Appendix C:
Biological Resources Report

Natural Environment Study

(Minimal Impacts)

Fulton Mall, City of Fresno
Fresno County, California

Federal Project # TCSPL-5060(263)

July 1, 2013

STATE OF CALIFORNIA
Department of Transportation

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Prepared For: California Department of Transportation

1. Summary

A Natural Environment Study - Minimal Impacts (NES-MI) was prepared for the City of Fresno for the proposed Fulton Mall Project. The Biological Study Area (BSA) for this NES-MI consists of approximately 65.5 acres located in the City of Fresno, Fresno County, California. The project involves converting the pedestrian paths associated with the Fulton Mall into multi-use roadways. The proposed project would allow multi-use access to the Fulton Mall and three cross street mall sections, Merced Mall, Mariposa Mall, and Kern Mall.

The purpose of the proposed project is to improve parking and vehicle access to local businesses on Fulton Street in order to maximize sustainable development and economic productivity in conjunction with other downtown redevelopment projects. The proposed project would also be intended to lower crime and improve safety for people walking between parking areas and businesses located on the Fulton Mall and for people who live in, work in, and visit the project area.

The BSA is comprised of developed and disturbed land associated with existing developments such as the Fulton Mall, associated buildings and structures, vehicle parking, pedestrian pathways, access roads and Chukchansi ballpark. The BSA contains no suitable habitat for any federal or state listed plant or wildlife species. No potentially jurisdictional drainages or mapped blue-line streams occur within or immediately adjacent to the BSA and no regulatory permitting would be required for the proposed project.

The BSA is not within any United States Fish and Wildlife Service (USFWS) designated critical habitat and is not within a designated wildlife movement corridor. The BSA is not within any approved or proposed Habitat Conservation Plan (HCPs) or Natural Community Conservation Plans (NCCPs). The BSA contains some suitable nesting habitat for resident and migratory bird species protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFG Code). Avoidance and minimization measures would be required to minimize impacts to migratory birds, if construction activities take place during the avian nesting season from February 15th through September 1st.

2. Introduction

The City of Fresno, in cooperation with the California Department of Transportation (Caltrans), proposes to convert the pedestrian paths associated with the Fulton Mall into multi-use roadways to reintroduce vehicle traffic into the Downtown Mall Area.

2.1 Project Location

The BSA is regionally located near the central portion of the City of Fresno, within Fresno County, south of State Route (180), west of SR-41 and east of SR-99 (Appendix A). The BSA is depicted on the Fresno South, California, United States Geological Survey (USGS) 7.5-minute topographic quadrangle in Sections 3, 4, 9 and 10 of Township 14 South, Range 20 East. The proposed project is specifically located north of Inyo Street, south of Tuolumne Street, east of Broadway Street and west of Van Ness Avenue. The BSA for the project is depicted on Appendix B.

2.2 Project Description

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), in cooperation with the City of Fresno (City) proposes to reconstruct Fulton Mall as a complete street by reintroducing vehicle traffic lanes to the existing pedestrian mall. The Mall consists of six linear blocks that were open to traffic prior to 1964 but now do not allow public vehicle access. The Mall is bounded by Tuolumne Street to the north and Inyo Street to the south, and includes portions of three cross streets. The total length of the new roadways would be 0.74 mile. Figures 1-1 and 1-2 show project vicinity and location maps.

The “Mall” refers specifically to the pedestrian areas between adjoining buildings located on the former City streets of Fulton, Mariposa, Merced, and Kern, which function as an integrated pedestrian Mall. Fresno Street and Tulare Street, which do allow vehicle traffic, run through the Mall and divide it into three roughly equal sections. Mall landscaping elements include fountains, planters, benches, sculptures, electrical systems, irrigation systems, and two “tot lots.” The Mall does not include the adjoining buildings or their facades.

Each Build Alternative proposes to reconstruct the Mall using “complete streets” design concepts. Complete streets are those designed to function as shared public space, or as “living streets”—for pedestrians, cyclists, outdoor businesses, and slow-moving, cautiously driven vehicles. Complete streets may include narrow roadways, corner bulb-outs, winding streets, and other traffic calming measures to lower driving speeds; street trees and other landscape elements; wide pedestrian sidewalks and crosswalks; and bicycle accommodations such as dedicated bicycle lanes or wide shoulders. The purpose of incorporating these design concepts into the proposed project is to retain portions of the historic fabric

and character of the Mall, maintaining the key elements, feeling and unique experience of a pedestrian mall in downtown Fresno.

The proposed project has three Alternatives, including two Build Alternatives and a No Build Alternative.

Alternative 1 consists of reopening the Mall with two-way streets, with one lane of vehicular traffic in each direction alongside bicycle, pedestrian, and potentially other travel modes. On-street vehicle parking spaces would be reintroduced along the length of the Mall (including cross streets), and construction of streetscape improvements would optimize the streets for the new blend of travel modes. One 11-foot vehicle travel lane would run in each direction, with a parallel parking lane of 9 feet included on both sides of the streets. A 20-foot sidewalk included on both sides of the streets would allow for walking and pedestrian-only seating, landscaping, lighting, and public art.

The existing 20 works of sculpture present on the Mall today would all remain, though some may be moved to be incorporated in sidewalk areas of the new streetscape. Only the three fountains found along the Kern Mall, west of Fulton, would remain. All of the planter beds and raised seating areas found along the Mall today would be removed in favor of wide sidewalks that incorporate artwork and seating areas. The two tot lots present, one located near the corner of Merced and Fulton, and the other located near the corner of Kern and Fulton, would be relocated and potentially combined into one larger tot on Kern Mall between Fulton Street and Home Run Alley, or near the corner of Mariposa and Fulton. Impacts to native earth during project construction are not anticipated.

Alternative 2 consists of reconnecting the street grid as in Alternative #1, but would include rebuilding distinctive elements of the Mall in five to six specific locations, known as “vignettes.” The vignettes would include many of the existing elements (sculptures, fountains, pavement pattern, trees, etc.). One 11-foot vehicle travel lane would run in each direction and would curve through the vignettes to avoid existing landscape features. Outside the vignette areas, the street would be straight, and the landscape would include a 9-foot parallel parking lane and a pedestrian-only walking, seating, vegetation, and public art area 20 feet in width on one or both sides of the street. Within the vignettes, the existing Mall landscape elements would be kept maximally intact. The remaining space on each side of the street would be dedicated to pedestrian travel, seating, vegetation, and artwork.

A total of 12 fountains—9 in vignettes and 3 on Kern Mall west of Fulton—would remain in place. The 12 fountains would be fully rebuilt or restored to working order. Fourteen of 20 sculptures would remain in their precise current locations. The other 6 fountains (along with the various tile mosaics benches on the Mall today) would be configured differently within the current right-of-way to accommodate the new streetscape. Street lighting outside the vignettes would be contemporary and pedestrian-oriented, but the original Mall fixtures would be rehabilitated within each vignette. The 2 tot lots present, one located near the corner of Merced and Fulton, and the other located near the corner of Kern and Fulton, would be relocated and potentially combined into one larger tot on Kern Mall between Fulton Street and Home Run

Alley, or near the corner of Mariposa and Fulton. Impacts to native earth during project construction are not anticipated.

The third Alternative is the no-build Alternative. New streets would not be constructed and the Mall would remain as it now exists.

