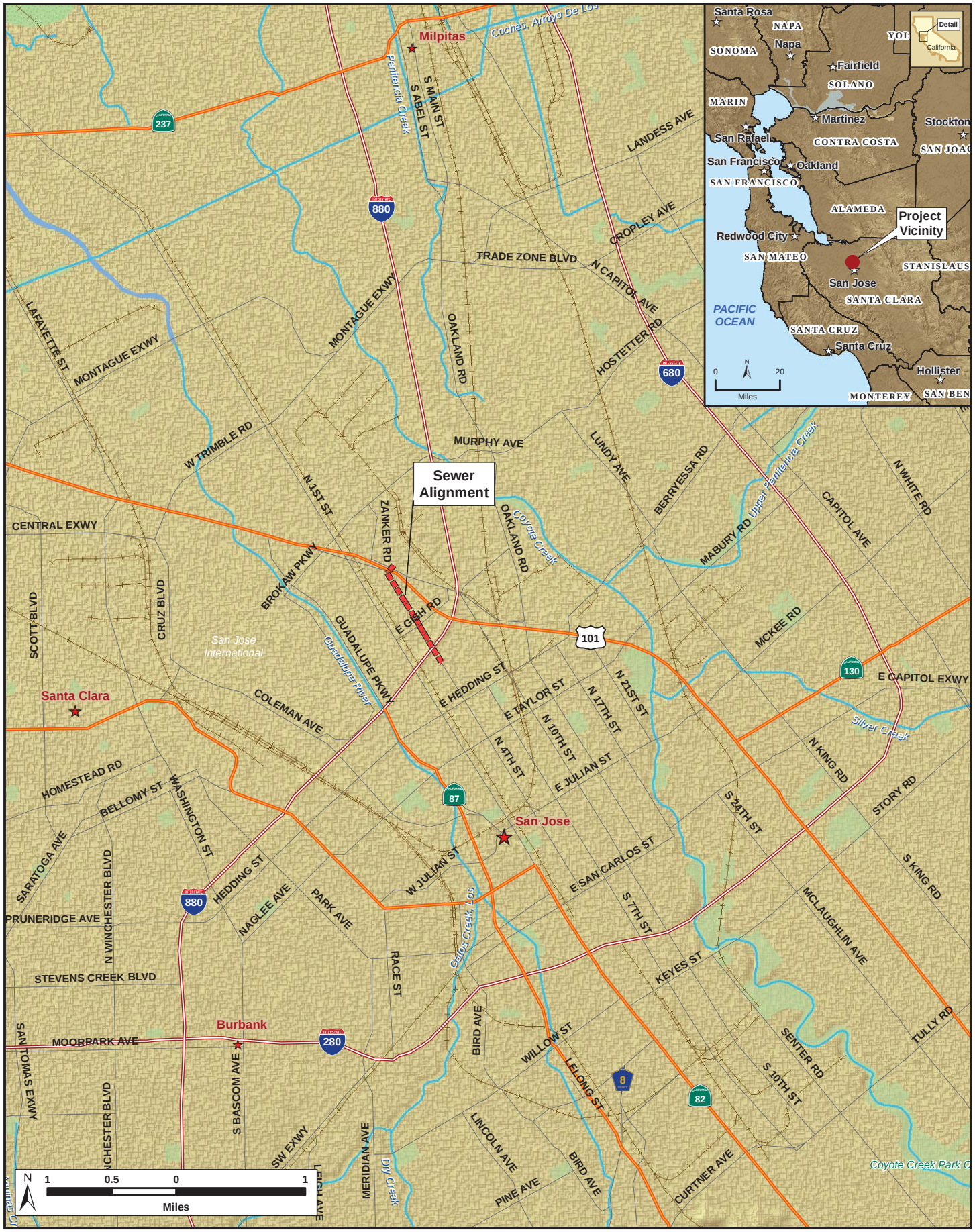

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Figure 1: Vicinity Map

San Jose Sewer Intercept Biotic Study (3164-01)
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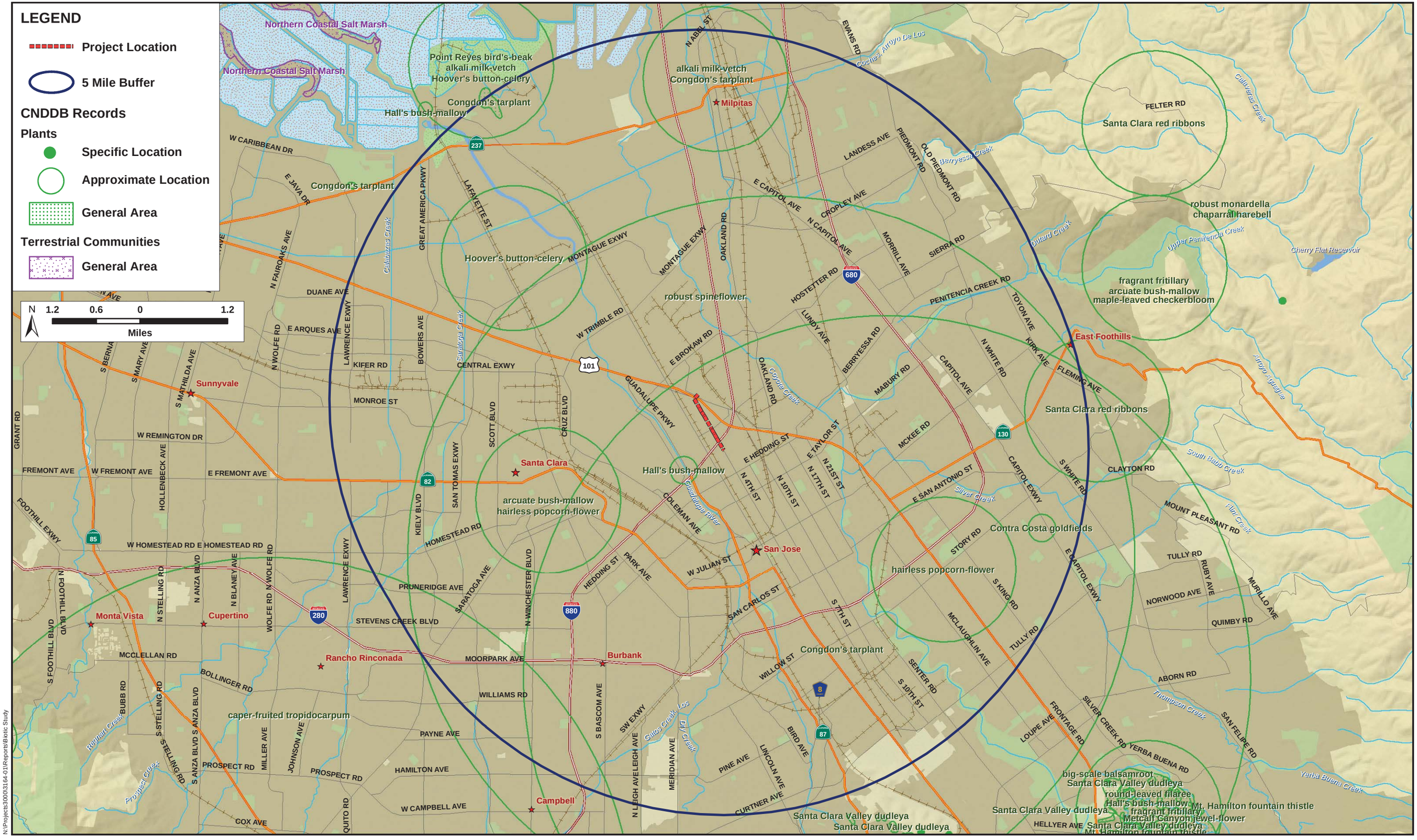

