Appendix A:
Floral and Faunal Compendia

Flora Compendia

Adoxaceae		**Honeysuckle Family**
Sambucus	*mexicana*	blue elderberry
Amaranthaceae		**Amaranth Family**
Amaranthus	*albus*	tumbling pigweed
Amaranthus	*arenicola*	pigweed
Anacardiaceae		**Sumac or Cashew Family**
Malosma	*laurina*	laurel sumac
Schinus	*molle*	Peruvian pepper tree
Asteraceae		**Sunflower Family**
Ambrosia	*psilostachya*	western ragweed
Anthemis	*cotula*	mayweed
Artemisia	*californica*	California sagebrush
Artemisia	*douglasiana*	mugwort
Artemisia	*dracunculus*	tarragon
Baccharis	*salicifolia*	mule fat
Centaurea	*solstitialis*	yellow star-thistle
Chamomilla	*suaveolens*	pineapple weed
Conyza	*canadensis*	horseweed
Cotula	*coronopifolia*	brass-buttons
Encelia	*californica*	California brittlebush
Encelia	*farinosa*	brittlebush
Helianthus	*annuus*	common sunflower
Heterotheca	*grandiflora*	telegraphweed
Lasthenia	*californica*	California goldfields
Lepidospartum	*squamatum*	California broomsage
Pseudognaphalium	*canescens*	everlasting cudweed
Sonchus	*asper ssp. asper*	prickly sow thistle
Sonchus	*oleraceus*	common sow thistle
Boraginaceae		**Borage Family**
Amsinckia	*menziesii*	Menzies' fiddleneck
Heliotropium	*curassivicum*	saltmarsh heliotrope
Brassicaceae		**Mustard Family**
Brassica	*nigra*	black mustard
Brassica	*tournefortii*	Asian mustard
Cakile	*edentula*	American sea rocket
Hirschfeldia	*incana*	short-podded mustard
Idahoa	*scapigera*	oldstem idahoa
Raphanus	*sativus*	radish
Rorippa	*columbiae*	Columbian yellowcress
Sisymbrium	*irio*	London rocket

Flora Compendia

Chenopodiaceae		**Goosefoot Family**
Atriplex	*canescens*	four wing saltbush
Chenopodium	*album*	lamb's quarters
Salsola	*tragus*	Russian thistle
Cistaceae		**Rock-Rose Family**
Cistus	*salviifolius*	salvia cistus
Convolvulaceae		**Morning-Glory Family**
Convolvulus	*arvensis*	field bindweed
Cornaceae		**Dogwood Family**
Cornus	*glabrata*	brown dogwood
Euphorbiaceae		**Spurge Family**
Chamaesyce	*albomarginata*	rattlesnake weed
Ricinus	*communis*	castor bean
Fabaceae		**Legume Family**
Lotus	*scoparius*	common deerweed
Lupinus	*sp.*	unknown lupine sp.
Melilotus	*indicus*	annual yellow sweetclover
Vicia	*sativa*	garden vetch
Geraniaceae		**Geranium Family**
Erodium	*botrys*	longe beak stork's bill
Erodium	*cicutarium*	red-stemmed stork's bill
Hydrophyllaceae		**Waterleaf Family**
Phacelia	*cicutaria*	caterpillar phacelia
Lamiaceae		**Mint Family**
Marrubium	*vulgare*	horehound
Salvia	*apiana*	white sage
Salvia	*mellifera*	black sage
Oleaceae		**Olive Family**
Fraxinus	*latifolia*	Oregon ash
Olea	*europaea*	olive
Onagraceae		**Evening Primrose Family**
Camissonia	*arenaria*	Fortuna Range sun cup
Polygonaceae		**Buckwheat Family**
Eriogonum	*fasciculatum*	California buckwheat
Salicaceae		**Willow Family**
Populus	*fremontii ssp. fremontii*	Fremont cottonwood
Salix	*exigua*	narrowleaf willow
Salix	*gooddingii*	Goodding's willow
Salix	*lasiolepis*	arroyo willow

Flora Compendia

Scrophulariaceae		**Figwort Family**
Scrophularia	*californica*	California figwort
Simaroubaceae		**Quassia Family**
Ailanthus	*altissima*	tree of heaven
Solanaceae		**Nightshade Family**
Datura	*wrightii*	jimson weed
Nicotiana	*glauca*	tree tobacco
Tamaricaceae		**Tamarisk Family**
Tamarix	*aphylla*	athel tamarisk
Arecaceae		**Palm Family**
Washingtonia	*filifera*	California Washington palm
Poaceae		**Grass Family**
Arundo	*donax*	giant reed
Avena	*barbata*	slender oat
Bouteloua	*aristidoides*	needle grama
Bromus	*carinatus*	California brome
Bromus	*diandrus*	ripgut brome
Bromus	*rubens*	red brome
Deschampsia	*cespitosa ssp. holciformis*	California hair grass
Elymus	*condensatus*	giant wild rye
Hordeum	*murinum*	wall barley
Hordeum	*vulgare*	hore barley
Leptochloa	*viscida*	sticky sprangletop
Pleuropogon	*californicus*	annual semaphoregrass
Triticum	*aestivum*	wheat

Fauna Compendium

Aeshnidae		**Darners**
Aeshna	*Multicolor*	blue-eyed darner
Pieridae		**Whites, Sulphurs, and Orangetips**
Pieris	*rapae*	cabbage white
Nymphalidae		**Brush-Footed Butterflies**
Vanessa	*cardui*	painted lady
Pompilidae		**Spider Wasps**
Pepsis	*chrysothemis*	tarantula hawk
Phrynosomatidae		**Lizards**
Sceloporus	*occidentalis*	western fence lizard
Uta	*stansburiana*	side-blotched lizard
Colubridae		**Egg-laying snakes**
Pituophis	*cantenifer annectens*	San Diego gopher snake
Cathartidae		**Vultures**
Cathartes	*aura*	turkey vulture
Accipitridae		**Hawks**
Elanus	*leucurus*	white-tailed kite
Circus	*cyaneus*	northern harrier
Buteo	*lineatus*	red-shouldered hawk
Buteo	*jamaicensis*	red-tailed hawk
Charadriidae		**Plovers**
Charadrius	*vociferus*	killdeer
Laridae		**Gulls/Terns**
Larus	*californicus*	California gull
Columbidae		**Pigeons/Doves**
Columba	*livia*	rock pigeon
Zenaida	*macroura*	mourning dove
Cuculidae		**Cuckoos/Roadrunners/Anis**
Geococcyx	*californianus*	greater roadrunner
Tytonidae		**Barn owls**
Tyto	*alba*	barn owl
Strigidae		**True Owls**
Athene	*cunicularia*	burrowing owl
Trochilidae		**Hummingbirds**
Calypte	*anna*	Anna's hummingbird
Calypte	*costae*	Costa's hummingbird
Picidae		**Woodpeckers**
Picoides	*nuttallii*	Nuttall's woodpecker
Tyrannidae		**Flycatchers**

Fauna Compendium

Sayornis	*nigricans*	black phoebe
Sayornis	*saya*	Say's phoebe
Myiarchus	*cinerascens*	ash-throated flycatcher
Tyrannus	*vociferans*	Cassin's kingbird
Tyrannus	*verticalis*	western kingbird
Laniidae		**Shrikes**
Lanius	*ludovicianus*	loggerhead shrike
Corvidae		**Jays/Crows**
Corvus	*brachyrhynchos*	American crow
Corvus	*corax*	common raven
Alaudidae		**Larks**
Eremophila	*alpestris*	horned lark
Hirundinidae		**Swallows**
Stelgidopteryx	*serripennis*	northern rough-winged swallow
Hirundo	*rustica*	barn swallow
Hirundo	*rustica*	barn swallow
Aegithalidae		**Bushtits**
Psaltriparus	*minimus*	bushtit
Troglodytidae		**Wrens**
Salpinctes	*obsoletus*	rock wren
Thryomanes	*bewickii*	Bewick's wren
Troglodytes	*aedon*	house wren
Timaliidae		**Old world babblers**
Sialia	*mexicana*	western bluebird
Mimidae		**Mockingbirds/Thrashers**
Mimus	*polyglottos*	northern mockingbird
Sturnidae		**Starlings**
Sturnus	*vulgaris*	European starling
Parulidae		**New world warblers**
Wilsonia	*citrina*	hooded warbler
Emberizidae		**Warblers, sparrow, etc.**
Pipilo	*crissalis*	California towhee
Melospiza	*melodia*	song sparrow
Zonotrichia	*leucophrys*	white-crowned sparrow
Cardinalidae		**Cardinals**
Pheucticus	*melanocephalus*	black-headed grosbeak
Passerina	*caerulea*	blue grosbeak
Passerina	*caerulea*	blue grosbeak
Icteridae		**New world blackbirds**

Fauna Compendium

Agelaius	*phoeniceus*	red-winged blackbird
Sturnella	*neglecta*	western meadowlark
Euphagus	*cyanocephalus*	Brewer's blackbird
Icterus	*cucullatus*	hooded oriole
Icterus	*bullockii*	Bullock's oriole
Fringillidae		**Finches**
Carpodacus	*mexicanus*	house finch
Carduelis	*psaltria*	lesser goldfinch
Leporidae		**Hares and Rabbits**
Sylvilagus	*audubonii*	desert cottontail
Sciuridae		**Squirrels**
Spermophilus	*beecheyi*	California ground squirrel
Geomyidae		**Pocket Gophers**
Thomomys	*bottae*	Botta's pocket gopher
Canidae		**Wolves and Foxes**
Canis	*familiaris*	domestic dog
Canis	*latrans*	coyote
Mustelidae		**Weasels, Skunks, and Otters**
Mephitis	*mephitis*	striped skunk

Appendix B: Site Photographs

Photograph 1: looking south at the eastern side of Theodore Street at the northern end of the project site. In the photograph is a highly eroded road-side ditch, with extensive agriculture on the east and disturbed roadside to the west.

Photograph 2: Looking northeast at extensive agriculture from the eastern side of the project site. This vegetation community is the dominant community within the specific plan area.

Source: First Carbon Associates-Michael Brandman Associates, 2012.

FirstCarbon® SOLUTIONS
MICHAEL BRANDMAN ASSOCIATES

Appendix B
Site Photographs 1 and 2

Photograph 3: Looking southeast at the patch of mule fat scrub within the central portion of the specific plan area. This area is an isolated from adjacent riparian habitat.

Photograph 4: Looking northeast from the central portion of the project site. The non-native grassland areas as commonly found in areas where extensive agriculture has been stopped.

Source: First Carbon Associates-Michael Brandman Associates, 2012.

FirstCarbon® SOLUTIONS
MICHAEL BRANDMAN ASSOCIATES

Appendix B
Site Photographs 3 and 4

Photograph 5: Looking south at the extensive agricultural areas in the western portion of the project site. The mixed chaparral habitat located within the specific plan area is located at the base of the hills in the background.

Photograph 6: Looking south at the central portion of Drainage 9. This portion of the drainage is the southern most extent of coastal sage scrub before it transitions into mule fat scrub.

Source: First Carbon Associates-Michael Brandman Associates, 2012.

FirstCarbon® SOLUTIONS
MICHAEL BRANDMAN ASSOCIATES

Appendix B
Site Photographs 5 and 6

Photograph 7: Looking north at the central portion of the specific plan area from the southern portion of the project site. In the background, southern willow scrub habitat occurs on the left side of the photo and ornamental habitat occurs on the right side.

Photograph 8: Looking east at the central potion of the project site. The urban/developed area in the background is a natural gas compressor station. The area surrounding the development is extensive agriculture.

Source: First Carbon Associates-Michael Brandman Associates, 2012.

FirstCarbon® SOLUTIONS
MICHAEL BRANDMAN ASSOCIATES

Appendix B
Site Photographs 7 and 8

Photograph 9: Looking south at Drainage 1 from the northern portion of the WLCSP's western boundary. This portion of the drainage is contained within a asphalt-lined swale.

Photograph 10: Looking south at Drainage 1 from the southern portion of the drainage west of the WLCSP. This portion of the drainage is contained within a soft-bottom earthen swale and returns to an asphalt-lined channel in the background.

Source: First Carbon Associates-Michael Brandman Associates, 2012.

FirstCarbon® SOLUTIONS
MICHAEL BRANDMAN ASSOCIATES

Appendix B
Site Photographs 9 and 10

Photograph 11: Looking north along the central portion of Drainage 2. This drainage is avoided during regular agricultural activities, but has no change in soils or vegetation.

Photograph 12: Looking northwest at the western portion of the WLCSP. Drainage 2 terminates at the palm trees located in the central part of the photograph. Drainage 12 can be seen in the bottom-left corner of the photograph.

Source: First Carbon Associates-Michael Brandman Associates, 2012.

FirstCarbon® SOLUTIONS
MICHAEL BRANDMAN ASSOCIATES

Appendix B
Site Photographs 11 and 12

Photograph 13: Looking southwest at the southern portion of Drainage 3 from the east edge of the detention basin. There is no evidence of flows within the southern portion of the Drainage 3. There is an earthen berm in the background that prohibits downstream flows.

Photograph 14: Looking north at the southern extent of the tree tobacco that is growing within Drainage 4. A row of olive trees occurs in the background. There is no riparian vegetation within the channel, just a stand of tree tobacco and castorbean.

Source: First Carbon Associates-Michael Brandman Associates, 2012.

Photograph 15: Looking south at Drainage 4 from the southern extent of the tree tobacco within the drainage. This drainage sheet flows and has no further evidence of flows just based the structure in the background.

Photograph 16: Looking north at the central portion of Drainage 5 just north of Alessandro Boulevard. There is no vegetation within this roadside ditch.

Source: First Carbon Associates-Michael Brandman Associates, 2012.

FirstCarbon® SOLUTIONS
MICHAEL BRANDMAN ASSOCIATES

Appendix B
Site Photographs 15 and 16

Photograph 17: Looking southeast at the southern extent of Drainage 5. At this point the drainage sheet flows and is no longer detectable. In addition, Drainage 6 occurs on the opposite side of the road and also sheet flows at this point.

Photograph 18: Looking north at the central portion of Drainage 6 just north of Alessandro Boulevard. There is little to no vegetation within this roadside ditch. Bed and bank features are intermittent throughout the feature.

Source: First Carbon Associates-Michael Brandman Associates, 2012.

FirstCarbon® SOLUTIONS
MICHAEL BRANDMAN ASSOCIATES

Appendix B
Site Photographs 17 and 18

Photograph 19: Looking northeast at the southern extent of Drainage 6, just south of Alessandro road. At this point, all flows within Drainage 6 begin to sheet flow and there is no downstream evidence of continued flows.

Photograph 20: Looking south at Drainage 7 from the southern portion of Alessandro Boulevard. Concrete apron protects the drainage crossing from excessive erosion from surface flows. This is the northern extent of the mulefat scrub location within the drainage.

Source: First Carbon Associates-Michael Brandman Associates, 2014.

Photograph 21: Looking south and the southern extent of Drainage 7 as it flows off-site. The clearly defined bed and bank feature stops at the edge of the disked agricultural field, but evidence of flows continues further south.

Photograph 22: Looking south at the central portion Drainage 8 just south of the Alessandro Boulevard crossing. This drainage terminates in a non-native grassland area that is not actively disked as part of the agricultural activities in the surrounding area.

Source: First Carbon Associates-Michael Brandman Associates, 2014.

Photograph 23: Looking south at the central portion Drainage 9 just south of the Alessandro Boulevard crossing. This portion of the drainage is within highly erosive soils, which is common in the area. Vegetation within the drainage feature is fairly sparse.

Photograph 24: Looking west at the southern terminus of Drainage 9. The dirt access road is located within the SJWA, but clearly shows that the largely incised channel eventually sheet flows before any flows enter Mystic Lake.

Source: First Carbon Associates-Michael Brandman Associates, 2014.

FirstCarbon® SOLUTIONS
MICHAEL BRANDMAN ASSOCIATES

Appendix B
Site Photograph 23 and 24

Photograph 25: Looking northeast at the southern extent of Drainage 10 before it flows offsite. Riparian vegetation ends at this point.

Photograph 26: View of Drainage 11 as it flows off the project site to the south. The feature sheet flows after a short distance and does not have direct connectivity to Mystic Lake, shown in the distance.

Source: First Carbon Associates-Michael Brandman Associates, 2012.

FirstCarbon® SOLUTIONS
MICHAEL BRANDMAN ASSOCIATES

Appendix B
Site Photographs 25 and 26

Photograph 27: Looking south at Drainage 12 just south of Alessandro Boulevard. This drainage feature contains non-native weedy plant species with no evidence of riparian habitat.

Photograph 28: Looking northeast at the southern extent of Drainage 12 prior to entering the golf course, just north of Cactus Avenue. This drainage continues down stream into the Perris Valley Storm Drain, which then flows into the San Jacinto River.

Source: First Carbon Associates-Michael Brandman Associates, 2014.

FirstCarbon® SOLUTIONS
MICHAEL BRANDMAN ASSOCIATES

Appendix B
Site Photograph 27 and 28

Photograph 29: Looking east at the northern extent of Drainage 13. This is the only feature within the WLCSP that flows from south to north. There is no hydrologic connected between Drainage 13 and any other drainage feature downstream. The concrete facility in the foreground is part of the previous agricultural activities and was used to irrigate crops. It is no longer functioning.

Photograph 30: Looking east at the northern edge of the isolated feature Drainage 14. The concrete apron and metal pipes have all been removed and the riparian vegetation has significantly reduced in size due to a lack of sufficient hydrology.

Source: First Carbon Associates-Michael Brandman Associates, 2014.

FirstCarbon® SOLUTIONS
MICHAEL BRANDMAN ASSOCIATES

Appendix B
Site Photographs 29 and 30

Photograph 31: Looking south at a proposed utility crossing of Drainage 15. The drainage flows beneath Cottonwood Avenue within an underground culvert. This drainage is a maintained flood control facility.

Photograph 32: Looking north at the southern portion of Drainage 15 just north of Cactus Avenue prior to entering the golf course. This drainage has a clearly defined channel, which continues off-site and empties into the Perris Valley Storm Drain system.

Source: First Carbon Associates-Michael Brandman Associates, 2014.

FirstCarbon® SOLUTIONS
MICHAEL BRANDMAN ASSOCIATES

Appendix B
Site Photograph 31 and 32

Appendix C:
Los Angeles Pocket Mouse Focused Surveys

DRAFT
Focused Los Angeles Pocket Mouse Survey Report for the 1,778-Acre Bel Lago Property City of Moreno Valley Riverside County, California

Sunnymead and El Casco, CA USGS 7.5-minute Topographic Quadrangles
Sections 1 and 12, Township 3 South, Range 3 West and
Sections 7, 8, 16, 17, and 18, Township 3 South, Range 2 West

Prepared for:

Highland Fairview Properties
24525 Alessandro Boulevard
Moreno Valley, CA 92553

Contact: David C. Smith, General Counsel

Prepared by:

Michael Brandman Associates
220 Commerce, Suite 200
Irvine, CA 92602
714.508.4100

Contact: Kelly M. Rios, Project Biologist

Michael Brandman Associates

September 26, 2005

Draft

TABLE OF CONTENTS

Section 1: Introduction **1**
1.1 - Survey Purpose 1
1.2 - Project Site Location 1
1.3 - Los Angeles Pocket Mouse Description 4

Section 2: Methods **6**
2.1 - Literature Review 6
2.2 - General Biological Surveys 6
2.3 - Focused Surveys 6

Section 3: Existing Conditions **8**
3.1 - Weather Conditions 8
3.2 - Soils and Topography 8
3.3 - Surrounding Land Uses 8
3.4 - Plant Communities 11
3.5 - Wildlife 11
3.5.1 - Sensitive Biological Resources 11
3.6 - Trap Line Descriptions 13

Section 4: Focused Trapping Survey Results **15**

Section 5: Conclusions and Recommendations **16**

Section 6: Certification **17**

Section 7: References **18**

Appendix A: Floral and Faunal Compendia

Appendix B: Field Data Sheet

LIST OF EXHIBITS

Exhibit 1: Regional Location Map **2**

Exhibit 2: Local Vicinity USGS Map **3**

Exhibit 3: Local Vicinity Aerial Map **5**

Exhibit 4: USDA Soils Map **10**

Exhibit 5: Los Angeles Pocket Mouse Survey Area Map **14**

Draft

LIST OF TABLES

Table 1: 2005 Focused Trapping Results for the Bel Lago Project Site 15

Draft

SECTION 1: INTRODUCTION

1.1 - SURVEY PURPOSE

This report contains the findings of Michael Brandman Associates' (MBA) focused survey for Los Angeles pocket mouse (*Perognathus longimembris brevinasus*). The 1,778-acre Bel Lago property, herein referred to as Project Site or Site, is located within the City of Moreno Valley, Riverside County, California. MBA biologist Kelly Rios conducted a live-trapping effort, with the assistance of MBA biologists Steven Hongola, Scott Crawford, Karl Osmundson, Kyle Workman, and Jacque Rice for the Los Angeles pocket mouse (LAPM) which is a California Department of Fish and Game (CDFG) species of concern. This report describes the existing conditions of the property, general biological resources observed onsite and results of the trapping effort. The focused survey is a Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) requirement. This species was identified as species that may require additional surveys if suitable habitat is present within the Project Site based on the Riverside County Report Generator. The trapping effort was conducted to determine the presence/absence of LAPM on the Project Site, since suitable habitat was identified.

1.2 - PROJECT SITE LOCATION

The Project Site is located in the City of Moreno Valley, Riverside County, California. Generally, the Site is located north of the San Jacinto Wildlife Area (SJWA), south of State Route (SR) 60, east of Redlands Boulevard, and west of Gilman Springs Road (Exhibit 1). The Site is specifically located in Sections 1 and 12 of Township 3 South, and Range 3 West; and Sections 7, 8, 16, 17, and 18 of Township 3 South and Range 2 West as depicted on the Sunnymead and El Casco, CA United States Geological Survey (USGS) 7.5-minute topographic maps (Exhibit 2). The Project Site is located within the Reche Canyon/Badlands Area Plan of the MSHCP.

The Project Site consists of two large properties and a smaller, isolated property. The western property is approximately 825 acres in size with a north-south orientation. The larger eastern property is approximately 890 acres in size, oriented east-west. The small, isolated property is approximately 63 acres in size, oriented east-west, and located immediately east of Gilman Springs Road and north of Eucalyptus Avenue.

Draft

Source: Census 2000 Data, The CaSIL, MBA GIS 2005.

Michael Brandman Associates

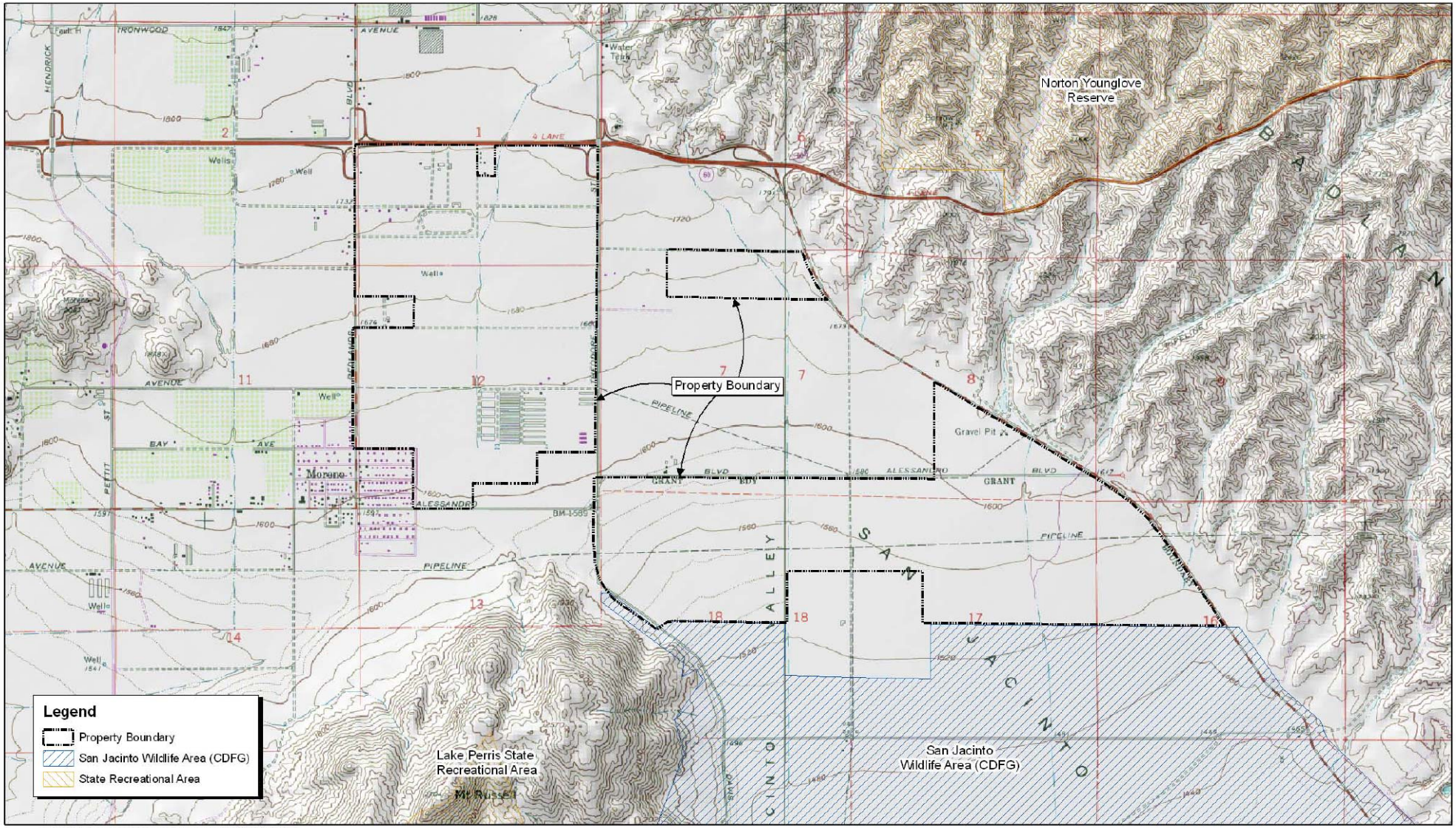
NORTH

5 2.5 0 5 Miles

Exhibit 1
Regional Location Map

26100003 • 09/2005 | 1_regional.mxd

HIGHLAND FAIRVIEW PROPERTIES • 1,778-ACRE BEL LAGO PROPERTY
LOS ANGELES POCKET MOUSE FOCUSED SURVEY REPORT



Source: USGS El Casco (1979) and Sunnymead (1980) 7.5' DRG.

NORTH

2,000 1,000 0 2,000 Feet

Michael Brandman Associates

26100003 • 09/2005 | 2_local_usgs.mxd

Exhibit 2
Local Vicinity USGS Map

HIGHLAND FAIRVIEW PROPERTIES • 1,778-ACRE BEL LAGO PROPERTY
LOS ANGELES POCKET MOUSE FOCUSED SURVEY REPORT

The Project Site has been used for dry-land grain farming for decades and is dominated by agricultural fields (Exhibit 3). General land use in the vicinity of the Project Site includes agricultural lands and scattered rural residences to the north, agricultural and conservation lands within the SJWA as well as a natural gas compressor station to the south, recreational and conservation lands to the southwest within the Lake Perris State Recreation Area, open undeveloped foothills proposed for conservation to the east, and agricultural lands and residential development to the west.

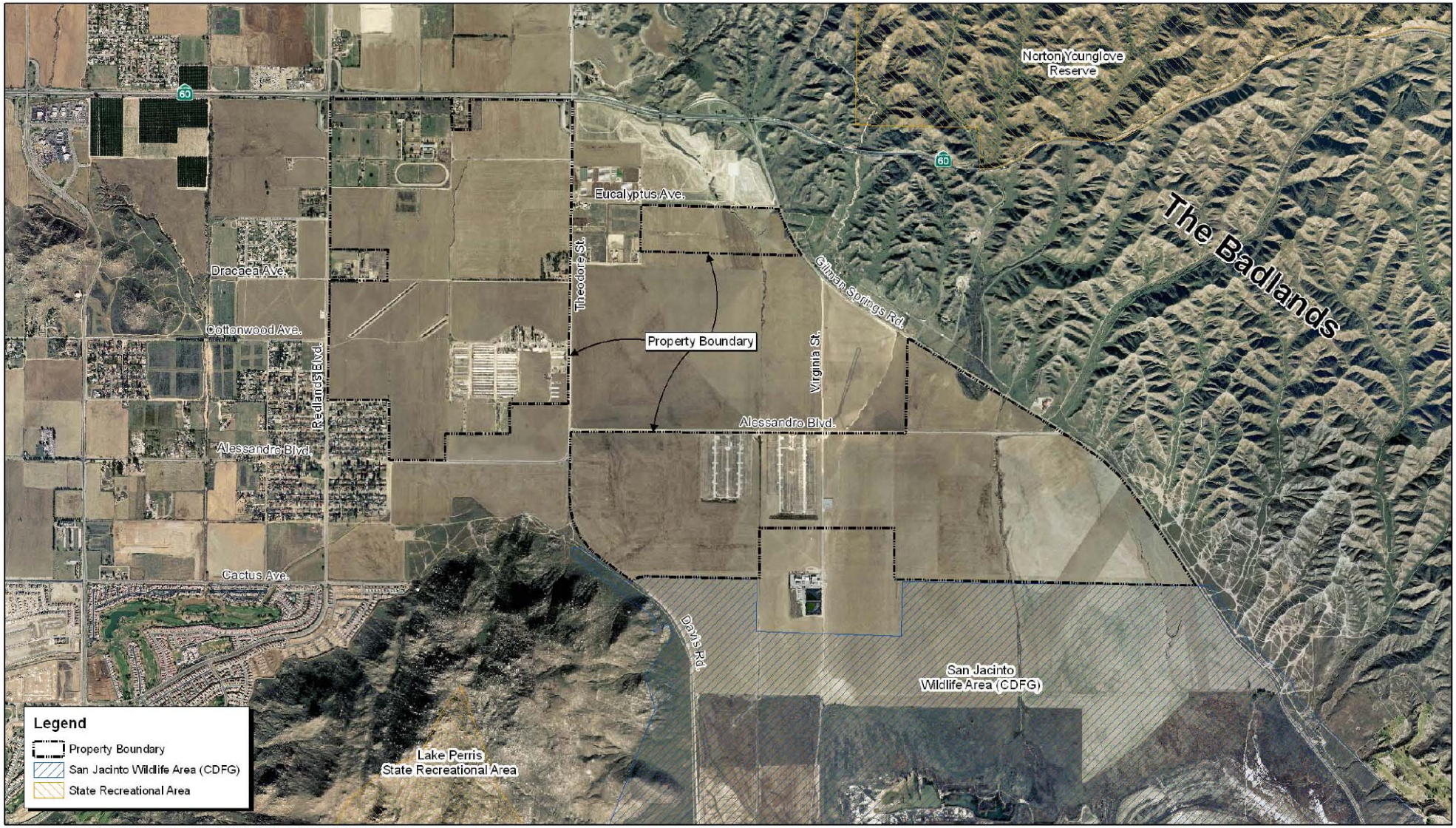
1.3 - LOS ANGELES POCKET MOUSE DESCRIPTION

The Los Angeles pocket mouse (LAPM) is a widely distributed in the eastern two-thirds of the MSHCP Area, but recent known localities are sparsely scattered throughout this area. LAPM appears to be limited to sparsely vegetated habitat areas in patches of fine sandy soils associated with washes or of aeolian (windblown) origin, such as dunes. The current status of populations in the MSHCP Area is relatively unknown, but some biologists believe that the Los Angeles pocket mouse is in serious decline in the region because it is seldom trapped and much of its suitable habitat has been lost to agriculture and urban development.

LAPM are known to occur in similar habitats to those found within the general vicinity of the Project Site. The closest recorded observation of this species is located in a large canyon bottom within the southern portion of the Badlands. The Project Site contains a single location containing suitable habitat for LAPM. The large drainage feature in the eastern portion of the project site contains similar habitat including fine sandy soil (San Emigdio fine sandy loam).

The Project Site is located within the northern portions of the Perris and San Jacinto Valley floors, immediately west of the Badlands, and immediately north of the SJWA. General land use in the vicinity of the Project Site includes open undeveloped foothills to the east within the Badlands, agricultural, recreational, and conserved lands to the south within the SJWA, and rural residential properties and active agricultural lands to the north and west of the Site. Relatively uninterrupted connectivity of habitat exists between these areas and the Project Site. Based on current records provided by the California Natural Diversity Data Base (CNDDB) (2005). One LAPM was recorded to occur approximately two miles southeast of the Project Site (see Section 3.5.1, Existing Conditions).

Draft



Source: Forma and AirPhoto USA, Flown March 2004, California Dept. of Fish and Game.

NORTH

2,000 1,000 0 2,000 Feet

Michael Brandman Associates

26100003 • 09/2005 | 3_local_aerial.mxd

Exhibit 3
Local Vicinity Aerial Map

SECTION 2: METHODS

A literature review and records search were conducted for sensitive flora and faunal resources potentially occurring in the vicinity of the Project Site. In addition to the literature review, general field surveys of the Site were conducted in May and August 2005. The field surveys provided information on the existing conditions on the Site and the potential for sensitive resources to be present. Suitable habitat was determined to occur on the Project Site. Focused trapping efforts for LAPM were recommended and subsequently conducted on areas containing potential LAPM habitat.

2.1 - LITERATURE REVIEW

A literature review was conducted prior to trapping. This included a review of standard field guides and texts on sensitive and non-sensitive biological resources, as well as the following sources:

- List of sensitive biological resources provided by the California Natural Diversity Data Base (CNDDB);
- Biological resources reports for the Project Site; and
- General texts and other documents identifying potential resources on the Site.

2.2 - GENERAL BIOLOGICAL SURVEYS

A reconnaissance level survey was conducted on the Project Site, prior to trapping by walking the Site to assess potentially suitable LAPM habitat within the project boundaries. The biologist inventoried and evaluated the condition of the plant communities onsite in order to assess the probability of occurrence for LAPM or other sensitive species. Field notes were taken during the survey of all plant and animal species observed. Observations of animal species included scat, trails, tracks, burrows, nests, vocalizations, and visual observation. In addition, Site characteristics such as soils, topography, the condition of the plant communities, and evidence of human use of the Site were noted. A list of plant and wildlife species observed is included in Appendix A.

2.3 - FOCUSED SURVEYS

A focused trapping effort for LAPM was conducted according to established United States Fish and Wildlife Service (USFWS) protocols for Pacific pocket mouse (*Perognathus longimembris*

Draft

longimembris), a similar species. Kelly Rios (USFWS permit number TE018909-02, Scientific Collecting Permit number 801056-05) conducted the trapping surveys. A total of 9 acres of suitable habitat was surveyed (Exhibit 3). The current protocol requires five consecutive nights of trapping conducted when the animal is active aboveground at night, and preferably during a new moon phase. As MBA conducted trapping on the five consecutive nights beginning August 21 and concluding the morning of August 26, 2005.

A total of 121 traps, set approximately ten meters apart, were set in the largest blue-line drainage feature located in the eastern portion of the Project Site as illustrated in Exhibit 5 and described further in section 5.6-1 Trap Line Descriptions.

This drainage contains suitable sandy habitat required by this species. Five nights of trapping were conducted for a total of 605 trap nights. Traps were placed in suitable habitat areas within the Project Site, concentrating on areas containing sandy soils, suitable vegetation, and near burrow locations.

Each trap was baited with a mixture of birdseed placed at the back of the traps. The traps were left in place, opened at dusk each night, and inspected once during the night and at dawn each morning. All animals were identified and released at the point of capture.

Field notes (see Appendix B) were recorded of the habitat conditions where the traps were placed. Weather conditions at the time of the baiting and trapping were also noted.

Draft

SECTION 3:
EXISTING CONDITIONS

3.1 - WEATHER CONDITIONS

Weather conditions during the trapping survey included morning temperatures in the mid 60s degrees Fahrenheit. Skies were partly cloudy but no precipitation occurred. The moon was in its third quarter phase at the time of the surveys; the new moon occurred on August 5.

3.2 - SOILS AND TOPOGRAPHY

The Project Site contains two different soil series (Exhibit 4). A soil series is a group of soils with similar profiles. These profiles include major horizons with similar thickness, arrangement, and other important characteristics. The Project Site is dominated by San Emigdio fine sandy loam. The other soil series present onsite was Metz loamy sand, which was located in the southern portion of the drainage feature (U.S. Department of Agriculture 1971).

Topographically, the Project Site is located at the northern extent of the San Jacinto and Moreno Valleys, north and northwest of Mt. Russell, and east of The Badlands. The SJWA, managed by CDFG, is directly south of the Project Site. The Site is flat, with the exception of the deeply incised drainage feature, with a gentle slope to the south. It has an elevation range approximately 1,500 to 1,780 feet above sea level.

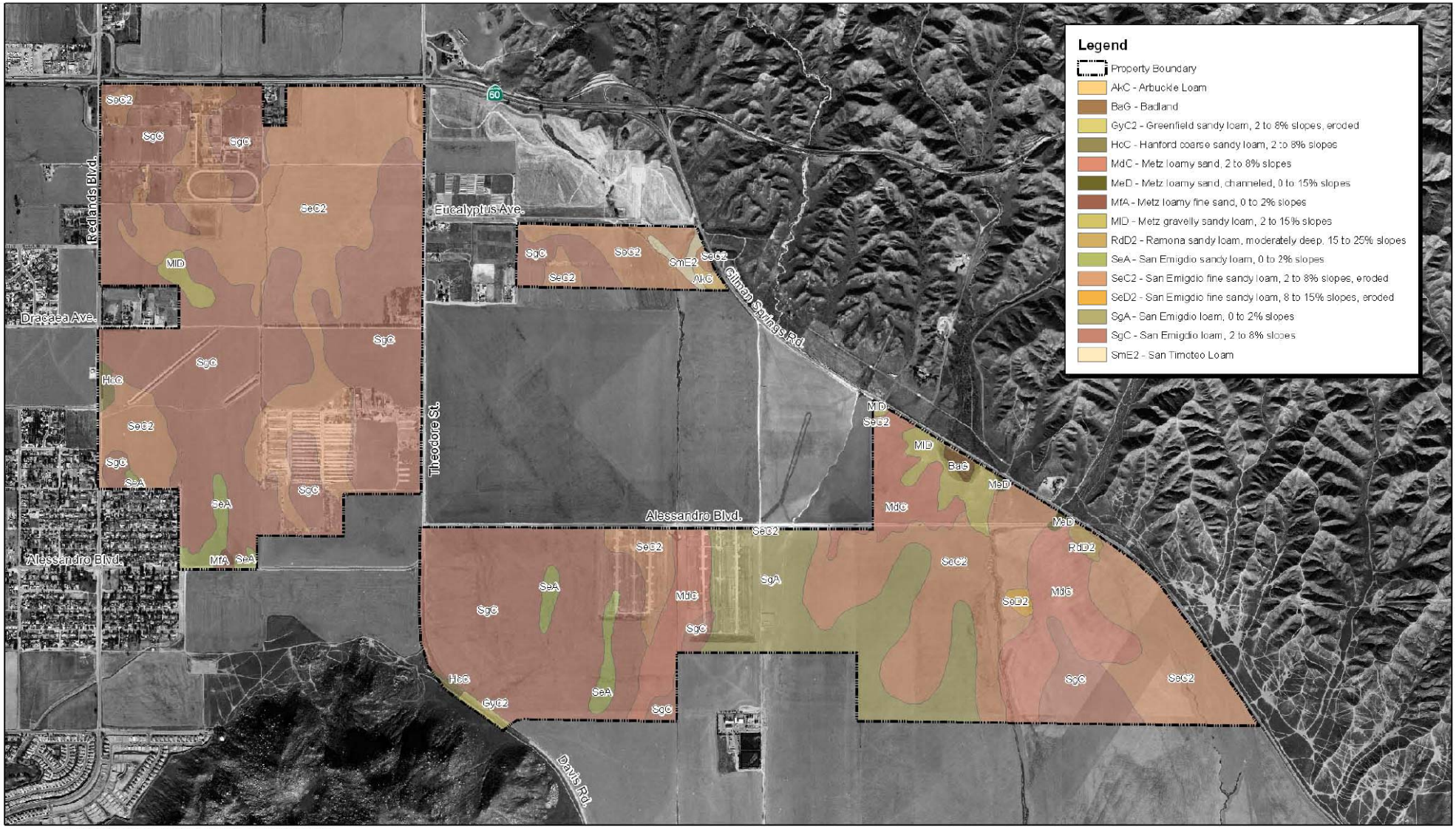
3.3 - SURROUNDING LAND USES

Overall, the Project Site contains extensive evidence of previous disturbance. With the exception of a few major drainage features, the entire Site was previously developed for agricultural purposes. Currently, cultivated wheat fields are present throughout the majority of the Project Site. The northwestern corner of the Site is occupied by an abandoned equestrian property that contains an arrangement of corrals, stables, fields, and rural residences. Rural residential development is also present at the northwestern corner of the intersection of Cottonwood Avenue and Theodore Street. In addition, there are several abandoned structures previously used for agricultural purposes in the southern portion of the Project Site.

Draft

Specifically, the land surrounding the survey area of the drainage feature was dominated by extensive agriculture to the north, east, and west (Holland, 1996 update).

Draft



Source: Forma, USDA Soil Series and AirPhoto USA, Flown March 2004.

NORTH

1,500 750 0 1,500 Feet

Michael Brandman Associates

26100003 • 09/2005 | 4_soils.mxd

Exhibit 4
USDA Soils Map

HIGHLAND FAIRVIEW PROPERTIES • 1,778-ACRE BEL LAGO PROPERTY
LOS ANGELES POCKET MOUSE FOCUSED SURVEY REPORT

The western Riverside County MSHCP classifies this vegetation type as Field Croplands, a community that is widespread throughout the Plan Area. Alessandro Boulevard is located at the northern end of the drainage feature.

3.4 - PLANT COMMUNITIES

The survey area in the drainage feature is located within a Riversidean alluvial fan sage scrub (RAFSS) plant community. The vegetation within this channel is sparse and frequently disturbed during high flow events. The drainage feature has been moderately disturbed as a result of trash dumping, grazing, agricultural activities, and the presence of domesticated animals. This community surrounds the Site to the north, south, east, and west.

The RAFSS community occupies approximately nine acres of the Project Site and common species observed in this community are typical of those found in a Riversidean sage scrub (RSS) community these include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), brittlebush (*Encelia farinosa*), and black sage (*Salvia mellifera*). However, the RAFSS also contains plant species commonly associated with alluvial systems such as scalebroom (*Lepidospartum squamatum*), mulefat (*Baccharis salicifolia*), and four-wing saltbush (*Atriplex canescens*). This plant community is considered distinct from RSS due to the slight difference in vegetation composition and its location within the active drainage feature.