3. Study Methods

A review and assessment of the natural resources was conducted within the BSA, and analyzed the potential for sensitive biological resources to occur within the BSA. An informal assessment of potential jurisdictional waters and wetlands was also included in the review. The following section discusses the methods used for these studies.

3.1 Studies Required

Prior to the completion of the biological study, the impact area was reviewed and compared to the topographic map and aerial photographs. The BSA encompassed the proposed impact area and immediately surrounding habitat, for a total survey area of approximately 65.5 acres (Appendix B).

3.2 Literature Review

As part of the study of the biological resources within the BSA, a literature review was conducted of the environmental setting of the BSA. Literature reviewed included the United States Department of Agriculture (USDA 1971) Soil Survey for the BSA, the USGS topographic quadrangles queried for the California Natural Diversity Database (CNDDB 2013) (Appendix C) including the Fresno South, Fresno North, Clovis and Malaga quadrangles, and literature detailing the habitat requirements of sensitive species occurring in the vicinity of the BSA. The CNDDB Geographic Information System (GIS) database was utilized, together with ArcGIS software, to determine sensitive species located within a 5-mile radius of the BSA.

The entire BSA was assessed to verify the extent of plant communities and to determine the presence of suitable habitat for sensitive plant and wildlife species. Parameters assessed included soil conditions, presence of indicator species, slope, aspect, and hydrology.

Plant communities were mapped using 7.5-minute USGS topographic base maps and aerial photography. The plant communities within the BSA were classified according to the California Department of Fish and Wildlife (CDFW) List of Terrestrial Natural Communities (2003) and cross-referenced to descriptions provided in Holland's Preliminary Descriptions of the Terrestrial

Natural Communities of California (1986 and 1992 update). The California Natural Plant Society (CNPS) Inventory of Rare and Endangered Plants was also reviewed (Appendix D).

3.3 Personnel and Survey Dates

The biological study was completed by Biologist Tommy Molioo of Michael Brandman Associates. Mr. Molioo has over five years experience conducting and managing biological resources studies. A site visit to the BSA was conducted by Senior Archeologist Michael Dice of Michael Brandman Associates on April 3, 2013 with other Michael Brandman Associates staff and City personnel. Site photos and general notes of the BSA were taken onsite by Mr. Dice. The information provided by Mr. Dice was compiled with first-hand knowledge of the BSA, downtown portion of the City of Fresno, and the Fresno city limits and zone of influence, to determine the biological resources within the BSA.

3.4 Assessment of Jurisdictional Waters and Wetlands

The assessment of jurisdictional waters and wetlands was conducted by Tommy Molioo on April 22, 2013. Mr. Molioo has over five years experience assessing waters and wetlands for potential regulatory agency jurisdiction. A formal jurisdictional and wetland delineation, consistent with the USACE 1987 "Federal Manual for Identifying and Delineating Jurisdictional Wetlands," was not conducted; however, the BSA was systematically inspected to record existing conditions, including any potentially jurisdictional drainage features.

4. Environmental Setting

4.1 Description of the Existing Biological and Physical Conditions

Study Area

The BSA encompasses the project impact area and a buffer around the impact area (Appendix B). The buffer was not based on a fixed measurement but rather on land uses and surrounding habitat. The BSA is approximately 65.5 acres, including the entirety of the proposed Fulton Mall project footprint with a buffer extending out to encompass any potential impacts that may occur during construction activity.

Physical Conditions

The BSA is located on the eastern side of the San Joaquin Valley on the valley floor west of the Sierra Nevada Mountains. The BSA occurs on relatively flat land at an elevation of approximately 290 feet above mean sea level.

The BSA is mapped by the Natural Resource Conservation Service (NRCS) as containing four separate soil series: Delhi loamy sand (3 to 9 percent slopes) Hanford sandy loam, Madera loam, and San Joaquin sandy loam (0 to 3 percent slopes). The soils within the majority of the BSA have been significantly altered from their natural state because of grading and compaction for the construction of the existing Fulton Mall and adjacent buildings and infrastructure.

4.2 Regional Species and Habitats of Concern

Based on the most current version of the California Natural Diversity Database (CNDDB), one sensitive plant community, eight sensitive plant species and fifteen sensitive wildlife species were previously recorded to occur within the Fresno South, Fresno North, Clovis, and Malaga, California USGS topographic quadrangles (Appendix C). For the purpose of this NES (MI) NEPA document, only the federally listed species were analyzed for their potential to occur within the BSA. A detailed description and analysis of each species, including habitat type and potential for occurrence, is included in Appendix E, Sensitive Species Tables. Based on the CNDDB, five federally listed plant species and four federally listed wildlife species have been recorded within 5 miles of the BSA. The five federally listed plant species include succulent owl's clover (*Castilleja campestris ssp. succulenta*), California jewel-flower (*Caulanthus californicus*), San Joaquin Valley Orcutt grass (*Orcuttia inaequalis*), hairy Orcutt grass (*Orcuttia pilosa*), and Greene's tuctoria (*Tuctoria greenei*). The four federally listed wildlife species include vernal pool fairy shrimp (*Branchinectia lynchi*), California tiger salamander (*Ambystoma californiense*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), Fresno kangaroo rat (*Dipodomys nitratoides exilis*).

The BSA is located within a disturbed and developed area characterized by concrete pavement and buildings with scattered ornamental trees. As shown in the photographs located in Appendix F, no native or natural habitat occurs within the BSA or has the potential to occur within the BSA. The five federally listed plant species listed above as well as in Appendix E occur within grassland or vernal pool habitats, which are not found within the BSA. The four federally listed wildlife species listed above as well as in Appendix E can be found in grassland, vernal pool, and/or riparian habitats, which do not occur within the BSA. Therefore, there is no suitable habitat for any federally listed species recorded within 5 miles of the BSA.

The BSA is located in the central portion of the City of Fresno and is surrounded by urban development to the north, south, east, and west. Therefore, the proposed project would have no effect on any federally listed plant or wildlife species.

4.3 Vegetation

The BSA is characterized by one habitat type, urban/developed land. The entirety of the BSA has been previously developed for the construction of the Fulton Mall and associated infrastructure, various buildings and a ballpark. Ornamental trees are scattered throughout the BSA, primarily as landscaping along paved pedestrian paths and adjacent to existing buildings. No natural vegetation or habitats occur within the BSA.

The vegetation present within the BSA consists of landscaped ornamental trees such as fig (*Ficus* sp.) pine (*Pinus* sp.), and gum (*Eucalyptus* sp.), with scattered non-native grasses and ruderal (weedy) species including, red brome (*Bromus rubens*), barley (*Hordeum murinum*), and Bermuda grass (*Cynodon dactylon*). These ornamental trees, non-native grasses and ruderal species occur within landscaped and disturbed areas associated with the paved pedestrian paths.

4.4 Animals

Wildlife species expected to occur within the BSA include common avian species typically observed in disturbed settings and urban environments such as, northern mockingbird (*Mimus polyglottos*), house finch (*Carpodacus mexicanus*), common raven (*Corvus corax*), and mourning dove (*Zenaida macroura*). Other wildlife species expected to occur onsite include western fence lizard (*Sceloporus occidentalis*) and domestic dog (*Canis familiaris*). The buildings associated with the Fulton Mall may provide suitable roosting habitat for bat species known to occur in the area such as California myotis (*Myotis californicus*). The trees located within Fulton Mall do not provide suitable habitat for tree roosting species and none are expected to occur within the landscaped trees within the Mall.