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Figure 2: CNDDB Plants Records

San Jose Sewer Intercept Biotic Study (3164-01)

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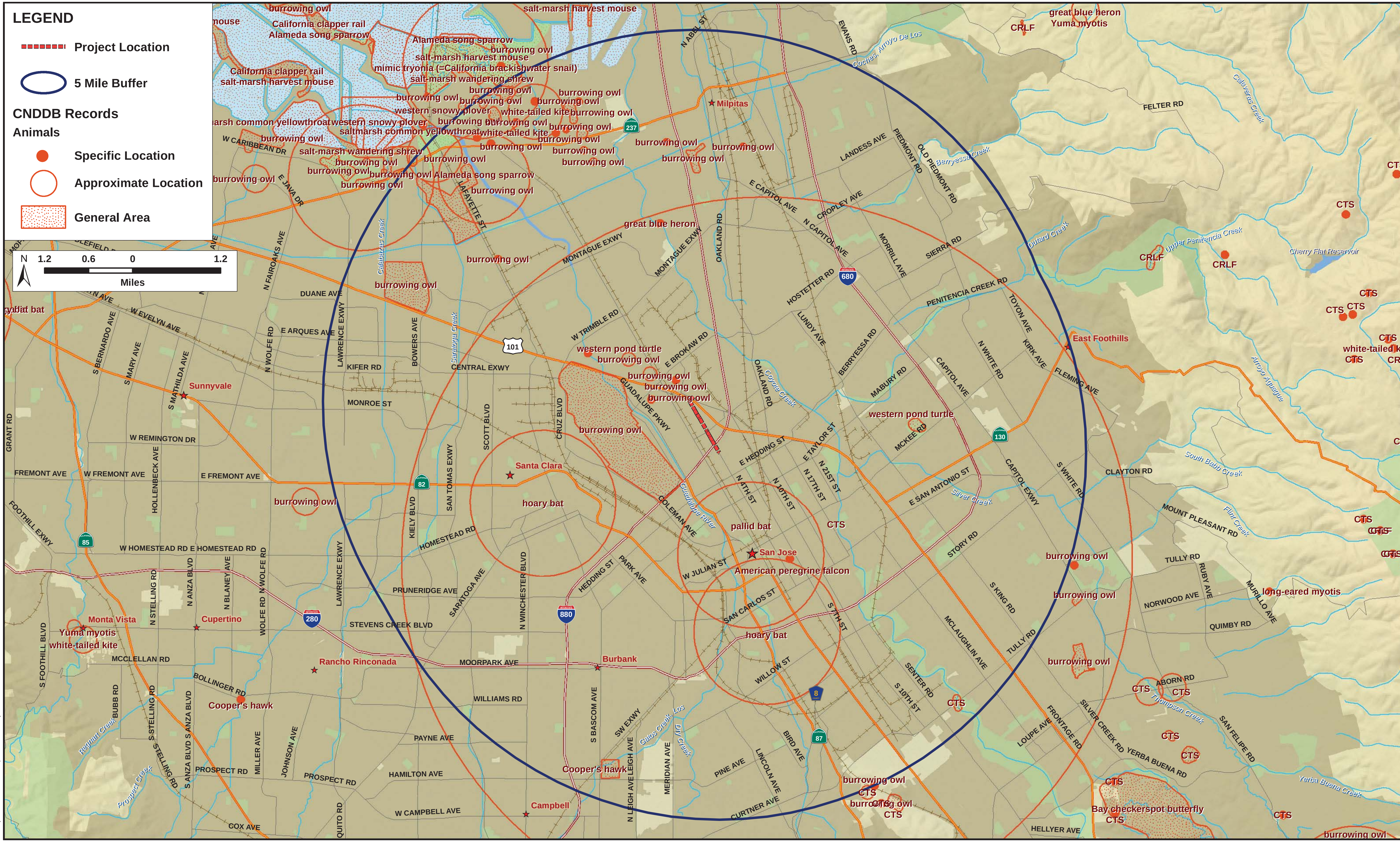