3.5 - WILDLIFE

Wildlife activity was low to moderate, with most of the wildlife represented by trapped mammal species. Birds and reptiles were observed mainly on the slopes and steep walls of the drainage feature. One amphibian species, western toad (*Bufo boreas*), was observed during the survey.

Wildlife observations were based on calls, songs, scat, tracks, burrows, and actual sightings of animals. A list of wildlife species observed is found in Appendix A.

3.5.1 - Sensitive Biological Resources

The following is a discussion of the sensitive species identified as potentially occurring on the Project Site.

Draft

Los Angeles Pocket Mouse

The LAPM (*Perognathus longimembris brevinasus*) is one of two pocket mice found in this area of Riverside County (Williams 1986). Both the LAPM and the northwestern San Diego pocket mouse (*Chaetodippus fallax fallax*) occupy similar habitats, but the northwestern San Diego pocket mouse has a wider habitat range extending south into San Diego County. The habitat of the LAPM is described as being confined to lower elevation grasslands and coastal sage scrub habitats, in areas with soils composed of fine sands (Williams, 1986). It occurs in open sandy areas in the valley and foothills of southwestern California (Hall 1981). LAPM forages in open ground and underneath shrubs. Pocket mice, in general, dig burrows in loose soil.

Presently, the known distribution of this species extends from Rancho Cucamonga east to the middle of the Santa Ana River near Slover Mountain, and from Cajon Wash south to at least Riverside Avenue in the City of Riverside. The LAPM is listed as a California Species of Special Concern by the CDFG. One LAPM was recorded to occur approximately two miles southeast of the Project Site.

Northwestern San Diego Pocket Mouse

The northwestern San Diego pocket mouse prefers habitat in open, sandy areas in the valleys and foothills of southwestern California. The range of this species extends from Orange County to San Diego County, and includes Riverside and San Bernardino counties. This species is a California Species of Special Concern; its historical range has been reduced by urban development and agriculture.

San Diego Desert Woodrat

The desert woodrat (*Neotoma lepida*) is a relatively wide-ranging species extending along the coast of California from south of San Francisco through to the border of Baja California. This species also occurs in the Central Valley and the deserts of southern California, extending along the desert side of the Sierra Nevada into southeastern Oregon.

The coastal race of the desert woodrat, the San Diego desert woodrat (*Neotoma lepida intermedia*), prefers scrub habitats such as coastal sage scrub, chaparral, and alluvial fan sage scrub. It is more common in areas with rock piles and coarse sandy to rocky soils throughout coastal southern California.

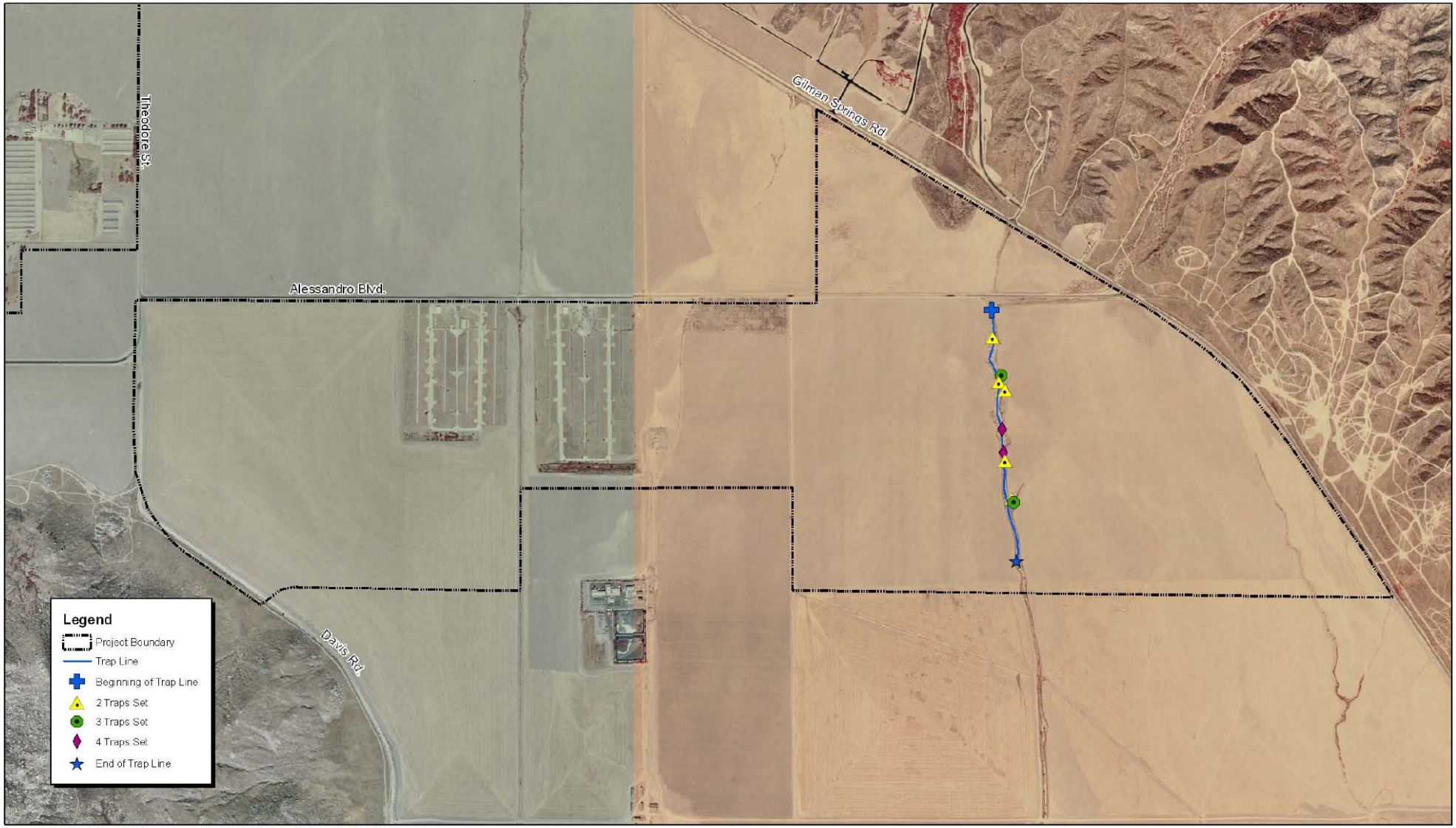
Draft

The range of this species extends from just south of Sacramento and the San Francisco area to the border of Baja California. The coastal subspecies of the widespread desert woodrat is listed as a California Species of Special Concern; its historical range has been impacted by the conversion of scrub habitats into residential, commercial, and industrial use.

3.6 - TRAP LINE DESCRIPTIONS

Traps were set in a single transect on the bottom of the main drainage feature in open sandy areas within the Project Site boundary (Exhibit 5). Additional trap sets were also set on sandy benches adjacent to the main trap line. The additional trap sets ranges from two to four additional traps depending on the amount of additional suitable within the sandy benches. Exhibit 5 illustrates the main trap line, the beginning, and end of the main trap line, and the location of the adjacent trap sets. Vegetation surrounding trap locations varied but overall, cover was less than 20 percent. Some trap locations had cobbles and loose gravel associated with the sandy patches.

Draft



Source: USGS El Casco (1998) and Sunnymead (1998) 3.75' DOQQ, and MBA Field Survey.

NORTH

1,000 500 0 1,000 Feet

Michael Brandman Associates

26100003 • 09/2005 | 5_lapm.mxd

Exhibit 5

Los Angeles Pocket Mouse Survey Area Map

HIGHLAND FAIRVIEW PROPERTIES • 1,778-ACRE BEL LAGO PROPERTY

LOS ANGELES POCKET MOUSE FOCUSED SURVEY REPORT

SECTION 4:
FOCUSED TRAPPING SURVEY RESULTS

Table 1 summarizes the results from the 2005 survey. No LAPM were captured during the survey. A total of four small mammal species were trapped, San Diego woodrat (*Neotoma lepida*), western harvest mouse (*Reithrodontomys megalotis*), deer mouse (*Peromyscus maniculatus*), and long-tailed pocket mouse (*Chaetodipus formosus*). Incidentally, a western toad (*Bufo boreas*) was also trapped on two different nights.

Table 1: 2005 Focused Trapping Results for the Bel Lago Project Site

Night #	San Diego Desert Woodrat	Western Harvest Mouse	Deer Mouse	Long-tailed Pocket Mouse
1	1	1	25	0
2	1	1	19	0
3	1	2	24	1
4	3	3	25	0
5	2	2	15	1
Total	**8**	**9**	**108**	**2**

Draft

SECTION 5:
CONCLUSIONS AND RECOMMENDATIONS

This survey effort was conducted within the main drainage feature in the eastern portion of the Project Site. The transect was located in the only area within the Project Site that contains suitable habitat for LAPM. However, LAPM were not captured as part of the 2005 trapping effort and are considered absent from the proposed Project Site. Development of the Project Site will be in full compliance with the MSHCP for LAPM and none of the conservation efforts associated with LAPM are required.

Draft

SECTION 6:
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: September 23, 2005 Signed Kelly Rios
Kelly Rios

Draft

SECTION 7: REFERENCES

Burt, W.H., 1986. *A Field Guide to the Mammals in North American North of Mexico*. Houghton Mifflin Company, Boston, Massachusetts.

California Department of Fish and Game (CDFG), 1998. *Conservation Plan for the Etiwanda-Day Canyon Drainage System Supporting the Rare Natural Community of Alluvial Fan Sage Scrub*. California State Polytechnic University California.

California Natural Diversity Data Base, 1997. Data Base report on threatened, endangered, rare or otherwise sensitive species and communities in the vicinity of the Rancho Summit III project site.

Garrett, K. and J. Dunn, 1981. *Birds of Southern California*. Los Angeles Audubon Society. The Artisan Press, Los Angeles, California.

Grinnell, J., 1933. *Review of the Recent Mammal Fauna of California*. University of California Publications in Zoology. 40:71-234.

Hall, E.R., 1981. *The Mammals of North America*, Volumes I and II. John Wiley and Sons, New York, New York.

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

Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. State of California Resources Agency. Department of Fish and Game. Non-Game Heritage Program. Sacramento, CA. (1996 update).

Ingles, L.G., 1965. *Mammals of the Pacific States*. Stanford University Press, Stanford, California.

Laudenslayer, Jr., W.F., W.E. Grenfell, Jr., and D.C. Zeiner, 1991. *A Checklist of the Amphibians, Reptiles, Birds and Mammals of California*. California Fish and Game 77:109-141.

McKernan, R.L., 1997. *The Status and Known Distribution of the San Bernardino Kangaroo Rat (Dipodomys merriami parvus): Field surveys conducted between 1987 and 1996*. Report prepared for the U.S. Fish and Wildlife Service, Carlsbad Field Office.

McKernan, R.L. 1999. *Biological Inventory of the Etiwanda Creek Flood Control Project, San Bernardino County*. Report prepared for the San Bernardino County Transportation/Flood Control Department, San Bernardino, California.

Draft

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

Remsen, Jr., J.V., 1978. *Bird Species of Special Concern in California*. Non-game Wildlife Investigations. Wildlife Management Branch Administrative Report No 78-1. Report prepared for the California Department of Fish and Game.

Riverside County. 2003 (June). Final Western Riverside County Multiple Species Habitat Conservation Plan. www.rcip.org

Skinner, M.W. and B.M. Pavlik, 1994. *Inventory of Rare and Endangered Vascular Plants of California*. California Native Plant Society, Spec. Pub. No. 1 (5th edition), Berkeley, California.

Soil Conservation Service, 1980. Soil Survey of Riverside County, California.

Stebbins, R.C., 1985. *A Field Guide to Western Reptiles and Amphibians*, Houghton Mifflin Company, Boston.

U.S. Fish and Wildlife Service, 1996. *Review of plant and animal taxa for listing as endangered or threatened species; notice of review*. Federal Register Vol. 61, No. 40.

U.S. Fish and Wildlife Service, 1998a. *Emergency Rule to List the San Bernardino Kangaroo Rat, San Bernardino and Riverside Counties in Southern California, as Endangered*. Vol. 63, No. 17, pp. 3835 - 3843.

U.S. Fish and Wildlife Service, 1998b. *Endangered and Threatened Wildlife and Plants; Proposed Rule to List the San Bernardino Kangaroo Rat as Endangered; and Notice of Public Hearing*. Vol. 63, No. 17, pp. 3877 - 3878.

U.S. Fish and Wildlife Service, 1998c. *Endangered and Threatened Wildlife and Plants; Final Rule to List the San Bernardino Kangaroo Rat as Endangered*, Vol. 63, No. 185, pp. 51005 - 51017.

Williams, D.F., 1986. *Mammalian Species of Special Concern in California*. Wildlife Management Division Administrative Report 86-1. Prepared for The Resources Agency, California Department of Fish and Game.

Draft

Appendix A: Floral and Faunal Compendia

Draft

FLORAL COMPENDIUM

Angiospermae: Dicotyledones	Dicot Flowering Plants
Asteraceae	**Sunflower family**
Ambrosia acanthicarpa	Annual bur-sage
Ambrosia psilostachya	Western ragweed
Artemisia californica	California sagebrush
Helianthus annuus	Annual sunflower
Hemizonia sp.	Tarweed
Boraginaceae	Borage family
Amsinckia intermedia	Fiddleneck
Cryptantha intermedia	Popcorn flower
Brassicaceae	**Mustard family**
Hirschfeldia incana	Short-podded mustard
Chenopodiaceae	**Saltbush family**
Salsola tragus	Russian thistle
Euphorbiaceae	**Spurge family**
Croton californica	Croton
Fabaceae	**Pea family**
Lotus scoparius	Deerweed
Geraniaceae	**Geranium family**
Erodium cicutarium	Red-stemmed filaree
Hydrophyllaceae	**Waterleaf family**
Eriodictyon trichocalyx	Yerba santa
Lamiaceae	**Mint family**
Marrubium vulgare	Horehound
Salvia apiana	White sage
Salvia mellifera	Black sage

Angiospermae: Dicotyledones	Dicot Flowering Plants
Polygonaceae	**Buckwheat family**
Eriogonum fasciculatum	California buckwheat
Eriogonum gracile	Graceful buckwheat
Rosaceae	**Rose family**
Adenostoma fasciculatum	Chamise
Prunus ilicifolia	Holly-leaved cherry

Draft

Solanaceae	Nightshade family
Nicotiana glauca	Indian tree tobacco
Angiospermae: Monocotyledonae	**Monocot Flowering Plants**
Poaceae	**Grass family**
Avena barbata	Slender wild oats
Bromus diandrus	Ripgut brome
Bromus madritensis	Red brome
Bromus tectorum	Cheat grass
Hordeum murinum	Wild barley
Lolium perenne	Ryegrass
Schismus barbatus	Mediterranean grass

Draft

FAUNAL COMPENDIUM

Reptilia	Reptiles
Iguanidae *Uta stansburiana*	**Iguanas and their allies** Side-blotched lizard
Aves	**Birds**
Accipitridae *Buteo jamaicensis*	**Kites, hawks and eagles** Red-tailed hawk
Corvidae *Corvus brachyrhynchos*	**Crows and ravens** American crow
Emberizidae *Amphispiza bellii*	**Warblers, sparrows, blackbirds and relatives** Sage sparrow
Fringillidae *Carpodacus neomexicanus*	**Finches** House finch
Mammalia	**Mammals (Other Than Trapped)**
Leporidae *Sylvilagus audubonii*	**Rabbits and hares** Audubon's cottontail
Sciuridae *Spermophilus beecheyi*	**Squirrels, chipmunks and marmots** California ground squirrel
Geomyidae	Pocket gophers
Thomomys umbrinus	Botta's pocket gopher
Canidae *Canis latrans*	**Foxes, wolves and relatives** Coyote

Draft

Appendix B: Field Data Sheet

Draft

Bel Lago

2APMT trapping 8/21/05
w/ KO + SH
Yukon .98 mb 4.0 hrs.
1900 - @ site T=90° W=>1.0
very humid
- Set traps approx. 10 paces apart in drainage + on adj. benches.
- Not many small mammal burrows observed.
- 2 Barn owls flushed from bank.

2025 - Back @ car T=86°
0700 - @ site w/ KO 98 mb 8/22/05
T=63° W=71.0 0% clouds 3.5 hrs
P. maniculatus - ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~
Empty - ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~
triggered - ~~||||~~
R. megalotis
N. Lepida - 1

Bel Lago

LAPM Trapping 8/22/05
Yukon, '98 w/SC 3.5 hrs
1900 - T=89° W=71.0 0%
Baiting traps

8/23/05

0640 - @ Site T=62° W=71.0 0%
w/SH Yukon 4.0 hrs
SH recording plant sp. ~~IIII IIII IIII~~ I
Empty - ~~IIII~~ ~~IIII IIII IIII~~ ~~IIII IIII IIII~~ ~~IIII IIII IIII~~ ~~IIII IIII~~ III
P. maric. - ~~IIII IIII IIII~~ IIII
triggered - ~~IIII~~ III
[redacted]
WP # 2 = beginning of line #11-4
#3 - 1 trap #7-2 #12-2
#4 - 2 traps #8-2 #13-2
#5 - 1 trap #9-gabline #14-3
#6 - 3 traps #10-4 #15-end
R. megalotis - 1
N. [redacted] - 1
lepida
Bufo. b - 1
0800 - T=64° W=71.0 0% Clouds

Bel Lago

LAPM Trapping 8/23/05
w/ KW Yukon: 3.5 hrs

1845 - T = 83° W = 2.0 0%
Baiting traps

8/24/05

LAPM Trapping
w/ JR Yukon 4.5 hrs
0700 - @ Site T = 65° W = 71.0 0% Clouds
Empty - ~~IIII IIII IIII IIII IIII IIII IIII IIII IIII IIII IIII IIII~~
P. manic. - ~~IIII IIII IIII IIII~~ IIII ~~IIII IIII~~
R. megalotis - II
triggered - ~~IIII IIII~~
[illegible] - [illegible]
N. [illegible] lepida
Chat. formosus

0815 - T = 67 W = 71.0 0% clouds
8/24/05

1920 - Baiting traps
T = 88° W = 71.0 0% Clouds
w/ KO + SH

Bel Lago

LAPM Trapping 8/25/05
w/SC Yukon

0645 @ site T=68° W=71.0 10% cloud

Empty - |||| |||| |||| |||| |||| |||| |||| |||| |||| |||| ||||
|||| |||| |||| |||| |||| |

Triggered - |||| ||

P. maniс. - |||| |||| |||| |||| ||||

R. megalotis - |||

N. [illegible] |||

[illegible]

Bufo boreas - 1

0745 - T=69°

8/25/05

Kyle is baiting traps tonight.

Bel Lago

CAPM Trapping w/ KW 8/26/05

0615 T=65° W=71.0

68/53 |||| |||| |||| |||| |||| |||| |||| |||| ||||

Empty - |||| |||| |||| |||| |||| |||| |||| |||| ||||

Triggered - |||| |||| ||

P. manic. - |||| |||| ||||

R. megalotis - ||

N. lepida [illegible] - ||

C. formosus - |

[illegible]

picking up traps = Total 121

0730 - T=69° W=71.0

Total 605 trap nights

Bel Lago 8/23

LAPM Trapping #2

6:30 am 62°F 1-2 mph 0% clouds

OM: ~~IIII~~ ~~IIII~~ ~~IIII~~ IIII

[redacted]

F/M: 1

Wood R: 1

Wood: 1

plants: ✓mule fat ✓ragweed ✓centaurea

✓tarragon ✓Jimson ✓b. sage

✓scalebroom ✓CA sagebrush ✓lessingia

✓sp mustard ✓horseweed ✓telegraph

✓red brome ✓ripgut ✓stephanomeria

✓tree tobacco heliotrope ✓living saltbush

✓schismus ✓atriplex

✓common sunflower

✓R. thistle ✓CA buck

Focused Los Angeles Pocket Mouse Survey Report
Highlands Specific Plan
City of Moreno Valley, Riverside County, California

Sunnymead and El Casco, California USGS 7.5-minute Topographic Quadrangle Map
Sections 1, 2, 11, 12, 13, and 14; Township 3 South; Range 3 West
Sections 5, 6, 7, 8, 16, 17, 18, 19, 20, and 21; Township 3 South; Range 4 West

Prepared for:

Highland Fairview Operating Company
3070 South Bristol Street, Suite 320
Costa Mesa, CA 92626
951.242.9180

Contact: Mr. Wayne Peterson, Vice President, Community Planning

Prepared by:

Michael Brandman Associates
220 Commerce, Suite 200
Irvine, CA 92602
714.508.4100

Contact: Kenneth J. Lord, Ph.D.
Director of Natural and Cultural Resources

Michael Brandman Associates

Report Prepared By: Kelly M. Rios, Sr. Biologist
Survey(s) Conducted: June 27 through July 2, 2010
Report Date: December 13, 2010

Table of Contents

Section 1: Summary **1**

Section 2: Introduction **2**
2.1 - Survey Purpose 2
2.2 - Project Description 2
2.3 - Project Site Location and Study Area 2

Section 3: Methods **9**
3.1 - Literature Review 9
3.2 - Focused Surveys 9

Section 4: Existing Conditions **10**
4.1 - Weather Conditions 10
4.2 - Soils and Topography 10
4.3 - Plant Communities Within the Transects 10
4.4 - Mulefat Scrub 10
4.5 - Riversidean Alluvial Fan Sage Scrub 11
4.6 - Wildlife 14
4.7 - Sensitive Biological Resources 14
4.7.1 - Los Angeles Pocket Mouse 14
4.7.2 - Northwestern San Diego Pocket Mouse 14
4.7.3 - San Diego Desert Woodrat 14

Section 5: Focused Trapping Survey Results **16**

Section 6: Conclusions and Recommendations **17**

Section 7: Certification **18**

Section 8: References **19**

List of Tables

Table 1: Project Site Assessor's Parcel Numbers 3

Table 2: 2010 Focused Trapping Results for the Highlands Specific Plan Project Site 16

List of Exhibits

Exhibit 1: Regional Location Map 6

Exhibit 2: Local Vicinity Map Topographic Base 7

Exhibit 3: Local Vicinity Map Aerial Base 8

Exhibit 4: Soils Map 12

Exhibit 5: Transect Locations 13

SECTION 1: SUMMARY

Michael Brandman Associates (MBA) conducted a focused survey for Los Angeles pocket mouse on the 4,321-acre Highland Fairview project site (project site or site), located in the City of Moreno Valley, Riverside County, California. This effort assessed the presence/absence of Los Angeles pocket mouse and identified the potential for impacts to this species resulting from the proposed development of the site.

The Los Angeles pocket mouse focused surveys are part of the survey requirements for Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) consistency. The surveys were conducted according to established United States Fish and Wildlife Service (USFWS) protocols for Pacific pocket mouse, a similar species to determine the presence/absence of the species within the project site.

Los Angeles pocket mouse was not observed during the trapping session. The project site is considered unoccupied by Los Angeles pocket mouse. No additional measures are required for potential impacts associated with this species.

SECTION 2: INTRODUCTION

As requested by the Highland Fairview Operating Company, Michael Brandman Associates (MBA) completed a focused survey for Los Angeles pocket mouse for the Highlands Specific Plan within the City of Moreno Valley, Riverside Counties, California.

2.1 - Survey Purpose

MBA's biologist, Kelly Rios who is experienced in mammal trapping (United States Fish & Wildlife Service, permit TE018909-03 for San Bernardino kangaroo rat), conducted a live-trapping effort for the Los Angeles pocket mouse (LAPM), a California Species of Special Concern, on the 4,321-acre Highlands Specific Plan project site located in the City of Moreno Valley, Riverside County, California, (project site or site). Trapping for the LAPM occurred in three portions of the project site that contained suitable habitat for the LAPM, hereafter referred to as the survey area.

Previously, the project site had been surveyed for LAPM. The large drainage feature located in the southeastern portion of the site was trapped in September of 2005. The findings from that trapping effort were negative.

The live-trapping effort for the LAPM was conducted to comply with the Western Riverside County MSHCP. The study area occurs within the Reche Canyon/Badlands Area Plan of the MSHCP but is not located within any Criteria Cells. The study area is located within an MSHCP-designated survey area for LAPM.

This report describes the existing conditions of the survey area, general biological resources observed within the study area, and results of the trapping effort.

2.2 - Project Description

The Highland Fairview Operating Company property is a 4,321-acre project site dominated by dry-land farming agricultural land. Additional offsite areas include freeway interchanges, water quality basins, as well as other project infrastructure. Historically, the project site has been used for agricultural purposes for many decades. Currently, it is dominated by disked agricultural fields. General land use in the vicinity of the project site includes State Route (SR) 60 and agricultural lands to the north, agricultural lands intermixed with rural residences to the west and south, and undeveloped land to the east.

2.3 - Project Site Location and Study Area

The project site includes the Highland Fairview Operating Company property as well as offsite improvement areas that may be used in support of any future project implemented on the parcel map. The study area is generally located north of SR-74, south of SR-60, east of Interstate (I) 215, and west

of SR-79, in the City of Moreno Valley, Riverside County, California (Exhibit 1). The survey area is depicted within Sections 7 and 8 of Township 3 South, Range 4 West of the Sunnymead and El Casco, California, United States Geological Survey (USGS) 7.5-minute topographic quadrangle maps (Exhibit 2). More specifically, it is located south of Ironwood Avenue, east of Moreno Beach Drive, and west of Gillman Springs Road (Exhibit 3).

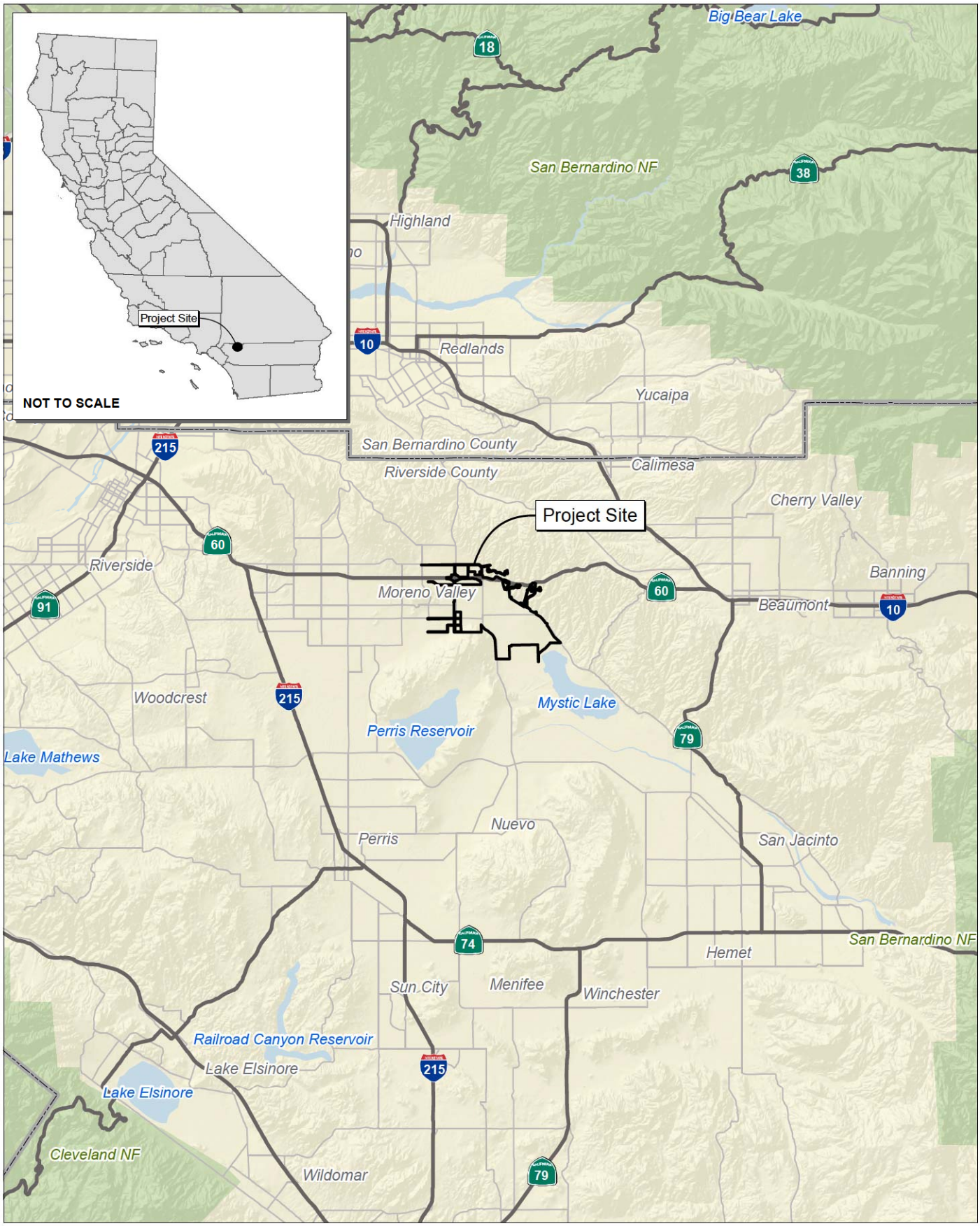
The entire project site occurs on the Assessor's Parcel Numbers (APNs) shown in Table 1.

Table 1: Project Site Assessor's Parcel Numbers

Project Site Assessor's Parcel Numbers				
304020006	304020008	304041014	304041015	304041016
304041029	304041030	304051005	304051006	304051012
304052026	304053001	304053006	304053007	304053010
304053011	304053012	304053013	304053014	304053015
304053016	304053017	304053018	304053019	304053020
304053021	304060001	304060002	304060003	304060004
304060005	304060006	304060007	304060008	304060009
304060020	304060021	304070001	304070002	304070003
304070004	304070005	304070006	304070007	304070008
304070009	304070010	304070011	304070012	304070013
304070014	304070015	304070016	304070017	304070052
304070053	304070054	304070055	304070056	304290063
304290064	304420001	304420002	304420003	304420004
304420005	304420006	304420007	304421001	304421002
304421003	304421004	304421005	304421006	304421007
304421008	304421009	304421010	304421011	304421012
304421029	304421043	304431005	304431006	304431007
304431008	304431009	312020006	312041011	312050015
312061001	312063019	312063020	312063021	312063022
312063023	312063024	312063025	422020003	422020004
422020005	422020006	422020007	422020009	422020010
422030002	422030003	422030007	422030008	422030012
422030013	422040008	422040009	422040010	422040012
422040013	422040014	422040015	422050006	422070005
422070006	422070010	422070014	422070017	422070018
422070019	422070020	422070021	422070022	422070023
422070024	422070029	422070030	422070031	422070032
422070033	422070034	422070035	422070036	422070037
422080001	422080002	422080003	422080004	422090001
422100001	422100002	422100003	422100006	422100007
422100010	422100012	422100013	422100014	422100015
422100016	422100021	422100022	422110001	422110002
422110003	422110004	422110005	422110006	422110007

Project Site Assessor's Parcel Numbers				
422110008	422110009	422120001	422120002	422120003
422120004	422120007	422120008	422120011	422120012
422120015	422120016	422120017	422130001	422130002
422130003	422140001	422140002	422140003	422140004
422140006	422140007	422140008	422140009	422140010
422150004	422150006	422150007	422150008	422150010
422160008	422160009	422160010	422180002	422190003
423070005	423070008	423070009	423250001	423250002
423250007	423250008	423250009	423250010	423250011
423250012	423250013	423250018	423260001	423260002
423260003	423260004	423260005	423260006	423260007
423260008	423260009	423270003	423270004	423270006
423270007	423270008	423270009	423270017	423270018
423270019	423280001	423280002	423280003	423280004
423280005	423280006	423280007	423280008	423280009
423290007	423300002	423300004	423300005	423300009
423300010	423310001	423310002	423310003	423310004
423310005	423310006	423310007	423310008	423320001
473220016	473220017	473220024	473220025	478020040
478070004	478070005	478070006	478070007	478070008
478070010	478070011	478070012	478070016	478070017
478070025	478080007	478080008	478100002	478100003
478100009	478100012	478100017	478100018	478110001
478110004	478110005	478110006	478120001	478120002
478120003	478120004	478120007	478120008	478120017
478120018	478120020	478120021	478120024	478131039
478131041	478131056	478132020	478132021	478132030
478141002	478141045	478142025	478142028	478142029
478151001	478151002	478151003	478151004	478151012
478151014	478151016	478151018	478151024	478151036
478151037	478151038	478151040	478152012	478152052
478165075	478165077	478166001	478166002	478166003
478166004	478166006	478166007	478166008	478166009
478166010	478166013	478166014	478166015	478166016
478166017	478166018	478166019	478166031	478166032
478166033	478166036	478166037	478173029	478173034
478173042	478173043	478174016	478174017	478174018
478181059	478181060	478182022	478182023	478182042
478182047	478182048	478182054	478182058	478182061
478182062	478191029	478191030	478191031	478191032
478191033	478191034	478191035	478191036	478191037
478192055	478192056	478201039	478201047	478201063
478202052	478202090	478210032	478210033	478210044

Project Site Assessor's Parcel Numbers				
478210045	478210046	478210054	478210055	478210056
478220001	478220002	478220003	478220004	478220005
478220006	478220007	478220009	478220010	478220011
478220012	478220013	478220014	478220015	478220016
478220017	478220018	478220019	478220020	478220021
478220022	478220023	478220024	478220025	478220026
478220027	478220028	478220029	478220030	478220031
478230001	478230002	478230003	478230004	478230005
478230006	478230007	478230008	478230009	478230010
478230011	478230014	478230015	478230016	478230017
478230019	478230020	478240002	478240003	478240005
478240006	478240007	478240008	478240011	478240012
478240013	478240014	478240015	478240016	478240017
478240019	478240021	478240022	478240023	478240024
478240025	478240026	478240027	478240028	478240029
478240030	478240031	478240032	478240033	478240034
478370005	478370006	478370007	478370008	478370014
486160037	486160038	486340029	486480001	486480026
486480027	486480042	486480043	486480044	486480047
486481001	486481002	486481003	486481004	486481005
486481006	488080006	488080007	488230001	488230012
488231001	488231002	488231003	488231004	488231005
488231006	488231007	488231008	488250001	488250002
488250003	488250004	488250005	488250006	488250007
488260001	488260002	488260003	488260006	488260009
488260012	488260014	488260018	488260019	488260020
488260021	488260022	488260023	488260024	488260025
488260026	488260027	488260028	488260031	488260032
488260033	488260034	488260035	488260036	488260037
488260038	488310004	488310009	488310010	488310011
488320001	488320006	488320007	488320008	488320009
488330001	488330004	488330013	488330019	488330022
488330023	488330024	488330025	488330026	488330027
488330028	488330029	488330030	488330031	488340001
488340002	488340003	488340004	488350001	488350002
488350003	488350004	488350005	488350006	488350007
488350008	488350009	488350010	488350011	488350012
488350013	488350014	488360001	488360002	488360004
488360005	488360006	488360007	488360008	488360009
488360010	488360011	488360012		



Source: Census 2000 Data, The CaSIL, MBA GIS 2009.

Michael Brandman Associates

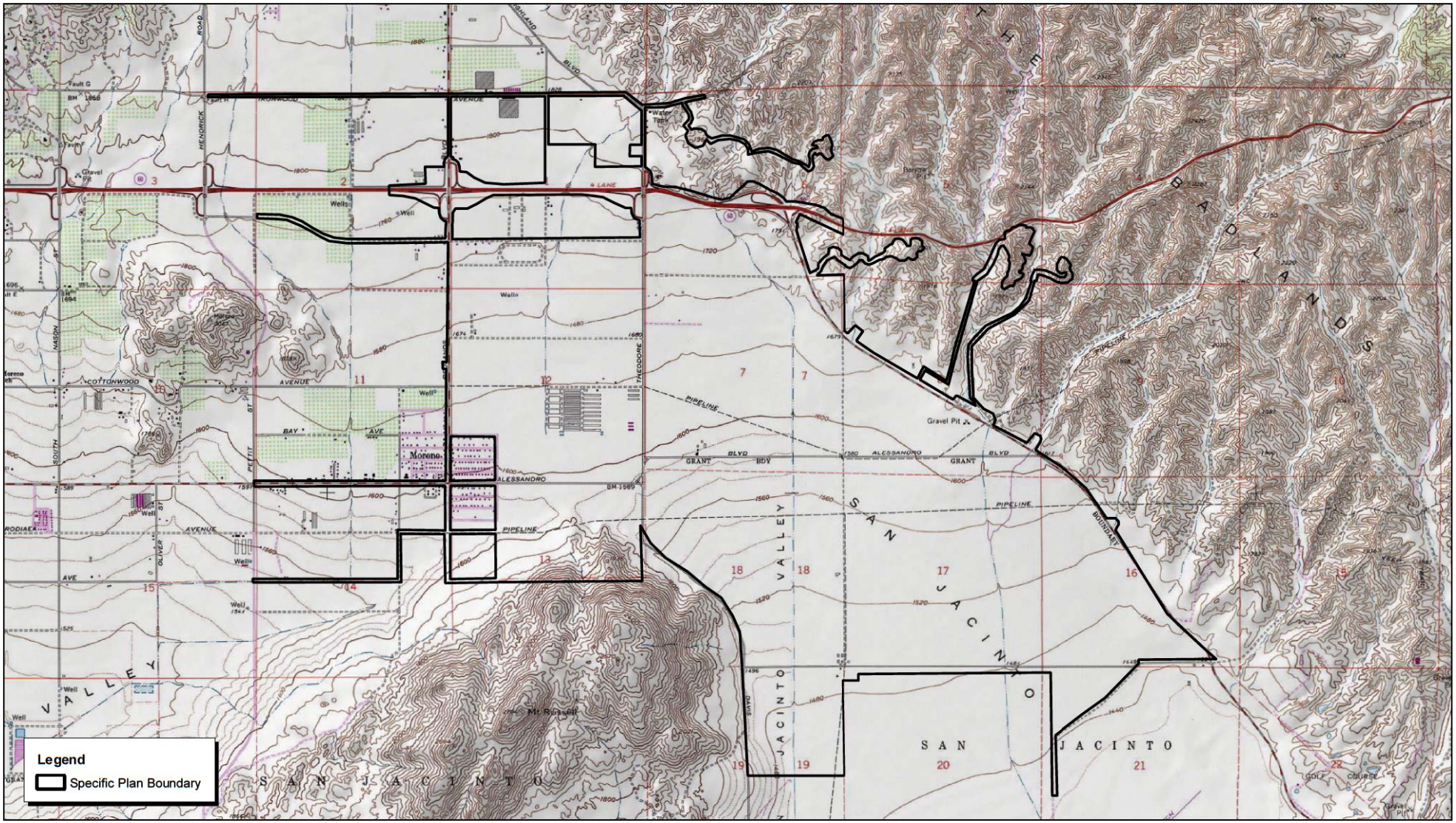
NORTH

5 2.5 0 5 Miles

Exhibit 1
Regional Location Map

26100022 • 08/2010 | 1_regional.mxd

HIGHLAND FAIRVIEW OPERATING COMPANY • HIGHLANDS SPECIFIC PLAN
LOS ANGELES POCKET MOUSE FOCUSED SURVEY



Source: TOPO! USGS Sunnymead (1978) and El Casco (1976) 7.5' DRG.

NORTH

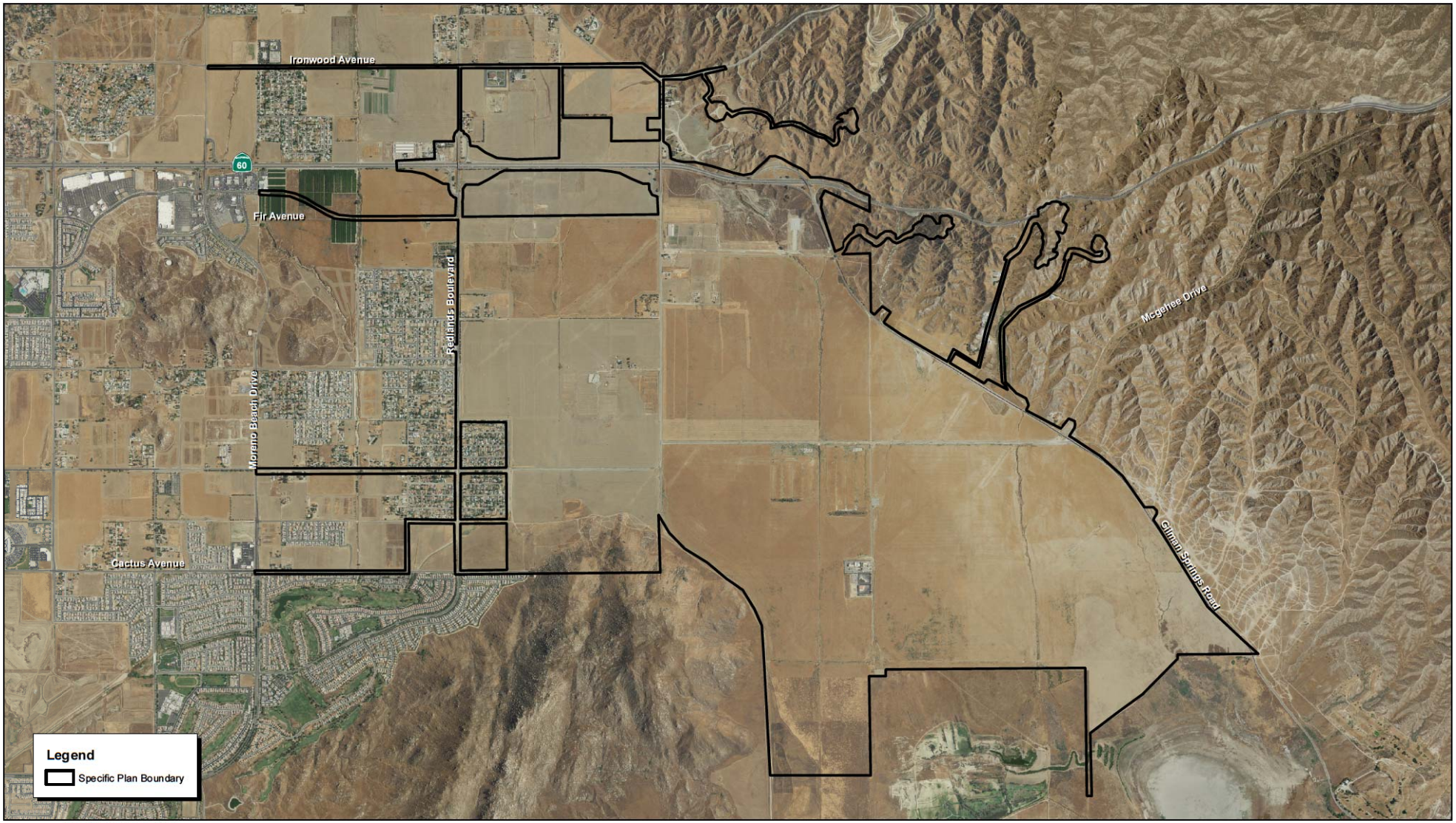
2,500 1,250 0 2,500 Feet

Michael Brandman Associates

26100022 • 08/2010 | 2_local_topo.mxd

Exhibit 2
Local Vicinity Map
Topographic Base

HIGHLAND FAIRVIEW OPERATING COMPANY • HIGHLANDS SPECIFIC PLAN
LOS ANGELES POCKET MOUSE FOCUSED SURVEY



Source: Riverside County NAIP, 2009.