The BSA is located in the downtown portion of the City of Fresno and is surrounded by development in all directions. The BSA does not demonstrate connectivity with any undeveloped habitat, does not function as a wildlife movement corridor for species moving through the area, and approval of the project would not reduce the potential for wildlife to move through the area.

5. Project Impacts

The proposed project would be contained entirely within developed areas associated with the existing Fulton Mall and associated access roads, parking, and paved pedestrian paths. The proposed project would convert the existing paved pedestrian paths into multi-use roadways to facilitate an increase in vehicle traffic. All project impacts would occur to existing developed areas and no native vegetation would be removed as a result of construction of the project. The

developed areas associated with the Fulton Mall do not provide suitable habitat for any sensitive biological resources, and there would be no effect on sensitive plant or wildlife species, particularly federally listed species.

The project site provides suitable nesting habitat for a number of common resident and migratory bird species protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game (CFG) Code Section 3500. The ornamental landscaped trees located throughout the Fulton Mall project provide suitable nesting habitat for common species such as house sparrow (*Passer domesticus*) and lesser goldfinch (*Carduelis psaltria*). Both build options of the proposed project would result in the removal of approximately 160 public and street trees located along the existing pedestrian paths and access roads associated with the Fulton Mall. If the removal of the landscaped trees occurs during the general avian breeding season of February 15th to September 1st, nesting bird species may be directly and/or indirectly impacted. Therefore, additional avoidance and minimization measures are required.

Since the buildings associated with Fulton Mall may provide suitable roosting habitat for bat species, construction activities, involving construction noise, may result in indirect effects on bat species, particularly if construction activities occur during the maternity roosting season of May through September. Therefore, avoidance and minimization measures are required.

During the construction phase of the proposed project, noxious and invasive weeds may be introduced to the project site from construction equipment and personnel vehicles. The project is proposing to improve and revitalize Downtown Fresno, which also involves creating an aesthetically pleasing outdoor space, and the potential introduction of noxious weeds is considered a significant effect. Noxious weeds and invasive species control would need to be implemented into the project to reduce the potential for the introduction of noxious weeds to no effect.

The project site and BSA do not occur within any potentially jurisdictional drainages or wetlands and no regulatory agency coordination or permitting is required. The project site is not within a known wildlife movement corridor. The project site is not within a USFWS designated critical habitat area, and the site is not within a local HCP or NCCP area.

6. Mitigation Measures

Both project build alternatives would remove approximately 160 trees associated with the Fulton Mall, and replace them with approximatley the same number of trees (i.e., 160 trees for Alternative 1 and 160 trees for Alternative 2). The replacement planting of trees needs to select species from the City of Fresno Master Tree List to limit the potential for unacceptable or nuisance trees to be planted within the City.

Since construction of the proposed project may potentially impact nesting resident and migratory birds, avoidance and minimization measures are recommended to decrease potential impacts to nesting birds. It is recommended that construction activity occur outside of the nesting season, which typically extends from February 15th through September 1st, but can vary based on seasonal conditions. If construction activity must proceed during the nesting season, a pre-construction nesting bird survey must be conducted within 30-days of tree removal. If an active nest is observed, a suitable buffer would be placed around the active nest and no construction activities may commence without the discretion of an onsite monitoring biologist. If no active nests are observed, construction activity would have no effect on nesting resident and migratory birds and no further measures are required.

Since construction of the proposed project may potentially impact bat species roosting within the buildings associated with Fulton Mall, avoidance and minimization measures are recommended to decrease potential impacts to roosting bats. It is recommended that construction activity occur outside of the maternity roosting season, which typically extends from May 1st through September 30th, but can vary based on seasonal conditions. If construction activity must proceed during the materity roosting season, a pre-construction roosting bat survey must be conducted within 15-days of construction. If an active roost is observed or detected, a suitable buffer would be placed around the active roost and no construction activities may commence without the discretion of an onsite monitoring biologist. If no active roosts are observed, construction activity would have no effect on roosting resident bats and no further measures are required.

Noxious weeds would be handled in accordance with both Caltrans Highway Design Manual topic 110.5 “Control of Noxious Weeds--Exotic and Invasive Species” and Executive Order 13112 (Invasive Species) and by methods approved by Caltrans’ landscape architect and/or vegetation control specialist.

This project would not introduce, transport, or spread invasive species and would not change the surrounding habitat to encourage immigration of invasive species to the site.

7. Permits Required

No local, state or federal permits are required for construction of the proposed project. Construction of the proposed project would not impact any state or federally listed species, would not result in any impacts to a potentially jurisdictional drainage feature or wetland, would not remove any habitat potentially suitable for a state or federally listed species nor would it affect any USFWS-designated Critical Habitat. Additionally no potentially jurisdictional waters or drainages will be impacted by the proposed project. Therefore, a U.S. Army Corps of Engineers Nationwide or 404 Permit, a CDFW Section 1600 Streambed Alteration Agreement or a Regional Water Quality Control Board Section 401 Certification are not required for the proposed project.

8. References

Burt, W.H., and Grossenheider, R.P., 1980. Peterson Field Guides, Mammals. Houghton Mifflin Company. New York, New York.

California Department of Fish and Game. 2003 (September). List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database. California Department of Fish and Game, Wildlife and Habitat Data Analysis Branch. Sacramento, California.

California Department of Fish and Wildlife (CDFW). California Natural Diversity Database (CNDDB). 2013. RareFind 4 online database. Data Base Record Search for Information on Threatened, Endangered, Rare, or Otherwise Sensitive Species for the Fresno North, Fresno South, Clovis and Malaga, California USGS Topographic Quadrangles. California Department of Fish and Game, State of California Resources Agency. Sacramento, California.

California Native Plant Society (CNPS). 2006. Inventory of Rare and Endangered Plants (online edition, v6-05a). California Native Plant Society. Sacramento, CA. Accessed on April 22, 2013 from http://www.cnps.org/inventory

Hickman, J.C. 1993. The Jepson Manual: Higher Plants of California. University of California Press. Berkeley, California.

Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Non-game Heritage Program. California Department of Fish and Game, Sacramento, California.

Holland, R.F. 1992 Update. Preliminary Descriptions of the Terrestrial Natural Communities of California. Non-game Heritage Program. California Department of Fish and Game, Sacramento, California.

Munz, P.A. 1974. A Flora of Southern California. University of California Press. Berkeley, California.

National Geographic Society. 1987. National Geographic Society Field Guide to the Birds of North America. 2nd Edition. National Geographic Society. Washington, DC.

Oberbauer, T., 1996. Terrestrial Vegetation Communities in San Diego County Based on Holland's Descriptions, 6p.

Sawyer, J.O. and T. Keeler-Wolf. 1995. A Manual of California Vegetation. California Native Plant Society. Sacramento, California.

Sibley, D.A. 2003. The Sibley Filed Guide to Birds of Western North America. Alfred A. Knopf, New York, USA. 471 p.

Skinner, M.W., and B.M. Pavlik. 1994. California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California. California Native Plant Society. Special Publication, No. 1, 5th ed.

Stebbins, R.C. 1985. A Field Guide to Western Reptiles and Amphibians. 2nd. Ed. Houghton-Mifflin Company. Boston, Massachusetts.