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Figure 3: CNDDB Animals Records

San Jose Sewer Intercept Biotic Study (3164-01)

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APPENDIX A.
ADDITIONAL LAWS AND REGULATIONS APPLICABLE TO BIOTIC RESOURCES

ADDITIONAL LAWS AND REGULATIONS APPLICABLE TO BIOTIC RESOURCES

In addition to the CEQA, the following laws and regulations apply to biotic resources present on the project site, and have the potential to affect project activities. Below is an outline of these laws, their applicability to project activities, and recommended measures to ensure that project activities comply with these laws.

MIGRATORY BIRDS

The federal MBTA (16 U.S.C., §703, Supp. I, 1989) prohibits killing, possessing, or trading migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. Species protected by the MBTA include all native migratory birds that occur in the United States, whether they are common or protected by state or federal laws. This act encompasses whole birds, parts of birds, and bird nests and eggs. Construction disturbance during the breeding season would violate the MBTA if it resulted in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment.

Migratory birds are also protected by the state of California. The State Fish and Game Code §3503 emulates the MBTA and protects birds' nests and eggs from all forms of take. Disturbance that causes nest abandonment resulting in the loss of eggs or young may be considered "take" by the CDFG. Nesting raptors (birds of prey) are specifically protected under California Fish and Game Code §3503.5.

Raptors (e.g., eagles, hawks, and owls) and their nests are protected under both federal and state laws and regulations. The federal MBTA prohibits killing, possessing, or trading raptors except in accordance with regulations prescribed by the Secretary of the Interior. Birds of prey are protected in California under Fish and Game Code §3503.5, which states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Construction disturbance during the breeding season that causes nest abandonment and/or loss of reproductive effort is considered a "taking" by the CDFG. Any loss of fertile raptor eggs or nesting raptors, or any activities resulting in raptor nest abandonment, would constitute a violation of federal and state law.

Project Applicability

The majority of bird species that potentially occur on the site are protected under both the MBTA and the California State Fish and Game Code. Nests of common "migratory" birds may be present throughout the project site in ornamental trees and shrubs during the breeding season (1 February – 31 August). Project construction has the potential to take nests, eggs, young, or individuals of protected species. Construction disturbance during the breeding season could result in the incidental loss of fertile bird eggs or nestlings. To avoid the risk of take of protected birds, we recommend that the following measures be implemented.

Recommended Avoidance Measures for Nesting Birds

Measure 1. Pre-construction/Pre-disturbance Surveys. If construction is to occur during the breeding season (1 February through 31 August), pre-construction surveys shall be conducted by a qualified ornithologist no more than 15 days prior to the initiation of construction in any given area. Pre-construction surveys will identify active nests of species protected by the MBTA or State Code.

Measure 2. Avoid the Nesting Season. If possible, potential nesting substrates (e.g., bushes, tree pruning, grass, buildings, burrows) to be removed by the project should be removed between 1 September and 31 January, to avoid the nesting season.

Measure 3. Buffer Zones. If an active nest is found and is greater than half completed, a qualified ornithologist, in consultation with the CDFG, will determine the extent of a construction-free buffer zone to be established around the nest, until nesting is complete. Typical buffer widths are 250 ft for a nesting raptor and 50-100 ft for other species. The establishment of construction-free buffer zones will ensure that no active nests of species protected by the MBTA or California Fish and Game Code will be disturbed by construction until the young birds have fledged.