NORTH

2,400 1,200 0 2,400 Feet

Michael Brandman Associates

26100022 • 08/2010 | 3_local_aerial.mxd

Exhibit 3
Local Vicinity Map
Aerial Base

HIGHLAND FAIRVIEW OPERATING COMPANY • HIGHLANDS SPECIFIC PLAN
LOS ANGELES POCKET MOUSE FOCUSED SURVEY

SECTION 3: METHODS

3.1 - Literature Review

A literature review was conducted prior to trapping. This included a review of standard field guides and texts on sensitive and non-sensitive biological resources, as well as the following sources:

- List of sensitive biological resources provided by the California Natural Diversity Database (CNDDB).
- Biological resources reports for the project site.
- General texts and other documents identifying potential resources on the site.

3.2 - Focused Surveys

A focused trapping effort for LAPM was conducted according to established USFWS protocols for Pacific pocket mouse (*Perognathus longimembris longimembris)*, a similar species. Kelly Rios (USFWS permit # TE-018909-03, Scientific Collecting permit # 801077-05) conducted the trapping surveys. Three transects were executed for the focused survey effort. The current protocol requires five consecutive nights of trapping conducted when the animal is active aboveground at night, and preferably during a new moon phase. MBA conducted the trapping effort on five consecutive nights beginning June 27 and concluded the morning of July 2, 2010.

A total of 122 traps were set in three drainages within the survey area. Five nights of trapping were conducted, for a total of 610 trap nights. Traps were placed in suitable habitat areas within the drainages, concentrating on areas containing sandy soils and suitable vegetation, and located near potential LAPM burrows.

The traps were left in the same place throughout the trapping survey. At sunset, each trap was baited with a mixture of birdseed placed at the back of the traps. The traps were inspected and the animals captured were released at dawn each morning. Any trap that was not triggered was set in the closed position to prevent accidental capture of animals during daylight hours. All animals were identified and released at the point of capture.

The habitat conditions of trap locations were recorded in a field notebook. Weather conditions at the time of the baiting and releasing of the animals were also noted.

SECTION 4: EXISTING CONDITIONS

4.1 - Weather Conditions

Weather conditions during the trapping survey included morning temperatures ranging from 57 to 64 degrees Fahrenheit (°F) and an evening temperature when the traps were set ranging from 76 to 83 °F. Skies were clear. The moon was in its new moon phase, which occurred on June 12, 2010.

4.2 - Soils and Topography

Exhibit 4 depicts the USDA soil types that are mapped within the project site (USDA 1971). Within the survey area, the majority of the transect lines occur within San Emigdo fine sandy loam. The southern portion of Transect 2 occurs in San Emigdo loam and Transect 1 is immediately adjacent to Metz sandy loam.

Of these soil types, San Emigdo fine sandy loam and Metz sandy loam are considered suitable burrowing substrate for the LAPM.

4.3 - Plant Communities Within the Transects

The three transects were located in three separate drainage features containing a mix of mulefat scrub and Riversidean alluvial fan sage scrub plant communities and surrounded by active agriculture fields (Exhibit 5). Transects 1 and 2 were located in ephemeral drainage features that meander through the agricultural field and are dominated by mulefat (*Baccharis salicifolia*). Scattered ruderal species such as short-podded mustard (*Hirschfeldia incana*), cheeseweed (*Malva parviflora*), bindweed (*Convolvulus arvensis*), and non-native grasses such as slender oats (*Avena barbata*) and rip-gut brome (*Bromus diandrus*) occur in the features.

Transect 3 was located in an agricultural field, however this large drainage feature was approximately 30 feet deep and was also surrounded by Riversidean alluvial fan sage scrub, which occurred on the lower banks of the drainage feature (Exhibit 5). The vegetation within this channel is sparse and frequently disturbed during high flow events. The drainage feature has been moderately disturbed as a result of trash dumping, grazing, agricultural activities, and the presence of domesticated animals.

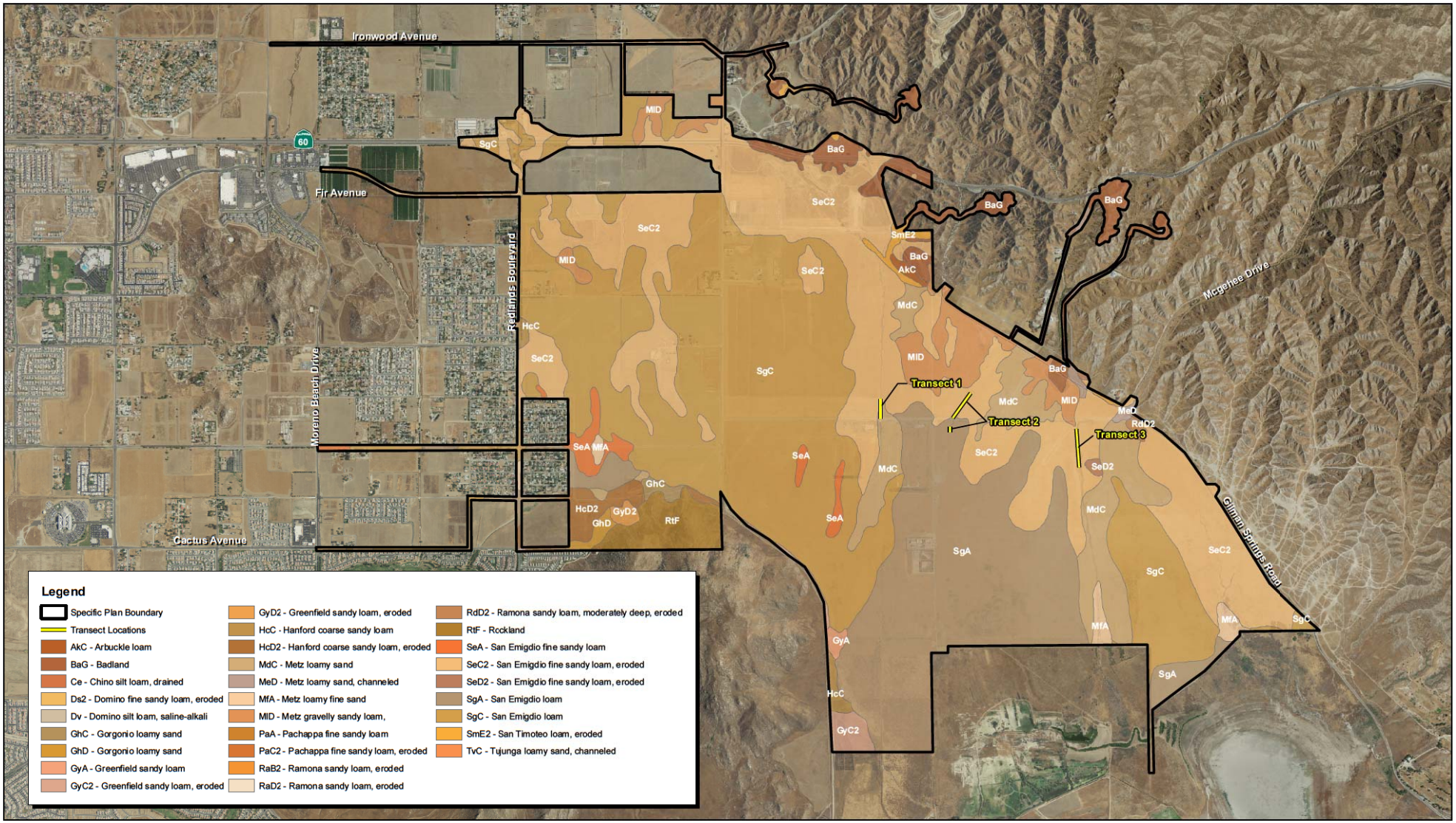
4.4 - Mulefat Scrub

This community occurs in small patches along the drainages and tends to dry out quickly after storm events. This riparian habitat type consists primarily of mulefat, with scattered willows (*Salix* spp.), and coyote bush, forming the shrub canopy. In most areas, the understory contains upland grasses and forbs like wild oats (*Avena* spp.) and mustard (e.g., *Brassica, Hirschfeldia*, *Rapa* spp.). In areas where mulefat is particularly dense or where substantial scouring has occurred, the understory component of this habitat may be sparsely vegetated or absent.

4.5 - Riversidean Alluvial Fan Sage Scrub

Riversidean alluvial fan sage scrub (RAFSS) is described as open vegetation adapted to alluvial fans and outwashes. It grows on sandy, rocky, alluvial flood deposits at the base of the San Bernardino, San Gabriel and San Jacinto Mountains. The community is composed of drought-deciduous shrubs and evergreen woody shrubs, with a substantial herbaceous/wildflower understory. The RAFSS habitat consisting of sandy soils is considered suitable for LAPM.

The RAFSS surrounding Transect 3 consisted of continuous stands of shrubby plant species with limited interstitial areas. The dominant species observed in the vicinity of Transect 3 are California buckwheat (*Eriogonum fasciculatum*) and brittlebush (*Encelia farinosa*). Additional native species observed includes California sagebrush (*Artemisia californica*).



Source: Riverside County NAIP, 2009. USDA Soils Data.

NORTH

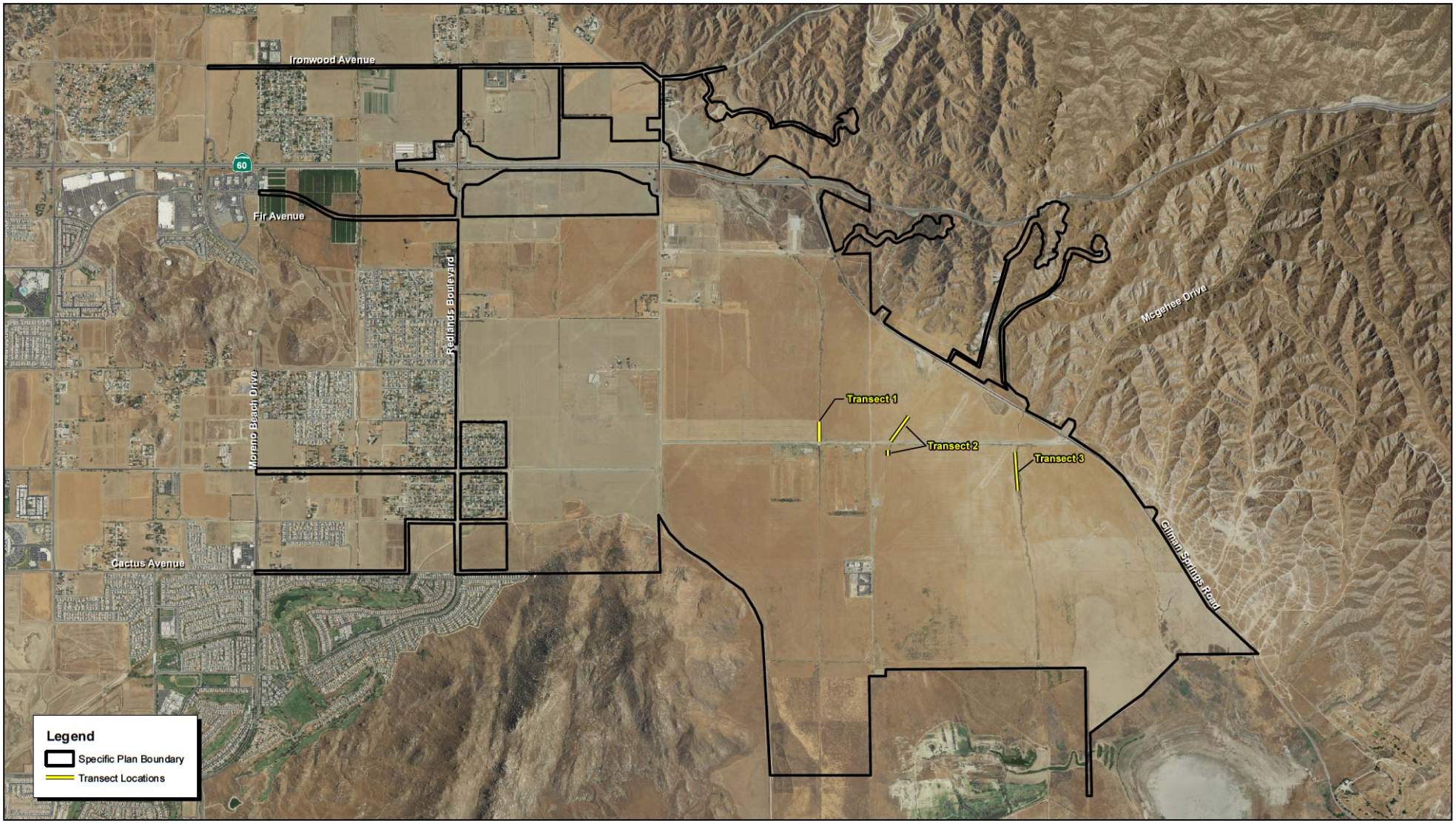
2,400 1,200 0 2,400 Feet

Michael Brandman Associates

26100022 • 08/2010 | 4_soils.mxd

Exhibit 4
Soils Map

HIGHLAND FAIRVIEW OPERATING COMPANY • HIGHLANDS SPECIFIC PLAN
LOS ANGELES POCKET MOUSE FOCUSED SURVEY



Source: Riverside County NAIP, 2009.

NORTH

2,400 1,200 0 2,400 Feet

Michael Brandman Associates

26100022 • 08/2010 | 5_transects.mxd

Exhibit 5
Transect Locations

HIGHLAND FAIRVIEW OPERATING COMPANY • HIGHLANDS SPECIFIC PLAN
LOS ANGELES POCKET MOUSE FOCUSED SURVEY

4.6 - Wildlife

Wildlife activity was low to moderate, with most of the wildlife represented by trapped mammal species. Wildlife observations were based on calls, songs, scat, tracks, burrows, and actual sightings of animals. Birds, reptiles, and mammal species were observed mainly on the slopes of the drainage features. Common avian species observed during the surveys include house finch (*Carpodacus mexicanus*) and American crow (*Corvus brachyrhynchos*). Other common wildlife species observed during the survey include reptilian species such as side-blotched lizard (*Uta stansburiana*), and mammalian species including desert cottontail (*Sylvilagus audubonii*) and California ground squirrel (*Spermophilus beecheyi*).

4.7 - Sensitive Biological Resources

The following is a discussion of the sensitive mammal species that have the potential to be trapped on the project site.

4.7.1 - Los Angeles Pocket Mouse

The LAPM is one of the smallest pocket mice found in this area of Riverside County. The habitat of the LAPM is described as being confined to lower elevation grasslands and coastal sage scrub habitats, in areas with soils composed of fine sands (Williams 1986). It occurs in open sandy soils within the valley and foothills of southwestern California (Hall 1981). LAPM is nocturnally active and forages in open ground and underneath shrubs. Pocket mice, in general, dig burrows in loose soil.

Marginal suitable habitat for LAPM occurs within the drainage features of the project site. These areas contains sparse to moderately vegetated mulefat scrub and non-native grassland, and contain moderately packed sandy soils that may provide suitable habitat for LAPM.

4.7.2 - Northwestern San Diego Pocket Mouse

The northwestern San Diego pocket mouse (*Chaetodipus fallax*) prefers habitat in open, sandy areas in the valleys and foothills of southwestern California. The range of this species extends from Orange County to San Diego County, and includes Riverside and San Bernardino counties. This species is a California Species of Special Concern; its historical range has been reduced by urban development and agriculture.

4.7.3 - San Diego Desert Woodrat

The desert woodrat (*Neotoma lepida*) is a relatively wide-ranging species extending along the coast of California from south of San Francisco through to the border of Baja California. This species also occurs in the Central Valley and the deserts of southern California, extending along the desert side of the Sierra Nevada into southeastern Oregon. The coastal race of the desert woodrat, the San Diego

desert woodrat (*Neotoma lepida intermedia*), prefers scrub habitats such as coastal sage scrub, chaparral, and alluvial fan sage scrub.

SECTION 5: FOCUSED TRAPPING SURVEY RESULTS

Table 2 summarizes the results of the 2010 survey. No LAPM were captured during this survey. A total of five mammal species were trapped, including deer mouse (*Perognathus maniculatus*), desert pocket mouse (*Chaetodipus penicillatus*), long-tailed pocket mouse (*Chaetodipus formosus*), Northwestern San Diego pocket mouse (*Chaetodipus fallax*), and harvest mouse (*Reithrodontomys megalotis*).

Table 2: 2010 Focused Trapping Results for the Highlands Specific Plan Project Site

Night #	Deer Mouse	Desert Pocket Mouse	Long-tailed Pocket Mouse	San Diego Pocket Mouse	Harvest Mouse
1	27	11	0	0	1
2	29	15	1	3	0
3	36	21	1	1	1
4	28	20	1	2	0
5	38	20	1	1	0
Total	**158**	**87**	**4**	**7**	**2**

SECTION 6: CONCLUSIONS AND RECOMMENDATIONS

This survey effort was conducted within portions of the project site that exhibit suitable LAPM habitat. No LAPM were captured during the 2010 trapping effort and the entire project site is considered unoccupied. There is no suitable connectivity from the project site to a known recorded occurrence of LAPM and many physical and topographical barriers limit any possible distribution to the site.

Based on the negative findings of the focused survey, the disturbed nature of the habitat within and surrounding the survey area, it is MBA's opinion that the existing facility will not directly impact LAPM.

SECTION 7: CERTIFICATION

I certify that the information in this survey report and attached exhibits fully and accurately represent my work.

Date: December 13, 2010 Signed: _____

Kelly Rios, Sr. Biologist
Permit Number TE-018909-3
Michael Brandman Associates
Irvine, California

SECTION 8: REFERENCES

Burt, W.H. 1986. A Field Guide to the Mammals in North American North of Mexico. Houghton Mifflin Company, Boston, Massachusetts.

California Department of Fish and Game (CDFG). 2010. California Natural Diversity Database. Wildlife and Habitat Data Analysis Branch.

Garrett, K. and J. Dunn. 1981. Birds of Southern California. Los Angeles Audubon Society. The Artisan Press, Los Angeles, California.

Grinnell, J. 1933. Review of the Recent Mammal Fauna of California. University of California Publications in Zoology. 40:71-234.

Hall, E.R. 1981. The Mammals of North America, Volumes I and II. John Wiley and Sons, New York, New York.

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

Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. State of California Resources Agency. Department of Fish and Game. Non-Game Heritage Program. Sacramento, California. (1996 update).

Ingles, L.G. 1965. Mammals of the Pacific States. Stanford University Press, Stanford, California.

Michael Brandman Associates (MBA). 2005. Biological Resources Assessment for the 1,778-acre Bel Lago Property. City of Moreno Valley, Riverside County, California. On file at MBA.

Michael Brandman Associates (MBA). 2007. Burrowing Owl Focused Survey, Highlands Specific Plan. City of Moreno Valley, Riverside County, California. On file at MBA.

Michael Brandman Associates (MBA). 2008. Habitat Assessment and MSHCP Consistency Analysis. Highland Fairview Corporate Park. City of Moreno Valley, Riverside County, California. On file at MBA.

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

Remsen, Jr., J.V. 1978. Bird Species of Special Concern in California. Non-game Wildlife Investigations. Wildlife Management Branch Administrative Report No 78-1. Report prepared for the California Department of Fish and Game.

Riverside County. 2003 (June). Final Western Riverside County Multiple Species Habitat Conservation Plan. Website: www.rcip.org.

Skinner, M.W. and B.M. Pavlik. 1994. Inventory of Rare and Endangered Vascular Plants of California. California Native Plant Society, Spec. Pub. No. 1 (5th edition), Berkeley, California.

U.S. Fish and Wildlife Service (USFWS). 1996. Review of plant and animal taxa for listing as endangered or threatened species; notice of review. Federal Register Vol. 61, No. 40.

United States Department of Agriculture (USDA). 1978. Soil Survey of Western Part of Riverside County, California. Department of the Interior. U.S. Government Printing Office. Washington, D.C.

Williams, D.F. 1986. Mammalian Species of Special Concern in California. Wildlife Management Division Administrative Report 86-1. Prepared for The Resources Agency, California Department of Fish and Game.

Appendix D:
Burrowing Owl Focused Surveys

Burrowing Owl Focused Survey
World Logistics Center Specific Plan
City of Moreno Valley, Riverside County, California

Sunnymead and El Casco, California USGS 7.5-minute Topographic Quadrangle Map
Sections 1, 10, 11, 12, 13, and 14 Township 3 South, Range 2 West and
Sections 5, 6, 7, 8, 9, 16, 17, 18, 19, 20, and 21 Township 3 South, Range 3 West

Prepared for:
Highland Fairview Operating Company
14225 Corporate Way
Moreno Valley, CA 92553
Contact: Mr. Wayne Peterson, Vice President, Community Planning

Prepared by:
FirstCarbon Solutions | Michael Brandman Associates
220 Commerce, Suite 200
Irvine, CA 92602
714.508.4100

Contact: Kenneth J. Lord, Ph.D., Director of Natural Resources

Report Prepared by: Tommy Molioo, Biologist

Surveys Conducted: June 13, 20, 21, 25, and July 3 and 9, 2013

Report Date: September 4, 2013

Table of Contents

Section 1: Summary 1

Section 2: Introduction 2
- 2.1 - Survey Purpose 2
- 2.2 - Project Description 2
- 2.3 - Project Location and Survey Area 3

Section 3: Background 7
- 3.1 - Burrowing Owl 7
- 3.2 - Western Riverside County MSHCP 7
- 3.3 - Burrowing Owl Survey History 8

Section 4: Methods 9
- 4.1 - Literature Review 9
- 4.2 - Focused Surveys 9
  - 4.2.1 - Focused Burrow Survey 9
  - 4.2.2 - Focused Burrowing Owl Survey 11

Section 5: Existing Conditions 12
- 5.1 - General Conditions 12
- 5.2 - Plant Communities 12
- 5.3 - General Wildlife 13

Section 6: Survey Results 14
- 6.1 - Focused Burrow Survey 14
- 6.2 - Focused Burrowing Owl Survey 14
- 6.3 - Nesting Birds 15
- 6.4 - Other Species 15

Section 7: Conclusions and Recommendations 16

Section 8: Certification 17

Section 9: References 18

Appendix A: Faunal Compendium

Appendix B: Site Photographs

Appendix C: Assessor's Parcel Numbers

List of Tables

Table 1: 2013 Survey Results for Burrowing Owl 14

List of Exhibits

Exhibit 1: Regional Location Map 4
Exhibit 2: Local Vicinity Map - Topographic Base 5
Exhibit 3: Local Vicinity Map - Aerial Base 6
Exhibit 4: Burrowing Owl Survey Area and Burrow Location Map 10

SECTION 1: SUMMARY

FirstCarbon Solutions | Michael Brandman Associates (FCS-MBA) conducted a focused burrow and burrowing owl survey on a 2,610 acre property, located in the City of Moreno Valley, Riverside County, California. For the purpose of this report, the burrowing owl surveys focused on two areas, the World Logistics Center Specific Plan area (Plan Area) and the World Logistics Center Specific Plan Offsite Areas (Offsite Facilities). The California Department of Fish and Wildlife (CDFW) conservation area is also included as a part of the project evaluation, but was not included as part of this burrowing owl survey effort as no direct impacts to these areas would occur. Where appropriate the MSHCP required 500-foot buffer to the Plan Area was examined for sign of burrowing owls. The 2013 burrowing owl surveys assessed the presence/absence of suitable burrows and burrowing owls (*Athene cunicularia hypugaea*), and identify the potential for impacts to this species resulting from the proposed development of the property.

Burrowing owl focused surveys are part of the survey requirements for Western Riverside Multiple Species Habitat Conservation Plan (MSHCP), and consistency and compliance with the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFG Code) Section 3503. The surveys were conducted according to standard protocols set forth by the Burrowing Owl Consortium, California Department of Fish and Wildlife (CDFW), and the MSHCP to determine the presence of potential burrows, burrowing owls, and evaluate current burrowing owl use of the project site.

The Plan Area and Offsite Areas, plus a 500-foot buffer will be referred to as the survey area within this report. The survey area was evaluated to determine suitable habitat for burrowing owl. The survey area for this report includes a total of 3,436 acres (The Plan Area, Offsite Areas and a 500-foot buffer in areas of suitable habitat). Based on four previous burrowing owl surveys and the current existing conditions within the entire survey area, suitable habitat for burrowing owls was determined to occur. New and previously identified suitable habitat areas were surveyed for the current presence of burrowing owl within the survey area.

Burrowing owls and evidence of burrowing owls were observed in the survey area during the focused surveys. A pair of burrowing owls was observed in the southern portion of the survey area, on a berm located immediately south of Alessandro Boulevard and west of Virginia Street within the Plan Area. Due to the presence of burrowing owls and suitable habitat, a 30-day pre-construction clearance survey will be required prior to any future ground disturbance activity within the Plan Area. Additionally, a biological monitor will be required during construction activities if burrowing owls are observed onsite or within the 500-foot buffer during the pre-construction clearance surveys.

SECTION 2: INTRODUCTION

At the request of Highland Fairview Operating Company, FCS-MBA conducted focused surveys for burrowing owl within the project site located in the City of Moreno Valley, Riverside County, California. The project site occurs within the Reche Canyon/Badlands Area Plan of the MSHCP. The project site is located within an MSHCP-designated habitat assessment area for burrowing owl.

2.1 - Survey Purpose

The 2013 surveys were conducted in order to determine the presence/absence of burrowing owls within a MSHCP-designated burrowing owl survey area associated with the Plan Area. The 2013 survey was conducted in June and July as part of a series of burrowing owl surveys conducted on the Plan Area beginning in 2005. The 2013 focused burrowing owl survey was conducted within all suitable habitat identified within the Plan Area, as well as associated buffer areas included within the survey area. After the initial focused burrow survey, additional focused burrowing owl surveys were limited to areas with moderate to high quality habitat contained within the survey area.

2.2 - Project Description

The World Logistics Center Specific Plan area encompasses 2,610 acres of land in eastern Moreno Valley. The proposed General Plan Amendment and Zone Change (GPA/ZC) covers an additional 1,104 acres associated with CDFW lands added to the San Jacinto Wildlife Area as a buffer to proposed development associated with the 2005 Specific Plan and Sand Diego Gas and Electric (SDGE) lands associated with a natural gas compressor station. The objective of the General Plan Amendment and Zone Change is to delete the current residential mixed-use land uses (the Moreno Highlands Specific Plan) and replacing them with job-producing land uses (the World Logistics Center Specific Plan [Plan Area]) in the development areas. The northerly 70 percent of the survey area is within the proposed Specific Plan Area, which will function as the development regulations for the World Logistics Center, a 2,610-acre master-planned logistics complex. The most southerly 30 percent of the GPA/ZC (1,104 acres) will not be in the Specific Plan and will be designated for “open space” and “public” uses as defined by the General Plan Amendment and Zone Change. The remaining acres include 302-acres of Offsite Facilities.

Offsite environmental impacts are associated with roadway and utility improvements. These include a new detention basin near Sinclair Street north of State Route (SR) 60 and a series of detention basins in various canyons along the north side of Gilman Springs Road. Potential water reservoirs and an access road are proposed for a hilly area west of Moreno Beach Drive/north of Cottonwood Avenue and on a hillside west of Theodore Street/south of Ironwood Avenue. Sewer improvements are planned for Redlands Boulevard, Gilman Springs Road, Bay Avenue, Merwin Street, Brodiaea Avenue, and Quincy Street. Water supply improvements are planned for Cottonwood Avenue, Eucalyptus Avenue, Merwin Street, Redlands Boulevard, and Gilman Springs Road. Roadway improvements are planned for Redlands Boulevard and Gilman Springs Road. SR-60 shall be

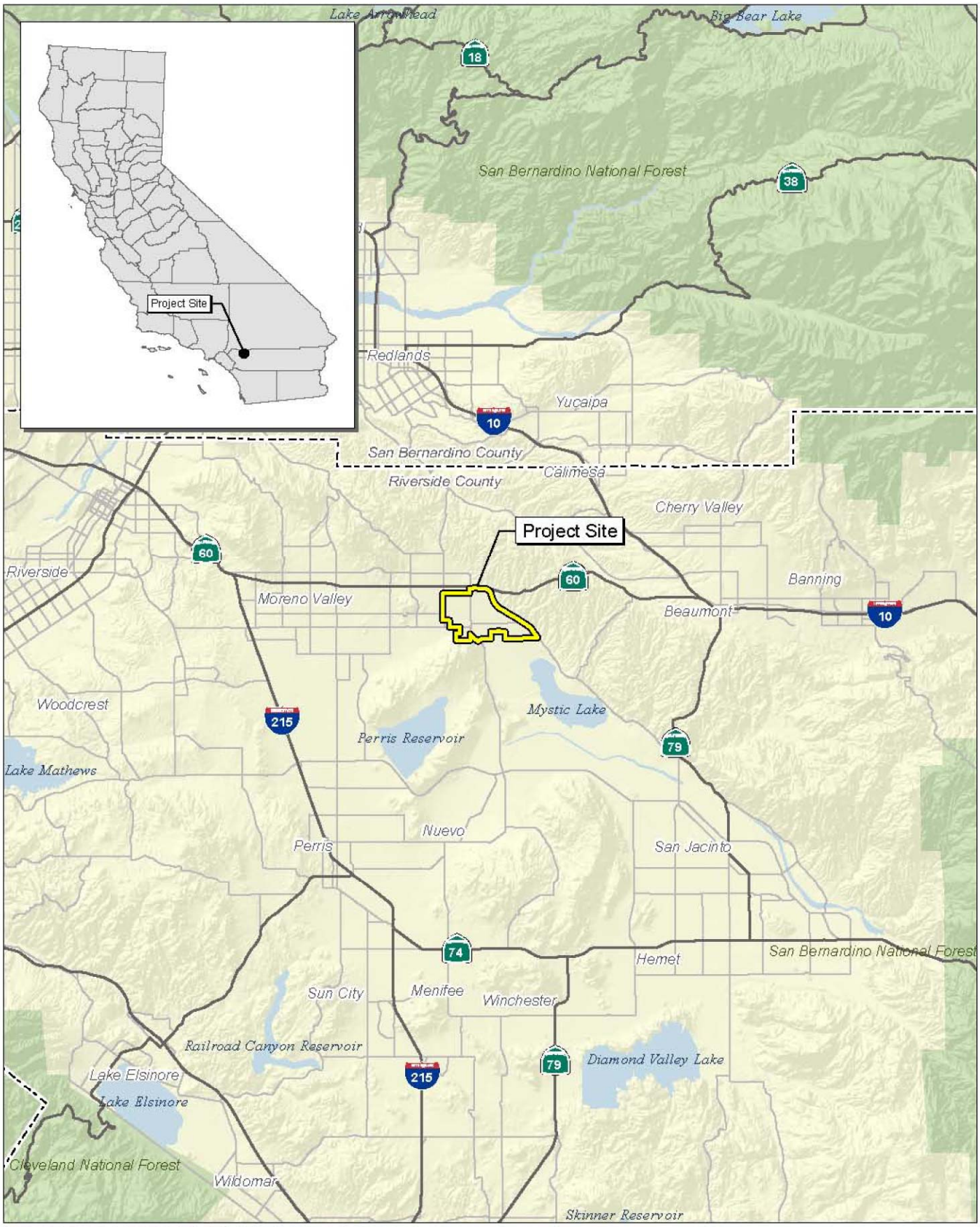
improved with modifications to on- and off-ramps: these projects will be undertaken by Caltrans and covered under separate environmental documents.

2.3 - Project Location and Survey Area

The project site and survey area is located within the Reche Canyon/Badlands Area Plan of the MSHCP in the City of Moreno Valley, Riverside County, California. It is generally located north of State Route (SR) 74, south of SR-60, east of Interstate (I) 215, and west of SR-79 (Exhibit 1). Specifically, the survey area is located in Sections 1, 10, 11, 12, 13, and 14 of Township 3 South, Range 2 West; and Sections 5, 6, 7, 8, 9, 16, 17, 18, 19, 20, and 21 of Township 3 South, Range 3 West as depicted on the Sunnymead and El Casco, California, United States Geological Survey (USGS) 7.5-minute topographic maps (Exhibit 2). The survey area is specifically located north of Air Forbes Road, south of SR-60, east of Redlands Boulevard, and west of Gilman Springs Road (Exhibit 3). The survey area encompasses several contiguous lots totaling approximately 3,436 acres including potential offsite improvements on the eastern, northern, and western margins of the Plan Area. Within the survey area, Highland Fairview Operating Company is proposing the World Logistics Center Specific Plan for 2,610 acres of the survey area (Exhibit 2 and Exhibit 3).

The survey area consists of the Assessor's Parcel Numbers (APNs) listed in Appendix C.

Dry-land grain farming activities dominate the survey area. Some rural residences are located within the survey area along Theodore Street and Redlands Boulevard, and areas of open space are located throughout the southern and northeastern portions of survey area. General land use in the vicinity of the survey area includes agricultural and residential lands to the north and west, the San Jacinto Wildlife Area (SJWA) and the Lake Perris State Recreation Area (LPSRA) to the south and southwest respectively, undeveloped foothills to the east, and the Norton Younglove Reserve to the northeast. Additionally, a 15-acre natural gas compressor station is located north of the CDFW Conservation Buffer area in the southern portion of the survey area.



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

Michael Brandman Associates

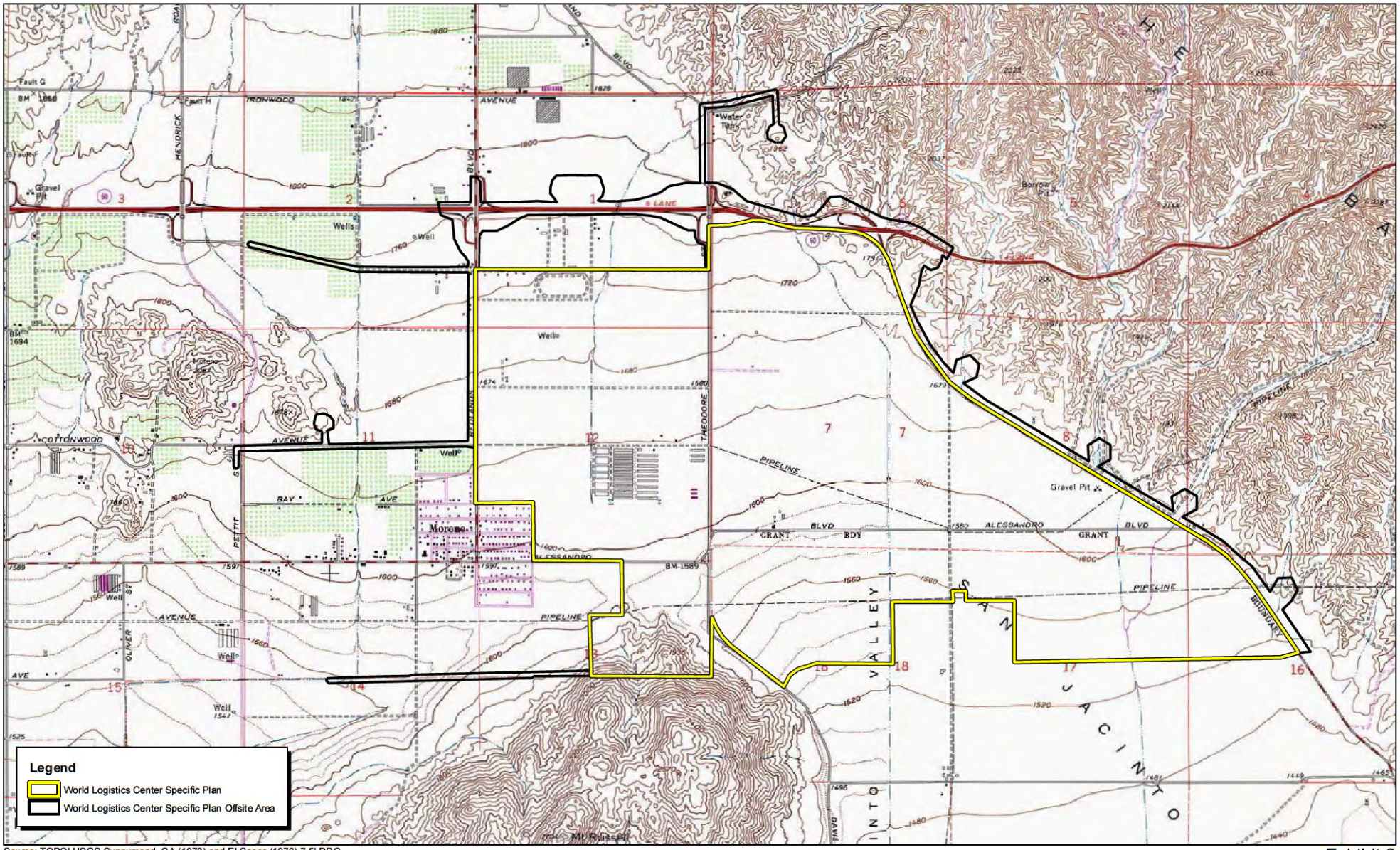
NORTH

5 2.5 0 5 Miles

Exhibit 1
Regional Location Map

26100025 • 08/2013 | 1_regional.mxd

HIGHLAND FAIRVIEW OPERATING COMPANY • WORLD LOGISTICS CENTER SPECIFIC PLAN
BURROWING OWL FOCUSED SURVEY



Source: TOPO! USGS Sunnymead, CA (1978) and El Casco (1976) 7.5' DRG.

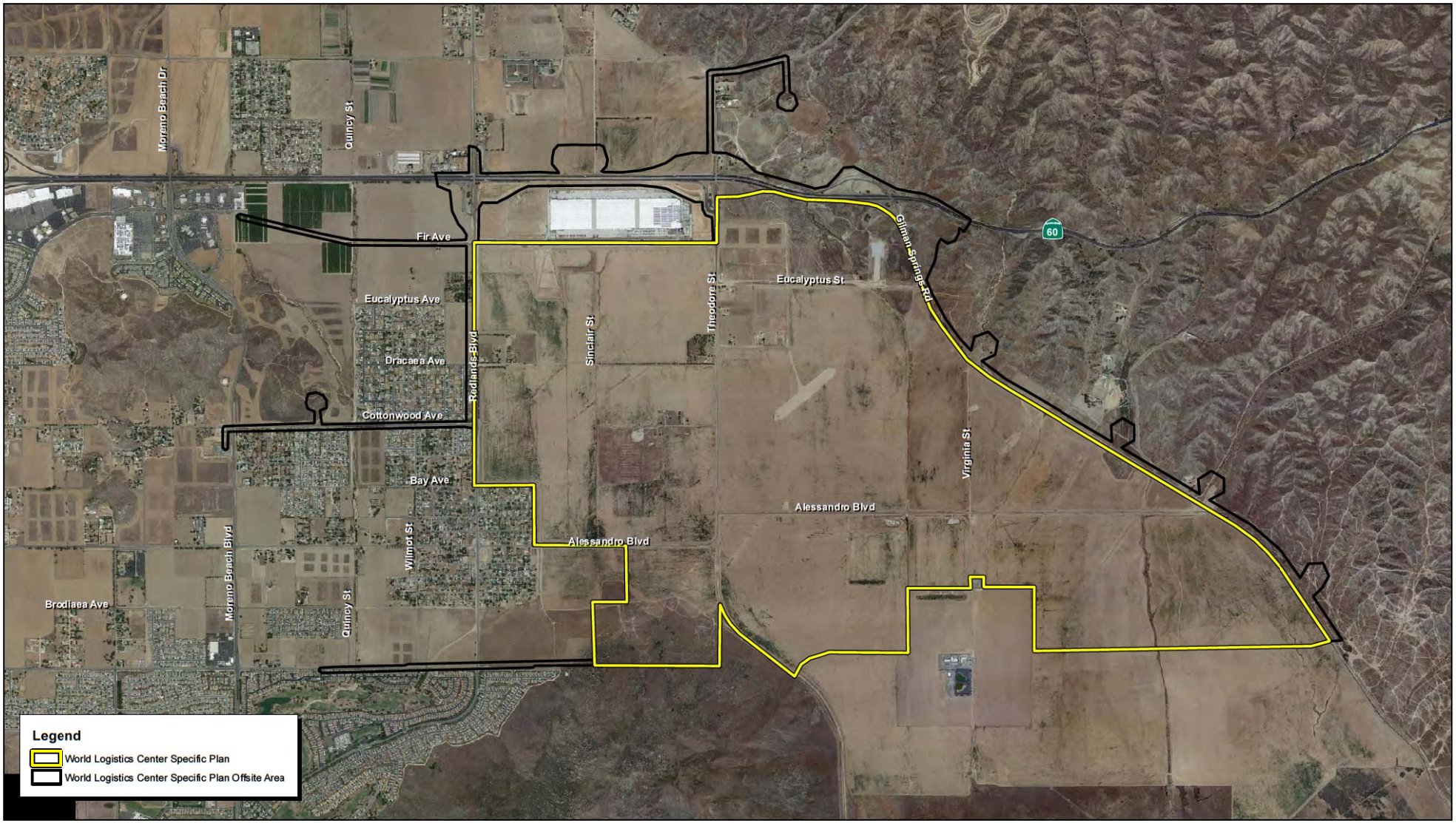
NORTH

2,000 1,000 0 2,000 Feet

Michael Brandman Associates

26100025 • 08/2013 | 2_local_topo.mxd

Exhibit 2
Local Vicinity Map
Topographic Base



Source: Forma, Air Photo USA. MBA Field Survey and GIS Data, 2013.

NORTH

2,000 1,000 0 2,000 Feet

Michael Brandman Associates

26100025 • 08/2013 | 3_local_aerial.mxd

Exhibit 3
Local Vicinity Map
Aerial Base

SECTION 3: BACKGROUND

3.1 - Burrowing Owl

The burrowing owl is designated as a California species of concern due to its great decrease in numbers in the State over the past 30 years. These owls require large open expanses of sparsely vegetated areas on gently rolling or level terrain with an abundance of active small mammal burrows for both foraging and nesting. Typical habitat associated with burrowing owls includes short-grass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), prairies, coastal dunes, desert floors, and other open areas. Burrowing owls also use golf courses, cemeteries, road rights-of-way within cities, airports, vacant lots in residential areas, and irrigation ditches. Although open areas with short vegetation are critical for nesting, there is some evidence that the owls prefer a vegetation mosaic with nesting habitat interspersed with taller vegetation for hunting. However, the primary requirement for suitable burrowing owl foraging habitat appears to be low vegetation cover that allows visibility and access to prey.