U.S. Department of Agriculture. 1962. Soil Survey: Madera County, California. Department of the Interior. U.S. Government Printing Office. Washington, DC.

9. Appendices

A - Regional Vicinity Map

B - Biological Study Area and Project Area

C - California Natural Diversity Data Base List

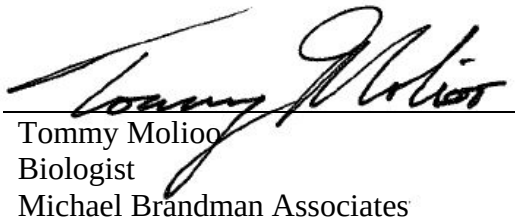
D - CNPS Inventory of Rare and Endangered Plants List

E - Special Status Species Tables

F - Photographs

Certification

I hereby certify that the statements furnished above and in the attached exhibits present data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: July 01, 2013 Signed: 

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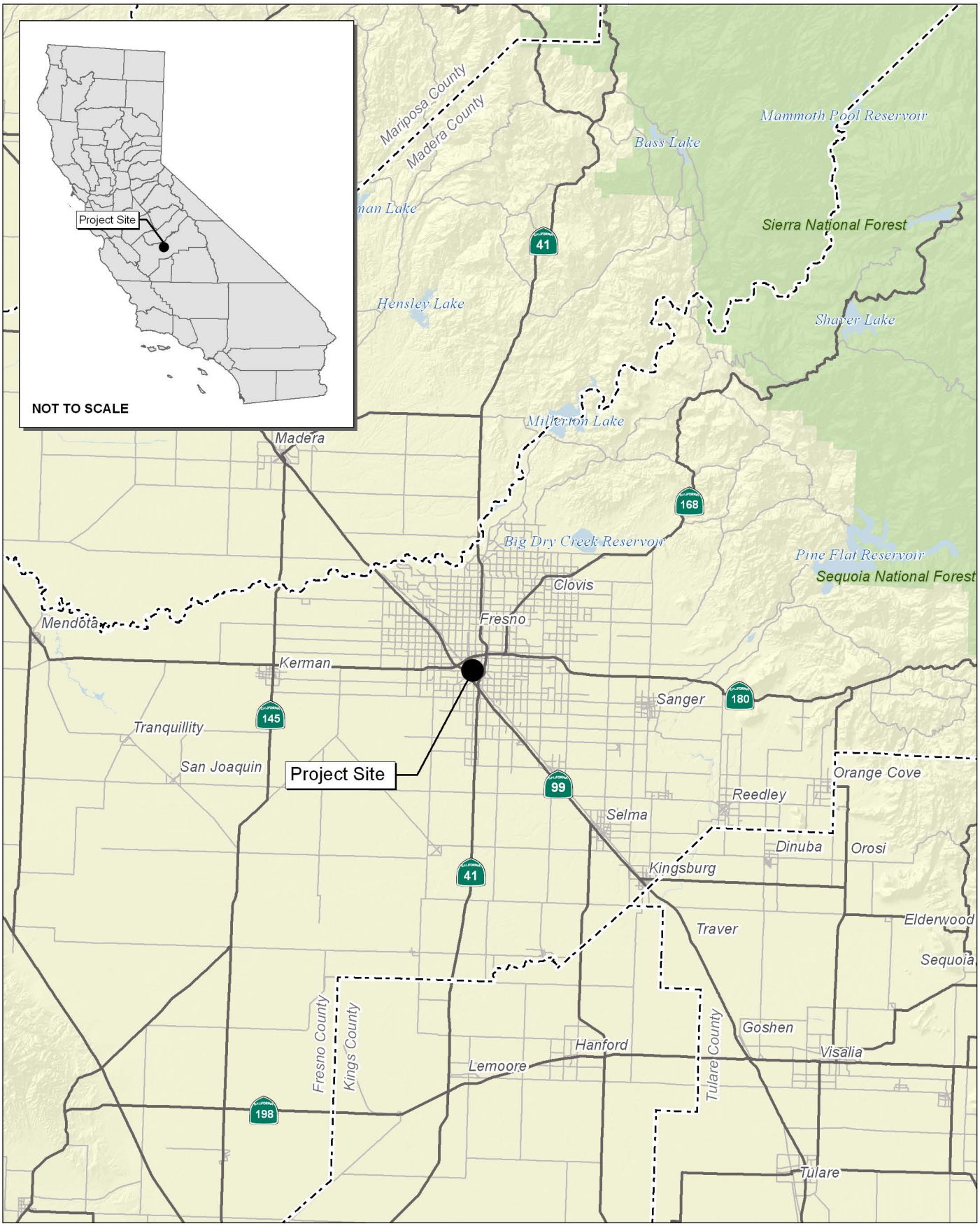
Appendix A - Regional Vicinity Map



Source: Census 2000 Data, The CaSIL, MBA GIS 2013.

Michael Brandman Associates

NORTH

10 5 0 10

Miles

Appendix A
Regional Vicinity Map

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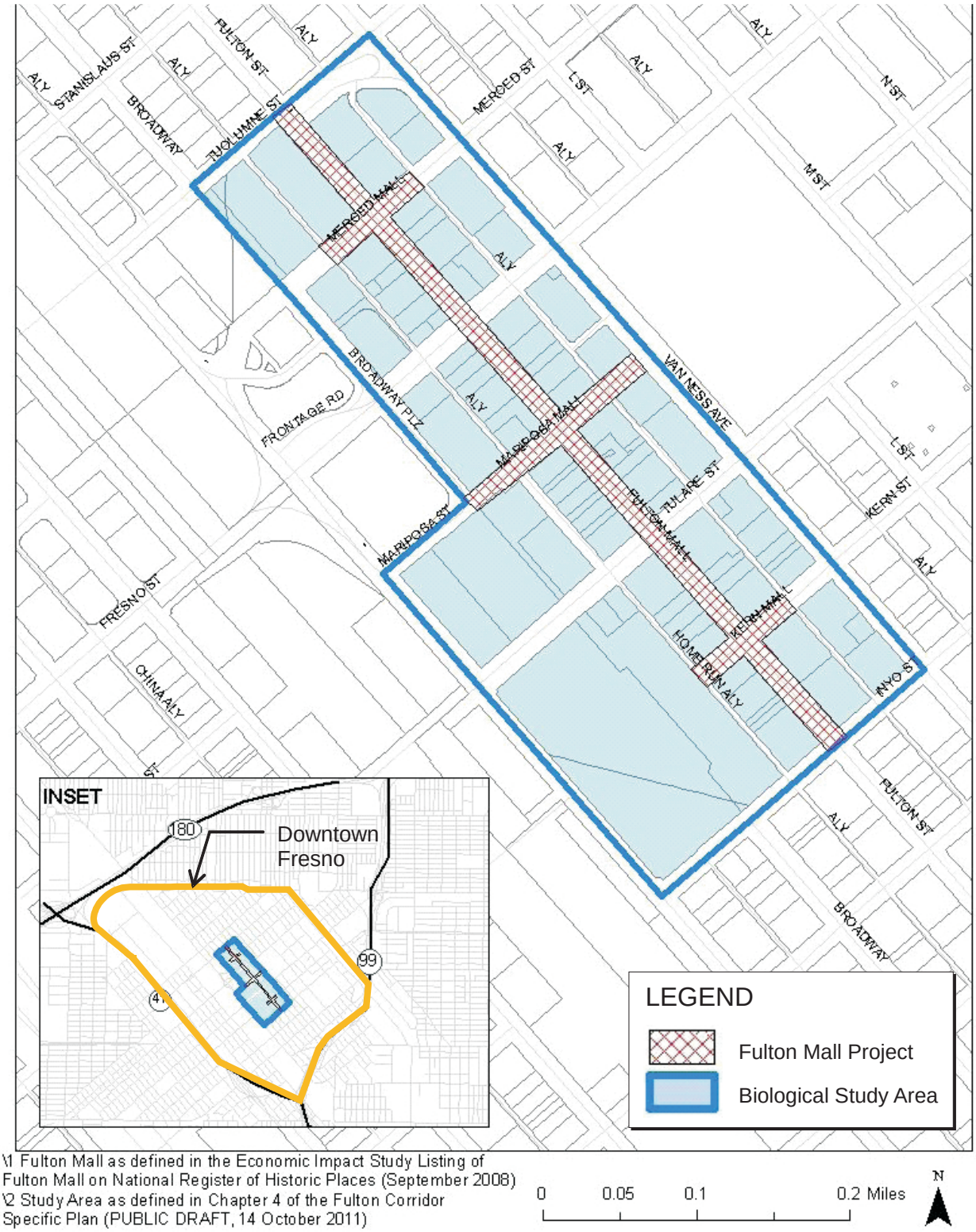
CITY OF FRESNO • FULTON MALL PROJECT
NATURAL ENVIRONMENT STUDY – MINIMAL IMPACTS

Appendix B - Biological Study Area Map



\1 Fulton Mall as defined in the Economic Impact Study Listing of Fulton Mall on National Register of Historic Places (September 2008)
\2 Study Area as defined in Chapter 4 of the Fulton Corridor Specific Plan (PUBLIC DRAFT, 14 October 2011)

Michael Brandman Associates

Appendix B
Biological Study Area and Project Area

Appendix C - California Natural Diversity Data Base List

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE

Quad is (Fresno South (3611967) or Fresno North (3611977) or Clovis (3611976) or Malaga (3611966))

CNDDB Element Query Results

ScientificName	CommonName	ElementCode	OccCount	GlobalRank	StateRank	FederalListingStatus	StateListingStatus	CNPSList	OtherStatus	Habitat
Agelaius tricolor	tricolored blackbird	ABPBXB0020	428	G2G3	S2	None	None		ABC_WLBCC-Watch List of Birds of Conservation Concern | BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_EN-Endangered | USFWS_BCC-Birds of Conservation Concern	Freshwater marsh | Marsh and swamp | Swamp | Wetland
Ambystoma californiense	California tiger salamander	AAAAA01180	1054	G2G3	S2S3	Threatened	Threatened		CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable	Cismontane woodland | Meadow and seep | Riparian woodland | Valley and foothill grassland | Vernal pool | Wetland
Antrozous pallidus	pallid bat	AMACC10010	402	G5	S3	None	None		BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive | WBWG_H-High Priority	Chaparral | Coastal scrub | Desert wash | Great Basin grassland | Great Basin scrub | Mojavean desert scrub | Riparian woodland | Sonoran desert scrub | Upper montane coniferous forest | Valley and foothill grassland
Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	608	G3	S2S3	Threatened	None		IUCN_VU-Vulnerable	Valley and foothill grassland | Vernal pool | Wetland
Castilleja campestris ssp. succulenta	succulent owl's-clover	PDSCR0D3Z1	90	G4?T3	S3	Threatened	Endangered	1B.2		Valley and foothill grassland | Vernal pool | Wetland
Caulanthus californicus	California jewel-flower	PDBRA31010	63	G1	S1	Endangered	Endangered	1B.1	USFS_S-Sensitive	Chenopod scrub | Pinon and juniper woodlands | Valley and foothill grassland
Coccyzus americanus occidentalis	western yellow-billed cuckoo	ABNRB02022	119	G5T3Q	S1	Candidate	Endangered		BLM_S-Sensitive | USFS_S-Sensitive | USFWS_BCC-Birds of Conservation Concern	Riparian forest
Dipodomys nitratoides exilis	Fresno kangaroo rat	AMAFD03151	12	G3T1	S1	Endangered	Endangered		IUCN_VU-Vulnerable	Chenopod scrub
Efferia antiochi	Antioch efferian robberfly	IIDIP07010	4	G1G3	S1S3	None	None			Interior dunes

Eumops perotis californicus	western mastiff bat	AMACD02011	293	G5T4	S3?	None	None		BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | WBWG_H-High Priority	Chaparral | Cismontane woodland | Coastal scrub | Valley and foothill grassland
Imperata brevifolia	California satintail	PMPOA3D020	31	G2	S2.1	None	None	2.1	USFS_S-Sensitive	Chaparral | Coastal scrub | Meadow and seep | Mojavean desert scrub | Riparian forest | Wetland
Lasiurus cinereus	hoary bat	AMACC05030	235	G5	S4?	None	None		IUCN_LC-Least Concern | WBWG_M-Medium Priority	Broadleaved upland forest | Cismontane woodland | Lower montane coniferous forest | North coast coniferous forest
Leptosiphon serrulatus	Madera leptosiphon	PDPLM09130	27	G1?	S1?	None	None	1B.2	USFS_S-Sensitive	Cismontane woodland | Lower montane coniferous forest
Linderiella occidentalis	California linderiella	ICBRA06010	382	G3	S2S3	None	None		IUCN_NT-Near Threatened	Vernal pool
Lytta molesta	molestan blister beetle	IICOL4C030	17	G2	S2	None	None			Vernal pool | Wetland
Metapogon hurdi	Hurd's metapogon robberfly	IIDIP08010	3	G1G3	S1S3	None	None			Interior dunes
Northern Claypan Vernal Pool	Northern Claypan Vernal Pool	CTT44120CA	21	G1	S1.1	None	None			Vernal pool | Wetland
Orcuttia inaequalis	San Joaquin Valley Orcutt grass	PMPOA4G060	47	G1	S1	Threatened	Endangered	1B.1		Vernal pool | Wetland
Perognathus inornatus inornatus	San Joaquin pocket mouse	AMAFD01061	109	G4T2T3	S2S3	None	None		BLM_S-Sensitive	Coastal scrub | Valley and foothill grassland
Sagittaria sanfordii	Sanford's arrowhead	PMALI040Q0	88	G3	S3	None	None	1B.2	BLM_S-Sensitive	Marsh and swamp | Wetland
Spea hammondii	western spadefoot	AAABF02020	422	G3	S3	None	None		BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_NT-Near Threatened	Cismontane woodland | Coastal scrub | Valley and foothill grassland | Vernal pool | Wetland
Taxidea taxus	American badger	AMAJF04010	454	G5	S4	None	None		CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Alkali marsh | Alkali playa | Alpine | Alpine dwarf scrub | Bog and fen | Brackish marsh | Broadleaved upland forest | Chaparral | Chenopod scrub | Cismontane woodland | Closed-cone coniferous forest | Coastal bluff scrub | Coastal dunes |