Due to a burrowing owl's inability to construct its own burrow, they normally require the use of existing rodent burrows or other burrows for roosting and nesting cover. Burrowing owls may also use pipes, culverts, and nest boxes where animal burrows are scarce. One burrow is typically selected for use as the nest; however, satellite burrows are usually found within the immediate vicinity of the nest burrow within the defended territory of the owl. If left undisturbed, they will use the same burrow year after year for nesting. Typically, a clutch of seven to nine eggs are laid between March and July. Burrowing owls are generally considered a monogamous species. Both parents take part in incubation for about 28 days. The young emerge from the nest and spend daylight hours at the burrow entrance with one or both adults.

Burrowing owls are crepuscular owls, being most active during the early morning and evening hours. Their diet is predominantly large insects and small rodents, but they will also take small birds, reptiles, amphibians, fish, scorpions, and other available prey. They are often observed perched on fence posts or utility wires. Reasons for the decline in their numbers include habitat destruction, insecticide poisoning, rodenticide (particularly squirrel eradication), and shooting.

3.2 - Western Riverside County MSHCP

The MSHCP is a comprehensive, multi-jurisdictional Habitat Conservation Plan focusing on conservation of species and their associated habitats in western Riverside County. According to the MSHCP, surveys for the burrowing owl are to be conducted as part of the environmental review process. The MSHCP Additional Surveys Needs and Procedures (Section 6.3.2) identify a specific burrowing owl survey area within the MSHCP Plan Area (Burrowing Owl Survey Area Map, Figure 6-4 of the MSHCP, Volume I). The MSHCP also identifies species-specific objectives for the burrowing owl surveys if suitable habitat occurs on a proposed project site.

Under the MSHCP, "if a site (including adjacent buffer areas) supports three or more pairs of burrowing owls, supports greater than 35 acres of suitable habitat, and is non-contiguous with MSHCP Conservation Area lands, at least 90 percent of the area with long-term conservation value and burrowing owl pairs will be conserved onsite." If it is determined that the 90 percent threshold cannot be met, the Permittee(s) must submit a Determination of Biologically Equivalent or Superior Preservation (DBESP) to provide information on how the proposed plan would protect the nesting owls.

3.3 - Burrowing Owl Survey History

The initial burrowing owl habitat assessment and focused survey was completed by MBA in 2005. Additional burrowing owl surveys were conducted in 2007, 2010 and 2012 to document the status of burrowing owl residency throughout the years and different phases of this project. These burrowing owl focused surveys were conducted within previously known occupied areas and areas with moderate to high quality habitat for burrowing owl. These areas include the banks of erosion features within the project site. These areas are not disturbed during agricultural activities and can provide suitable burrow habitat for burrowing owls.

Burrowing owl was previously observed within the survey area in 2005 (MBA 2005b) during a focused burrowing owl survey, and was an incidental observation in early spring of 2012 (Crawford pers. comm.) during a jurisdictional delineation survey. Burrowing owls were not observed during the 2007, 2010, and 2012 protocol surveys.

The 2013 focused burrowing owl surveys were conducted within the entire 2,610-acre Plan Area. The surveys also focused on the 302-acre Offsite Facilities, and 500-foot buffer around all project components, for a total of 3,436-acre survey area.

SECTION 4: METHODS

4.1 - Literature Review

FCS-MBA reviewed available documents and graphics regarding burrowing owl biology, habitat requirements, and previously mapped distribution within the Plan Area. The literature review included a review of field guides, web sites, and Geographic Information Systems (GIS) data. Section 9, References, lists the material reviewed for this report.

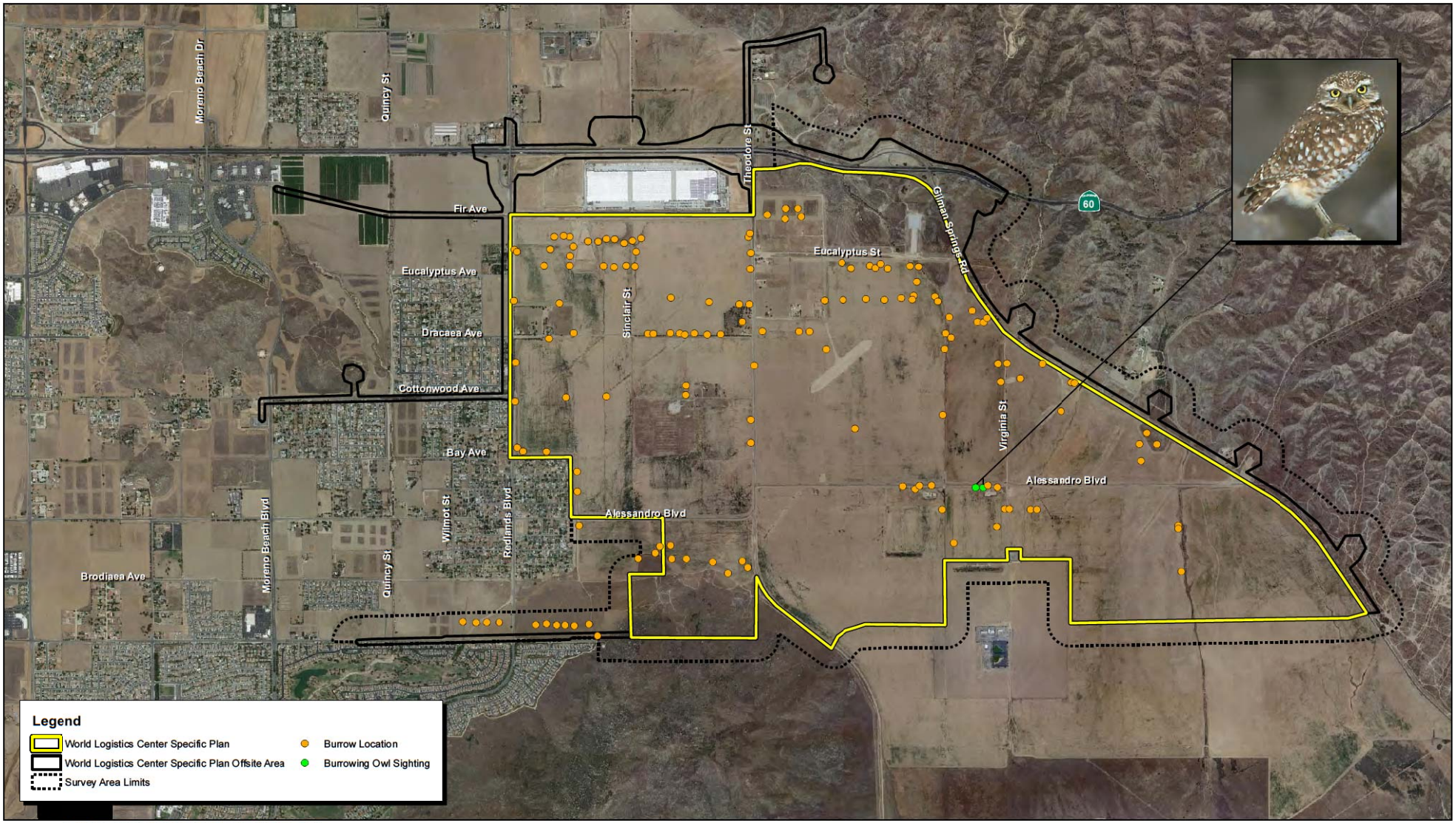
4.2 - Focused Surveys

A focused burrow and burrowing owl survey was conducted by qualified FCS-MBA biologists, Tommy Molioo, Scott Crawford, and Dale Hameister, with assistance from FCS-MBA staff Zackery Ziade, Liz Westmoreland, and Catherine Lytle in June and July 2013. FCS-MBA staff assisting with the focused burrowing owl surveys were under the direct supervision of FCS-MBA biologists at all times. Focused surveys were conducted in accordance with the survey protocols developed by the California Burrowing Owl Consortium (CBOC 1993) and the "Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area" (Riverside County 2006) per the Riverside County survey requirements. The Plan Area plus a 500-foot buffer surrounding the site, also known as the survey area, was surveyed to determine the suitable habitat areas (Exhibit 4). All observations during the surveys were recorded on field data sheets, which are available upon request.

4.2.1 - Focused Burrow Survey

The survey for potential burrows and burrowing owl sign was conducted by walking through suitable habitat throughout the survey area. The 500-foot buffer within the survey area is included to account for adjacent burrows and foraging habitat outside the suitable habitat areas and impacts from factors such as noise and vibration due to heavy equipment, which could indirectly affect biological resources during project construction. Pedestrian survey transects were spaced to allow 100 percent visual coverage of the ground surface. The distance between transect center lines were no more than 100 feet and when necessary were reduced to account for differences in terrain, vegetation density, and ground surface visibility.

All suitable burrows were thoroughly examined for presence of sign and suitable perches were inspected for burrowing owl pellets and whitewash. If occupied burrows or individual owls were observed during the survey, a minimum distance of 50 meters was maintained between owls or occupied burrows and the observer, to minimize any potential harassment or disturbance. The initial focused burrow survey was conducted over a three-day period, to account for all suitable habitat within the survey area and achieve 100 percent visual coverage. Due to MSHCP survey time limitations, surveying that occurred after 0800 hours was not considered valid for the first focused burrowing owl survey. Despite time limitations, FCS-MBA biologists continued the burrow assessment survey to identify all suitable burrow locations within the project site. Any observation of burrowing owl after 0800 hours would be considered an incidental observation.



Source: Forma, Air Photo USA. MBA Field Survey and GIS Data, 2013.

NORTH

2,000 1,000 0 2,000 Feet

Michael Brandman Associates

26100025 • 08/2013 | 4_buow_survey_area_loc.mxd

Exhibit 4

Burrowing Owl Survey Area and Burrow Location Map

HIGHLAND FAIRVIEW OPERATING COMPANY • WORLD LOGISTICS CENTER SPECIFIC PLAN
BURROWING OWL FOCUSED SURVEY

4.2.2 - Focused Burrowing Owl Survey

Following the results of the initial burrow survey, three additional focused surveys were conducted within suitable habitat areas to determine the presence of burrowing owl within the survey area. Due to MSHCP survey time limitations and the size of the survey area, the initial focused burrowing owl survey was conducted over a three-day period concurrently with the burrow assessment survey. Only burrow assessment survey times that occurred within two hours after sunrise were counted as part of the initial focused burrowing owl survey. Additionally, only areas identified in the initial survey as having potential burrows and adjacent foraging habitat for owls were surveyed during the remaining three surveys, which is a significantly smaller area than the entire survey area. These areas contain moderate to high-quality suitable habitat, presence of suitable burrows, and known locations of previous observations. Areas containing an abundance of potentially suitable burrows were focused on during the three focused burrowing owl surveys. These areas, plus the 500-foot buffer, are depicted on Exhibit 4 within the survey area limits.

Presence of owls was determined by direct observations and/or presence of sign, including pellets, white wash, tracks, feathers, and/or prey remains within the immediate vicinity of a suitable burrow.

SECTION 5: EXISTING CONDITIONS

5.1 - General Conditions

The survey area is located in the northeast portion of Moreno Valley, south and west of The Badlands, and north of Mount Russell. Overall, the entire survey area is relatively flat, and gently slopes from north to the south, with an elevation range of approximately 1,580 to 1,820 feet above mean sea level.

The survey area contains several erosion features and a few roadside ditches, generally associated with existing roads. These areas provide the most suitable habitat for burrows potentially used by burrowing owl as these areas are not regularly impacted by active agricultural activities. The vast majority of the survey area is dominated by regularly disked and planted fields with grain crops. The crops are generally planted in Fall and harvested in late Spring It is highly unlikely that burrowing owl will occupy areas within these active agricultural fields. However, burrowing owl are known to occur within the margins of these areas within roadside berms and ditches.

The survey area contains five different soil series. A soil series is a group of soils with similar profiles. These profiles include major horizons with similar thickness, arrangement, and other important characteristics. The survey area contains Metz gravelly sandy loam, Metz loamy fine sand, Hanford coarse sandy loam, San Emigdio fine sandy loam, and San Emigdio loam (USDA 1978). No other mapped soil series are present onsite.

The entire survey area contains significant evidence of previous disturbance. Most of the survey area was ready for harvesting during the focused survey effort for burrowing owl. Non-native plant species are prevalent throughout the entire survey area. Active grazing was observed throughout the northern portion of the survey area, south of SR-60. In addition, numerous abandoned buildings, fences, and trees associated with the previous agricultural activities, have recently been removed from the survey area.

The site photographs included in Appendix B depict the general habitats and vegetation communities observed on the project site during the focused burrowing owl survey. Representative photographs of suitable habitat are also included in Appendix B.

5.2 - Plant Communities

Two plant communities, extensive agriculture and non-native grassland, are the dominant plant communities on the project site and survey area. These two plant communities account for the majority of habitat within the survey area, and these areas are most suited for potential burrowing owl habitat. The extensive agriculture community is heavily disturbed due to disking and grazing and during the 2013 survey period contained winter wheat. Commonly observed species include short-podded mustard (*Hirschfeldia incana*), cheeseweed (*Malva parviflora*), bindweed (*Convolvulus arvensis*), and non-native grasses such as slender oats (*Avena barbata*) and rip-gut brome (*Bromus diandrus*). Other less dominant plant communities were observed within the survey area, and are

generally not considered suitable burrowing owl habitat. These plant communities include, mule fat scrub, non-native grassland, non-vegetated channel, northern mixed chaparral, ornamental, Riversidean sage scrub, southern willow scrub, and urban/developed land.

5.3 - General Wildlife

The project site provides habitat for wildlife species that occur in extensive agriculture and disturbed/developed plant communities. No amphibian species were observed within the survey area during the focused surveys. Common wildlife species observed or detected include:

- Western kingbird (*Tyrannus verticalis*)
- Western meadowlark (*Sturnella neglecta*)
- Northern mockingbird (*Mimus polyglottos*)
- Common raven (*Corvus corax*)
- American crow (*Corvus brachyrhynchos*)
- Brewer's blackbird (*Euphagus cyanocephalus*)
- Red-tailed hawk (*Buteo jamaicensis*)
- American kestrel (*Falco sparverius*)
- California ground squirrel (*Spermophilus beecheyi*)
- Desert cottontail (*Sylvilagus audubonii*)

A complete list of wildlife species observed is located in Appendix A, Faunal Compendium.

SECTION 6: SURVEY RESULTS

6.1 - Focused Burrow Survey

FCS-MBA biologists Tommy Molioo, Dale Hameister, and Scott Crawford, with assistance from FCS-MBA staff, conducted the initial focused burrow survey in conjunction with the first focused burrowing owl survey on June 13, 2013. The survey was conducted between 0540 and 1245 hours. Weather conditions during the survey included overcast skies with an average temperature of 62 degrees Fahrenheit and winds of 1 to 2 miles per hour. Due to the size of the survey area and in order to obtain 100 percent visual coverage, FCS-MBA's biologists assessed the entire survey area over a three-day period on June 13, June 20, and June 21, 2013. Wildlife activity was moderate during the surveys. There had been no recorded rain in the region for a minimum of seven days prior to initiating the burrowing owl surveys.

The majority of the survey area is characterized by disturbed habitat and agriculture with rows of winter wheat and grazing areas that do not provide suitable habitat for burrowing owl. The survey area consists of several small and one large erosional feature that provides moderate to high quality burrowing owl habitat. Numerous desert cottontail and California ground squirrel burrows were observed scattered throughout the survey area. Several pipes and other human-made debris also provided suitable burrows within the drainage features. Additionally, the margins of the agricultural lands within the survey area provide moderate to high quality suitable habitat for burrowing owl. No burrowing owl was observed within the survey area during the burrow assessment survey.

6.2 - Focused Burrowing Owl Survey

FCS-MBA's biologists focused on portions of the survey area identified during the burrow assessment surveys that contain moderate- to high-quality habitat, and areas that previously provided suitable habitat for burrowing owl in 2005 and 2012. Due to MSHCP survey time limitations and the size of the survey area, the initial focused burrowing owl survey was conducted over a three-day period concurrently with the focused burrow survey. Only survey times that occurred within two hours after sunrise were counted as part of the initial focused burrowing owl survey. The subsequent three surveys were conducted during single-day efforts due to a much limited survey area focusing only on suitable habitat. Burrowing owls and evidence of burrowing owls were observed during most of the focused surveys conducted in 2013 (Table 1).

Table 1: 2013 Survey Results for Burrowing Owl

Survey Number	Date	Time	Temperature (Fahrenheit)	Skies	Results (# of owls observed)
1	June 13, 2013	0540 to 0800	62	Clear	Absent
1	June 20, 2013	0545 to 0800	62	Clear	Present (2)
1	June 21, 2013	0530 to 0815	63	Clear	Present (2)
2	June 25, 2013	0500 to 0800	67	Overcast	Present (1)

Survey Number	Date	Time	Temperature (Fahrenheit)	Skies	Results (# of owls observed)
3	July 3, 2013	0545 to 0800	65	Clear	Present (1)
4	July 9, 2013	1800 to 2000	82	Clear	Present (2)

Burrowing owls were observed within the survey area on all survey days except for the initial burrow assessment day. A pair of burrowing owls was observed perched on a berm located immediately south of Alessandro Boulevard, just west of Virginia Street (Exhibit 4). When flushed, the burrowing owls were observed flying up a few hundred feet south into the existing wheat fields and near a large rock spoil pile. Two burrowing owls were observed during Survey #1 on June 21, but only one burrowing owl was observed during Survey #2 on June 25, as well as Survey #3 on July 3. The location of the other burrowing owl was not known or determined during Survey #2 and Survey #3. However, two burrowing owls were again observed during Survey #4 on July 9. Each observation of a single or pair of burrowing owls occurred on the same berm located immediately south of Alessandro Boulevard. Upon further inspection of the berm and burrow locations, no sign of active nesting or nestlings was observed, indicating that the pair is not currently nesting within the survey area.

No other observations of burrowing owl occurred during the 2013 focused surveys. A focused effort on areas with previous observations in 2005 and 2012 within the Proposed Project Site (Exhibit 4) was undertaken. No other sign of burrowing owl was observed in any other portion of the survey area.

6.3 - Nesting Birds

The project site supports active agricultural lands consisting of dry-land farming and grazing. There are several scattered eucalyptus (*Eucalyptus sp*) and olive (*Olea europaea)* trees and other landscaped vegetation associated with the existing residences in the western and central portions of the survey area. The agricultural land and ornamental trees provide suitable nesting habitat for several common ground and tree-nesting avian species known to occur in the region. Additionally, the significantly eroded drainage features in the eastern portion of the project site provide suitable habitat for raptor species such as barn owl (*Tyto alba*). Barn owls were previously observed nesting in 2005 and 2010 within a large erosion feature in the eastern portion of the survey area. No barn owls were observed nesting within the survey area during the 2013 surveys. No evidence of any nesting activity was observed within the survey area during the burrowing owl focused surveys.

6.4 - Other Species

Appendix A, Faunal Compendium, provides a complete list of the wildlife species observed on the project site and immediate vicinity during the burrowing owl focused surveys.

SECTION 7: CONCLUSIONS AND RECOMMENDATIONS

A pair of burrowing owls was observed along a berm immediately south of Alessandro Boulevard and west of Virginia Street during the 2013 focused surveys. Therefore, the southern portion of the survey area is currently considered occupied by burrowing owls. Since only a single pair of burrowing owls was identified within the 3,436 acre survey area, there is no requirement for additional owl conservation measures as defined in the MSHCP.

Due to the presence of burrowing owls within the survey area, a 30-day pre-construction clearance survey will be required prior to any ground disturbing activity as phases of the project are implemented. If burrowing owls are observed within these survey areas, consultation with the County and/or CDFW may be required to determine the best course of action. Avoidance and minimization measures will be required by the project, such as placing an appropriate buffer around the burrowing owl and any active burrows, depending on the proximity of the observed burrowing owl to the proposed impact area. Additionally, a biological monitor will be required to be onsite during ground-disturbing activities to ensure no direct or incidental take of burrowing owl occurs as a result of any project-related ground-disturbing activities. No project activities may encroach into the buffer area without the consent of the biological monitor.

No sign of burrowing owl nesting activity or nestlings was observed during the survey. No other burrowing owls were observed within any other portion of the survey area, particularly areas with previous observations or the proposed Project Site.

The ornamental trees and eroded drainage feature provide potentially suitable nesting habitat for several avian species. Therefore, FCS-MBA recommends that construction activities avoid the avian nesting season from February through August, if possible. If construction activities must take place during the nesting season, a pre-construction nesting bird survey should be conducted prior to any ground-disturbing activities. The survey can be conducted in conjunction with the pre-construction clearance survey for burrowing owl.

If passerine birds are found to be nesting or there is evidence of nesting behavior inside or within 250 feet of the impact area, a 250-foot buffer will be required around the nest where no vegetation disturbance would be permitted. For raptor species, such as hawks and owls, this buffer could be expanded to 500 feet. A qualified biologist will be required to closely monitor any active nests during construction activities to ensure no direct impacts occur, until it is determined that the nestlings have fledged and the nest is no longer active. Construction activity may commence only at the discretion of the biological monitor.

SECTION 8: 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: September 4, 2013 Signed: _____

Tommy Molioo, Biologist
Michael Brandman Associates
Irvine, California

SECTION 9: REFERENCES

California Burrowing Owl Consortium (CBOC). 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines.

California Department of Fish and Wildlife (CDFW). 2013. California Natural Diversity Database. Wildlife and Habitat Data Analysis Branch.

Crawford, Scott. Sr. Biologist, FCS-MBA. Personal communication: verbal. October 2012.

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.

Jennings, M.R. and M.P. Hayes. 1994. Amphibians and Reptile Species of Special Concern in California. Inland Fisheries Division, California Department of Fish and Game.

Laudenslayer, Jr., W.F., W.E. Grenfell, Jr., and D.C. Zeiner. 1991. "A Check-list of the Amphibians, Reptiles, Birds and Mammals of California." California Fish and Game 77:109-141.

Michael Brandman Associates (MBA). 2005a. Biological Resources Assessment for the 1,778-acre Bel Lago Property. City of Moreno Valley, Riverside County, California. On file at FCS-MBA.

Michael Brandman Associates (MBA). 2005b. Focused Burrowing Owl Survey Report for the 1,178-acre Bel Lago Property, City of Moreno Valley, Riverside County, California. September 12.

Michael Brandman Associates (MBA). 2007. Burrowing Owl Focused Survey, Highland Fairview Corporate Park. City of Moreno Valley, Riverside County, California. On file at FCS-MBA.

Michael Brandman Associates (MBA). 2008. Habitat Assessment and MSHCP Consistency Analysis. Highland Fairview Corporate Park. City of Moreno Valley, Riverside County, California. On file at FCS-MBA.

Michael Brandman Associates (MBA). 2010. Burrowing Owl Focused Survey, Highlands Specific Plan. City of Moreno Valley, Riverside County, California. On file at FCS-MBA.

Michael Brandman Associates (MBA). 2012. Burrowing Owl Focused Survey, World Logistics Center Specific Plan. City of Moreno Valley, Riverside County, California. On file at FCS-MBA.

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 D.C.

Riverside County. 2006. Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area. Riverside County, California.

Skinner, M.W. and B.M. Pavlik. 1994. Inventory of Rare and Endangered Vascular Plants of California. California Native Plant Society, Spec. Pub. No. 1 (5th edition), Berkeley, California.

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

Udvardy, M.D. 1994. National Audubon Society Field Guide to North American Birds. Alfred A. Knopf, Inc. New York, New York.

United States Department of Agriculture (USDA). 1978. Soil Survey of Western Part of Riverside County, California. Department of the Interior. U.S. Government Printing Office. Washington, D.C.

United States Fish and Wildlife Service (USFWS). 1996. "Review of plant and animal taxa for listing as endangered or threatened species; notice of review." Federal Register Vol. 61, No. 40.

United States Fish and Wildlife Service (USFWS). 2002. Birds of conservation concern 2002. Division of Migratory Bird Management, Arlington, Virginia.

United States Geological Survey (USGS). 1976. Lakeview, California 7.5-Minute Topographic Quadrangle Map. Department of the Interior. Washington D.C.: US Government Printing office.

Appendix A: Faunal Compendium

Fauna Compendium

Phrynosomatidae		**Lizards**
Sceloporus	*occidentalis*	western fence lizard
Cathartidae		**Vultures**
Cathartes	*aura*	turkey vulture
Accipitridae		**Hawks**
Buteo	*jamaicensis*	red-tailed hawk
Falconidae		**Falcons**
Falco	*sparverius*	American kestrel
Falco	*mexicanus*	prairie falcon
Columbidae		**Pigeons/Doves**
Columba	*livia*	rock pigeon
Zenaida	*macroura*	mourning dove
Strigidae		**True Owls**
Athene	*cunicularia*	burrowing owl
Trochilidae		**Hummingbirds**
Calypte	*anna*	Anna's hummingbird
Tyrannidae		**Flycatchers**
Sayornis	*nigricans*	black phoebe
Myiarchus	*cinerascens*	ash-throated flycatcher
Tyrannus	*verticalis*	western kingbird
Laniidae		**Shrikes**
Lanius	*ludovicianus*	loggerhead shrike
Corvidae		**Jays/Crows**
Corvus	*brachyrhynchos*	American crow
Corvus	*corax*	common raven
Mimidae		**Mockingbirds/Thrashers**
Mimus	*polyglottos*	northern mockingbird
Sturnidae		**Starlings**
Sturnus	*vulgaris*	European starling
Emberizidae		**Warblers, sparrow, etc.**
Pipilo	*crissalis*	California towhee
Cardinalidae		**Cardinals**
Passerina	*caerulea*	blue grosbeak
Icteridae		**New world blackbirds**
Sturnella	*neglecta*	western meadowlark
Euphagus	*cyanocephalus*	Brewer's blackbird
Leporidae		**Hares and Rabbits**
Sylvilagus	*audubonii*	desert cottontail
Sciuridae		**Squirrels**

Fauna Compendium

Spermophilus	*beecheyi*	California ground squirrel
Canidae		**Wolves and Foxes**
Canis	*latrans*	coyote
Procyonidae		**Raccoons**
Procyon	*lotor*	raccoon

Appendix B: Site Photographs

Photograph 1: Taken from the center of the project site, near Eucalyptus Avenue and Theodore Street, facing south towards Alessandro Avenue in the distance. Note wheat fields dominate the site.

Photograph 2: Taken from the central portion of the survey area, south of Eucalyptus Avenue and west of Virginia Street, facing south along drainage. Note small mammal burrows along the drainage.

Photograph 3: Taken from the eastern portion of the survey area, near Gilman Springs Road, facing south. Note burrows in the center of the photo.

Photograph 4: Taken from the east side of Gilman Springs Road. Facing west towards the survey area.

Source: Michael Brandman Associates (2013).

Michael Brandman Associates

26100025 • 07/2013 | B_site_photos_1through4.cdr

Appendix B
Site Photographs 1 through 4

Photograph 5: Taken from the top of the berm just south of the existing Sketchers property. Facing south towards the proposed project site.

Photograph 6: Taken from the southern boundary of the survey area. Facing north towards Alessandro Boulevard. Note tall wheat fields in foreground.

Photograph 7: Taken near the corner of Alessandro Boulevard and Redlands Boulevard. Facing east towards the survey area.

Photograph 8: Taken near the corner of Alessandro Boulevard and Redlands Boulevard. Facing north towards the survey area. Note wheat fields in foreground and background.

Source: Michael Brandman Associates (2013).

Michael Brandman Associates

Appendix B
Site Photographs 5 through 8

Photograph 9: Photo of single burrowing owl perched on berm just south of Alessandro Boulevard. Note, a pair of burrowing owls were observed in this area, but only 1 was photographed.

Photograph 10: Photo of suitable burrowing owl burrow observed on the berm that a pair of burrowing owls were observed perched on.

Source: Michael Brandman Associates (2013).

Michael Brandman Associates

Appendix B
Site Photographs 9 through 10

Appendix C:
Assessor's Parcel Numbers

Assessor's Parcel Numbers				
42204009	42204010	42204014	42204015	422070005
422070006	422070010	422070014	422070017	422070018
422070019	422070020	422070021	422070022	422070029
422070030	422070031	422070032	422070033	422070034
422070035	422070036	422070037	422080001	422080002
422080003	422080004	422110001	422130001	422130002
422130003	423250001	423250002	423250007	423250008
423250009	423250010	423250011	423250012	423250013
423250018	423260001	423260002	423260003	423260004
423260005	423260006	423260007	423260008	423260009
423270003	423270004	423270006	423270007	423270008
423270009	423270017	423270018	423280001	423280002
423280003	423280004	423280005	423280006	423280007
423280008	423280009	423300002	423300004	423300009
423300010	423310001	423310002	423310003	423310004
423310005	423310006	423310008	478210054	478210055
478220001	478220002	478220003	478220004	478220005
478220006	478220007	478220009	478220010	478220011
478220012	478220013	478220014	478220015	478220016
478220017	478220018	478220019	478220020	478220021
478220022	478220023	478220024	478220025	478220026
478220027	478220028	478220029	478220030	478220031
478230001	478230002	478230003	478230004	478230005
478230006	478230007	478230008	478230009	478230010
478230011	478230014	478230015	478230016	478230017
478230019	478230020	478240002	478240003	478240005
478240006	478240007	478240008	478240011	478240012
478240013	478240014	478240015	478240016	478240017
478240019	478240021	478240022	478240023	478240024
478240025	478240026	478240027	478240028	478240029
478240030	478240031	478240032	478240033	478240034
488350003	488350004	488350005	488350006	488350007
488350008	488350009	488350010	488350012	488350013

Assessor's Parcel Numbers				
488350014	488350015	488350019	488350021	488350023
488350025				

Appendix E:
Sensitive Plants Surveys

Sensitive Plant Focused Survey
Highlands Specific Plan
City of Moreno Valley, Riverside County, California

Sunnymead and El Casco, California USGS 7.5-minute Topographic Quadrangle Map
Sections 1, 2, 11, 12, 13, and 14; Township 3 South; Range 3 West
Sections 5, 6, 7, 8, 16, 17, 18, 19, 20, and 21; Township 3 South; Range 4 West

Prepared for:

Highland Fairview Operating Company
3070 South Bristol Street, Suite 320
Costa Mesa, CA 92626
951.242.9180

Contact: Mr. Wayne Peterson, Vice President, Community Planning

Prepared by:

Michael Brandman Associates
220 Commerce, Suite 200
Irvine, CA 92602
714.508.4100

Contact: Kenneth J. Lord, Ph.D.
Director of Natural and Cultural Resources

Michael Brandman Associates

Report Prepared By: Scott A. Crawford, Sr. Biologist
Survey(s) Conducted: June 9 through July 2, 2010
Report Date: December 13, 2010

Table of Contents

Section 1: Summary **1**

Section 2: Introduction **2**
2.1 - Survey Purpose 2
2.2 - Project Description 2
2.3 - Project Site Location and Study Area 2

Section 3: Methods **9**
3.1 - Survey Protocol 9
3.2 - Literature Review 10

Section 4: Surveys **17**
4.1 - Survey Findings 17
4.1.1 - Survey Area 17

Section 5: Existing Conditions **21**
5.1 - General Conditions 21
5.2 - Plant Communities 21

Section 6: Conclusions and Recommendations **22**
6.1 - Conclusions 22
6.2 - Recommendations 22

Section 7: Certification **23**

Section 8: References **24**

Appendix A: Floral Compendium

Appendix B: Regulatory Framework

Appendix C: Riverside County Integrated Project's Report

List of Tables

Table 1: Study Area Assessor's Parcel Numbers 2

Table 2: Special Status Plant Species 11

Table 3: Sensitive Plant Focused Surveys 17

List of Exhibits

Exhibit 1: Regional Location Map 6

Exhibit 2: Local Vicinity Map Topographic Base 7

Exhibit 3: Local Vicinity Map Aerial Base 8

Exhibit 4: Soils Map 19

Exhibit 5: Sensitive Plant Survey Area Map 20

SECTION 1: SUMMARY

The purpose of this study is to determine the presence/absence of any special status plant species within the proposed Highlands Specific Plan in the City of Moreno Valley, Riverside County, California. A literature review initiated the search and was followed by site visits to suitable habitat areas as well as known reference populations. The list of potentially occurring plant species is based on species range, known recorded occurrence within the vicinity, and the presence of marginal to suitable habitat.

Fifteen sensitive plant species were listed in the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) report generator within or immediate adjacent to the Highlands Specific Plan, herein referred to as project site, including Munz's onion, San Diego ambrosia, many-stemmed dudleya, spreading navarretia, California orcutt grass, Wright's trichocoronis, San Jacinto Valley crownscale, Parish's brittlescale, Davidson's saltscale, thread-leaved brodiaea, smooth tarplant, round-leaved filaree, Coulter's goldfields, little mousetail, and mud nama.

Based on the known recorded occurrence and existing habitat onsite, three of the sensitive plant species listed above have a moderate potential to occur including Coulter's goldfields, smooth tarplant, and thread-leaved brodiaea. Therefore, sensitive plant surveys were limited to these three species.

This report describes the assessment and results of a focused survey for fifteen sensitive plants species as required by the MSHCP. No sensitive plant species were observed during the focused plant survey. Therefore, the project site is considered absent of all potentially occurring sensitive plant species.

SECTION 2: INTRODUCTION

As requested by the Highland Fairview Operating Company, Michael Brandman Associates (MBA) completed a sensitive plant assessment and surveys for the Highlands Specific Plan within the City of Moreno Valley, Riverside County, California.

2.1 - Survey Purpose

The 2010 surveys were conducted as part of the ongoing effort documenting sensitive plant and wildlife species for the project sites since 2005. The 2010 sensitive plant surveys were based on a finalized Highlands Specific Plan footprint clearly indicating all related impact areas associated with the Highlands Specific Plan Area.

2.2 - Project Description

The Highland Fairview Operating Company property is a 4,321-acre project site dominated by dry-land farming agricultural land. Additional offsite areas include freeway interchanges, water quality basins, as well as other project infrastructure. Historically, the project site has been used for agricultural purposes for many decades. Currently, it is dominated by disked agricultural fields. General land use in the vicinity of the project site includes State Route (SR) 60 and agricultural lands to the north, agricultural lands intermixed with rural residences to the west and south, and undeveloped land to the east.

2.3 - Project Site Location and Study Area

The project site includes the Highland Fairview Operating Company property as well as offsite improvement areas that may be used in support of any future project implemented on the parcel map. The study area is generally located north of SR-74, south of SR-60, east of Interstate (I) 215, and west of SR-79, in the City of Moreno Valley, Riverside County, California (Exhibit 1). The project site is depicted within Sections 1, 2, 11, 12, 13, and 14 of Township 3 South, Range 3 West and Sections 5, 6, 7, 8, 16, 17, 18, 19, 20, and 21 of Township 3 South, Range 4 West of the Sunnymead and El Casco, California, United States Geological Survey (USGS) 7.5-minute topographic quadrangle map (Exhibit 2). More specifically, it is located south of Ironwood Avenue, east of Moreno Beach Drive, and west of Gillman Springs Road (Exhibit 3).

The study area occurs on the following Assessor's Parcel Numbers (APNs) shown in Table 1.

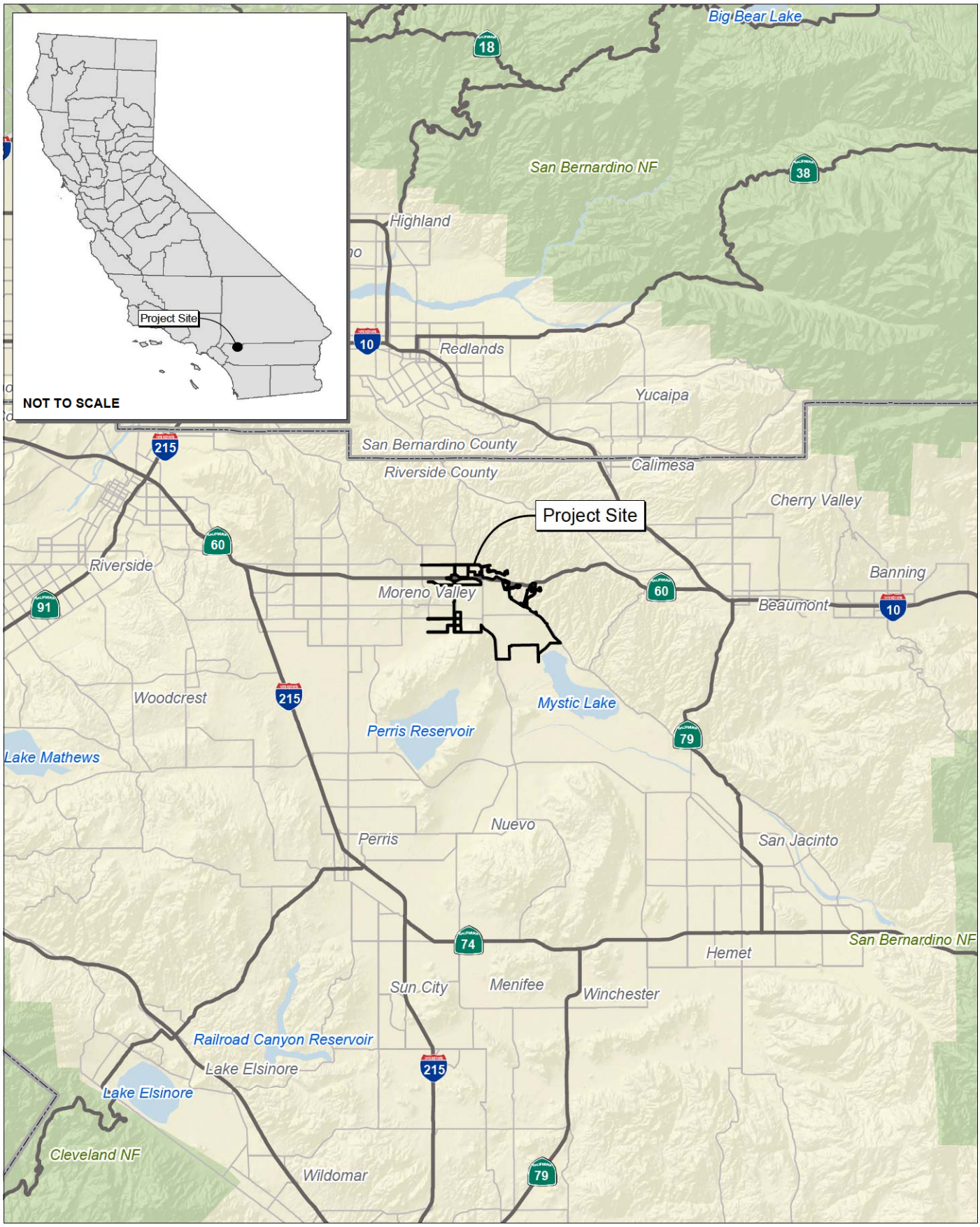
Table 1: Study Area Assessor's Parcel Numbers

Study Area Assessor's Parcel Numbers				
304020006	304020008	304041014	304041015	304041016
304041029	304041030	304051005	304051006	304051012

Study Area Assessor's Parcel Numbers				
304052026	304053001	304053006	304053007	304053010
304053011	304053012	304053013	304053014	304053015
304053016	304053017	304053018	304053019	304053020
304053021	304060001	304060002	304060003	304060004
304060005	304060006	304060007	304060008	304060009
304060020	304060021	304070001	304070002	304070003
304070004	304070005	304070006	304070007	304070008
304070009	304070010	304070011	304070012	304070013
304070014	304070015	304070016	304070017	304070052
304070053	304070054	304070055	304070056	304290063
304290064	304420001	304420002	304420003	304420004
304420005	304420006	304420007	304421001	304421002
304421003	304421004	304421005	304421006	304421007
304421008	304421009	304421010	304421011	304421012
304421029	304421043	304431005	304431006	304431007
304431008	304431009	312020006	312041011	312050015
312061001	312063019	312063020	312063021	312063022
312063023	312063024	312063025	422020003	422020004
422020005	422020006	422020007	422020009	422020010
422030002	422030003	422030007	422030008	422030012
422030013	422040008	422040009	422040010	422040012
422040013	422040014	422040015	422050006	422070005
422070006	422070010	422070014	422070017	422070018
422070019	422070020	422070021	422070022	422070023
422070024	422070029	422070030	422070031	422070032
422070033	422070034	422070035	422070036	422070037
422080001	422080002	422080003	422080004	422090001
422100001	422100002	422100003	422100006	422100007
422100010	422100012	422100013	422100014	422100015
422100016	422100021	422100022	422110001	422110002
422110003	422110004	422110005	422110006	422110007
422110008	422110009	422120001	422120002	422120003
422120004	422120007	422120008	422120011	422120012
422120015	422120016	422120017	422130001	422130002
422130003	422140001	422140002	422140003	422140004
422140006	422140007	422140008	422140009	422140010
422150004	422150006	422150007	422150008	422150010
422160008	422160009	422160010	422180002	422190003
423070005	423070008	423070009	423250001	423250002

Study Area Assessor's Parcel Numbers				
423250007	423250008	423250009	423250010	423250011
423250012	423250013	423250018	423260001	423260002
423260003	423260004	423260005	423260006	423260007
423260008	423260009	423270003	423270004	423270006
423270007	423270008	423270009	423270017	423270018
423270019	423280001	423280002	423280003	423280004
423280005	423280006	423280007	423280008	423280009
423290007	423300002	423300004	423300005	423300009
423300010	423310001	423310002	423310003	423310004
423310005	423310006	423310007	423310008	423320001
473220016	473220017	473220024	473220025	478020040
478070004	478070005	478070006	478070007	478070008
478070010	478070011	478070012	478070016	478070017
478070025	478080007	478080008	478100002	478100003
478100009	478100012	478100017	478100018	478110001
478110004	478110005	478110006	478120001	478120002
478120003	478120004	478120007	478120008	478120017
478120018	478120020	478120021	478120024	478131039
478131041	478131056	478132020	478132021	478132030
478141002	478141045	478142025	478142028	478142029
478151001	478151002	478151003	478151004	478151012
478151014	478151016	478151018	478151024	478151036
478151037	478151038	478151040	478152012	478152052
478165075	478165077	478166001	478166002	478166003
478166004	478166006	478166007	478166008	478166009
478166010	478166013	478166014	478166015	478166016
478166017	478166018	478166019	478166031	478166032
478166033	478166036	478166037	478173029	478173034
478173042	478173043	478174016	478174017	478174018
478181059	478181060	478182022	478182023	478182042
478182047	478182048	478182054	478182058	478182061
478182062	478191029	478191030	478191031	478191032
478191033	478191034	478191035	478191036	478191037
478192055	478192056	478201039	478201047	478201063
478202052	478202090	478210032	478210033	478210044
478210045	478210046	478210054	478210055	478210056
478220001	478220002	478220003	478220004	478220005
478220006	478220007	478220009	478220010	478220011
478220012	478220013	478220014	478220015	478220016

Study Area Assessor's Parcel Numbers				
478220017	478220018	478220019	478220020	478220021
478220022	478220023	478220024	478220025	478220026
478220027	478220028	478220029	478220030	478220031
478230001	478230002	478230003	478230004	478230005
478230006	478230007	478230008	478230009	478230010
478230011	478230014	478230015	478230016	478230017
478230019	478230020	478240002	478240003	478240005
478240006	478240007	478240008	478240011	478240012
478240013	478240014	478240015	478240016	478240017
478240019	478240021	478240022	478240023	478240024
478240025	478240026	478240027	478240028	478240029
478240030	478240031	478240032	478240033	478240034
478370005	478370006	478370007	478370008	478370014
486160037	486160038	486340029	486480001	486480026
486480027	486480042	486480043	486480044	486480047
486481001	486481002	486481003	486481004	486481005
486481006	488080006	488080007	488230001	488230012
488231001	488231002	488231003	488231004	488231005
488231006	488231007	488231008	488250001	488250002
488250003	488250004	488250005	488250006	488250007
488260001	488260002	488260003	488260006	488260009
488260012	488260014	488260018	488260019	488260020
488260021	488260022	488260023	488260024	488260025
488260026	488260027	488260028	488260031	488260032
488260033	488260034	488260035	488260036	488260037
488260038	488310004	488310009	488310010	488310011
488320001	488320006	488320007	488320008	488320009
488330001	488330004	488330013	488330019	488330022
488330023	488330024	488330025	488330026	488330027
488330028	488330029	488330030	488330031	488340001
488340002	488340003	488340004	488350001	488350002
488350003	488350004	488350005	488350006	488350007
488350008	488350009	488350010	488350011	488350012
488350013	488350014	488360001	488360002	488360004
488360005	488360006	488360007	488360008	488360009
488360010	488360011	488360012		



Source: Census 2000 Data, The CaSIL, MBA GIS 2009.

Michael Brandman Associates

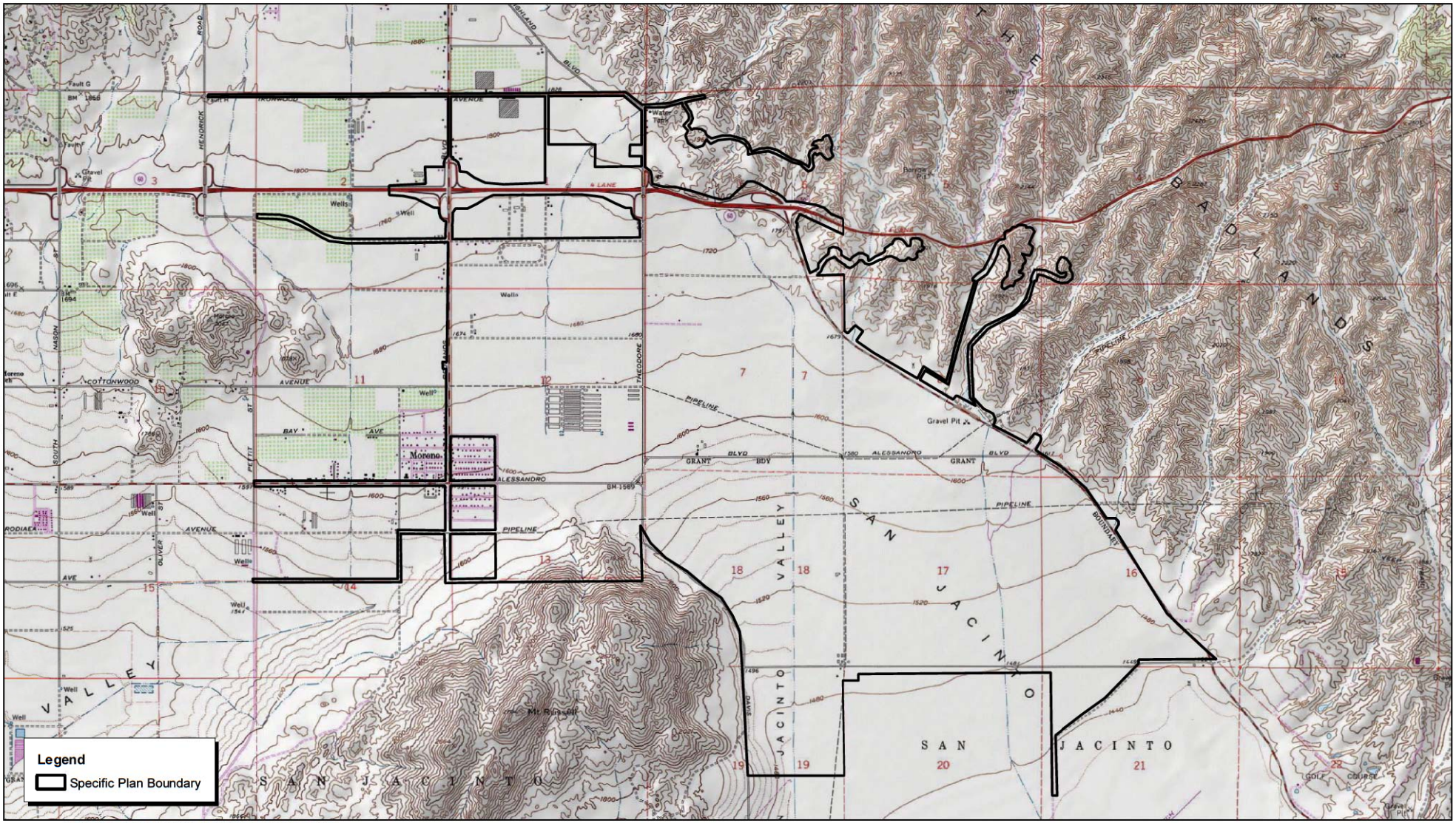
NORTH

5 2.5 0 5 Miles

Exhibit 1
Regional Location Map

26100022 • 08/2010 | 1_regional.mxd

HIGHLAND FAIRVIEW OPERATING COMPANY • HIGHLANDS SPECIFIC PLAN
SENSITIVE PLANT FOCUSED SURVEY



Source: TOPO! USGS Sunnymead (1978) and El Casco (1976) 7.5' DRG.

NORTH

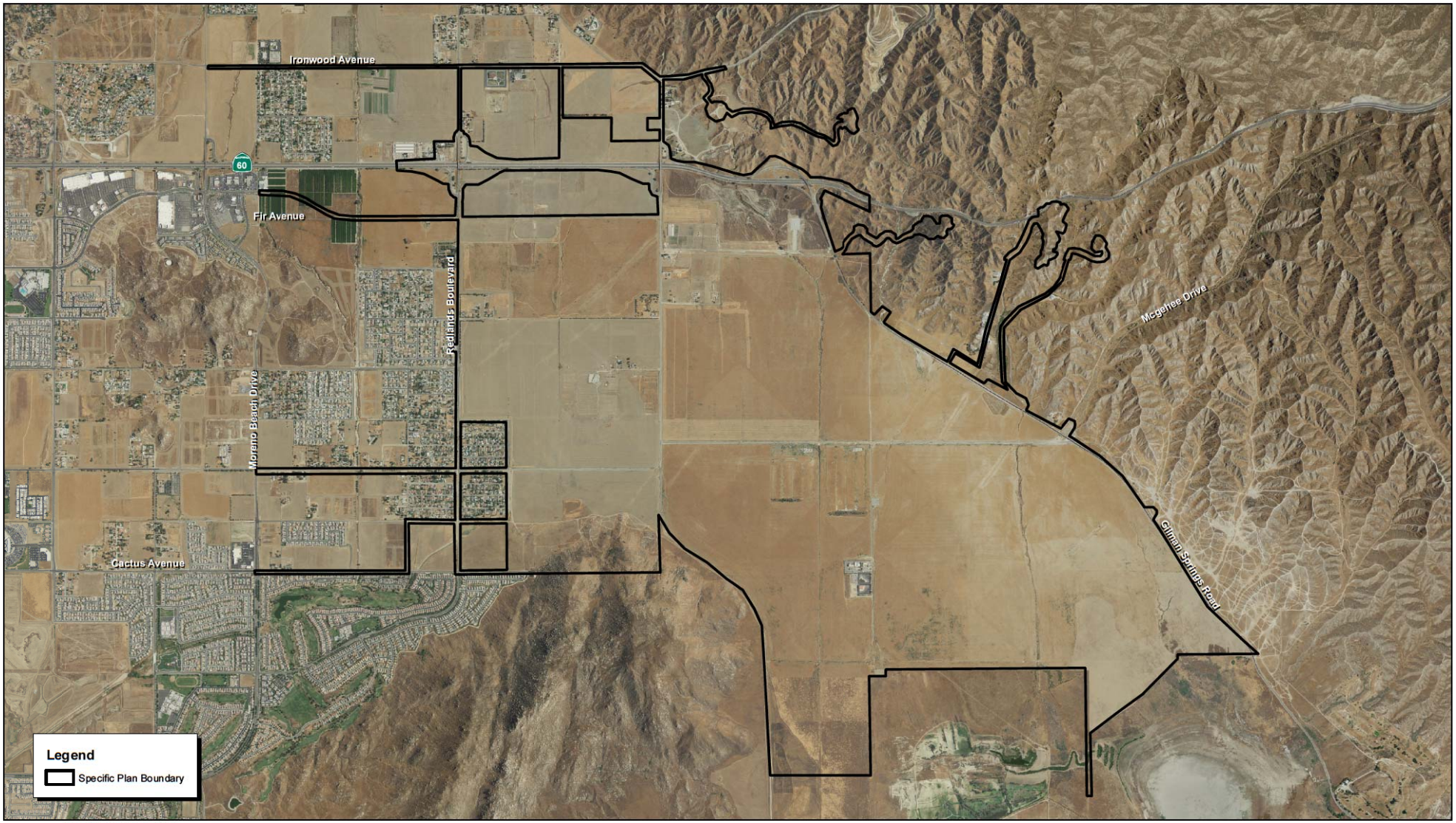
2,500 1,250 0 2,500 Feet

Michael Brandman Associates

26100022 • 08/2010 | 2_local_topo.mxd

Exhibit 2
Local Vicinity Map
Topographic Base

HIGHLAND FAIRVIEW OPERATING COMPANY • HIGHLANDS SPECIFIC PLAN
SENSITIVE PLANT FOCUSED SURVEY



Source: Riverside County NAIP, 2009.

NORTH

2,400 1,200 0 2,400 Feet

Michael Brandman Associates

26100022 • 08/2010 | 3_local_aerial.mxd

Exhibit 3
Local Vicinity Map
Aerial Base

HIGHLAND FAIRVIEW OPERATING COMPANY • HIGHLANDS SPECIFIC PLAN
SENSITIVE PLANT FOCUSED SURVEY

SECTION 3: METHODS

A review of MSHCP report generator, California Department of Fish and Games California Natural Diversity Database (CNDDB) and the Inventory of Rare and Endangered Vascular Plants of California by MBA biologists resulted in a list of special status plant species that are known to occur within the vicinity of the project site. Each species was evaluated to determine if the plant has a moderate to high potential to occur onsite based on the presence of suitable habitat and distance from a known recorded occurrence of the species.

The list of potentially occurring plant species and their flowering periods were assessed to determine the order in which suitable habitat areas within the project site should be surveyed. Many of the sensitive plants have different survey windows depending on their flowering period. MBA designed a survey strategy to survey sensitive plants from earliest flowering period to those that flower later in the growing season.

3.1 - Survey Protocol

The majority of the project site is located within active agricultural fields, which provides limited suitable habitat for any natural occurring plant species. The plant surveys generally followed the United States Department of Agriculture (USDA) Forest Service's Threatened, Endangered, and Sensitive Plant Survey Field Guide, March 2005. Data collected during the site visits were recorded in field notebooks. Survey location areas were hand drawn on aerial photographs and transferred to ArcView as survey area polygons (Exhibit 2).

All accessible areas containing suitable habitat for sensitive plants were covered during the focused surveys. In addition, sensitive plant species were also surveyed during all other visits to the proposed project sites, such as focused surveys for burrowing owl (*Athene cunicularia*) and Los Angeles pocket mouse (*Perognathus longimembris brevinasus*).

Parallel transects were walked throughout all suitable habitats as well as marginal habitat areas, even though the potential for the plants to occur was considered extremely low. Special attention was given to areas of high potential that contained all necessary microhabitat requirements such as soil type, plant community, and elevation limits. Areas with impenetrable 100 percent cover of chaparral, private property areas, and extremely steep areas were not surveyed due to inaccessibility. All plant species observed within the project sites were recorded in field notebooks and are included in Appendix A, Floral Compendium.

The 2010 surveys were conducted within the known flowering period of the special status species potentially occurring with the proposed project footprint. The focused plant survey targeted sensitive plants species and is not considered a comprehensive botanical survey to record all observed species within the survey areas. Common plant species observed were noted and any sensitive plants, if

observed, were mapped. Focused plant surveys were conducted on June 9, 10, 11, 16, 22, 23, and 24, 2010 by MBA Senior Biologist Scott A. Crawford. Surveys were made within suitable habitat areas most likely to support the three sensitive plant species determined to have a moderate potential to occur onsite. Table 2, Special Status Plant Species, below provides general information regarding the sensitive plant species assessed and the necessary information used to determine their potential to occur within the suitable habitat on site.

3.2 - Literature Review

The sensitive plant surveys began with a literature review to establish a list of plant species that could potentially occur within the project sites. Based on information reviewed in the MSHCP for the project site, a list of narrow endemic plants and cell criteria plants was established. This list was cross-referenced with CDFG's CNDDB and the California Native Plant Society Electronic Inventory of Rare and Endangered Vascular Plants of California (Skinner and Pavlik 1994) resulting in a list of 15 plant species to further evaluate to determine if surveys are warranted and include the following:

- Munz's onion (*Allium munzii*)
- San Diego ambrosia (*Ambrosia pumila*)
- Spreading navarretia (*Navarretia fossalis*)
- California Orcutt grass (*Orcuttii californica*)
- Wright's trichocoronis (*Trichocoronis wrightii*)
- San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*),
- Parish's brittlescale (*Atriplex parishii*)
- Davidson's saltscale (*Atriplex serenana* var. *davidsonii*)
- Thread-leaved brodiaea (*Brodiaea filifolia*)
- Round-leafed filaree (*California macrophylla*)
- Coulter's goldfields (*Lasthenia glabrata* spp. *coulteri*)
- Little mousetail (*Myosurus minimus* ssp. *apus*)
- Mud nama (*Nama stenocarpum*)
- Smooth tarplant (C*entromadia pungens* ssp. *laevis*)
- Many-stemmed dudleya (*Dudleya multicaulis*)

The list of sensitive plant species was evaluated and based on suitable habitat requirements and distance from known recorded occurrences, three special status plant species potentially occur within the project site. The remaining 12 species have a low potential to occur within the project site and are not likely to occur based on the distance from a known recorded occurrence and the lack of suitable habitat (Table 2).

Table 2: Special Status Plant Species

Species		Status			Blooming Period		Habitat Association (and elevation range)	Potential for Occurrence in Project site
Scientific Name	Common Name	USFWS	CDFG	Other				
Allium munzii	Munz's onion	FE	ST	1B.1	Perennial herb (bulbiferous)	Mar - May	Chaparral, coastal scrub, cismontane woodland, pinyon-juniper woodland, grassland (1,000-3,400 ft.)	**Low -** Closest recorded occurrence is 12 miles southwest of the project site. . Marginally suitable habitat present.
Ambrosia pumila	San Diego ambrosia	FE	None	1B.1	Perennial herb (rhizomatous)	Jun - Sep	Upper terraces of rivers, openings in coastal scrub and grassland, occ. adjacent to vernal pools. (<1,300 ft.)	**Low -** Known from one disjunct population NE of Lake Elsinore.. Marginal habitat potentially present.
Atriplex coronata var. *notatior*	San Jacinto Valley crownscale	FE	None	1B.1	Annual herb	Apr - Aug	Playas, chenopod scrub, grassland, vernal pools. (1,300-1,700 ft.)	**Low -** Known recorded occurrence is approximately 17 miles to the west, but only marginally suitable habitat occurs in the project site.

Species		Status			Blooming Period		Habitat Association (and elevation range)	Potential for Occurrence in Project site
Scientific Name	Common Name	USFWS	CDFG	Other				
Atriplex serenan var. davidsonii	Davidson's saltscale	None	None	1B.2	Annual herb	Apr – Oct	Coastal bluff scrub and coastal scrub in alkaline soils.	**Low -** Known recorded occurrence is approximately 13 miles to the south, but only marginally suitable habitat occurs in the project site.
Atriplex parishii	Parish's brittlescale	None	None	1B.1	Annual herb	June – Oct	Chenopod scrub, playas, vernal pools (100 - 6,000 ft.)	**Low -** Known recorded occurrence is approximately 4 miles to the south, but only marginally suitable habitat occurs in the project site.
Brodiaea filifolia	thread-leaf brodiaea	FT	SE	1B.1	Perennial herb (bulbiferous)	Mar - Jun	Coastal scrub, cismontane woodland, grasslands, vernal pools, clay soils. (<2,800 ft.)	**Moderate–** Previously recorded within 3 miles to the west of the project site. Marginally suitable habitat onsite.

Species		Status			Blooming Period		Habitat Association (and elevation range)	Potential for Occurrence in Project site
Scientific Name	Common Name	USFWS	CDFG	Other				
California macrophylla	round-leaved filaree	None	None	1B.1	Annual herb	Mar - May	Cismontane woodland and valley and foothill grassland.	**Low** – Closest recorded occurrence is approximately 13 mile south of the project site. Marginally suitable grassland habitat occurs onsite.
Centromadia pungens ssp. *laevis*	smooth tarplant	None	None	1B.1	Annual herb	Apr - Sep	Chenopod scrub, wet meadows, seeps, playas, riparian woodlands, alkaline soils. (<1,600 ft.)	**Moderate** – Known to occur within 2 miles south of the project site. Marginal suitable riparian habitat occurs onsite.
Dudleya multicaulis	many-stemmed dudleya	None	None	1B.2	Perennial herb	May - Jul	Chaparral, coastal scrub. (<2600 ft.)	**Low** – Known to occur within 20 miles southwest of the project site. Marginal suitable habitat occurs onsite.

Species		Status			Blooming Period		Habitat Association (and elevation range)	Potential for Occurrence in Project site
Scientific Name	Common Name	USFWS	CDFG	Other				
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	None	None	1B.1	Annual herb	Feb - Jun	Vernal pools, playas, marshes. (<5,000 ft.)	**Moderate -** Known from the immediate vicinity. Suitable habitat occurs just off-site, and the project site lies well within the species' range.
Myosurus minimus ssp. *apus*	little mousetail	None	None	3.1	Annual herb	Mar - Jun	Vernal pools. (<2,100 ft.)	**Low-** Observed approximately 12 miles south of the project site. No suitable habitat occurs within the project site.
Nama stenocarpum	Mud nama	—	—	2.2	Annual / perennial herb	Jan - Jul	Marshes, swamps, lake shores, river banks, intermittently wet areas. Elevation limits: 5 to 500m.	**Low.** Observed approximately 5 miles southeast of project site. No suitable habitat present.

Species		Status			Blooming Period		Habitat Association (and elevation range)	Potential for Occurrence in Project site
Scientific Name	Common Name	USFWS	CDFG	Other				
Navarretia fossalis	spreading navarretia	None	None	1B.1	Annual herb	Apr – Jul	Coastal scrub, meadows and seeps, valley and foothill grassland, and vernal pools.	**Low** – Closest recorded occurrence is less than 2 miles to the south. Marginally suitable habitat occurs onsite.
Orcuttia californica	California orcutt grass	FE	SE	1B.1	Annual herb	Apr - Jun	Vernal pools. (50 - 2200 ft.)	**Low-** Not known from the immediate vicinity. No suitable habitat occurs within the project site.
Trichocoronis wrightii var. wrightii	Wright's trichocoronis	—	—	2.1	Annual herb	May - Sep	Marshes and swamps, riparian forest, meadows and seeps, vernal pools. Found in mud flats of vernal lakes, drying riverbeds, and alkali meadows. Elevation limits: 5 to 435m.	**Low-** Observed approximately 12 miles south of the Project Site. No suitable habitat present.

U.S. Fish and Wildlife Service
FE Federal Endangered
FT Federal Threatened
FPE Proposed Endangered

California Department of Fish & Game
SE California Endangered
ST California Threatened

California Native Plant Society
1A Plant species presumed extinct in California.
1B Rare, threatened, or endangered in California and elsewhere.
2 Rare, threatened, or endangered in California, but more common elsewhere.

Species		Status			Blooming Period	Habitat Association (and elevation range)	Potential for Occurrence in Project site
Scientific Name	Common Name	USFWS	CDFG	Other			
					3 More information is required regarding status. 4 Species with limited distribution, a "watch" list.		

SECTION 4: SURVEYS

4.1 - Survey Findings

Focused surveys were conducted in areas containing suitable habitat on the project sites to ascertain presence/absence of the above-mentioned sensitive species. A detailed description of the survey area, target species, and habitat elements is discussed below.

4.1.1 - Survey Area

MBA conducted surveys on June 9, 10, 11, 16, 22, 23, and 24, 2010. Weather conditions during the surveys were recorded in field notebooks and summarized below in Table 3.

Table 3: Sensitive Plant Focused Surveys

Survey Number	Date	Time	Temperature (Fahrenheit)	Skies
1	June 9, 2010	0630 - 0730	66	Overcast
2	June 10, 2010	0600 – 0700	68	Overcast
3	June 11, 2010	0650 - 0750	60	Overcast
4	June 16, 2010	0630 - 0730	60	Overcast
5	June 22, 2010	0600 - 0700	60	Clear
6	June 23, 2010	0630 - 0730	64	Clear
7	June 24, 2010	0630 - 0730	63	Clear

The majority of the project site is used for dry-land farming and is actively disturbed on a regular basis for planting wheat. There are small undisturbed areas within a few large erosional features that provide some native scrub habitat as well as non-native grassland habitat scattered along the edges of the agricultural fields.

The study area is located in the northeast portion of Moreno Valley, south and west of The Badlands, and north of Mount Russell. Overall, the entire study area is relatively flat, and gently slopes from north to the south, with an elevation range of approximately 1,580 to 1,820 feet above mean sea level.

The study area contains several erosion features and a few roadside ditches. These areas provide the most suitable habitat for sensitive plant species within the project site. These areas are not regularly impacted by active agricultural activities. It is highly unlikely that sensitive plants will occur in areas within the active agricultural fields.

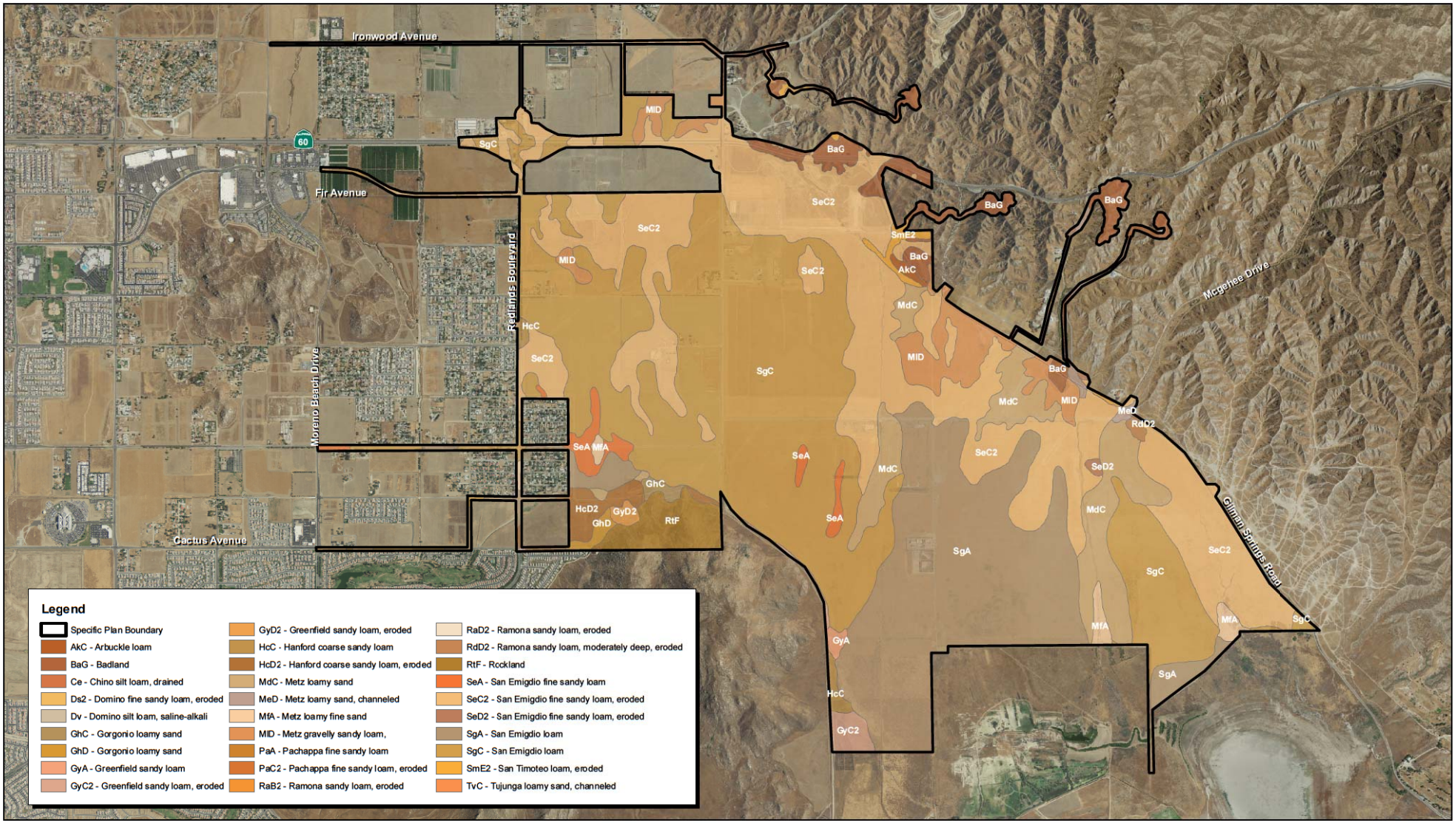
The suitable habitat areas contain five different soil series (Exhibit 4). A soil series is a group of soils with similar profiles. These profiles include major horizons with similar thickness, arrangement, and other important characteristics. Many sensitive plant species are known to occur in specific soil

types. The MSHCP lists three soils series as important soils for sensitive plant species including Willow-Domino-Travers soils. The study area contains Metz gravelly sandy loam, Metz loamy fine sand, Hanford coarse sandy loam, San Emigdio fine sandy loam, and San Emigdio loam (USDA 1971). No other mapped soil series are present onsite, therefore the project site does not contain any soil series known to provide suitable habitat for sensitive plants.

The entire project site contains significant evidence of previous disturbance. Most of the project site was ready for harvesting or recently harvested during the focused survey effort for sensitive plants. Non-native plant species are prevalent throughout the entire project site. Much of the northwest portion of the project site has been harvested. In addition, numerous abandoned buildings, fences, and trees associated with the previous agricultural activities, have recently been removed from the project site.

The following target species share some suitable habitat elements with the habitat found within the project site.

- Coulter's goldfields
- Smooth tarplant
- Thread-leaved brodiaea



Source: Riverside County NAIP, 2009. USDA Soils Data.

NORTH

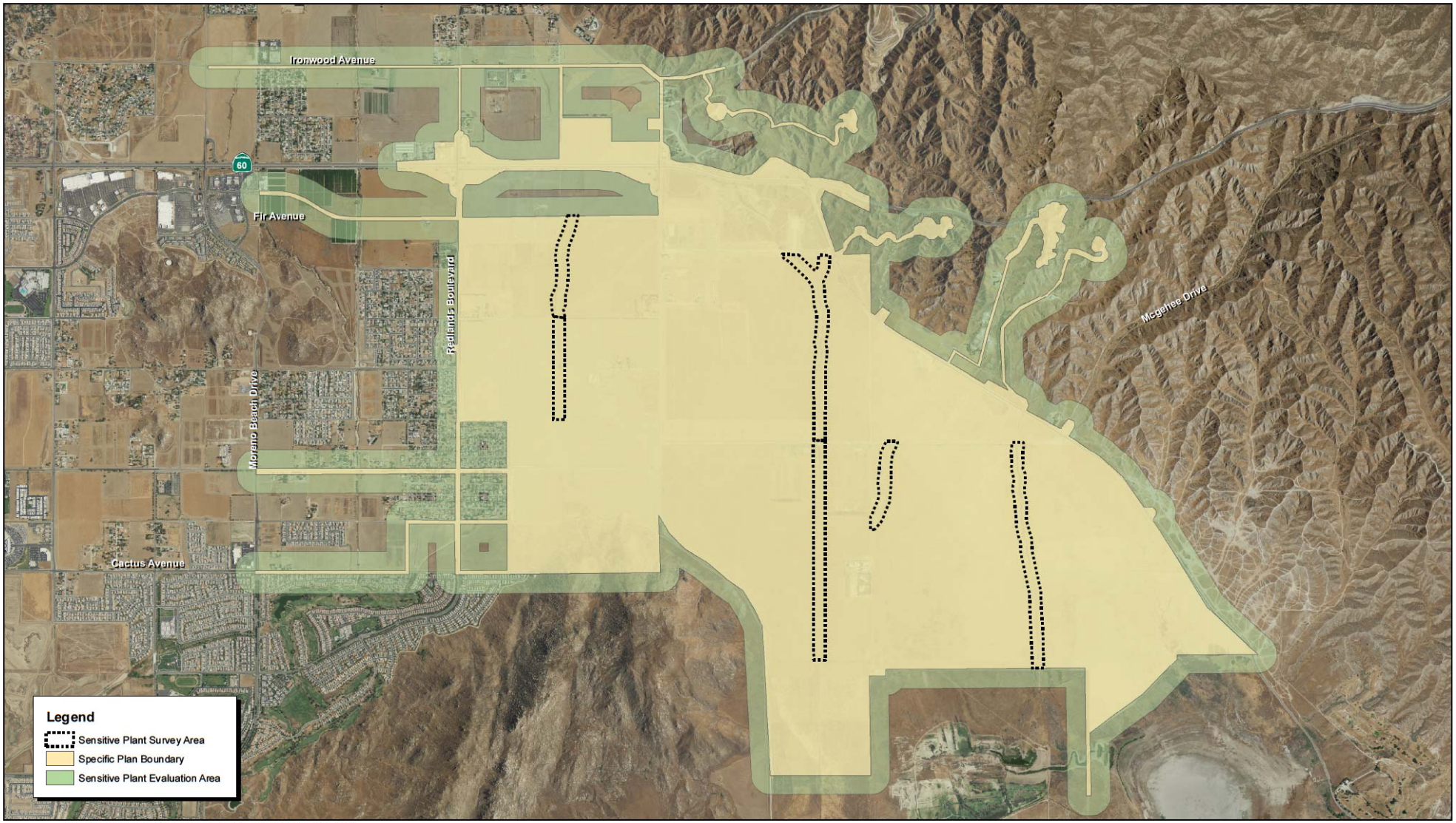
2,400 1,200 0 2,400 Feet

Michael Brandman Associates

26100022 • 08/2010 | 4_soils.mxd

Exhibit 4
Soils Map

HIGHLAND FAIRVIEW OPERATING COMPANY • HIGHLANDS SPECIFIC PLAN
SENSITIVE PLANT FOCUSED SURVEY



Source: Riverside County NAIP, 2009. MBA Field Survey and GIS Data, 2010.

Michael Brandman Associates

NORTH

2,400 1,200 0 2,400 Feet

26100022 • 08/2010 | 5_sens_plant_survey_area.mxd

Exhibit 5
Sensitive Plant Survey Area Map

HIGHLAND FAIRVIEW OPERATING COMPANY • HIGHLANDS SPECIFIC PLAN
SENSITIVE PLANT FOCUSED SURVEY

SECTION 5: EXISTING CONDITIONS

5.1 - General Conditions

The study area is located in the northeast portion of Moreno Valley, south and west of The Badlands, and north of Mount Russell. Overall, the entire study area is relatively flat, and gently slopes from north to the south, with an elevation range of approximately 1,580 to 1,820 feet above mean sea level.

The study area contains several erosion features and a few roadside ditches. These areas provide the most suitable habitat sensitive plants. These areas are not regularly impacted by active agricultural activities and therefore native plants species would not be impacted during planting or harvesting. It is highly unlikely that sensitive plant species would occupy areas within the active agricultural fields.

The entire project site contains significant evidence of previous disturbance. Most of the project site was ready for harvesting or recently harvested during the focused survey effort. Non-native plant species are prevalent throughout the entire project site. Much of the northwest portion of the project site has been harvested. In addition, numerous abandoned buildings, fences, and trees associated with the previous agricultural activities, have recently been removed from the project site.

5.2 - Plant Communities

Two plant communities, identified as extensive agriculture and urban/developed, occur within the project site. The extensive agriculture community is heavily disturbed due to disking and grazing and currently contains winter wheat. Additional vegetation present is dominated by ruderal (weedy) species, such as short-podded mustard (*Hirschfeldia incana*), cheeseweed (*Malva parviflora*), bindweed (*Convolvulus arvensis*), and non-native grasses such as slender oats (*Avena barbata*) and rip-gut brome (*Bromus diandrus*). The urban/developed community is comprised of structures, roadways, and associated ornamental vegetation, such as European olive (*Olea europaea*), and gum tree (*Eucalyptus* sp.). The vegetation in the urban/developed community occurs along SR-60 on the northern portion of the project site.

SECTION 6: CONCLUSIONS AND RECOMMENDATIONS

Three sensitive plant species were documented during focused sensitive plant surveys for special status plant species that potentially occur within the project site. MBA biologists determined that no special status plant species were considered present within some portion of the project site. Although several of the habitat elements needed for the three sensitive plants with a moderate potential to occur onsite, such as Riversidean sage scrub, non-native grasslands, and riparian habitat, these species were not observed during the surveys. The project site is considered absent of all sensitive plant species

6.1 - Conclusions

The plant species observed within the project site during the focused survey are common and known to occur throughout the region.

6.2 - Recommendations

Since there are no observed or recorded occurrences of sensitive plant species within the project site, no additional surveys or mitigation measures will be required prior to project construction. In the event that the Highlands Specific Plan is not implemented with the next two to three years, additional surveys may be required if the habitat with the project site changes. For example, if the agricultural fields are left fallow for a number of years, this may provide the necessary habitat components to establish a population of sensitive plant species.

SECTION 7: 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: December 13, 2010 Signed: _____

Scott A. Crawford
Michael Brandman Associates
Irvine, California

SECTION 8: REFERENCES

California Department of Fish and Game (CDFG). 2010. California Department of Fish and Game, Natural Diversity Data Base. The Resources Agency of California. Sacramento, California. (July.

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.

McAuley, M. 1996. Wildflowers of the Santa Monica Mountains. Canyon Publishing Company, Canoga Park, California.

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

Native Plant Society 2000. Flowering Plants of The Santa Monica Mountains, Coastal & Chaparral Regions of Southern California. California Native Plant Society. Sacramento, California.

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.

Appendix A:
Floral Compendium

Floral Compendium

Amaranthaceae		**Amaranth Family**
Amaranthus	*arenicola*	pigweed
Asteraceae		**Sunflower Family**
Anthemis	*cotula*	mayweed
Baccharis	*salicifolia*	mule fat
Centaurea	*solstitialis*	yellow star-thistle
Conyza	*canadensis*	horseweed
Helianthus	*annuus*	common sunflower
Sonchus	*oleraceus*	common sow thistle
Boraginaceae		**Borage Family**
Amsinckia	*menziesii*	Menzies' fiddleneck
Brassicaceae		**Mustard Family**
Brassica	*nigra*	black mustard
Brassica	*tournefortii*	Asian mustard
Hirschfeldia	*incana*	short-podded mustard
Raphanus	*raphanistrum*	wild radish
Chenopodiaceae		**Goosefoot Family**
Salsola	*tragus*	Russian thistle
Convolvulaceae		**Morning-Glory Family**
Convolvulus	*arvensis*	field bindweed
Lamiaceae		**Mint Family**
Marrubium	*vulgare*	horehound
Oleaceae		**Olive Family**
Olea	*europaea*	olive
Solanaceae		**Nightshade Family**
Nicotiana	*glauca*	tree tobacco
Poaceae		**Grass Family**
Avena	*barbata*	slender oat
Cynodon	*dactylon*	Bermuda grass
Hordeum	*murinum ssp. leporinum*	leporinum barley
Phalaris	*canariensis*	annual canary grass

Appendix B:
Regulatory Framework

The Federal Endangered Species Act (ESA) of 1973 defines an endangered species as "any species, which is in danger of extinction throughout all or a significant portion of its range…" Threatened species are defined as "any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under provisions of Section 9(a)(1)(B) of the ESA, it is unlawful to "take" any listed species. "Take" is defined as follows in Section 3(18) of the Act: "…harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

Further, the United States Fish and Wildlife Service (USFWS), through regulation, has interpreted the terms "harm" and "harass" to include certain types of habitat modification as forms of "take." These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a federal agency for an action, which could affect a federally listed plant and animal species, the property owner and agency are required to consult with USFWS. Section 9(a)(2)(b) of the ESA addresses the protections afforded to listed plants. Due to the jurisdictional areas within the Project Sites, the property owner will require a federal permit with regard to the jurisdictional waters within the sites.

The California Department of Fish and Game (CDFG) administers the California Endangered Species Act (CESA). The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management. A rare species is one present in such small numbers throughout its range that it may become endangered if its present environment worsens. Rare species applies to California native plants. State threatened and endangered species, as defined above, are fully protected against take. Species of Special Concern is an informal designation used by CDFG for some declining wildlife species that are not state candidates. This designation does not provide legal protection, but signifies that these species are recognized as sensitive by CDFG.

The California Native Plant Society (CNPS) has developed an inventory of California's sensitive plant species (Skinner and Pavlik 1994). This inventory summarizes information on the distribution, rarity, and endangerment of California's vascular plants. The inventory is divided into four lists based on the rarity of the species. In addition, the CNPS provides an inventory of plant communities that are considered sensitive by the state and federal resource agencies, academic institutions, and various conservation groups. Determination of the level of sensitivity is based on the number and size of remaining occurrences as well as recognized threats.

The CNPS created five lists of plant species reflecting their rarity and vulnerability. List 1A is for plants presumed extinct in California. List 1B includes species that are rare, threatened, or endangered in California or elsewhere. Although plant species in this latter category do not possess any legal protection, it is recommended that they are included in the analysis of project impacts and mitigation measures. Plants designated as 1B meet the definitions of §1901, Chapter 10 (Native Plant

Protection Act) or §2062 and 2067 (CESA) of the CDFG, and must also be fully considered during preparation of environmental documents relating to CEQA. List 2 plants are rare, threatened, or endangered in the State of California but are more common elsewhere. Plants designated as List 2 meets the definitions of §1901, Chapter 10 (Native Plant Protection Act). List 3 plants are species that need more information and are placed on a review list. All of these species lack the necessary information that would allow the federal or state listing or rejection of the species as a rare, threatened, or endangered species. List 4 plants are species that have a limited distribution and are placed on a watch list. These plants typically have low vulnerability or susceptibility to threat and should be monitored regularly.

Appendix C:
Riverside County Integrated Project's Report

RIVERSIDE COUNTY TLMA TRANSPORTATION & LAND MANAGEMENT AGENCY

Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)

APN	Cell	Cell Group	Acres	Area Plan	Sub Unit
423270003	Not A Part	Independent	0.37	Reche Canyon / Badlands	Not a Part
423270003	1364	D'	1.22	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270003	1370	D'	39.92	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270004	Not A Part	Independent	0.49	Reche Canyon / Badlands	Not a Part
423270004	1370	D'	37.39	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270006	1370	D'	35.45	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270006	1483	D'	1.95	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270007	Not A Part	Independent	0.24	Reche Canyon / Badlands	Not a Part
423270007	1370	D'	10.95	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270007	1377	D'	0.15	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270008	1370	D'	4.82	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270008	1377	D'	0.48	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270017	Not A Part	Independent	0.06	Reche Canyon / Badlands	Not a Part
423270017	1364	D'	20.45	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270018	Not A Part	Independent	0.04	Reche Canyon / Badlands	Not a Part
423270018	1364	D'	2.06	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270018	1370	D'	37.45	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270018	1483	D'	1.92	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280001	Not A Part	Independent	1.26	Reche Canyon / Badlands	Not a Part
423280001	1377	D'	44.72	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280002	Not A Part	Independent	1.84	Reche Canyon / Badlands	Not a Part
423280002	1377	D'	46.19	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280003	Not A Part	Independent	2.38	Reche Canyon / Badlands	Not a Part
423280003	1377	D'	0.42	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake

423280003	1386	D'	45.37	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280004	Not A Part	Independent	3.03	Reche Canyon / Badlands	Not a Part
423280004	1297	X	0.81	Reche Canyon / Badlands	SU3 - Badlands North
423280004	1386	D'	46.94	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280004	1389	D'	11.41	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280005	1482	D'	1.28	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280006	1377	D'	33.79	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280006	1482	D'	2.09	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280007	1377	D'	35.16	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280007	1482	D'	2.48	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280008	Not A Part	Independent	2.74	Reche Canyon / Badlands	Not a Part
423280008	1377	D'	0.39	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280008	1386	D'	34.65	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280008	1482	D'	0.03	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280009	Not A Part	Independent	3.16	Reche Canyon / Badlands	Not a Part
423280009	1386	D'	36.02	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280009	1389	D'	8.21	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280009	1477	D'	0.78	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423300002	1483	D'	39.59	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423300004	1483	D'	36.33	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423300004	1577	D'	6.52	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423300009	Not A Part	Independent	0.1	Reche Canyon / Badlands	Not a Part
423300009	1483	D'	40.95	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423300010	1483	D'	36.71	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423300010	1577	D'	6.29	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423310003	Not A Valid Parcel Number				
423310004	Not A Valid Parcel Number				
423310005	Not A Valid Parcel Number				
423310006	Not A Valid Parcel Number				
423310008	Not A Valid Parcel Number				

HABITAT ASSESSMENTS

Habitat assessment shall be required and should address at a minimum potential habitat for the following species:

APN	Amphibia Species	Burrowing Owl	Criteria Area Species	Mammalian Species	Narrow Endemic Plant Species	Special Linkage Area
423270003	NO	**YES**	NO	NO	NO	NO
423270004	NO	**YES**	NO	NO	NO	NO
423270006	NO	**YES**	NO	NO	NO	NO
423270007	NO	**YES**	NO	NO	NO	NO
423270008	NO	**YES**	NO	NO	NO	NO
423270017	NO	**YES**	NO	**YES**	NO	NO
423270018	NO	**YES**	NO	**YES**	NO	NO
423280001	NO	**YES**	NO	NO	NO	NO
423280002	NO	**YES**	NO	NO	NO	NO
423280003	NO	**YES**	NO	NO	NO	NO
423280004	NO	**YES**	NO	NO	NO	NO
423280005	NO	**YES**	**YES**	NO	**YES**	NO
423280006	NO	**YES**	**YES**	NO	**YES**	NO
423280007	NO	**YES**	**YES**	NO	**YES**	NO
423280008	NO	**YES**	**YES**	NO	**YES**	NO
423280009	NO	**YES**	**YES**	NO	**YES**	NO
423300002	NO	**YES**	**YES**	**YES**	**YES**	NO
423300004	NO	**YES**	**YES**	**YES**	**YES**	NO
423300009	NO	**YES**	NO	**YES**	NO	NO
423300010	NO	**YES**	NO	**YES**	NO	NO

Burrowing Owl

Burrowing owl.