										Coastal prairie | Coastal scrub | Desert dunes | Desert wash | Freshwater marsh | Great Basin grassland | Great Basin scrub | Interior dunes | Ione formation | Joshua tree woodland | Limestone | Lower montane coniferous forest | Marsh and swamp | Meadow and seep | Mojavean desert scrub | Montane dwarf scrub | North coast coniferous forest | Oldgrowth | Pavement plain | Redwood | Riparian forest | Riparian scrub | Riparian woodland | Salt marsh | Sonoran desert scrub | Sonoran thorn woodland | Ultramafic | Upper montane coniferous forest | Upper Sonoran scrub | Valley and foothill grassland
Tropidocarpum capparideum	caper-fruited tropidocarpum	PDBRA2R010	18	G1	S1	None	None	1B.1	USFS_S-Sensitive	Valley and foothill grassland
Tuctoria greenei	Greene's tuctoria	PMPOA6N010	46	G1	S1	Endangered	Rare	1B.1	USFS_S-Sensitive	Vernal pool | Wetland

Appendix D - CNPS Inventory of Rare and Endangered Plants List

CNPS California Native Plant Inventory of Rare and Endangered Plants

Plant List

11 matches found. *Click on scientific name for details*

Search Criteria

Found in Fresno County, Found in 9 Quads around 36119G7

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
Castilleja campestris ssp. succulenta	succulent owl's-clover	Orobanchaceae	annual herb (hemiparasitic)	1B.2	S3	G4?T3
Caulanthus californicus	California jewel-flower	Brassicaceae	annual herb	1B.1	S1	G1
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	2.2	S2	G2
Eryngium spinosepalum	spiny-sepaled button-celery	Apiaceae	annual / perennial herb	1B.2	S2.2	G2
Imperata brevifolia	California satintail	Poaceae	perennial rhizomatous herb	2.1	S2.1	G2
Leptosiphon serrulatus	Madera leptosiphon	Polemoniaceae	annual herb	1B.2	S1?	G1?
Orcuttia inaequalis	San Joaquin Valley Orcutt grass	Poaceae	annual herb	1B.1	S1	G1
Pseudobahia bahiifolia	Hartweg's golden sunburst	Asteraceae	annual herb	1B.1	S2	G2
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb	1B.2	S3	G3
Tropidocarpum capparideum	caper-fruited tropidocarpum	Brassicaceae	annual herb	1B.1	S1	G1
Tuctoria greenei	Greene's tuctoria	Poaceae	annual herb	1B.1	S1	G1

Suggested Citation

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Appendix E - Special Status Species Tables

Appendix E.1: Special-Status Plant Species Table

Special Status Plant Species Table

Species		Status			Preferred Habitat	Life Form	Blooming Period	Potential to Occur/ Known Occurrence/ Suitable Habitat
Scientific Name	Common Name	USFWS	CDFW	CNPS				
Atriplex persistens	vernal pool smallscale	—	—	1B.2	This species occurs within vernal pools, specifically alkaline vernal pools. Known Elevation Limits: 33 – 377 ft.	Annual herb	Jun – Oct	**Not Likely to Occur.** The BSA occurs within the Fresno River floodplain that does not contain any vernal pools. Additionally the BSA is significantly disturbed from previous and ongoing disturbances.
Castilleja campestris ssp. *succulenta*	succulent owl's clover	FT	SE	1B.2	Succulent owl's clover occurs in vernal pools within valley and foothill grasslands. Known Elevation Limits: 82 – 2,460 ft.	Annual herb	Apr – May	**Not Likely to Occur.** The project site and BSA are located within an entirely disturbed and developed area. No vernal pools or any native habitat occur within the BSA.
Caulanthus californicus	California jewel-flower	FE	SE	1B.1	This species occurs within chenopod scrub, valley and foothill grassland, and pinyon-juniper woodland. It is historically found from various valley habitat in both the central valley and the Carrizo Plain. Known Elevation Limits: 213 – 2,952 ft.	Annual herb	Feb – May	**Not Likely to Occur.** The project site and BSA are located within an entirely disturbed and developed area. No chenopod scrub, grasslands, juniper woodlands, or any native habitat occur within the BSA.
Leptosiphon serrulatus	Madera leptosiphon	—	—	1B.2	This species occurs within cismontane woodland and lower montane coniferous forests, on dry slopes	Annual herb	Apr – May	**Not Likely to Occur.** The BSA occurs partially within the Fresno River floodplain and partially within urban/developed areas.

Species		Status			Preferred Habitat	Life Form	Blooming Period	Potential to Occur/ Known Occurrence/ Suitable Habitat
Scientific Name	Common Name	USFWS	CDFW	CNPS				
					and often on decomposed granite woodland. Known Elevation Limits: 984 – 4,265 ft.			No woodland habitat occurs within or immediately adjacent to the BSA. Additionally the BSA is significantly disturbed from previous and ongoing disturbances.
Orcuttia inaequalis	San Joaquin Valley Orcutt grass	FT	SE	1B.1	This species is only found in vernal pools. Known Elevation Limits: 50 – 2,165 ft.	Annual herb	Apr – Sep	**Not Likely to Occur.** The project site and BSA are located within an entirely disturbed and developed area. No vernal pools or any native habitat occur within the BSA.
Orcuttia pilosa	hairy Orcutt grass	FE	SE	1B.1	This species typically occurs along the margins of vernal pools. Known Elevation Limits: 150 – 656 ft.	Annual herb	May – Sep	**Not Likely to Occur.** The BSA occurs within the Fresno River floodplain that does not contain any vernal pools. Additionally the BSA is significantly disturbed from previous and ongoing disturbances.
Tuctoria greenei	Greene's tuctoria	FE	SR	1B.1	Greene's tuctoria only occurs in vernal pools. It can specifically be found on the dry bottoms of vernal pools in open grasslands. Known Elevation Limits: 98 – 3,510 ft.	Annual herb	May – Sep	**Not Likely to Occur.** The project site and BSA are located within an entirely disturbed and developed area. No vernal pools, grasslands or any native habitat occur within the BSA.

Species		Status			Preferred Habitat	Life Form	Blooming Period	Potential to Occur/ Known Occurrence/ Suitable Habitat
Scientific Name	Common Name	USFWS	CDFW	CNPS				
U.S. Fish and Wildlife Service FE Federal Endangered FT Federal Threatened		California Department of Fish and Game SE State Endangered ST State Threatened SR State Rare				California Native Plant Society 1A Plants presumed extinct in California. 1B Plants rare, threatened, or endangered in California and elsewhere. 2 Plants rare, threatened, or endangered in California, but more common elsewhere. 3 Plants in need of more information. 4 Plants of limited distribution. ** No Longer Recognized as Sensitive by CNPS		

Not Likely to Occur – There are no present or historical records of the species occurring on or in the immediate vicinity, (within 3 miles) of the Project Site and the diagnostic habitats strongly associated with the species do not occur on or in the immediate vicinity of the Site.

Low Potential to Occur – There is a historical record of the species in the vicinity of the Project Site and potentially suitable habitat on Site, but existing conditions, such as density of cover, prevalence of non-native species, evidence of disturbance, limited habitat area, isolation, substantially reduce the possibility that the species may occur. The Site is above or below the recognized elevation limits for this species.

Moderate Potential to Occur – The diagnostic habitats associated with the species occur on or in the immediate vicinity of the Project Site, but there is not a recorded occurrence of the species within the immediate vicinity (within 3 miles). Some species that contain extremely limited distributions may be considered moderate, even if there is a recorded occurrence in the immediate vicinity.