Criteria Area Species

3) San Jacinto Valley Crownscale, Parish's brittlescale, Davidson's saltscale, Thread-leaved brodiaea, Smooth Tarplant, Round-leaved filaree, Coulter's Goldfields, Little Mousetail, Mud Nama

Mammalian Species

2) L.A. pocket mouse.

Narrow Endemic Plant Species

3) Munz's onion, San Diego ambrosia, Many-stemmed dudleya, Spreading navarretia, California Orcutt grass, Wright's trichocoronis

If potential habitat for these species is determined to be located on the property, focused surveys may be required during the appropriate season.

Background

The final MSHCP was approved by the County Board of Supervisors on June 17, 2003. The federal and state permits were issued on June 22, 2004 and implementation of the MSHCP began on June 23, 2004.

For more information concerning the MSHCP, contact your local city or the County of Riverside for the unincorporated areas. Additionally, the Western Riverside County Regional Conservation Authority (RCA), which oversees all the cities and County implementation of the MSHCP, can be reached at:

Western Riverside County Regional Conservation Authority
3403 10th Street, Suite 320
Riverside, CA 92501

Phone: 951-955-9700
Fax: 951-955-8873

www.wrc-rca.org

Go Back To Previous Page

GIS Home Page

Appendix F: Determination of Biological Equivalent or Superior Preservation (DBESP) Analysis

Determination of Biological Equivalent or Superior Preservation (DBESP) Analysis
World Logistics Center Project
City of Moreno Valley, Riverside County, California

Sunnymead and El Casco USGS 7.5-minute Topographic Quadrangles
Sections 1, 10, 11, 12, 13, and 14 of Township 3 South and Range 2 West

Prepared for:

Highland Fairview Operating Company
14225 Corporate Way
Moreno Valley, CA 92553
951.867.5300

Contact: Mr. Wayne Peterson, Vice President, Community Planning

Prepared by:

FirstCarbon Solutions | Michael Brandman Associates
621 E. Carnegie Drive, Suite 100
San Bernardino, CA 92408
909.884.2255

Contact: Scott A. Crawford M.A.,
Section Manager of Natural Resources

June 10, 2014
Revised: October 1, 2014

Table of Contents

Section 1: Summary 1

Section 2: Introduction 3
2.1 - Project Location 3
2.2 - Project Description 3

Section 3: Methodology 11
3.1 - Literature Review 11
3.2 - Field Investigation 11

Section 4: Determination of Biological Equivalent or Superior Preservation (DBESP) Analysis 13
4.1 - Purpose and Need for the DBESP Analysis 13
4.2 - Description of the Pre-Project Riparian/Riverine Functions and Values 13
4.2.1 - Drainage Feature 1 15
4.2.2 - Drainage Feature 2 15
4.2.3 - Drainage Feature 3 15
4.2.4 - Drainage Feature 4 15
4.2.5 - Drainage Feature 5 15
4.2.6 - Drainage Feature 6 16
4.2.7 - Drainage Feature 7 16
4.2.8 - Drainage Feature 8 17
4.2.9 - Drainage Feature 9 17
4.2.10 - Drainage Feature 10 18
4.2.11 - Drainage Feature 11 19
4.2.12 - Drainage Feature 12 19
4.2.13 - Drainage Feature 13 20
4.2.14 - Drainage Feature 14 20
4.2.15 - Drainage Feature 15 20
4.3 - Potential Project Related Impacts 22
4.3.1 - Drainage 1 22
4.3.2 - Drainage 2 22
4.3.3 - Drainage 4 23
4.3.4 - Drainage 5 23
4.3.5 - Drainage 6 23
4.3.6 - Drainage 7 23
4.3.7 - Drainage 8 23
4.3.8 - Drainage 9 23
4.3.9 - Drainage 12 24
4.3.10 - Drainage 15 24
4.4 - Project Design Features and Mitigation Measures 24
4.4.1 - Mitigation Measures 27
4.4.2 - Measures to Reduce/Minimize Indirect Impacts 32
4.4.3 - Fuels Management Guidelines 38
4.5 - Demonstration of Increase in Post-Project Riparian/Riverine Functions and Values 38
4.5.1 - Performance Criteria for Mitigation Sites 39
4.5.2 - Minimum Success Standards 39
4.6 - Determination of Biologically Superior Preservation 40

Section 5: Certification **41**

Section 6: References **43**

List of Tables

Table 1: Riparian/Riverine Areas within the WLCSP 21

Table 2: Invasive Plant Species 34

Table 3: Target Total Native Coverage Guidelines 39

List of Exhibits

Exhibit 1: Regional Location Map 5

Exhibit 2: Local Vicinity Map, Topographic Base 7

Exhibit 3: Local Vicinity Map, Aerial Base 9

Exhibit 4: Riparian/Riverine and Drainage Feature Map 25

Exhibit 5: DBESP Mitigation Areas 29

SECTION 1: SUMMARY

FirstCarbon Solutions | Michael Brandman Associates (FCS) conducted a Habitat Assessment and MSHCP Consistency Analysis (FCS 2013a) to comply with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) and City of Moreno Valley CEQA requirements for an Environmental Impact Report (EIR) for the World Logistics Center project . This report includes an assessment of the riparian/riverine areas associated with the World Logistics Center project.

Within the World Logistics Center Specific Plan (WLCSP), Highland Fairview Operating Company is proposing to develop 40.6 million square feet of warehouse facilities and associated infrastructure. As part of the project design, a buffer area will remain along the southern boundary adjacent to the California Department of Fish and Wildlife (CDFW) Conservation Buffer.

A total survey area of 6,063 acres was examined during the MSHCP consistency analysis, which includes the WLCSP, offsite facilities, CDFW Conservation Buffer, and additional survey areas. The examination was made through direct pedestrian surveys, literature reviews, and/or aerial photography reviews.

Fifteen drainage features were documented within the project site based on the Delineation of Jurisdictional Waters and Wetlands for the World Logistics Center Specific Plan (FCS 2013b).

Ten of these features are potentially riparian/riverine areas (1, 2, 3, 4, 5, 6, 7, 8, 9, 12, and 15), as described in the Delineation of Jurisdictional Waters and Wetlands for the World Logistics Center Specific Plan. Based on current design plans, a program-level Determination of Biologically Equivalent or Superior Preservation (DBESP) will be required if these drainage features are likely to be impacted by future project development. If impacts to any of these areas are anticipated on a project level, a project-level DBESP may be required to assess the extent of impact and the measures taken to reduce the impact or determine mitigation measures for implementation: onsite habitat creation, offsite habitat creation, or through the purchase of mitigation credits at an approved mitigation bank.

SECTION 2: INTRODUCTION

2.1 - Project Location

The survey area is generally located north of State Route 74 (SR-74), south of SR-60, east of Interstate (I) 215, and west of SR-79 (Exhibit 1). Specifically, the survey area is located within Sections 1, 2, 10, 11, 12, 13, and 14 of Township 3 South, Range 2 West; and Sections 5, 6, 7, 8, 9, 16, 17, 18, 19, 20, and 21 of Township 3 South, Range 3 West as depicted on the Sunnymead and El Casco, California, United States Geological Survey (USGS) 7.5-minute topographic maps (Exhibit 2). The survey area is specifically located south of SR-60, east of Redlands Boulevard, and west of Gilman Springs Road (Exhibit 3). The survey area encompasses several contiguous parcels totaling approximately 6,063 acres, including potential offsite improvements on the eastern, northern, and western margins of the WLCSP to assess indirect impacts to "wildlands areas." Highland Fairview Operating Company is proposing to develop the WLCSP within 2,610 acres of the northern portions of the survey area.

Land use within the survey area includes extensive agricultural lands, seven remaining private residences, natural gas compressor station, water district facility, and general open space. Off-site facilities are located in residential development and general open space areas.

Land use in the general vicinity of the site includes residential development to the west, active agricultural to the north and south, and open space areas to the east.

2.2 - Project Description

The overall project site covers 3,819 acres in the Rancho Belago area of the City of Moreno Valley. It includes 3,713 acres of land, which is the subject of various entitlements, plus 104 acres of land affected by off-site improvements needed to support the proposed development. The off-site improvements consist of eight utility lines (16 acres), four freeway ramps (15 acres), four basins (9 acres), one drainage (6 acres), and eight roadways (58 acres). The proposed entitlements are summarized below.

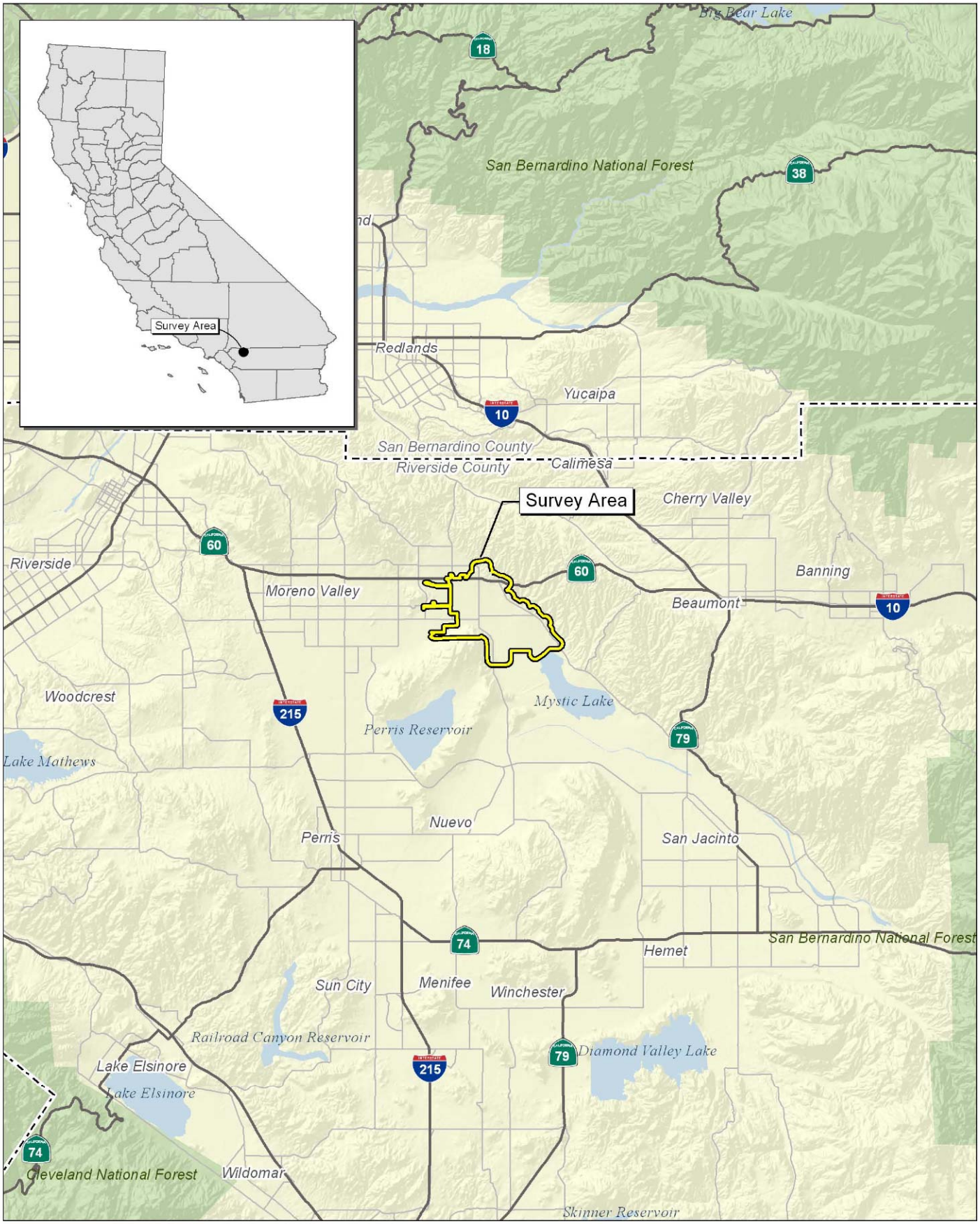
A 74.3-acre parcel will remain undeveloped and will be zoned for open-space. This parcel is located in the southwestern corner of the survey area, immediately north of the Lake Perris State Recreational Area. This parcel is located at the foothills of Mt. Russell and is located between the proposed development and the land associated with existing Core H under the MSHCP.

A General Plan Amendment is proposed covering 3,713 acres, which re-designates approximately 70 percent of the area (2,610 acres) for logistics warehousing (the World Logistics Center project), and the remaining 30 percent (1,103 acres) for permanent open space and public facilities. The following elements of the General Plan are included in the proposed Amendment: Community Development (land use), Circulation, Parks, Recreation, and Open Space, Safety, Conservation, and the General Plan Goals and Objectives. A new Specific Plan is proposed to govern development of the 2,610-acre World Logistics Center project.

The Specific Plan will be adopted through the zone change process. A separate zone change is also proposed to re-zone 1,103 acres for open space and public facilities uses. This acreage is currently zoned for a variety of development uses under the existing Moreno Highlands Specific Plan. This area is not part of the proposed WLC Specific Plan. In addition to the General Plan Amendment, Specific Plan, and Zone Change, the project includes a Tentative Parcel Map covering 1,539 acres (property owned by the project applicant, Highland Fairview) within the project site. This subdivision map is for financing purposes only and will not confer any development rights. The project also includes pre-annexation zoning for an 85-acre parcel of land within the proposed Specific Plan. This area is already within the City's adopted Sphere of Influence. This project proposes to complete the annexation process for this 85-acre parcel.

Finally, a Development Agreement between the City and Highland Fairview (the project applicant) is included as one of the project entitlements.

The details of these project entitlements are included in Section 3.4 of the EIR (Project Characteristics.

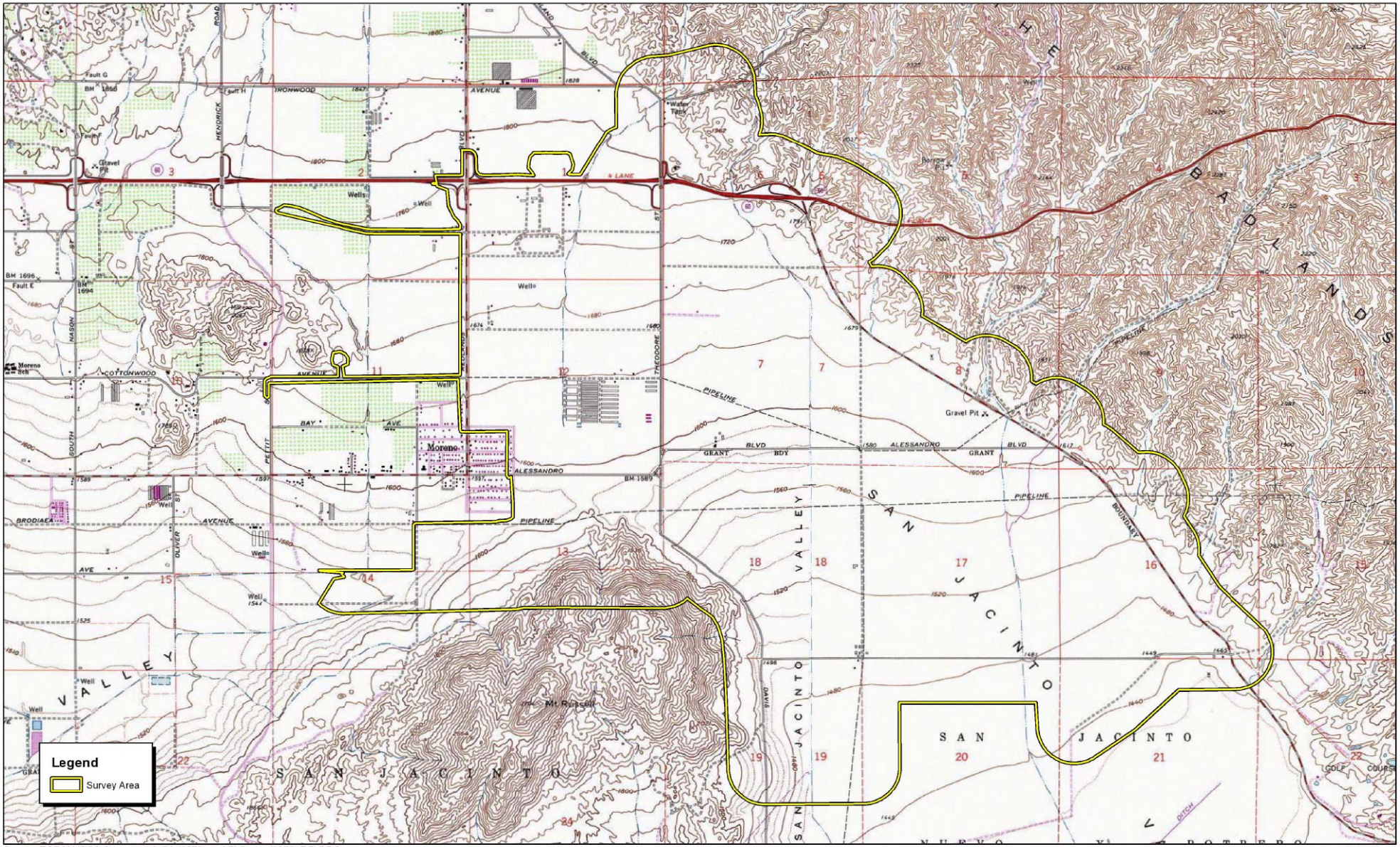


Source: Census 2000 Data, The CaSIL, FCS-MBA GIS 2014.

FirstCarbon® SOLUTIONS
MICHAEL BRANDMAN ASSOCIATES

5 2.5 0 5 Miles

Exhibit 1
Regional Location Map

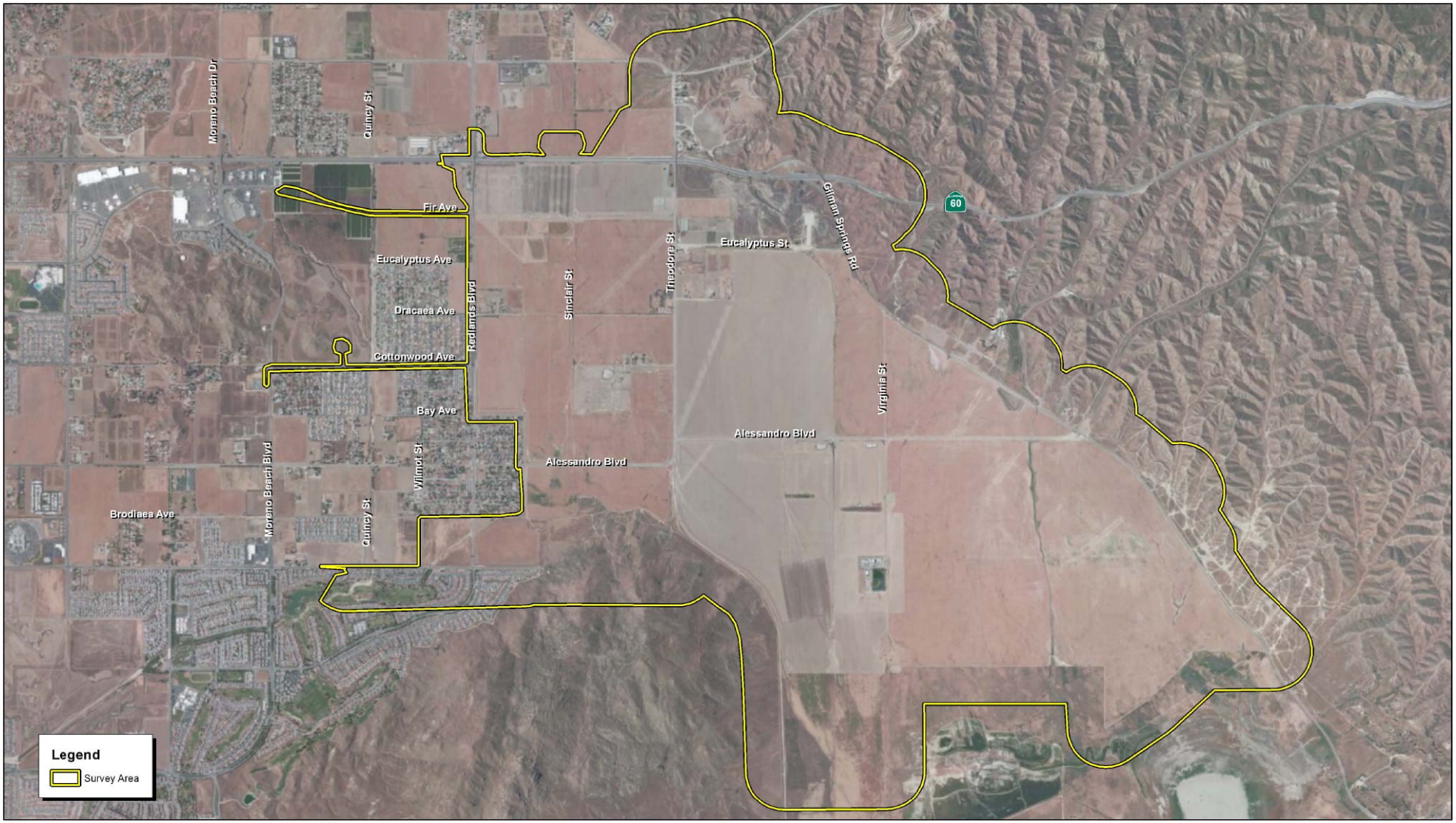


Source: TOPO! USGS Sunnymead, CA (1978) and El Casco (1976) 7.5' DRG.

FirstCarbon SOLUTIONS

Exhibit 2
Local Vicinity Map
Topographic Base

26100025 • 08/2014 | 2_local_topo.mxd



Source: ESRI Aerial Imagery. FCS-MBA Field Survey and GIS Data, 2014.

FirstCarbon SOLUTIONS

2,400 1,200 0 2,400 Feet

Exhibit 3
Local Vicinity Map
Aerial Base

SECTION 3: METHODOLOGY

3.1 - Literature Review

Prior to conducting the DBESP analysis for the riparian/riverine areas, a literature review was conducted of the environmental and regulatory setting for the biological survey area. The literature review provides a baseline from which to evaluate the riparian/riverine areas potentially occurring within the survey area, and within the local and regional vicinity.

The literature review began with a thorough examination of existing technical reports associated with the WLCSP and surrounding area. Recent and historical aerial imagery was reviewed, as well as the topographic electronic and hard copies of the Lakeview, Sunnymead, and El Casco, California USGS 7.5-minute topographic quadrangle maps. The Delineation of Jurisdictional Waters and Wetlands for the World Logistics Center Specific Plan was used to confirm the current locations of drainage features likely to be considered riparian/riverine under the MSHCP.

The MSHCP requires that an assessment be completed of the potentially significant effects of the project on riparian/riverine areas, and vernal pools. According to the MSHCP, the documentation for the assessment shall include mapping and a description of the functions and values of the mapped areas with respect to the species listed in Section 6.1.2, protection of species associated with riparian/riverine areas and vernal pools.

3.2 - Field Investigation

The habitat assessment component of the subject DBESP report was based on the findings of the field reconnaissance surveys most recently conducted on June 13, 20, 21, and 27, and July 3, 7, and 9, 2013. FCS's biologists conducted various surveys of the project site on foot, including habitat assessment surveys for sensitive plant and wildlife species, and thorough analyses of all potential drainage features onsite, particularly those that qualify as riparian/riverine habitat.

Environmental conditions and biological resources that were observed or otherwise detected during the surveys of the project site were recorded in field notebooks. Data used in determining jurisdictional limitations for FCS's delineation of jurisdictional waters and wetlands were collected using a Trimble GeoXt GPS unit with an accuracy of ±1 foot , as well as mapping on standard 7.5-minute USGS topographic quadrangles and aerial photographs. Other materials used to delineate the limits of the drainage features included a 30-meter tape measure, shovel, and Munsell color chart.

All 15 drainage features observed onsite were systematically inspected to record existing conditions and measure widths and length. Width measurements were taken from bank to bank at the ordinary high water mark (OHWM), at approximately 300-foot intervals. Any associated riparian vegetation coverage was recorded on aerial photographs and verified during the site visit. Width and length measurements were entered into Geographical Information System (GIS) Arcview software to identify drainage area locations and dimensions. The Arcview application was then used

to compute the surface area of each riparian/riverine feature in acres. Acreage computations were verified using the aerial photographic and field data to estimate the approximate drainage length. Surface area was calculated by multiplying total length of each feature by its average width as determined at the measurement intervals.

SECTION 4: DETERMINATION OF BIOLOGICAL EQUIVALENT OR SUPERIOR PRESERVATION (DBESP) ANALYSIS

4.1 - Purpose and Need for the DBESP Analysis

Section 6.1.2 of the Western Riverside County MSHCP requires an assessment of the potentially significant effects of a project on Riparian/Riverine Areas and Vernal Pools and associated riparian/ riverine species. This assessment is independent from considerations given to waters of the United States (U.S.) and waters of the State under the CWA and California Fish and Game Code (CFG Code).

Projects within the boundaries of the Western Riverside County MSHCP area that have the potential to impact existing riparian/riverine habitat require an analysis of the functions and values of the habitat on and adjacent to the project impact area. In addition, a biologically equivalent or superior alternative to existing riparian/riverine conditions must be incorporated into the project. Functions and values include those that contribute to the biological sustainability of an area determined to be riparian/riverine, such as vegetation and faunal composition of the habitat, and the degree to which a riparian/riverine area provides habitat suitable for plant and wildlife species. Functions and values that pertain to the hydrology of the riparian/riverine area and the watershed, to which it is directly connected, include its contribution to flows that may affect water quality, flow rates, energy dissipation, flooding, erosion, scouring, and sediment transport into adjacent areas.

The DBESP analysis includes the following:

- Identification and delineation of all riparian/riverine habitat within the project area
- Description of pre-project functions and values of riparian/riverine habitat onsite
- Description of project design features, impacts, and avoidance and/or mitigation measures to conserve and/or protect existing riparian/riverine habitat onsite
- Demonstration of an increase in post-project functions and values of riparian/riverine habitat onsite and offsite through the implementation of the project and associated avoidance and mitigation measures

4.2 - Description of the Pre-Project Riparian/Riverine Functions and Values

Riparian/riverine areas are defined as containing habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens which occur close to, or depend upon soil moisture from, a nearby fresh water source, or areas with fresh water flow, during all or a portion of the year. Vernal pools are seasonal wetlands that occur in shallow depression areas that have all three wetland indicators (hydrology, hydric soils, and hydrophytic vegetation), during the wet portion of the growing season, but may lack wetland indicators during the dry portion of the growing season.

Fifteen drainage features were assessed as part of the riparian/riverine study as required under the MSHCP (Exhibit 4). Drainage features 10 and 11 are within the CDFG Conservation area and are not a part of the WLCSP, and thus will not be impacted by the project. Ten of these drainage features

within the WLCSP meet the criteria as riparian/riverine under the MSHCP (Drainages 1, 2, 4, 5, 6, 7, 8, 9, 12, and 15). This determination was based on two primary drainage requirements. Two of the drainage features (Drainages 12 and 15) have direct hydrologic connections to downstream drainage features and are tributary to larger drainage features. These two drainage features lack vegetation, but have a clearly defined bed and bank feature and evidence of flows. Eight drainage features within the WLCSP (Drainages 1, 2, 4, 5, 6, 7, 8, and 9) have evidence of an intermittent defined bed and bank feature for a portion of the drainage and some portion of the drainage may have a stand of riparian vegetation, which is dominated by mule fat scrub or other riparian vegetation. There is no supporting hydrology data that verifies that these drainage features do not have a sub-surface connection the Mystic Lake and the conservation area surrounding it. Therefore, these drainage features may be considered riparian/riverine areas and any impacts these features requires the preparation of a DBESP. Three of the drainage features evaluated (Drainages 3, 13, and 14) do not meet the minimum requirements to be considered a riparian/riverine area. These features are not hydrologically connected to any downstream drainage features and are completely isolated. Therefore, they have an extremely low function and value and are not considered riparian/riverine areas under MSHCP guidelines. If it is determined at a project-level basis that additional drainage features should be considered riparian/riverine, then those drainage features will also be included in a project-level DBESP for future development.

None of the riparian/riverine plant species listed in the MSHCP's Section 6.1.2 were observed on the project site. That list includes:

Brand's phacelia
California Orcutt grass
California black walnut
Coulter's matilija poppy
Engelmann oak
Fish's milkwort
Graceful tarplant
Lemon lily
Mojave tarplant
Mud nama
Ocellated Humboldt lily
Orcutt's brodiaea
Parish's meadowfoam
Prostrate navarretia
San Diego button-celery
San Jacinto Valley crownscale
San Miguel savory
Santa Ana River woolly-star
Slender-horned spineflower
Smooth tarplant
Spreading navarretia
Thread-leaved brodiaea
Vernal barley

None of the riparian vegetation observed on site is listed as threatened or endangered or otherwise sensitive. No onsite portions of WLCSP provide suitable habitat for any of the wildlife species listed in the MSHCP's Section 6.1.2. That list includes:

Arroyo toad
Mountain yellow-legged frog
California red-legged frog
Bald eagle
Least Bell's vireo
Peregrine falcon
Southwestern willow flycatcher
Western yellow-billed cuckoo
Sana Ana sucker
Riverside fairy shrimp
Vernal pool fairy shrimp

None of these species were observed during any of FCS's surveys. No vernal pools or suitable habitat for vernal pool plant or wildlife species occur on the project site.

The following is a complete description of the drainage features within the study area. These drainage features are numbered based on the Delineation of Jurisdictional Waters and Wetlands for

the World Logistics Center Specific Plan (FCS 2013b). Table 1 provides information on all drainages determined to be riparian/riverine within the project site (Exhibit 4).

4.2.1 - Drainage Feature 1

This feature is a roadside ditch that conveys nuisance flows on the east side of Redlands Boulevard. Currently, the ditch is contained within a concreted-lined swale and has intermittent areas with an earthen bed and bank. This ditch has no vegetation and leaves the site in an underground storm drain facility. This roadside ditch typically conveys flows during any storm event because most of the drainage is currently paved.

4.2.2 - Drainage Feature 2

This feature is an upland swale that conveys nuisance flows within an actively disked agricultural field and only receives flows every 5 to 7 years. This swale contains periodic signs of erosion, but is mostly an unvegetated swale with minimal evidence of flows. This drainage begins to sheet flow just north of Bay Avenue and has no surface hydrologic connection to any downstream drainage feature.

4.2.3 - Drainage Feature 3

This feature is a temporary detention basin used to treat nuisance flow from the adjacent Skechers logistic facility. The flows within this feature are completely contained within the facility and there is no downstream connection to any other drainage features. This feature does not contribute function or value to any downstream drainage features and is not considered a riparian/riverine feature.

4.2.4 - Drainage Feature 4

The drainage feature previously originated from an underground storm drain beneath SR-60. The previous flows from this feature have been redirected into the detention basin associated with Drainage 3. Drainage 4 currently conveys flows from local runoff within the WLCSP footprint and only receives flows every 5 to 7 years. This feature has evidence of a historic channel near the intersection of Dracaea Avenue and Sinclair Street. However, this feature sheet flows just south of Cottonwood Avenue and has no surficial hydrologic connection to any downstream drainage features.

4.2.5 - Drainage Feature 5

This drainage is a roadside ditch located along the western side of Theodore Street. This drainage originates at the eastbound Theodore Street off-ramp from SR-60. This feature conveys nuisance flows from Theodore Street and immediate vicinity during large storm events and may only receive flows every 5 to 7 years. This feature contains an intermittent bed and bank feature, but terminates just south of Alessandro Boulevard. This feature has no surficial hydrologic connection to any downstream drainage.

4.2.6 - Drainage Feature 6

This feature is also a roadside ditch located along the eastern side of Theodore Street. This drainage originates from an underground storm drainage beneath SR-60. It conveys nuisance flow from Theodore Street and immediate vicinity and may only receive flows every 5 to 7 years. This feature contains an intermittent bed and bank feature, but terminates southeast of Alessandro Boulevard within an active agricultural field. This feature has no surficial hydrologic connection to any downstream drainage.

4.2.7 - Drainage Feature 7

Drainage 7 is an agricultural ditch/swale that runs from north to south and originates in the Badlands approximately 0.75 mile north of the survey area. It passes beneath highway SR-60 through a corrugated steel pipe and continues as a soft-bottom channel with a dense stand of mule fat scrub with scattered arroyo willows (*Salix lasiolepis*). This habitat continues downstream for approximately 1,300 feet before the channel reverts to an unvegetated soft-bottom channel. The drainage continues to the south and eventually reverts to a mule fat scrub habitat immediately south of Alessandro Road. This portion of the channel is approximately 30 feet wide and 1,500 feet in length. The drainage continues in an unvegetated soft bottom channel until it reaches the southerly survey area boundary, where it again reverts to a mule fat scrub community. This portion of the channel extends for approximately 600 feet and then reverts to an unvegetated channel. The drainage eventually sheet-flows within an existing agricultural field south of the survey area and north of Mystic Lake with no direct hydrologic connection to any TNW or RPW.

Vegetation observed within Drainage 7 is primarily non-native herbaceous annual forbs and grasses, including short pod mustard, Russian thistle, ripgut brome, and red brome. Other sub-dominant species observed include tree tobacco, mule fat (*Baccharis salicifolia*), tarragon (*Artemisia dracunculus*), and Jimson weed (*Datura wrightii*). Additionally, there is a predominance of bare ground in the herbaceous layer. There is an intermittent dominance of hydrophytic vegetation observed within three separate reaches of the feature associated with patches of mule fat. There are no clearly defined bed and bank features throughout the drainage feature.

Soils observed within Drainage 7 are dominated by both San Emigdio loam and San Emigdio fine sandy loam, and do not exhibit any hydric soil indicators. Small inclusions of Badlands and Metz loamy sand also occur within the drainage. These soils can be considered hydric if adequate hydrology is present. There is no evidence of hydrophytic vegetation within areas designated as Badland or Metz loamy sand. The soils within Drainage 7 are permeable and promote very high percolation rates, thereby reducing the potential for any anaerobic or hydric conditions. No wetland hydrology, hydric soils, or obligate hydrophytes exist within Drainage 7.

The majority of Drainage 7 is a low quality drainage feature with little or no vegetative cover. There are three isolated patches of moderate quality riparian habitat within portions of the drainage feature. It conveys storm flows with little or no significant pollution sources. There is minimal erosion and overall the value of this drainage is moderate. Drainage 7 also has a small tributary that collects run-off from Davis Road. There is a small portion of this tributary in the southern portion of the WLCSP and it begins just south of Alessandro Boulevard where Theodore Street terminates into

Davis Road. This tributary is relatively unvegetated with a few weedy species such as tree tobacco and short-podded mustard. The tributary flows into Drainage 7 in an off-site area south of the WLCSP, and since there is a hydrologic connection between the two drainage features, they are combined into one feature.

4.2.8 - Drainage Feature 8

Drainage 8 is an agricultural ditch/swale within the survey area. The majority of this feature is similar in form and function to Drainage 7. This feature originates in the Badlands approximately 1.6 miles north of the survey area, just south of the existing County landfill. This is an undisturbed ephemeral feature with an unvegetated channel. Drainage 8 passes beneath SR-60 within a corrugated steel culvert. The drainage flows southwest within an unvegetated channel until it reaches Gilman Springs Road. It flows parallel to the road until it reaches an underground culvert and goes beneath Gilman Springs Road where it enters the project area. The drainage then continues to the south as an agricultural ditch/swale for approximately 8,800 linear feet before the drainage feature terminates, allowing runoff to sheet-flow within the southern portion of the survey area. This drainage is physically interrupted by agricultural activities at several locations and does not flow continuously throughout its length. Drainage 8 appears to have been created as a result of artificial water channeling from historical agricultural activities.

Dominant vegetation associated with Drainage 8 is limited to sparse non-native herbaceous annual forbs and grasses including tree tobacco, annual sunflower, and red brome. Other plant species observed within portions of Drainage 8 include mule fat, horehound, and white horse nettle (*Solanum elaeagnifolium*). Scattered ruderal vegetation within the feature is dominated by tumbleweed (*Amaranthus albus*), annual sunflower (*Helianthus annuus*), and tree tobacco. No dominance of hydrophytic vegetation was observed within any portions of the feature.

Soils observed within Drainage 8 are dominated by Metz gravelly sandy loam, San Emigdio loam, and San Emigdio fine sandy loam. The soils within Drainage 8 are permeable and promote very high percolation rates, thereby reducing the potential for any anaerobic or hydric conditions.

The majority of Drainage 8 is a low quality drainage feature with little or no vegetative cover. It conveys storm flows that cross Gilman Springs Road, which can be considered a source of pollution from street run-off. There is minimal erosion and overall the value of this drainage is low.

4.2.9 - Drainage Feature 9

The segment of Drainage 9 that occurs within the survey area is approximately 1.3 miles long with an average OHWM ranging from 3 to 5 feet. This feature originates in the Badlands approximately 2.75 miles north of the survey area and is the most eroded drainage feature within the WLCSP. Water in Drainage 9 comes from three sources. A portion enters the survey area from a box culvert beneath Gilman Springs Road. Additional water flows over Gilman Springs Road in heavy rain events, and other flows travel along Gilman Springs Road and are diverted beneath Gilman Springs Road just north of Alessandro Boulevard. The drainage then flows in a southerly direction, and enters a small culvert beneath Alessandro Boulevard. The drainage then continues to the south as a highly eroded ephemeral drainage before transitioning to an upland swale and eventually sheet-flows south of the

survey area. This drainage is physically interrupted by agricultural activities at several locations off site and does not flow continuously throughout its length. Drainage 9 appears to have been created as a result of runoff from the Badlands that flows under and across Gilman Springs Road and from onsite agricultural activities. Drainage 9 has become incised over the years due to occasional high runoff volumes and highly erosive soils.

The drainage feature contains signs of scouring and excessive erosion. It also contains a significant change in soil texture with a defined main channel and a single upland shelf. Drainage 9 is dominated by Metz loamy sand and San Emigdio fine sandy loam with a small inclusion of Metz loamy fine sand.

The majority of the drainage contains little or no vegetation along the channel bed. Vegetation is limited to the upland areas above the OHWM and is dominated by coastal sage scrub species. Dominant plant species include California buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), desert brittlebush (*Encelia farinosa*), California sagebrush (*Artemisia californica*), and short-pod mustard. Other plant species observed within the channel include scale-broom (*Lepidospartum squamatum*), California aster (*Lessingia filaginifolia*), mayweed (*Anthemis cotula*), and four-winged saltbush (*Atriplex canescens*).

Soil within the drainage contains a noticeable change in texture from surrounding upland habitats. The sandy deposits contain no evidence of organic streaking or other hydric conditions. The drainage feature contains an intermittent OHWM between Gilman Springs Road and Alessandro Boulevard. Storm flows have cut a greatly incised channel, approximately 60 feet wide at the top of the channel and 10 to 20 feet in depth, just south of Alessandro Boulevard. The area immediately south of Alessandro Boulevard contains trash dumping, which includes yard waste, kitchen appliances, and old tires. This portion of the drainage feature does not meet the requirements for hydric soils.

The majority of Drainage 9 is a moderate quality drainage feature with scattered riparian and Riversidean sage scrub vegetation. It conveys storm flows that cross Gilman Springs Road, which can be considered a significant source of pollution from street run-off. There is some severe erosion located just south of Alessandro Boulevard. The overall value of this drainage is moderate.

4.2.10 - Drainage Feature 10

This drainage is an isolated feature that contains some evidence of erosion and is caused by a change in slope within highly erosive soils. This feature terminates as the topography levels resulting in sheet flows. This feature contains a few scattered tree tobacco, but otherwise has no change in soils or vegetation. This feature has no surficial hydrologic connection to any downstream drainage and may only receive flows every 5 to 7 years. This feature does not contribute to function or value to any downstream drainage features and is not considered a riparian/riverine feature. This feature is located completely within the SJWA and no further analysis is required.

4.2.11 - Drainage Feature 11

This drainage is an isolated feature and similar to Drainage 10. This feature contains some evidence of erosion and is likely caused by runoff associated with Gilman Springs Road. This feature terminates as the topography levels resulting in sheet flows. This feature has no surficial hydrologic connection to any downstream drainage and may only receive flows every 5 to 7 years. This feature does not contribute function or value to any downstream drainage features and is not considered a riparian/riverine feature. This feature is located completely within the SJWA and no further analysis is required.

4.2.12 - Drainage Feature 12

This feature flows along the east side of Merwin Street as a road-side ditch and enters a detention area designed as an energy reducer to minimize flood hazards to the adjacent residential development. The water continues to flow through an underground culvert beneath Alessandro Road and continues in an unvegetated channel until it flows offsite.

Drainage 12 has been artificially altered to receive additional flows due to the installation of several earthen berms designed to reduce flooding in the adjacent residential development. The additional earthen berms allow additional water to flow into the upstream portion of drainage 12, which originates just downstream of the intersection of Bay Avenue and Merwin Street within the WLCSP. The drainage is contained within an unvegetated channel for approximately 1,200 linear feet and is collected in a small detention area just north of Alessandro Boulevard. The Alessandro Boulevard Crossing was created as part of a flood control project along the western portion of the survey area and slows water flows to reduce erosion and flooding hazard. The drainage spills into a four-foot corrugated pipe and continues along the east side of Merwin Street, just south of Alessandro Boulevard.

This ephemeral drainage feature conveys flows only during and immediately following large storm events. The channel contains evidence of an intermittent OHWM and bed and bank features within the survey area. The majority of the drainage contains little or no vegetation and does not meet the minimum criteria for hydrophytic vegetation. Unlike Drainages 7, 8, and 9, this feature continues offsite within an improved flood control channel. South of Cactus Avenue, it flows south through an existing golf course, it continues southwest in the Perris Valley Storm Drain, which then connects to Canyon Lakes. As such, Drainage 12 directly connects to a downstream water of the U.S.

The drainage channel is dominated by San Emigdio loam and Hanford coarse sandy loam, which are typical soils within the survey area. Soil within Drainage 12 contains a noticeable change in texture from surrounding upland habitats. The sandy deposits contain no evidence of organic streaking or other hydric soils.

Drainage 12 contains no wetland hydrology indicators and does not meet the criteria for jurisdictional wetlands under the 3-criteria wetland determination guidelines (USACE 2001).

The majority of Drainage 12 is a low quality drainage feature with a nearly unvegetated channel with scattered weedy vegetation. It conveys storm flows that originate within the active agricultural area

and areas directed around residential development. There is some erosion located just south of Alessandro Boulevard and overall the value of this drainage is low.

4.2.13 - Drainage Feature 13

This drainage is an isolated feature and similar to Drainage 10. This feature contains some evidence of erosion and is likely caused by runoff associated with the steep hillsides to the south. This feature terminates as the topography levels resulting in sheet flows. This feature has no surficial hydrologic connection to any downstream drainage and may only receive flows every 5 to 7 years. This feature does not contribute function or value to any downstream drainage features and is not considered a riparian/riverine feature.

4.2.14 - Drainage Feature 14

Drainage 14 includes two isolated basins that were previously used to collect runoff from a cattle-holding facility. These basins were artificially created as isolated, human-made catch basins that receives nuisance flows and agricultural runoff from concrete cattle containment areas adjacent to the basin, which have subsequently been removed. There is no evidence of prolonged ponding within the Drainage 14 basins; for this reason, it is not suitable habitat for any of the sensitive fairy shrimp species. The vegetation in the western catch basin comprises sparse southern willow scrub but is not sufficient to support any sensitive riparian species, such as least Bell's vireo, southwestern willow flycatcher, and yellow-billed cuckoo.

As stated in Section 6.1.2 of the MSHCP, "With the exception of wetlands created for the purpose of providing wetlands habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, areas demonstrating characteristics as described above which are artificially created are not included in these definitions." Therefore, the artificially created catch basins, which were used to collect cattle waste, are not considered riparian/riverine areas.

4.2.15 - Drainage Feature 15

Drainage 15 is located west of the project site and flows in a north-south direction. The drainage originates near the intersection of Quincy Street and Walther Avenue, approximately 2.0 miles northwest of the project site. The drainage is contained within a soft-bottom earthen channel and is an unvegetated channel with sparse riparian vegetation. This drainage flows into the downstream portion of Drainage 12 listed above, in an existing golf course area. Drainage 15 has a downstream connection to waters of the U.S.

Drainage 15 crosses a potential route of offsite infrastructure improvements and only a portion of the drainage feature is peripherally associated with the project site. It includes a clearly defined OHWM.

This ephemeral drainage feature conveys flows during and immediately following large storm events. It contains signs of scouring and excessive erosion. The channel contains a clearly defined OHWM at the location where the proposed offsite project feature is located.

The majority of the drainage contains little to no vegetation and does not meet the minimum criteria for hydrophytic vegetation.

The drainage channel is dominated by San Emigdio fine sandy loam, which is a typical soil scattered throughout Moreno Valley. Soil within the drainage contains a noticeable change in texture from surrounding upland habitats. The sandy deposits contain no evidence of organic streaking or other hydric soils.

The drainage feature contains no wetland hydrology indicators. The drainage feature does not meet the criteria for jurisdictional wetlands under the three-criteria wetland determination guidelines.

The majority of Drainage 15 is a low quality drainage feature with an unvegetated channel and scattered weedy species. It conveys storm flows from natural runoff and nuisance flows from adjacent residential development, which can be considered a significant source of pollution from street run-off. There is some severe erosion located along the length of the drainage and overall the value of this drainage is low.

Table 1: Riparian/Riverine Areas within the WLCSP

Drainage Feature	Drainage Type	Flow Description	Riparian Habitat	Average Width (Feet)	Overall Length (Feet)	Total Acres
Drainage 1	Roadside Ditch	Terminates in Storm Drain	0.26 acre Ephemeral	2	5,250	0.26
Drainage 2	Upland Swale	Terminates On-site	0.21 acre Ephemeral	2	4,230	0.21
Drainage 4	Upland Swale	Terminates On-site	0.23 acre Ephemeral	2	4,640	0.23
Drainage 5	Roadside Ditch	Terminates On-site	0.42 acres Ephemeral	3	7,720	0.42
Drainage 6	Roadside Ditch	Terminates On-site	0.42 acre Ephemeral	2	8,370	0.42
Drainage 7	Ephemeral Drainage	Terminates off-site	0.31 acre Riparian/ 0.83 acre Ephemeral	4	12,460	1.14
Drainage 8	Ephemeral Drainage	Terminates Off-site	0.57 acre Ephemeral	4	6,200	0.57
Drainage 9	Ephemeral Drainage	Terminates Off-site	0.71 acre Riparian/ 0.19 acre Ephemeral	10	4,000	0.90
Drainage 12	Ephemeral Drainage	Continues Off-site	0.53 acre Ephemeral	6	3,830	0.53
Drainage 15	Ephemeral Drainage	Continues Off-site	0.01 acre Ephemeral	5	375	0.01
		Totals	**1.02 acres Riparian/ 3.67 acres Ephemeral**	**—**	**57,075**	**3.67**

4.3 - Potential Project Related Impacts

Although the WLCSP EIR analysis is a program level effort, project related impacts were estimated based on current specific plan design. The following is a brief discussion of the potential impacts associated with the riparian/riverine areas. This is necessary to establish estimated mitigation requirements necessary to offsite potential project related impacts at a specific-plan level. Anticipated project-related impacts may change in the future and therefore, impacts to riparian/riverine areas will be assessed on a project-by-project basis during the individual project development analysis. A separate project-level DBESP will be prepared for any project-related impacts to riparian/riverine areas.

Drainages 3, 13, and 14 are not considered riverine/riparian habitat. These features lack a hydrologic connection to a downstream drainage feature, are completely isolated, and do not meet the minimum criteria to be considered riparian/riverine areas. Drainages 10 and 11 are located within the CDFW Conservation Area and will not be impacted by the proposed development. These five features will not be further discussed in the document (Exhibit 4).

The riparian habitat within drainage features 7, 9, and 14 is disturbed with minimal canopy cover, a mix of native and non-native species, and is isolated from any upstream or downstream riparian habitat. Southern willow scrub is typically considered suitable habitat for a number of wildlife species that commonly occur in riparian/riverine habitats throughout southern California. These wildlife species include sensitive avian species such as least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo. The riparian habitat within the WLCSP is considered low in habitat quality because it is isolated, small in size, and lacks significant vegetation density. The closest area that contains suitable habitat for these species is more than 2 miles to the southeast and there is no direct habitat connection to any suitable offsite habitat. Given these characteristics, riparian wildlife species have a low potential to occur, and impacts to least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo are not anticipated

A total of 5.67 acres of riparian/riverine area occur within the WLCSP. The following is a general evaluation and estimate of the project related impacts to riparian/riverine areas.

4.3.1 - Drainage 1

Drainage 1 will be removed as part of the proposed development. All drainage associated with this feature will be contained within an underground storm drain system and flows will be conveyed to the downstream portion of Drainage 12 via an underground storm drain pipe, where they will be returned to present flow patterns and rates. A total of 0.26 acre of riparian/riverine area will be permanently impacted within the WLCSP. This includes the all portions of the drainage, including the paved portions.

4.3.2 - Drainage 2

Drainage 2 will be removed as part of the proposed development. All drainage associated with this feature will be contained within an underground storm drain system and flows will be conveyed to the southern boundary of the WLCSP where it will be returned to present flow patterns and rates. A total of 0.21 acre of riparian/riverine area will be permanently impacted within the WLCSP.

4.3.3 - Drainage 4

Drainage 4 will be removed as part of the proposed development. All drainage associated with this feature will be contained within an underground storm drain system and flows will be conveyed to the southern boundary of the WLCSP where they will be returned to present flow patterns and rates. A total of 0.23 acre of riparian/riverine area will be permanently impacted within the WLCSP.

4.3.4 - Drainage 5

Drainage 5 will be removed as part of the proposed development. All drainage associated with this feature will be contained within an underground storm drain system and flows will be conveyed to the southern boundary of the WLCSP where they will be returned to present flow patterns and rates. A total of 1.16 acres of riparian/riverine area will be permanently impacted within the WLCSP.

4.3.5 - Drainage 6

Drainage 6 will be removed as part of the proposed development. All drainage associated with this feature will be contained within an underground storm drain system and flows will be conveyed to the southern boundary of the WLCSP where they will be returned to present flow patterns and rates. A total of 0.42 acre of riparian/riverine area will be permanently impacted within the WLCSP.

4.3.6 - Drainage 7

Drainage 7 will be removed as part of the proposed development. All drainage associated with this feature will be contained within an underground storm drain system and flows will be conveyed to the southern boundary of the WLCSP where they will be returned to present flow patterns and rates. A total of 1.0 acre of riparian/riverine area will be permanently impacted within the WLCSP. This includes the three patches of riparian habitat (0.3 acre) as well as the unvegetated channel that connects them (0.7 acre).

4.3.7 - Drainage 8

Drainage 8 will be removed as part of the proposed development. All drainages associated with this feature will be contained within underground storm drainage and flows will be conveyed to the southern boundary of the WLCSP where they will be returned to present flow patterns and rates. A total of 0.61 acre of riparian/riverine area will be permanently impacted.

4.3.8 - Drainage 9

Drainage 9 will remain in place and will be enhanced to provide higher quality riparian habitat as well as provide for wildlife movement between the Badlands and the SJWA. Proposed impacts associated with Drainage 9 include trash removal, construction of a single road crossing, removal of the existing Alessandro Boulevard, installation of energy dissipation devices, and the re-contouring of the upstream portion of the drainage between Gilman Springs Road and Alessandro Boulevard. Drainage 9 enhancement will begin with the removal of Alessandro Road. Currently, storm flows spill over the road and causes severe erosion south of Alessandro Boulevard. The upstream portion of drainage will be re-contoured to provide a more natural slope between Gilman Springs Road and Alessandro Boulevard. Energy dissipating devices will be installed periodically along Drainage 9 to

reduce the flow velocity within the active channel, which will decrease downstream sediment deposition and erosion. Total area of riparian/riverine habitat within Drainage 9 is 0.9 acre. The impacts include 0.7 acre of riparian habitat as well as the unvegetated channel that connects them (0.2 acre). Most, if not all, portions of this drainage will be affected by future drainage improvements. However, once completed, the drainage will have a much higher function and value than what currently exists within the WLCSP.

4.3.9 - Drainage 12

The entirety of Drainage 12 will be impacted by project related activities within the WLCSP. This drainage has a total of 0.47 acre of riparian/riverine area. All of the impacts will be permanent. Drainage 12 will be placed in an underground storm drain system and will outlet into a detention basin within the WLCSP. Downstream of Alessandro Blvd, Drainage 12 is proposed to be improved with a soft-bottom channel to Redlands Blvd. where it will connect to the existing improved channel.

4.3.10 - Drainage 15

Drainage 15 will be minimally disturbed throughout the proposed project development. There are two utility line upgrades that may be required at two road crossings of Drainage 15 (Cottonwood Avenue and Cactus Avenue). It is estimated that the area needed to complete the utility line upgrades is approximately 0.01 acre of riparian/riverine area.

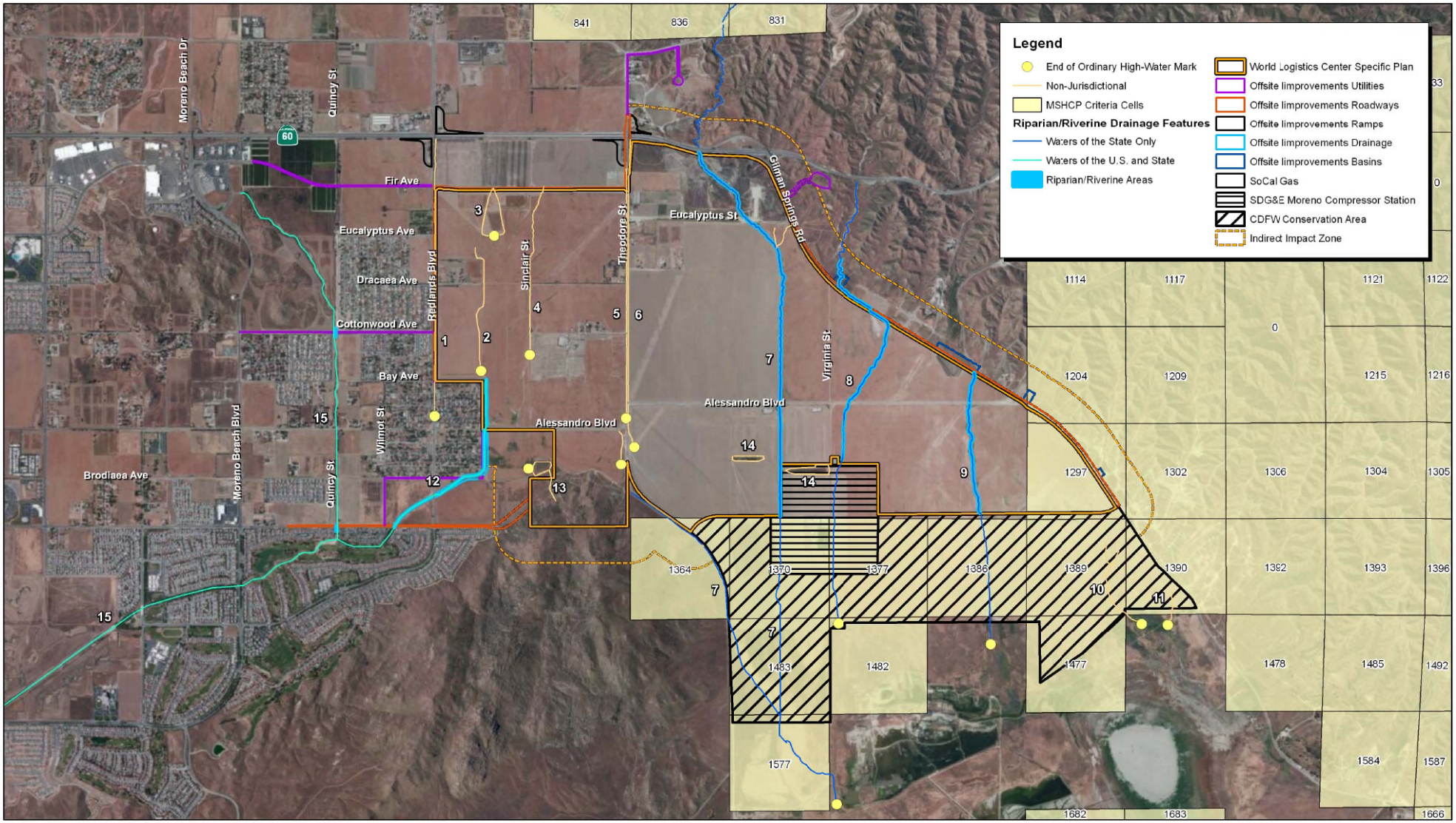
4.4 - Project Design Features and Mitigation Measures

This program-level DBESP for impacts to riparian/riverine areas is required by the RCA and will be approved prior to final project approval. This DBESP includes a general discussion of mitigation options for impacts to riparian/riverine areas as well as general location and size of the mitigation area and will also include a monitoring program.

If impacts to riparian habitat within the WLCSP cannot be avoided at the time of project specific development, then a separate project-level DBESP and specific mitigation will be required under MSHCP guidelines.

If impacts to riverine habitat within the WLCSP cannot be avoided at the time of project-specific development, then a separate project-level DBESP and specific mitigation will be required under MSHCP guidelines. The “Master Plan of Drainage Report prepared for World Logistics Center Specific Plan and Environmental Impact Report” prepared by CH2M Hill (May 2014) provides details on existing flow rates of all drainages on the property and provides details on how both flow rates and existing infiltration rates would be maintained through a series of detention and spreading basins to allow offsite flows similar to the existing condition.

Feasible mitigation measures are required to minimize the potentially significant impacts identified above. Many of the mitigation measures set forth below are standard mitigation measures approved by the United States Fish and Wildlife Service, California Department of Fish and Wildlife, County of Riverside, and City of Moreno Valley.



Source: ESRI Aerial Imagery. FCS-MBA Field Survey and GIS Data, 2014.

FirstCarbon SOLUTIONS

2,500 1,250 0 2,500 Feet

Exhibit 4
Riparian/Riverine and Drainage Feature Map

26100025 • 08/2014 | 4_riparian_and_riverine_areas.mxd

HIGHLAND FAIRVIEW OPERATING COMPANY • WORLD LOGISTICS CENTER SPECIFIC PLAN
DETERMINATION OF BIOLOGICAL EQUIVALENT OR SUPERIOR PRESERVATION (DBESP) ANALYSIS

4.4.1 - Mitigation Measures

Portions of Drainages 1, 2, 4, 5, 6, 7, 8, 9, 12, and 15 within the WLCSP will be filled as part of the proposed project development. The affected areas of these drainages do not constitute functioning riparian habitat. Since these features are of low habitat quality, mitigating for impacts to these features will provide a beneficial use in the creation or preservation of riparian habitat rather than preserving the unvegetated drainage features onsite. These impacts will be mitigated through a combination of riparian habitat creation on-site, creation of riparian habitat off-site, and/or purchase of credits at an approved mitigation bank. There will be a series of drainage improvements, which will be used for infiltration, to improve water quality and reduce erosion onsite, prior to entering the off-site drainage features. The WLCSP was designed to avoid the largest drainage feature within the WLCSP (Drainage 9) because it is a moderate-quality drainage feature, even though it does not connect to any downstream drainage features.

The post-project stream flows and sediment transport functions for Drainage 9 will be improved from the pre-project conditions. Temporary impacts will be mitigated by restoring the affected portions of Drainage 9 back to pre-project conditions, which includes removing the Alessandro Boulevard road crossing and re-contouring the upstream portion of the drainage between Gillman Springs Road and Alessandro Boulevard. No portion of Drainage 9 will be permanently impacted beyond disturbances associated with the new road crossing and energy dissipating devices. Installation of detention basins will provide a water quality component as well as reduced erosion and prevent downstream soil transport. The detention basins will provide improved function and value of riparian/riverine habitat within the WLCSP by reducing erosion and scour potential and increasing riparian habitat for local wildlife species.

Mitigation Measures/Riparian Habitat Creation

Post-construction stormwater discharges will be less than or equal to existing conditions onsite in accordance with Riverside County Flood Control requirements and all applicable water quality standards. This will be achieved through the installation of multiple detention/infiltration basins within the WLCSP, as well as several spreading basins along the southern project boundary to capture, further treat, and detain flows from the WLCSP before flows enter the adjacent CDFW Conservation Area.

The drainage improvements potentially occurring along the southern border of the WLCSP contain spreading structures that allow flows in an east-west direction to create a linear barrier between the proposed development and the adjacent open-space area. The proposed drainage improvements along the southern portion of the WLCSP can support as much as 52 acres, which includes approximately 45 acres of drainage bottom and 7 acres of drainage side slopes (Exhibit 5). In addition, portions of Drainage 9 will be enhanced with energy dissipating devices to reduce erosion and sediment loss. This will also include an additional riparian enhancement within the bottom of Drainage 9. Drainage 12 will be recontoured to support storm flows within and immediately downstream of the WLCSP. This area will also be enhanced and restored to a better than current existing condition by revegetation with native riparian plants that are associated with drier conditions.

Drainage improvements, such as detention basins, will be installed throughout the WLCSP to provide upstream detention and water quality treatment during a storm event's first flush. Drainage improvements along the southern boundary of the WLCSP, which will have spreading features, will be the final water quality treatment before entering an off-site drainage features. These areas may be used to create riparian habitat as part of the on-site mitigation option.

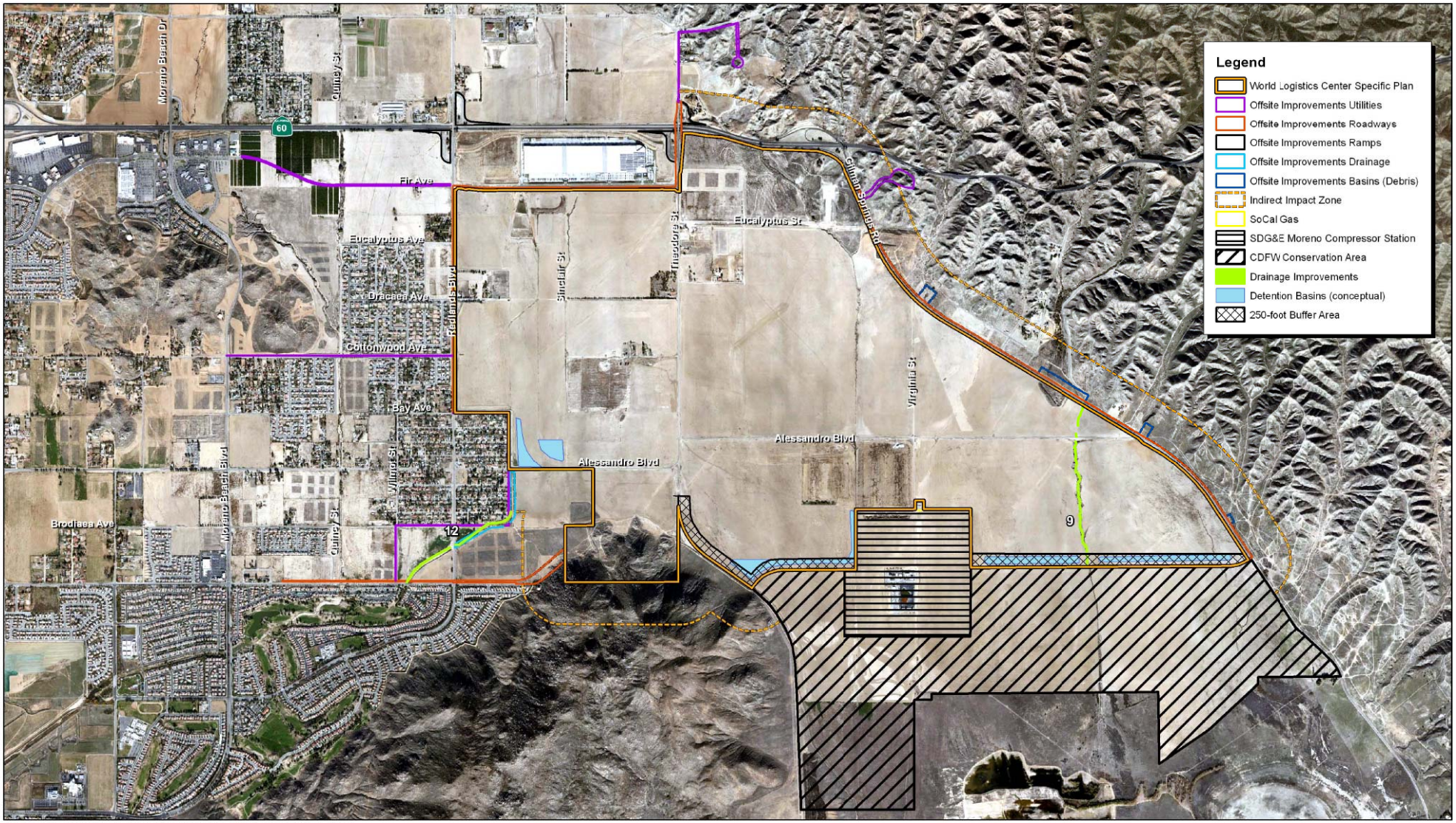
The term "functioning riparian habitat" describes a patch or area of riparian habitat that functions as a riparian habitat. It provides suitable habitat for plant and wildlife species that are commonly found in riparian habitats. Even low-quality riparian habitat may provide functional riparian habitat if it supports a population of riparian species. The riparian habitat onsite is extremely small and completely isolated from other riparian habitat in the eastern portion of the City of Moreno Valley. The riparian vegetation currently onsite does not support wildlife species commonly found within riparian habitat such as common yellow-throat (*Geothlypis trichas sinuosa*), yellow warbler (*Dendroica petechia brewsteri*), yellow-breasted chat (*Icteria virens*), and summer tanager (*Piranga rubra*), as described in the Birds as Indicators of Riparian Vegetation (no date) condition in the western U.S. Bureau of Land Management, Partners in Flight, Boise, Idaho. Therefore, even though the WLCSP contains small patches of riparian vegetation, these do not function as a riparian habitat. A few plants in an isolated area do not create a functional habitat.

The post-project best management practices shall meet the treatment flow-based/volume-based capacity requirements of the Regional Water Quality Control Board. These detention basins will be designed to provide functioning riparian habitat, which will be maintained by the increase in available water due to the impermeable surface of the proposed development.

A full Habitat Mitigation and Monitoring Plan (HMMP) will be prepared and submitted to the RCA and Wildlife Agencies for review, if necessary. A full HMMP will only be required if mitigation monitoring is required. If project-related impacts are mitigated through the offsite purchase of mitigation credits within an approved mitigation bank, then a full HMMP will not be required. This information will be required at a project-level environmental analysis.

Mitigation Measures

The mitigation plan for the major impacts to Drainages 1, 2, 4, 5, 6, 7, 8, 9, 12, and 15 consists of mitigating for impacts to 5.67 acres of riparian/riverine habitat at a minimum replacement ratio of no less than 1:1. Restoration of no more than 11.34 acres of riparian scrub habitat will be required, with components of Riversidean sage scrub/mule fat scrub habitat, using the following approach. If on-site mitigation is used, all existing invasive weedy plant species will be removed and transported offsite to reduce the seed bank of noxious species. The designated habitat creation areas for each project site shall be cleared of weeds prior to any grading activities. Once grading activities have been completed, soil decompacting may be required by ripping, if necessary. The site will then be seeded with appropriate native plant species and mulched to protect the prepared soils and deter weed germination. Cuttings will be installed during the appropriate season to promote rapid establishment of healthy riparian vegetation.



Source: Google Earth Pro, 2012. FCS-MBA Field Survey and GIS Data, 2014.

FirstCarbon SOLUTIONS

2,500 1,250 0 2,500 Feet

Exhibit 5
DBESP Mitigation Areas

Supplemental irrigation may be supplied to this restoration area by an irrigation system for the first 2 years to help establish the vegetation. Weed control in the treated area will be performed primarily during the late winter and spring months (January through May) during times when weed germination is prevalent. If needed, supplemental planting and seeding in subsequent years shall be conducted during the late fall and winter (October 15 through January 31). Monitoring of the revegetation process will be conducted periodically throughout the year and annual performance evaluations will be performed during late spring (May–June). Annual monitoring reports will be submitted to the appropriate agency describing the site's performance through the year and any supplemental planting conducted.

Based on the Habitat Assessment and MSHCP consistency document (FCS 2014), approximately 5.67 acres of riparian riverine habitat may be impacted by proposed projects in the future. At a minimum, habitat replacement will be required at a 1:1 ratio but may be as high as 3:1 depending on the quality of the habitat. Because the riparian habitat in a few of the drainage features is of low to moderate quality, a 2:1 mitigation ratio may be most appropriate. Again, the mitigation ratio will be established at the project level, in consultation with the CDFW, USFWS, RCA, and the City of Moreno Valley. At a 2:1 mitigation ratio, the estimated amount of replacement habitat is approximately 11.34 acres.

Since this document was prepared as a program-level document, several mitigation alternatives are provided. The project biologist has indicated a general shift in mitigation recommendations from resource agencies. The trend is use of large offsite mitigation banks rather than create small isolated mitigation areas within the project site. The onsite detention basins may constitute adequate mitigation for impacts to riparian/riverine resources if designed appropriately, which may be agreed to by the Wildlife Agencies, especially if the resulting habitat is superior to the current site conditions and is not disturbed by routine maintenance on an annual basis. The final mitigation requirements will be determined at a project-level analysis. Since the requirement for mitigation measures cannot be determined at this point, FCS respectfully requests to keep all three mitigation scenarios (onsite creation, offsite creation, and offsite purchase of mitigation credits) as options until project-specific analyses as determined by individual DBESPs can be completed.

The primary and initial purposes for having the basins are for drainage control and water quality. As long as those functions are not compromised and FCS is not restricted in maintaining the basins for those purposes, FCS would like to generate as much riparian habitat as possible. Although the preferred method of mitigation is offsite purchase of mitigation credits through an approved mitigation bank, FCS would like to have other options in case that option is no longer feasible.

Project-specific mitigation measures have not been created nor approved because a program level document cannot provide that level of specificity. Long-term conservation mechanisms available today may not be available or necessary when the proposed project is developed. The preferred means of mitigation is to purchase offsite mitigation credits at an approved mitigation bank. That way, all long-term conservation mechanisms are built into the mitigation purchase. In the event that onsite or offsite habitat creation is required as mitigation, then a non-wasting endowment will be established to provide monitoring and maintenance activities in perpetuity. These conservation areas will require a conservation easement and will be deeded to a third-party management agency

or similar conservation district to manage the land. The detailed project-specific information requested will only be available along with a project-level document.

The proposed mitigation measures address program-level issues. Many things can change over time, including the most effective ways of controlling erosion. More description of each mitigation measure will be provided at a project-level. For example, if the program-level DBESP's MM-DBESP 4 describes the erosion control measures to be installed as straw wattles, but the final project-level HMMP requires silt-fence and hay bales, will that constitute a significant change? As described above, MM-DBESP 5 will include project-specific details regarding the species to be planted, but only within a project-level document.

To ensure the preservation or improvement of the biological and hydrological functions and values of riparian/riverine habitat onsite, the following mitigation measures will occur:

- MM-DBESP 1 - Onsite creation of riparian habitat at a minimum of 1:1 ratio (due to poor quality habitat onsite), will be established within artificially created detention/infiltration basins to reduce storm flows, improve water quality and reduce sediment transportation. These detention basins will be large enough to provide long-term conservation to riparian habitat without the routine maintenance associated with smaller basins. Vegetation removal will only occur at the area surrounding the in-take and out-fall structures of the basins, leaving the majority of the basin undisturbed.
- MM-DBESP 2 - Habitat creation activities will include the installation of mule fat scrub or similar riparian scrub habitat to promote higher-quality riparian habitat but still maintain the basins for detention without impacts to the detention function of the basins.
- MM-DBESP 3 - Onsite soils and substrate that will be temporarily removed as a result of removing the drainage features will be retained for post-project re-establishment, so that native seed banks and soil compositions are conserved for optimal regrowth within the basins.
- MM-DBESP 4 - Erosion control measures will be installed within Drainage 9 to reduce the amount of sediment transport.
- MM-DBESP 5 - Additional riparian habitat will be enhanced within Drainage 9 following the installation of the erosion control measures.

4.4.2 - Measures to Reduce/Minimize Indirect Impacts

According to the MSHCP, the Urban/Wildlands Interface Guidelines are intended to address indirect effects associated with locating development in proximity to the MSHCP Conservation Area (MSHCP, page 6-42). Portions of the WLCSP are located within three Criteria Cells (1204, 1297, and 1364). There is a small portion of Core Area H within the southwestern portion of the WLCSP. The southeastern portion of the WLCSP contains a small portion of and is immediately adjacent to Proposed Core 3. There is also an off-site improvement located north of the WLCSP that is also within Proposed Core 3 (Exhibit 4).

The Urban/Wildlife Interface Guidelines, as discussed below, will be included in the project to ensure that indirect, project-related impacts to the riparian/riverine habitat (including drainage, toxics, lighting, noise, invasive plant species, barriers, and grading/land development) are avoided or minimized.

Drainage

Detention/infiltration basins are part of the project design. During construction, the runoff leaving construction areas will be directed to these basins and away from downstream drainage features offsite. These basins will be active during the operational phase of the proposed project. The basins will be designed in accordance with all federal, state, regional, and local standards and regulations concerning water quality. The entire length of Drainage 9 will maintain existing flows through the WLCSP. These measures will assure that the project stormwater discharges are no greater in rate and velocity than current undeveloped conditions and that the water leaving the site complies with all applicable water quality standards.

Toxics

As part of the project specific water quality management plan (WQMP) source control Best Management Practices (BMPs) will be determined to minimize the potential for accidental release of hazardous materials. A project WQMP is a plan for managing the quality of stormwater or urban runoff that flows from a developed site after construction is completed and the facilities or structures are occupied and/or operational. A project WQMP describes the BMPs that will be implemented and maintained throughout the life of a project and is used by property owners, facility operators, tenants, facility employees, maintenance contractors, etc. to prevent and minimize water pollution that can be caused by stormwater or urban runoff.

All projects within the WLCSP will be required to prepare a Storm Water Pollution Prevention Plan (SWPPP). The purpose of the SWPPP is to identify potential pollutant sources that may affect the quality of discharges associated with construction activity, to identify non-storm water discharges, and to design the use and placement of BMPs to effectively prohibit the entry of pollutants from the construction site into the storm drain system during construction. The WLCSP is required to stage construction operations as far away from the riparian/riverine habitat to the maximum extent feasible. Erosion and sediment source control BMPs shall be considered for both active and inactive (previously disturbed) construction areas. BMPs for wind erosion and dust control are also included as part of the SWPPP.

Invasive Plant Species

Invasive species identified in Table 6.2 of the MSHCP shall not be included in any landscape palette for land within 250 feet of CDFW-owned lands (see Table 1). All landscape plans shall be reviewed by the City for compliance with this requirement. Additionally, final landscaping and restoration plans will be consistent with the approved Conceptual Fuel Modification Plan for the project, if applicable.

Based on the discussion on page 111, as described in Section 6.1.6 of the MSHCP consistency analysis document, under invasive species, the project shall incorporate special edge treatments designed to separate development areas from open space areas. Landscape buffers shall be

incorporated into the project design to prevent the intrusion of invasive plant species into natural areas. None of the plant species listed in Section 6.1.4 of the MSHCP shall be used for landscaping for any proposed project element. All landscape plans shall be reviewed by a qualified biologist to ensure invasive weedy species and other harmful non-native plant species are avoided in the landscape plan.

Table 2: Invasive Plant Species

Botanical Name	Common Name
Acacia spp. (all species)	acacia
Achillea millefolium var. *millefolium*	common yarrow
Ailanthus altissima	tree of heaven
Aptenia cordifolia	red apple
Arctotheca calendula	cape weed
Arctotis spp. (all species & hybrids)	African daisy
Arundo donax	giant reed or arundo grass
Asphodelus fistulosus	asphodel
Atriplex glauca	white saltbush
Atriplex semibaccata	Australian saltbush
Carex spp. (all species*)	sedge
Carpobrotus chilensis	ice plant
Carpobrotus edulis	sea fig
Centranthus ruber	red valerian
Chrysanthemum coronarium	annual chrysanthemum
Cistus ladanifer (incl. hybrids/varieties)	gum rockrose
Cortaderia jubata (syn. C. Atacamensis)	jubata grass, pampas grass
Cortaderia dioica (syn. C. sellowana)	pampas grass
Cotoneaster spp. (all species)	cotoneaster
Cynodon dactylon (incl. hybrids varieties)	Bermuda grass
Cyperus spp. (all species*)	nutsedge, umbrella plant
Cytisus spp. (all species)	broom
Delosperma 'Alba'	white trailing ice plant
Dimorphotheca spp. (all species)	African daisy, Cape marigold
Drosanthemum floribundum rosea	rosea ice plant

Table 1 (cont.): Invasive Plant Species

Botanical Name	Common Name
Drosanthemum hispidum	purple ice plant
Eichhornia crassipes	water hyacinth
Elaegnus angustifolia	Russian olive
Eucalyptus spp. (all species)	eucalyptus or gum tree
Eupatorium coelestinum (syn. *Ageratina* sp.)	mist flower
Festuca arundinacea	tall fescue
Festuca rubra creeping	creeping red fescue
Foeniculum vulgare	sweet fennel
Fraxinus uhdei (and cultivars)	evergreen ash, shamel ash
Gaura(spp. (all species)	gaura
Gazania spp. (all species & hybrids)	gazania
Genista spp. (all species)	broom
Hedera canariensis	Algerian ivy
Hedera helix	English ivy
Hypericum spp. (all species)	St. John's wort
Ipomoea acuminata	Mexican morning glory
Lampranthus spectabilis	trailing ice plant
Lantana camara	common garden lantana
Lantana montevidensis (syn. *L. sellowiana*	lantana
Limonium perezii	sea lavender
Linaria bipartita	toadflax
Lolium multiflorum	Italian ryegrass
Lolium perenne	perennial ryegrass
Lonicera japonica (incl. 'Halliana')	Japanese honeysuckle
Lotus corniculatus	birdsfoot trefoil
Lupinus arboreus	yellow bush lupine
Lupinus texanus	Texas blue bonnets
Malephora crocea	ice plant
Malephora luteola	ice plant
Mesembryanthemum nodiflorum	little ice plant

Table 1 (cont.): Invasive Plant Species

Botanical Name	Common Name
Myoporum laetum	myoporum
Myoporum pacificum	shiny myoporum
Myoporum parvifolium (incl. *'Prostratum'*)	ground cover myoporum
Oenothera berlandieri	Mexican evening primrose
Olea europaea	European olive tree
Opuntia ficus-indica	Indian fig
Osteospermum spp. (all species)	trailing African daisy, African daisy
Oxalis pes-caprae	Bermuda buttercup
Parkinsonia aculeata	Mexican palo verde
Pennisetum clandestinum	Kikuyu grass
Pennisetum setaceum	fountain grass
Phoenix canariensis	Canary Island date palm
Phoenix dactylifera	date palm
Plumbago auriculata	cape plumbago
Polygonum spp. (all species)	knotweed
Populus nigra 'italica'	Lombardy poplar
Prosopis spp. (all species*)	mesquite
Ricinus communis	castorbean
Robinia pseudoacacia	black locust
Rubus procerus	Himalayan blackberry
Sapium sebiferum	Chinese tallow tree
Saponaria officinalis	bouncing bet, soapwort
Schinus molle Peruvian	Peruvian pepper tree, California pepper
Schinus terebinthifolius	Brazilian pepper tree
Spartium junceum	Spanish broom
Tamarix spp. (all species)	tamarisk, salt cedar
Trifolium tragiferum	strawberry clover
Tropaelolum majus	garden nasturtium
Ulex europaeus	prickly broom
Vinca major	periwinkle

Table 1 (cont.): Invasive Plant Species

Botanical Name	Common Name
Yucca gloriosa	Spanish dagger
Note: An asterisk (*) indicates some native species of the genera exist that may be appropriate.	

Barriers

Pedestrian and vehicular access to areas of riparian/riverine habitat will be prohibited except for controlled maintenance access. Plot plans for development adjacent to such areas shall include details of the means to achieve this restriction. All required barriers shall be in place and functional prior to occupancy of affected buildings. Barrier treatments shall be compatible throughout the WLC project.

Each individual project shall incorporate special edge treatments designed to separate development areas from open space areas. These areas will serve to minimize unauthorized access, domestic animal predation, and illegal trespass and dumping. Specific details regarding barriers to prevent pedestrian and vehicle access to riparian areas are not necessary for a program-level document. Specific project features to achieve these purposes will be designed on a project-by-project basis during the project-level analysis. Barriers, such as retaining walls, planters, sound walls, and assorted fencing materials may be used to prevent pedestrian and vehicle access.

Grading/Land Development

As described on the grading plan, no grading shall be permitted within conserved riparian/riverine habitat areas except for grading necessary to establish or enhance said habitat areas. All such riparian/riverine areas shall be clearly delineated on all grading plans to ensure this restriction is enforced.

The WLCSP, on a project-by-project basis, shall incorporate special edge treatments designed to separate development areas from open space areas. Landscape buffers shall be incorporated into the project design to prevent the intrusion of non-native plant species into natural areas. None of the plant species listed in Section 6.1.4 of the MSHCP shall be used for landscaping for any proposed project element. All landscape plans shall be reviewed by a qualified biologist to ensure invasive weedy species and other harmful non-native plant species are avoided in the landscape plan. Therefore, there should no justification for a discussion on invasive plant species above what is already included in Section 6.1.6 MSHCP consistency analysis document. A habitat mitigation and monitoring plan and/or a habitat restoration plan may be required on a project-by-project basis in consultation with RCA and CDFW.

To reduce potentially significant indirect impacts to the biological and hydrological functions and values of riparian/riverine habitat onsite, the following mitigation measures will occur:

- MM-DBESP 6 - During construction, the runoff leaving construction areas will be directed to on-site detention basins and away from downstream drainage features located offsite.
- MM-DBESP 7 - All projects within the WLCSP will be required to prepare a Storm Water Pollution Prevention Plan (SWPPP).
- MM-DBESP 8 - Invasive species identified in Table 6.2 of the MSHCP shall not be included in any landscape palette for land within 250 feet of CDFW-owned lands.
- MM-DBESP 9 - Pedestrian and vehicular access to areas of riparian/riverine habitat will be prohibited except for controlled maintenance access.
- MM-DBESP 10 - No grading shall be permitted within conserved riparian/riverine habitat areas except for grading necessary to establish or enhance said habitat areas.

4.4.3 - Fuels Management Guidelines

Fuels management focuses on hazard reduction for humans and their property (MSHCP, page 6-72).

According to the Fuels Management Guidelines, for new development that is planned adjacent to sensitive habitat, including riparian/riverine habitat or other undeveloped areas, brush management shall be incorporated in the development boundaries and shall not encroach into the habitat (MSHCP, page 6-72). The project shall be consistent with the Conceptual Fuel Modification Plan prepared for each individual project, pursuant to the City of Moreno Valley's Municipal Code and Fire Department, and National Fire Protection Association's Standard.

4.5 - Demonstration of Increase in Post-Project Riparian/Riverine Functions and Values

The post-project conditions of the onsite riparian/riverine habitats will be functionally superior to the pre-project conditions with the implementation of the conservation and avoidance strategies in the current WLCSP design, and the proposed mitigation options. Specifically, superior preservation will include the following:

- The enhancement of Drainage 9 with energy dissipation devices and restoration of mule fat scrub will improve riparian habitat quality while reducing soil erosion and thereby increasing the biological function for covered species.
- The detention basins with spreading structures will facilitate the creation and maintenance of riparian scrub vegetation within the WLCSP and stabilize the hydrologic regime by reducing erosion and scour potential, as well as assisting with energy dissipation during seasonal flooding. Slowing of surface flow rates will provide decreased sedimentation, reduction of erosion, and increased water quality.
- Increased habitat quality resulting from the proposed projects' improvements will collectively contribute to habitat function of the entire watershed by providing a buffer area of detention basins between the proposed WLCSP development and the adjacent CDFW Conservation Area.