High Potential to Occur – There is both suitable habitat associated with the species and a historical record of the species on or in the immediate vicinity of the Project Site (within 3 miles).

Species Present – The species was observed on the Project Site at the time of the survey or during a previous biological survey.

Appendix E.2: Special-Status Wildlife Species Table

Special Status Wildlife Species Table

Species		Status			Required Habitat	Potential to Occur/ Known Occurrence/ Suitable Habitat
Scientific Name	Common Name	Federal	State	Other		
Arthropods						
Branchinecta lynchi	vernal pool fairy shrimp	FT	—	—	This species inhabits the Central Valley of California, from Contra Costa to Kern and Tulare Counties. This beetle can be found in dry vernal pools, but absent from adjacent green/flowering, non pool vegetation.	**Not Likely to Occur.** No suitable habitat for this species occurs on or in the immediate vicinity of the BSA. No vernal pool habitat occurs within the BSA. This species was not observed during the survey.
Reptiles and Amphibians						
Ambystoma californiense	California tiger salamander	FT	ST	DFW: SSC	This salamander needs underground refuges, especially ground squirrel burrows and vernal pools or other season water sources for breeding.	**Not Likely to Occur.** No suitable habitat occurs on or in the immediate vicinity of the BSA for this species. The BSA does not contain vernal pools or ground squirrel burrows. This species was not observed during the survey.
Avian						
Athene cunicularia	burrowing owl	—	—	DFW: SSC	This speices is known to occur within open, dry annual or perennial grasslands, and in deserts and scrublands characterized by low-growing vegetation. The burrowing owl is a subterranean nester, dependant upon burrowing mammals, most notably, the California ground squirrel.	**Not Likely to Occur.** No suitable nesting habitat for this species occurs within the survey area due to lack of small mammal burrows. Marginally suitable foraging opportunities occurs within limited portions of the BSA; however, existing anthropogenic disturbances would likely deter this species from utilizing the area.

Species		Status			Required Habitat	Potential to Occur/ Known Occurrence/ Suitable Habitat
Scientific Name	Common Name	Federal	State	Other		
Coccyzus americanus occidentalis	western yellow-billed cuckoo	FC	SE	USFS: Sensitive	This bird is a riparian forest nester, primarily along the broad, lower flood-bottoms of larger river systems. It nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	**Not Likely to Occur.** The BSA occurs within Downtown Fresno and is characterized by disturbed and developed land. No riparian areas or riparian forests are located within the BSA. Ornamental trees occur within the BSA, but are not native willow or cottonwood trees.
Mammals						
Dipodomys nitratoides exilis	Fresno kangaroo rat	FE	SE	-	Fresno kangaroo rat occurs in alkali sink-open grassland habitats in western Fresno County. It prefers bare alkaline clay-based soils subject to seasonal inundation, with more friable soil mounds around shrubs and grasses.	**Not Likely to Occur.** The BSA is characterized by heavily disturbed and completely developed land. No native friable soils occur onsite due to paving of the BSA for the construction of Downtown Fresno.
Lasiurus cinereus	hoary bat	—	—	—	This species prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. It roosts in dense foliage of medium to large trees and feeds primarily on moths. Requires water.	**Not Likely to Occur.** No suitable roosting or foraging habitat occurs within the BSA. Swallow nests occur underneath the Schnoor Avenue Bridge and no dense stands of trees occur within the Fresno River floodplain. This species was not observed during the survey.

Species		Status			Required Habitat	Potential to Occur/ Known Occurrence/ Suitable Habitat
Scientific Name	Common Name	Federal	State	Other		

Federal		State		Other	
FE	Federal Endangered	SE	State Endangered		
FT	Federal Threatened	ST	State Threatened	DFW:SSC	California Species of Special Concern
PFT	Proposed Federal Threatened	CDFW:FP	Fully Protected Species	USFS:	Sensitive United States Forest Service
C	Candidate for Federal Listing	CDFW: P	Protected Species	BLM:	Sensitive
D	Delisted			G	Global Ranking Rarity
				S	State Ranking Rarity

Not Likely to Occur - There are no present or historical records of the species occurring on or in the immediate vicinity, (within 3 miles) of the Project Site and the diagnostic habitats strongly associated with the species do not occur on or in the immediate vicinity of the Site.

Low Potential to Occur - There is a historical record of the species in the vicinity of the Project Site and potentially suitable habitat on Site, but existing conditions, such as density of cover, prevalence of non-native species, evidence of disturbance, limited habitat area, isolation, substantially reduce the possibility that the species may occur. The Site is above or below the recognized elevation limits for this species.

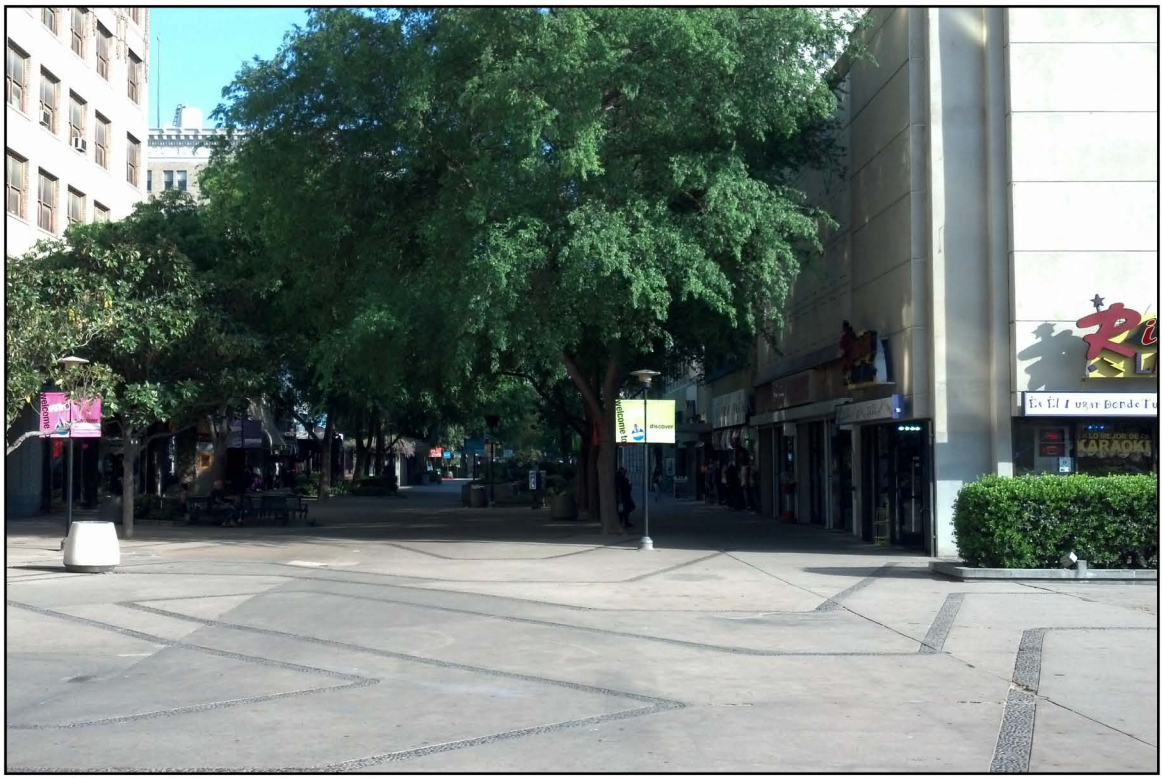
Moderate Potential to Occur - The diagnostic habitats associated with the species occur on or in the immediate vicinity of the Project Site, but there is not a recorded occurrence of the species within the immediate vicinity (within 3 miles). Some species that contain extremely limited distributions may be considered moderate, even if there is a recorded occurrence in the immediate vicinity.

High Potential to Occur - There is both suitable habitat associated with the species and a historical record of the species on or in the immediate vicinity of the Project Site (within 3 miles).

Species Present - The species was observed on the Project Site at the time of the survey or during a previous biological survey.

Appendix F - Photographs

Photograph 1: Southwest view of Mariposa Mall with 1900 Mariposa Mall building in distant background.

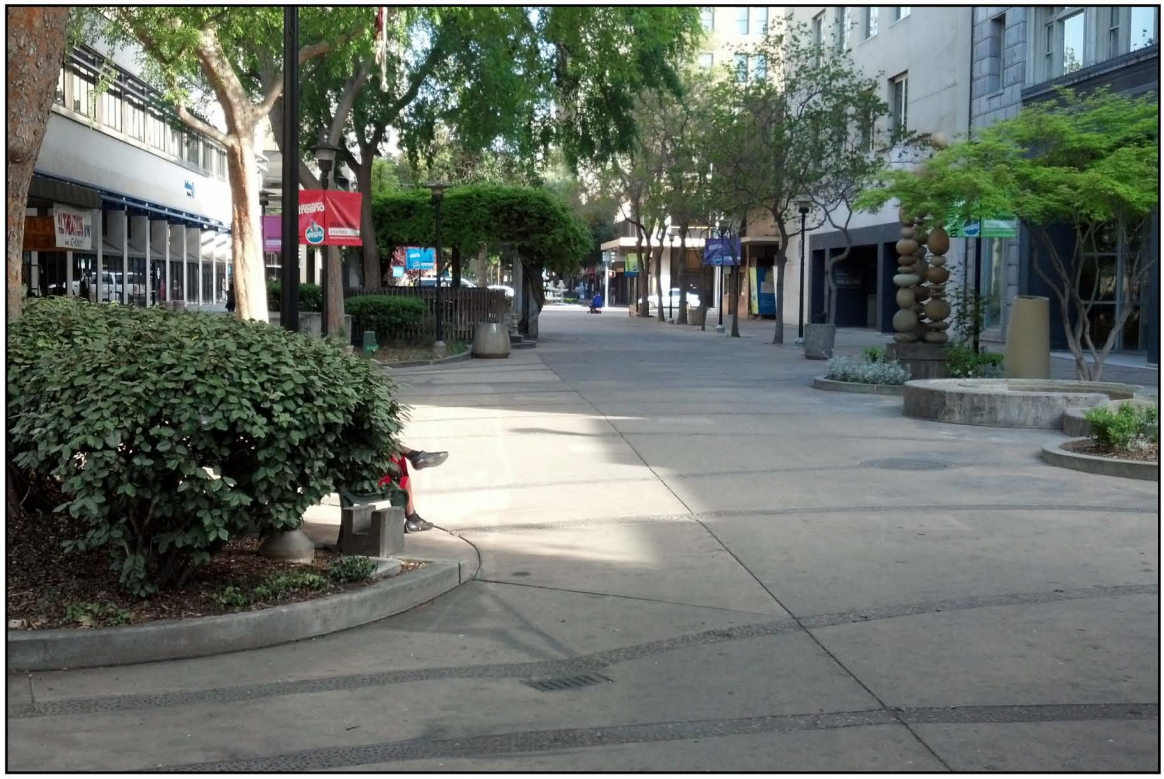


Photograph 2: Southeast view along Fulton Mall from the center of Mariposa Mall.

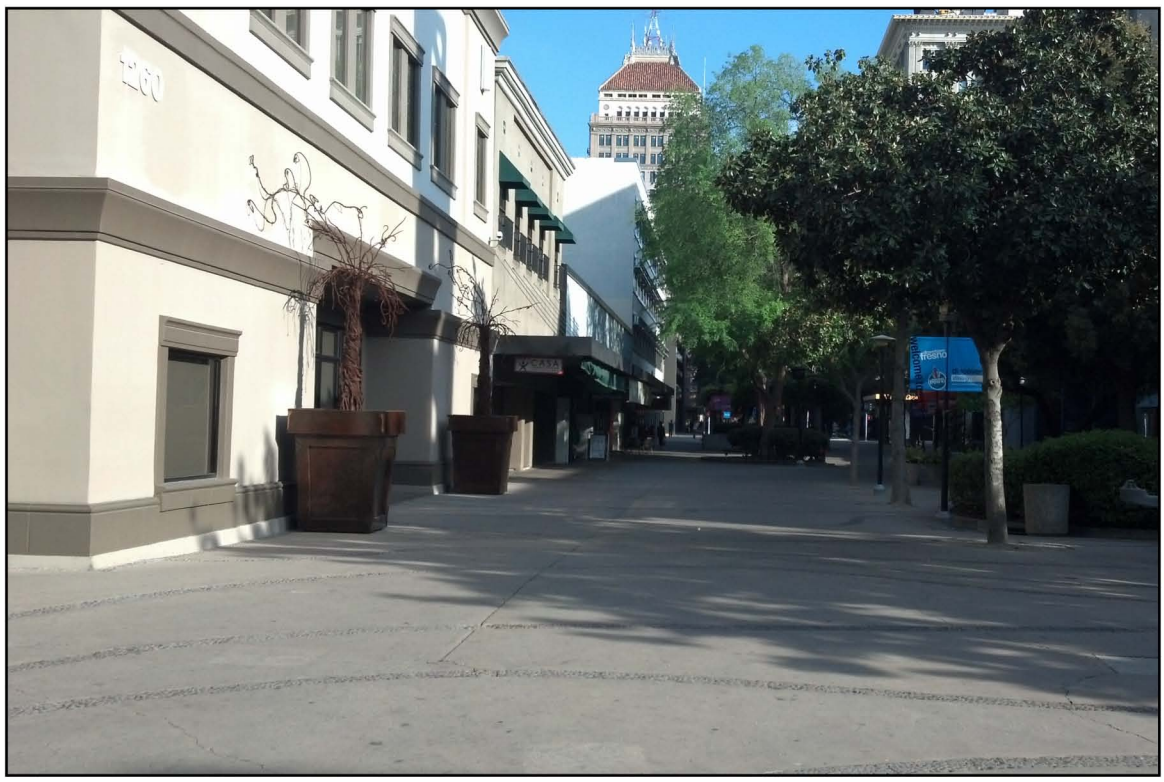
Source: Michael Brandman Associates, 2013.

Michael Brandman Associates

Appendix F
Site Photographs 1 and 2



Photograph 3: Fulton Mall overview (1215 Fulton Mall at far right), southeast view.



Photograph 4: Overview of Fulton Mall from the center of Merced Mall intersection (1260 Fulton Mall to left), southeast view.

Source: Michael Brandman Associates, 2013.

Michael Brandman Associates

Appendix F
Site Photographs 3 and 4