Typically, mitigation areas are required to meet a percentage of the visually estimated percent cover of the vegetation within the previous active channel prior to drainage relocation or removal. Prior to construction activities associated with the channel removal or enhancement, the percent of vegetation cover along the slopes and bottom of the channel should be visually estimated at the portion of the channel with the greatest percentage of vegetative cover occurs. The vegetative cover of the previously existing side slopes, on average, was estimated to be 30 percent with a 5-percent cover of the drainage bottoms. Therefore, the success criteria are a percentage of the estimated 30 percent side slopes and 5 percent drainage bottom.

4.5.1 - Performance Criteria for Mitigation Sites

Success Criteria

The success criteria for the total percent cover of all native plant species are detailed in Table 3.

Table 3: Target Total Native Coverage Guidelines

Year	Acceptable Range as a Percentage of Existing Conditions
1	25 to 30%
2	35 to 50%
3	40 to 60%
4	60 to 70%
5	Minimum 70% (plus 15% Bare Ground)

4.5.2 - Minimum Success Standards

In addition, the following minimum success standards must be achieved or exceeded for the revegetation effort to be considered successful:

1. **Total Coverage:** Vegetative cover is present over at least 70 percent of the total ground surface area within the treated area.
2. **Native Vegetation Coverage:** Native species must provide at least 75 percent total coverage within the treated area. This standard implies that no more than 10 percent of all vegetative cover may consist of ruderal non-native species. However, of the ruderal species "permitted" on the site, only species of very common, "naturalized," non-native grasses and herbs (e.g., Bromus, Avena, Conyza, Brassica spp.) may be allowed, particularly if their removal would be likely to promote erosion or incur significant collateral damage to healthy native species.
3. **Exotic Vegetation Coverage:** Particularly noxious invasive exotic species (tree tobacco, artichoke thistle, castor bean, tamarisk, etc.) must not contribute more than 1 percent of all vegetative cover.
4. **Species Diversity:** The composition of vegetation in the treated area must exhibit species diversity that is indicative of a transitional community with elements common to mule fat scrub and Riversidean sage scrub communities. Diversity may be measured in terms of the

numbers of dominant (comprising >5 to 10 percent relative cover), and sub-dominant (at least 1 to 5 percent relative cover) native shrubs, succulents, and herbs identified by both visual estimates and linear transect data collections. Both mule fat scrub and Riversidean sage scrub must exhibit a minimum of 10 percent relative cover within at least 0.5 acre of the restoration area.

5. **Irrigation Limitation:** Supplemental irrigation shall be discontinued or reduced in the restoration area after a minimum of 2 years.

4.6 - Determination of Biologically Superior Preservation

Implementation of the proposed project and execution of the proposed design features will result in an increase in habitat quality and long-term sustainability of the existing riparian/riverine habitat on the project site. Onsite restoration of riparian habitat will improve the existing moderate quality riparian habitat, providing more dense stands riparian vegetation throughout Drainage 9, and increase the overall function and long-term value of riparian habitat within the proposed detention basins at a key juncture with Criteria Cells and the San Jacinto Wildlife Area.

Project-specific mitigation measures cannot be determined at this point; therefore, the three mitigation scenarios (onsite creation, offsite creation, and offsite purchase of mitigation credits) should be retained as options until each project-specific analysis is completed. Because of the low-to-moderate quality riparian/riverine habitat within the WLCSP, any combination of onsite creation, offsite creation, or offsite purchase of mitigation credits would result in an overall increase in function and value of riverine/riparian habitat on a local and regional scale.

SECTION 5: CERTIFICATION

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

Date: December 5, 2013 Signed: _____

Scott A. Crawford
Section Manager of Natural Resources
FCS, Irvine, California

SECTION 6: REFERENCES

California Department of Fish and Game (CDFG). 2003 (July). State and Federally Listed Endangered, Threatened, and Rare Plants of California. California, Department of Fish and Game, Natural Heritage Division, Natural Diversity Data Base. Sacramento, CA.

California Department of Fish and Game (CDFG). 2003 (September). List of California Terrestrial Natural Communities. California Department of Fish and Game, Natural Diversity Data Base. Sacramento, CA.

California Department of Fish and Game (CDFG). 2004 (July). Special Plants List. California Department of Fish and Game, Natural Diversity Data Base. Sacramento, CA.

California Department of Fish and Game (CDFG). 2013. RareFind 4 personal computer program. Data Base Record Search for Information on Threatened, Endangered, Rare, or Otherwise Sensitive Species for the Sunnymead and El Casco, California 7.5-minute USGS Topographic Quadrangle. California Department of Fish and Game, State of California Resources Agency. Sacramento, CA.

California Native Plant Society (CNPS). 1994-1997. California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California. David C. Hudson & Associates and the Information Center for the Environment. U.C. Davis.

CH2M Hill. 2013. Master Plan of Drainage Report for World Logistics Center Specific Plan and Environmental Impact Report.

FirstCarbon Solution | Michael Brandman Associates (FCS 2013b). Delineation of Jurisdictional Waters and Wetlands for the World Logistics Center Specific Plan. City of Moreno valley, Riverside County, California. On File at FCS.

FirstCarbon Solution/Michael Brandman Associates (FCS 2013a). Habitat Assessment and Western Riverside County MSHCP Consistency Analysis World Logistics Center Specific Plan. City of Moreno valley, Riverside County, California. On File at FCS.

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

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

Ingles, L.G. 1965. Mammals of the Pacific States, California, Oregon, Washington. Stanford University Press. Stanford, CA.

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

Peterson, R.T. 1990. A Field Guide to Western Birds. Houghton Mifflin Company, Boston.

Riverside County Integrated Plan (RCIP). 2003. Revised Species Account Reports. Website: http://ecoregion.ucr.edu/dudek/accounts/Plants.pdf.

Riverside County. 1996. Habitat Conservation Plan for Stephen's Kangaroo Rat in Western Riverside County.

Riverside County. 2003 (June). Final Western Riverside County Multiple Species Habitat Conservation Plan. Website: www.rcip.org.

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

Stebbins, R.C. 2003. Western Reptiles and Amphibians. Houghton Mifflin Company, Boston, New York.

Tibor, D.P. 2001. California Native Plant Society's Inventory of Rare and Endangered Plants of California. California Native Plant Society. Special Publication, No. 1, 6th ed.

United States Army Corps of Engineers (USACE). 2001. Guidelines for Jurisdictional Determinations for Waters of the United States in the Arid Southwest (Arid Southwest Guidelines).

United States Department of Agriculture (USDA). 1971. Soil Survey: Western Riverside County, California. Department of the Interior. Washington, DC: U.S. Government Printing Office.

United States Department of the Interior, Geological Survey (USGS). 1979. El Casco, California 7.5-minute USGS Topographic Quadrangle Map. Department of the Interior. Washington, DC: U.S. Government Printing Office.

United States Department of the Interior, Geological Survey (USGS). 1980. Sunnymead, California 7.5-minute USGS Topographic Quadrangle Map. Department of the Interior. Washington, DC: U.S. Government Printing Office.

Appendix G: Regulatory Background

REGULATORY BACKGROUND

10.1.1 - Sensitive Plant and Wildlife Species

Sensitive species are native species that have been accorded special legal or management protection because of concern for their continued existence. There are several categories of protection at both federal and state levels, depending on the magnitude of threat to continued existence and existing knowledge of population levels.

Federal Endangered Species Act

The USFWS administers the Federal Endangered Species Act (FESA). The FESA provides a process for listing species as either threatened or endangered, and methods of protecting listed species. The FESA defines as "endangered" any plant or animal species that is in danger of extinction throughout all or a significant portion of its known geographic range. A "threatened" species is a species that is likely to become endangered. A "proposed" species is one that has been officially proposed by the USFWS for addition to the federal threatened and endangered species list.

FESA Section 9 prohibits "take" of threatened or endangered species. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. Take can include disturbance to habitats used by a threatened or endangered species during any portion of its life history. The presence of any federally threatened or endangered species in a biological survey area generally imposes severe constraints on development, particularly if development would result in "take" of the species or its habitat. Under the regulations of the FESA, the USFWS may authorize "take" when it is incidental to, but not the purpose of, an otherwise lawful act.

California Endangered Species Act

CDFW administers the California Endangered Species Act (CESA). The State of California considers an "endangered" species one whose prospects of survival and reproduction are in immediate jeopardy. A "threatened" species is one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management. A "rare" species is one present in such small numbers throughout its portion of its known geographic range that it may become endangered if its present environment worsens. The rare species designation applies to California native plants. State threatened and endangered species are fully protected against take, as defined above. The term "species of special concern" is an informal designation used by CDFW for some declining wildlife species that are not state candidates for listing. This designation does not provide legal protection, but signifies that these species are recognized as sensitive by CDFW.

California Native Plant Society

The California Native Plant Society (CNPS) is a California resource conservation organization that has developed an inventory of California's sensitive plant species. This inventory summarizes

information on the distribution, rarity, and endangerment of California's vascular plants. The inventory is divided into four lists based on the rarity of the species. In addition, the CNPS provides an inventory of plant communities that are considered sensitive by the state and federal resource agencies, academic institutions, and various conservation groups. Determination of the level of sensitivity is based on the number and size of remaining occurrences as well as recognized threats.

Migratory Bird Treaty Act

The MBTA protects all common wild birds found in the United States (U.S.) except the house sparrow, starling, feral pigeon, and resident game birds such as pheasant, grouse, quail, and wild turkey. Resident game birds are managed separately by each state. The MBTA makes it unlawful for anyone to kill, capture, collect, possess, buy, sell, trade, ship, import, or export any migratory bird including feathers, parts, nests, or eggs.

California Fish and Game Code - Section 3503 and Section 3511

The CDFW administers the CFG Code. There are particular sections of the CFG Code that are applicable to natural resource management. For example, Section 3503 of the CFG Code states it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird that is protected under the MBTA. CFG Code Section 3503.5 further protects all birds in the orders Falconiformes and Strigiformes, birds of prey such as hawks and owls, and their eggs and nests from any form of take. CFG Code Section 3511 lists fully protected bird species where the CDFW is unable to authorize the issuance of permits or licenses to take these species.

10.1.2 - Jurisdictional Waters and Wetlands

Impacts to natural drainage features and wetland areas are regulated by the USACE, RWQCB, and CDFW based upon the policies and regulations discussed below.

United States Army Corp of Engineers Regulations

Federal Clean Water Act - Section 404

The USACE administers Section 404 of the federal Clean Water Act (CWA). This section regulates the discharge of dredge and fill material into waters of the U.S. USACE has established a series of nationwide permits that authorize certain activities in waters of the U.S., if a proposed activity can demonstrate compliance with standard conditions. Normally, USACE requires an individual permit for an activity that will affect an area equal to or in excess of 0.5 acre of waters of the U.S. Projects that result in impacts to less than 0.5 acre can normally be conducted pursuant to one of the nationwide permits, if consistent with the standard permit conditions.

Waters of the United States

Waters of the U.S., as defined in the Code of Federal Regulations (CFR) Section 328.3, include all waters or tributaries to waters such as lakes, rivers, intermittent and perennial streams, mudflats, sand-flats, natural ponds, wetlands, wet meadows, and other aquatic habitats. Frequently, waters of the U.S., with at least intermittently flowing water or tidal influences are demarcated by an OHWM. The OHWM is defined in CFR Section 328.3(e) as the line on the shore established by the fluctuations

of water and indicated by physical characteristics such as a clear, natural line impressed on the bank shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. In this region, the OHWM is typically indicated by the presence of an incised streambed with defined bank shelving.

In June 2001, the USACE South Pacific Division has issued Guidelines for Jurisdictional Delineations for Waters of the United States in the Arid Southwest. The purpose of this document was to provide background information concerning physical characteristics of dry land drainage systems. These guidelines were reviewed and used to identify jurisdictional drainage features within the biological survey area.

Wetlands

According to the USACE Wetlands Delineation Manual, Technical Report, three criteria must be satisfied to classify an area as a jurisdictional wetland:

1. A predominance of plant life that is adapted to life in wet conditions (hydrophytic vegetation)
2. Soils that saturate, flood, or pond long enough during the growing season to develop anaerobic conditions in the upper part (hydric soils)
3. Permanent or periodic inundation or soils saturation, at least seasonally (wetland hydrology)

Wetland vegetation is characterized by vegetation in which more than 50 percent of the composition of dominant plant species are obligate wetland, facultative wetland, and/or facultative species that occur in wetlands. As a result of the 2001 Solid Waste Agency of North Cook County (SWANCC) case, a wetland must show connectivity to a stream course in order for such a feature to be considered jurisdictional. Although wetland criteria was used to identify if areas were considered wetlands, the exact limits of jurisdiction were not measured based on the standard wetland delineation protocol as described in the 1987 USACE manual.

United States Army Corp of Engineers Regulated Activities

The USACE regulates the discharge of dredged or fill material, including, but not limited to, grading, placing of rip-rap for erosion control, pouring concrete, laying sod, and stockpiling excavated material. Activities that generally do not involve a regulated discharge, if performed specifically in a manner to avoid discharges, include driving pilings, drainage channel maintenance, temporary mining and farm/forest roads, and excavating without stockpiling.

Regional Water Quality Control Board Regulations

Clean Water Act - Section 401

According to section 401 of the CWA, “any applicant for a Federal permit for activities that involve a discharge to waters of the State, shall provide the Federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the Federal Clean Water Act.” Therefore, before the USACE will issue a

Section 404 permit, applicants must apply for and receive a Section 401 water quality certification from the RWQCB.

Porter-Cologne Water Quality Act

The RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, within any region that could affect the water of the state" (water code §13260(a)), pursuant to provisions of the Porter-Cologne Water Quality Act. "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (water code Section 13050 (e)).

Regional Water Quality Control Board Regulated Activities

Under Section 401 of the CWA, the RWQCB regulates all activities that are regulated by the USACE. Additionally, under the Porter-Cologne Water Quality Act, the RWQCB regulates all activities, including dredging, filling, or discharge of materials into waters of the state that are not regulated by the USACE due to a lack of connectivity with a navigable water body and/or lack of an OHWM.

California Department of Fish and Game Regulations

California Fish and Game Code Section 1600 to Section 16003

The CFG Code mandates that "it is unlawful for any person to substantially divert or obstruct the natural flow or substantially changes the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds, without first notifying the department of such activity." CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses, including dry washes, characterized by the presence of hydrophytic vegetation, the location of definable bed and banks, and the presence of existing fish or wildlife resources.

Furthermore, CDFW jurisdiction is often extended to habitats adjacent to watercourses, such as oak woodlands in canyon bottoms or willow woodlands that function as part of the riparian system. Historic court cases have further extended CDFW jurisdiction to include watercourses that seemingly disappear, but re-emerge elsewhere. Under the CDFW definition, a watercourse need not exhibit evidence of an OHWM to be claimed as jurisdiction. However, CDFW does not regulate isolated wetlands; that is, those that are not associated with a river, stream, or lake.

California Department of Fish and Wildlife Regulated Activities

The CDFW regulates activities that involve diversions, obstruction, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife resources.

Western Riverside County Multiple Species Conservation Plan

The Western Riverside County MSHCP is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) focusing on conservation of species and their associated habitats in Western Riverside County. The MSHCP allows Riverside County and its Cities to better control local land-use decisions and maintain a strong economic climate in the region while addressing the requirements of the state and federal Endangered Species Acts.

The overall goal of the MSHCP is to enhance and maintain biological diversity and ecosystem processes while allowing future economic growth. The MSHCP will result in an MSHCP Conservation Area in excess of 500,000 acres and focuses on conservation of 146 species including amphibians, reptiles, birds, mammals, invertebrates, and plants. The MSHCP Conservation Area includes approximately 347,000 acres on existing PQP Lands and approximately 153,000 acres of Additional Reserve Land.

The MSHCP Plan Area encompasses approximately 1.26 million acres (1,966 square miles); it includes all unincorporated Riverside County land west of the crest of the San Jacinto Mountains to the Orange County line, as well as the jurisdictional areas of the Cities of Temecula, Murrieta, Lake Elsinore, Canyon Lake, Norco, Corona, Riverside, Moreno Valley, Banning, Beaumont, Calimesa, Perris, Hemet, San Jacinto and recently added Eastvale, Menifee, Wildomar and Jurupa Valley. It provides a coordinated MSHCP Conservation Area and implementation program to preserve biological diversity and maintain the region's quality of life.

The MSHCP serves as a HCP pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act of 1973 (FESA), as well as a Natural Communities Conservation Plan (NCCP) under the NCCP Act of 2001. The MSHCP allows the City of Moreno Valley as well as other signatories of the Plan to authorize "Take" of plant and wildlife species identified within the Plan Area. The United States Fish and Wildlife Service (USFWS) and CDFW have authority to regulate the Take of Threatened, Endangered, and rare Species. Under the MSHCP, the FWS and CDFW can grant "Take Authorization" for otherwise lawful actions—such as public and private Development that may incidentally Take or harm individual species or their Habitat outside of the MSHCP Conservation Area—in exchange for the assembly and management of a coordinated MSHCP Conservation Area.

Of the 1.26 million acres covered by the MSHCP, 500,000 acres have been designated for preservation: 347,000 acres are already conserved as PQP land and another 45,270 acres have been acquired as habitat by the Regional Conservation Authority (RCA). According to the most recent RCA-MSHCP Annual Report (2010), the City of Moreno Valley has a high-end goal of conserving 130 acres within their sphere of influence of the MSHCP; the City has already conserved 1030 acres (RCA Annual Report 2011, Table 3). Altogether, Riverside County has reached 77 percent of the goal in the MSHCP.

10.1.3 - Jurisdictional Criteria

The Federal Manual for Identifying and Delineating Jurisdictional Wetlands (1987) sets forth three mandatory criteria and a number of non-mandatory field indicators to use in evaluating whether or not an area is a jurisdictional wetland. The three mandatory criteria are hydrophytic vegetation, hydric soils, and wetland hydrology. The following paragraphs discuss the mandatory criteria, the field indicators, and other reference materials used to determine if each criterion has been met at the Project Site.

Hydrophytic Vegetation

Hydrophytic vegetation is defined as plant life growing in water, soil, or substrate that is at least periodically deficient in oxygen because of excessive water content. The United States Fish and Wildlife Service (USFWS) has published the National List of Plant Species That Occur in Wetlands, and divided plants into four groups based on their "wetland indicator status:"

1. Obligate wetland plants (OBL) that occur almost always in wetlands under natural conditions
2. Facultative wetland plants (FACW) that usually occur in wetlands but occasionally are found in upland areas
3. Facultative plants (FAC) that are equally likely to occur in wetlands as well as upland
4. Facultative upland plants (FACU) that usually occur in upland areas but occasionally are found in wetlands

An area has hydrophytic vegetation when, under normal circumstances, more than 50 percent of the composition of dominant plant species from all strata are obligate wetland (OBL), facultative wetland (FACW) and/or facultative species (FAC).

Hydric Soils

Hydric soils are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part. "Long enough" generally means 1 week during the growing season and soils that are saturated for this period usually support hydrophytic vegetation. The criteria for establishing the presence of hydric soils vary among different types of soils and between normal circumstances, disturbed areas, and problem areas. Due to their wetness during the growing season, hydric soils usually develop certain morphological properties that can be readily observed in the field. Prolonged anaerobic soil conditions typically lower the soil redox potential, causing a chemical reduction of some soil components, mainly iron oxides and manganese oxides. This reduction is typically reflected by the presence of iron or manganese concretions, gleying, or mottling. Other field indicators of hydric soils include the presence of sulfidic material, an aquic, or peraquic moisture regime, or a spodic horizon. All organic soils, with the exception of Folists, are classified as hydric soils.

Wetland Hydrology

Wetland hydrology is permanent or periodic inundation, or soil saturation for a significant period during the growing season. Numerous factors influence the wetness of an area, including precipitation, stratigraphy, topography, soil permeability, and plant cover. At certain times of the year in most wetlands, and in certain types of wetlands at most times, wetland hydrology is quite evident, since surface water or saturated soils may be observed. Yet, in many instances, especially along the uppermost boundary of wetlands, hydrology is not readily apparent. Despite this limitation, hydrologic indicators can be useful for confirming that a site with hydrophytic vegetation and hydric soils still exhibits wetland hydrology. While hydrologic indicators are sometimes diagnostic of the presence of wetlands, they are generally either operationally impracticable, as in

the case of recorded data, or technically inaccurate, as in the case of some field indicators, for delineating wetland boundaries.

The following hydrologic indicators, while not necessarily indicative of hydrologic events during the growing season or in wetlands alone, do provide evidence that inundation or soil saturation has occurred at some time:

- Visual observation of inundation
- Visual observation of soil saturation
- Oxidized channels (rhizospheres) associated with living roots and rhizomes
- Water marks
- Drift lines
- Waterborne sediment deposits
- Water-stained leaves
- Surface scoured areas
- Morphological plant adaptations
- Hydric soil characteristics

Appendix H:
Riverside County Integrated Project (RCIP) Conservation Summary Report and Attachment

Riverside County Transporation and Land Management Agency - TLMA

Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)

APN	Cell	Cell Group	Acres	Area Plan	Sub Unit
422070005	Not A Part	Independent	2.37	Reche Canyon / Badlands	Not a Part
422070006	Not A Part	Independent	42.49	Reche Canyon / Badlands	Not a Part
422070010	Not A Part	Independent	39.77	Reche Canyon / Badlands	Not a Part
422070014	Not A Part	Independent	10.11	Reche Canyon / Badlands	Not a Part
422070017	Not A Part	Independent	52.33	Reche Canyon / Badlands	Not a Part
422070018	Not A Part	Independent	26.17	Reche Canyon / Badlands	Not a Part
422070019	Not A Part	Independent	13.27	Reche Canyon / Badlands	Not a Part
422070020	Not A Part	Independent	26.84	Reche Canyon / Badlands	Not a Part
422070021	Not A Part	Independent	47.49	Reche Canyon / Badlands	Not a Part
422070022	Not A Part	Independent	10.47	Reche Canyon / Badlands	Not a Part

HABITAT ASSESSMENTS

Habitat assessment shall be required and should address at a minimum potential habitat for the following species:

APN	Amphibia Species	Burrowing Owl	Criteria Area Species	Mammalian Species	Narrow Endemic Plant Species	Special Linkage Area
422070005	NO	**YES**	NO	NO	NO	NO
422070006	NO	**YES**	NO	NO	NO	NO
422070010	NO	**YES**	NO	NO	NO	NO
422070014	NO	**YES**	NO	NO	NO	NO
422070017	NO	**YES**	NO	NO	NO	NO
422070018	NO	**YES**	NO	NO	NO	NO
422070019	NO	**YES**	NO	NO	NO	NO
422070020	NO	**YES**	NO	NO	NO	NO
422070021	NO	**YES**	NO	NO	NO	NO
422070022	NO	**YES**	NO	**YES**	NO	NO

Burrowing Owl

Burrowing owl.

Mammalian Species

2) L.A. pocket mouse.

If potential habitat for these species is determined to be located on the property, focused surveys may be required during the appropriate season.

Background

The final MSHCP was approved by the County Board of Supervisors on June 17, 2003. The federal and state permits were issued on June 22, 2004 and implementation of the MSHCP began on June 23, 2004.

For more information concerning the MSHCP, contact your local city or the County of Riverside for the unincorporated areas. Additionally, the Western Riverside County Regional Conservation Authority (RCA), which oversees all the cities and County implementation of the MSHCP, can be reached at:

Western Riverside County Regional Conservation Authority
3403 10th Street, Suite 320
Riverside, CA 92501

Phone: 951-955-9700
Fax: 951-955-8873

www.wrc-rca.org

Go Back To Previous Page

GIS Home Page

TLMA Home Page

Riverside County Transporation and Land Management Agency - TLMA

Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)

APN	Cell	Cell Group	Acres	Area Plan	Sub Unit
422070023	Not A Part	Independent	2.72	Reche Canyon / Badlands	Not a Part
422070024	Not A Part	Independent	14.37	Reche Canyon / Badlands	Not a Part
422070029	Not A Part	Independent	2.6	Reche Canyon / Badlands	Not a Part
422070030	Not A Part	Independent	2.66	Reche Canyon / Badlands	Not a Part
422070031	Not A Part	Independent	2.65	Reche Canyon / Badlands	Not a Part
422070032	Not A Part	Independent	2.59	Reche Canyon / Badlands	Not a Part
422070033	Not A Part	Independent	10.58	Reche Canyon / Badlands	Not a Part
422070034	Not A Part	Independent	2.18	Reche Canyon / Badlands	Not a Part
422070035	Not A Part	Independent	2.33	Reche Canyon / Badlands	Not a Part
422070036	Not A Part	Independent	2.4	Reche Canyon / Badlands	Not a Part
422070037	Not A Part	Independent	2.45	Reche Canyon / Badlands	Not a Part
422080001	Not A Part	Independent	4.17	Reche Canyon / Badlands	Not a Part
422080002	Not A Part	Independent	47.37	Reche Canyon / Badlands	Not a Part
422080003	Not A Part	Independent	223.69	Reche Canyon / Badlands	Not a Part
422080004	Not A Part	Independent	7.6	Reche Canyon / Badlands	Not a Part
422110001	Not A Part	Independent	17.49	Reche Canyon / Badlands	Not a Part
422130001	Not A Part	Independent	91.89	Reche Canyon / Badlands	Not a Part
422130002	Not A Part	Independent	64.8	Reche Canyon / Badlands	Not a Part
422130003	Not A Part	Independent	11.76	Reche Canyon / Badlands	Not a Part
423250001	Not A Part	Independent	0.1	Reche Canyon / Badlands	Not a Part

HABITAT ASSESSMENTS

Habitat assessment shall be required and should address at a minimum potential habitat for the following species:

APN	Amphibia Species	Burrowing Owl	Criteria Area Species	Mammalian Species	Narrow Endemic Plant Species	Special Linkage Area
422070023	NO	**YES**	NO	**YES**	NO	NO
422070024	NO	**YES**	NO	**YES**	NO	NO
422070029	NO	**YES**	NO	NO	NO	NO
422070030	NO	**YES**	NO	NO	NO	NO
422070031	NO	**YES**	NO	NO	NO	NO
422070032	NO	**YES**	NO	NO	NO	NO
422070033	NO	**YES**	NO	NO	NO	NO
422070034	NO	**YES**	NO	NO	NO	NO
422070035	NO	**YES**	NO	NO	NO	NO
422070036	NO	**YES**	NO	NO	NO	NO

422070037	NO	**YES**	NO	NO	NO	NO
422080001	NO	**YES**	NO	NO	NO	NO
422080002	NO	**YES**	NO	NO	NO	NO
422080003	NO	**YES**	NO	NO	NO	NO
422080004	NO	**YES**	NO	NO	NO	NO
422110001	NO	**YES**	NO	**YES**	NO	NO
422130001	NO	**YES**	NO	**YES**	NO	NO
422130002	NO	**YES**	NO	**YES**	NO	NO
422130003	NO	**YES**	NO	**YES**	NO	NO
423250001	NO	**YES**	NO	NO	NO	NO

Burrowing Owl

Burrowing owl.

Mammalian Species

2) L.A. pocket mouse.

If potential habitat for these species is determined to be located on the property, focused surveys may be required during the appropriate season.

Background

The final MSHCP was approved by the County Board of Supervisors on June 17, 2003. The federal and state permits were issued on June 22, 2004 and implementation of the MSHCP began on June 23, 2004.

For more information concerning the MSHCP, contact your local city or the County of Riverside for the unincorporated areas. Additionally, the Western Riverside County Regional Conservation Authority (RCA), which oversees all the cities and County implementation of the MSHCP, can be reached at:

Western Riverside County Regional Conservation Authority
3403 10th Street, Suite 320
Riverside, CA 92501

Phone: 951-955-9700
Fax: 951-955-8873

www.wrc-rca.org

Go Back To Previous Page

GIS Home Page

TLMA Home Page

Riverside County Transporation and Land Management Agency - TLMA

Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)

APN	Cell	Cell Group	Acres	Area Plan	Sub Unit
423250002	Not A Part	Independent	20.26	Reche Canyon / Badlands	Not a Part
423250007	Not A Part	Independent	41.97	Reche Canyon / Badlands	Not a Part
423250008	Not A Part	Independent	51.71	Reche Canyon / Badlands	Not a Part
423250009	Not A Part	Independent	48.7	Reche Canyon / Badlands	Not a Part
423250010	Not A Part	Independent	0.04	Reche Canyon / Badlands	Not a Part
423250010	1364	D'	2.41	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423250011	Not A Part	Independent	41.41	Reche Canyon / Badlands	Not a Part
423250012	Not A Part	Independent	43.83	Reche Canyon / Badlands	Not a Part
423250013	Not A Part	Independent	40.91	Reche Canyon / Badlands	Not a Part
423250018	Not A Part	Independent	64.11	Reche Canyon / Badlands	Not a Part
423250018	1364	D'	0.4	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423260001	Not A Part	Independent	0.91	Reche Canyon / Badlands	Not a Part
423260002	Not A Part	Independent	46.26	Reche Canyon / Badlands	Not a Part
423260003	Not A Part	Independent	48.95	Reche Canyon / Badlands	Not a Part
423260004	Not A Part	Independent	48.78	Reche Canyon / Badlands	Not a Part
423260005	Not A Part	Independent	51.32	Reche Canyon / Badlands	Not a Part
423260005	1204	X	0.17	Reche Canyon / Badlands	SU3 - Badlands North
423260005	1297	X	2.71	Reche Canyon / Badlands	SU3 - Badlands North
423260006	Not A Part	Independent	39.5	Reche Canyon / Badlands	Not a Part
423260007	Not A Part	Independent	40.8	Reche Canyon / Badlands	Not a Part
423260008	Not A Part	Independent	40.47	Reche Canyon / Badlands	Not a Part
423260009	Not A Part	Independent	41.8	Reche Canyon / Badlands	Not a Part
423260009	1297	X	7.45	Reche Canyon / Badlands	SU3 - Badlands North
423270003	Not A Part	Independent	0.37	Reche Canyon / Badlands	Not a Part
423270003	1364	D'	1.22	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270003	1370	D'	39.92	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270004	Not A Part	Independent	0.49	Reche Canyon / Badlands	Not a Part
423270004	1370	D'	37.39	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake

HABITAT ASSESSMENTS

Habitat assessment shall be required and should address at a minimum potential habitat for the following species:

APN	Amphibia Species	Burrowing Owl	Criteria Area Species	Mammalian Species	Narrow Endemic Plant Species	Special Linkage Area
423250002	NO	**YES**	NO	NO	NO	NO
423250007	NO	**YES**	NO	NO	NO	NO

423250008	NO	**YES**	NO	NO	NO	NO
423250009	NO	**YES**	NO	NO	NO	NO
423250010	NO	**YES**	NO	**YES**	NO	NO
423250011	NO	**YES**	NO	**YES**	NO	NO
423250012	NO	**YES**	NO	NO	NO	NO
423250013	NO	**YES**	NO	NO	NO	NO
423250018	NO	**YES**	NO	**YES**	NO	NO
423260001	NO	**YES**	NO	NO	NO	NO
423260002	NO	**YES**	NO	NO	NO	NO
423260003	NO	**YES**	NO	NO	NO	NO
423260004	NO	**YES**	NO	NO	NO	NO
423260005	NO	**YES**	NO	**YES**	NO	NO
423260006	NO	**YES**	NO	NO	NO	NO
423260007	NO	**YES**	NO	NO	NO	NO
423260008	NO	**YES**	NO	NO	NO	NO
423260009	NO	**YES**	NO	NO	NO	NO
423270003	NO	**YES**	NO	NO	NO	NO
423270004	NO	**YES**	NO	NO	NO	NO

Burrowing Owl

Burrowing owl.

Mammalian Species

2) L.A. pocket mouse.

If potential habitat for these species is determined to be located on the property, focused surveys may be required during the appropriate season.

Background

The final MSHCP was approved by the County Board of Supervisors on June 17, 2003. The federal and state permits were issued on June 22, 2004 and implementation of the MSHCP began on June 23, 2004.

For more information concerning the MSHCP, contact your local city or the County of Riverside for the unincorporated areas. Additionally, the Western Riverside County Regional Conservation Authority (RCA), which oversees all the cities and County implementation of the MSHCP, can be reached at:

Western Riverside County Regional Conservation Authority
3403 10th Street, Suite 320
Riverside, CA 92501

Phone: 951-955-9700
Fax: 951-955-8873

www.wrc-rca.org

Go Back To Previous Page

GIS Home Page

TLMA Home Page

Riverside County Transporation and Land Management Agency - TLMA

Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)

APN	Cell	Cell Group	Acres	Area Plan	Sub Unit
423270006	1370	D'	35.45	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270006	1483	D'	1.95	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270007	Not A Part	Independent	0.24	Reche Canyon / Badlands	Not a Part
423270007	1370	D'	10.95	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270007	1377	D'	0.15	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270008	1370	D'	4.82	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270008	1377	D'	0.48	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270009	Not A Part	Independent	0.27	Reche Canyon / Badlands	Not a Part
423270009	1370	D'	2.4	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270009	1377	D'	0.24	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270017	Not A Part	Independent	0.06	Reche Canyon / Badlands	Not a Part
423270017	1364	D'	20.45	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270018	Not A Part	Independent	0.04	Reche Canyon / Badlands	Not a Part
423270018	1364	D'	2.06	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270018	1370	D'	37.45	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423270018	1483	D'	1.92	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280001	Not A Part	Independent	1.26	Reche Canyon / Badlands	Not a Part
423280001	1377	D'	44.72	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280002	Not A Part	Independent	1.84	Reche Canyon / Badlands	Not a Part
423280002	1377	D'	46.19	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280003	Not A Part	Independent	2.38	Reche Canyon / Badlands	Not a Part
423280003	1377	D'	0.42	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280003	1386	D'	45.37	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280004	Not A Part	Independent	3.03	Reche Canyon / Badlands	Not a Part
423280004	1297	X	0.81	Reche Canyon / Badlands	SU3 - Badlands North
423280004	1386	D'	46.94	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280004	1389	D'	11.41	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280005	1482	D'	1.28	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280006	1377	D'	33.79	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280006	1482	D'	2.09	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280007	1377	D'	35.16	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280007	1482	D'	2.48	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280008	Not A Part	Independent	2.74	Reche Canyon / Badlands	Not a Part
423280008	1377	D'	0.39	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280008	1386	D'	34.65	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280008	1482	D'	0.03	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280009	Not A Part	Independent	3.16	Reche Canyon / Badlands	Not a Part
423280009	1386	D'	36.02	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake

423280009	1389	D'	8.21	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423280009	1477	D'	0.78	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423300002	1483	D'	39.59	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423300004	1483	D'	36.33	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423300004	1577	D'	6.52	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423300009	Not A Part	Independent	0.1	Reche Canyon / Badlands	Not a Part
423300009	1483	D'	40.95	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423300010	1483	D'	36.71	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423300010	1577	D'	6.29	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423310001	1204	X	3.14	Reche Canyon / Badlands	SU3 - Badlands North
423310001	1297	X	40.93	Reche Canyon / Badlands	SU3 - Badlands North

HABITAT ASSESSMENTS

Habitat assessment shall be required and should address at a minimum potential habitat for the following species:

APN	Amphibia Species	Burrowing Owl	Criteria Area Species	Mammalian Species	Narrow Endemic Plant Species	Special Linkage Area
423270006	NO	**YES**	NO	NO	NO	NO
423270007	NO	**YES**	NO	NO	NO	NO
423270008	NO	**YES**	NO	NO	NO	NO
423270009	NO	**YES**	NO	NO	NO	NO
423270017	NO	**YES**	NO	**YES**	NO	NO
423270018	NO	**YES**	NO	**YES**	NO	NO
423280001	NO	**YES**	NO	NO	NO	NO
423280002	NO	**YES**	NO	NO	NO	NO
423280003	NO	**YES**	NO	NO	NO	NO
423280004	NO	**YES**	NO	NO	NO	NO
423280005	NO	**YES**	**YES**	NO	**YES**	NO
423280006	NO	**YES**	**YES**	NO	**YES**	NO
423280007	NO	**YES**	**YES**	NO	**YES**	NO
423280008	NO	**YES**	**YES**	NO	**YES**	NO
423280009	NO	**YES**	**YES**	NO	**YES**	NO
423300002	NO	**YES**	**YES**	**YES**	**YES**	NO
423300004	NO	**YES**	**YES**	**YES**	**YES**	NO
423300009	NO	**YES**	NO	**YES**	NO	NO
423300010	NO	**YES**	NO	**YES**	NO	NO
423310001	NO	**YES**	NO	**YES**	NO	NO

Burrowing Owl

Burrowing owl.

Criteria Area Species

3) San Jacinto Valley Crownscale, Parish's brittlescale, Davidson's saltscale, Thread-leaved brodiaea, Smooth Tarplant, Round-leaved filaree, Coulter's Goldfields, Little Mousetail, Mud Nama

Mammalian Species

2) L.A. pocket mouse.

Narrow Endemic Plant Species

3) Munz's onion, San Diego ambrosia, Many-stemmed dudleya, Spreading navarretia, California Orcutt grass, Wright's trichocoronis

If potential habitat for these species is determined to be located on the property, focused surveys may be required during the appropriate season.

Background

The final MSHCP was approved by the County Board of Supervisors on June 17, 2003. The federal and state permits were issued on June 22, 2004 and implementation of the MSHCP began on June 23, 2004.

For more information concerning the MSHCP, contact your local city or the County of Riverside for the unincorporated areas. Additionally, the Western Riverside County Regional Conservation Authority (RCA), which oversees all the cities and County implementation of the MSHCP, can be reached at:

Western Riverside County Regional Conservation Authority
3403 10th Street, Suite 320
Riverside, CA 92501

Phone: 951-955-9700
Fax: 951-955-8873

www.wrc-rca.org

Go Back To Previous Page

GIS Home Page

TLMA Home Page

Riverside County Transporation and Land Management Agency - TLMA

Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)

APN	Cell	Cell Group	Acres	Area Plan	Sub Unit
423310002	1297	X	41.29	Reche Canyon / Badlands	SU3 - Badlands North
423310003	1297	X	2.92	Reche Canyon / Badlands	SU3 - Badlands North
423310003	1389	D'	35.94	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423310004	1390	E'	11.64	Reche Canyon / Badlands	SU3 - Badlands North
423310004	1297	X	4.46	Reche Canyon / Badlands	SU3 - Badlands North
423310004	1389	D'	42.42	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423310005	1389	D'	26.7	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423310005	1477	D'	35.25	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423310006	1389	D'	27.96	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423310006	1477	D'	15.4	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423310008	1390	E'	34.69	Reche Canyon / Badlands	SU3 - Badlands North
423310008	1389	D'	4.04	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
423310008	1477	D'	0.12	Reche Canyon / Badlands	SU4 - San Jacinto Wildlife Area/Mystic Lake
478210054	Not A Part	Independent	9.8	Reche Canyon / Badlands	Not a Part
478210055	Not A Part	Independent	8.91	Reche Canyon / Badlands	Not a Part
478220001	Not A Part	Independent	27.74	Reche Canyon / Badlands	Not a Part
478220002	Not A Part	Independent	9.31	Reche Canyon / Badlands	Not a Part
478220003	Not A Part	Independent	8.95	Reche Canyon / Badlands	Not a Part
478220004	Not A Part	Independent	8.79	Reche Canyon / Badlands	Not a Part
478220005	Not A Part	Independent	9.29	Reche Canyon / Badlands	Not a Part
478220006	Not A Part	Independent	9.6	Reche Canyon / Badlands	Not a Part
478220007	Not A Part	Independent	8.4	Reche Canyon / Badlands	Not a Part
478220009	Not A Part	Independent	9.68	Reche Canyon / Badlands	Not a Part
478220010	Not A Part	Independent	9.33	Reche Canyon / Badlands	Not a Part
478220011	Not A Part	Independent	8.8	Reche Canyon / Badlands	Not a Part
478220012	Not A Part	Independent	8.94	Reche Canyon / Badlands	Not a Part
478220013	Not A Part	Independent	9.31	Reche Canyon / Badlands	Not a Part

HABITAT ASSESSMENTS

Habitat assessment shall be required and should address at a minimum potential habitat for the following species:

APN	Amphibia Species	Burrowing Owl	Criteria Area Species	Mammalian Species	Narrow Endemic Plant Species	Special Linkage Area
423310002	NO	**YES**	NO	**YES**	NO	NO
423310003	NO	**YES**	NO	NO	NO	NO
423310004	NO	**YES**	NO	**YES**	NO	NO

423310005	NO	**YES**	**YES**	**YES**	**YES**	NO
423310006	NO	**YES**	**YES**	**YES**	**YES**	NO
423310008	NO	**YES**	NO	**YES**	NO	NO
478210054	NO	**YES**	NO	NO	NO	NO
478210055	NO	**YES**	NO	NO	NO	NO
478220001	NO	**YES**	NO	NO	NO	NO
478220002	NO	**YES**	NO	NO	NO	NO
478220003	NO	**YES**	NO	NO	NO	NO
478220004	NO	**YES**	NO	NO	NO	NO
478220005	NO	**YES**	NO	NO	NO	NO
478220006	NO	**YES**	NO	NO	NO	NO
478220007	NO	**YES**	NO	NO	NO	NO
478220009	NO	**YES**	NO	NO	NO	NO
478220010	NO	**YES**	NO	NO	NO	NO
478220011	NO	**YES**	NO	NO	NO	NO
478220012	NO	**YES**	NO	NO	NO	NO
478220013	NO	**YES**	NO	NO	NO	NO

Burrowing Owl

Burrowing owl.

Criteria Area Species

3) San Jacinto Valley Crownscale, Parish's brittlescale, Davidson's saltscale, Thread-leaved brodiaea, Smooth Tarplant, Round-leaved filaree, Coulter's Goldfields, Little Mousetail, Mud Nama

Mammalian Species

2) L.A. pocket mouse.

Narrow Endemic Plant Species

3) Munz's onion, San Diego ambrosia, Many-stemmed dudleya, Spreading navarretia, California Orcutt grass, Wright's trichocoronis

If potential habitat for these species is determined to be located on the property, focused surveys may be required during the appropriate season.

Background

The final MSHCP was approved by the County Board of Supervisors on June 17, 2003. The federal and state permits were issued on June 22, 2004 and implementation of the MSHCP began on June 23, 2004.

For more information concerning the MSHCP, contact your local city or the County of Riverside for the unincorporated areas. Additionally, the Western Riverside County Regional Conservation Authority (RCA), which oversees all the cities and County implementation of the MSHCP, can be reached at:

Western Riverside County Regional Conservation Authority
3403 10th Street, Suite 320
Riverside, CA 92501

Phone: 951-955-9700
Fax: 951-955-8873

www.wrc-rca.org

Go Back To Previous Page

GIS Home Page

TLMA Home Page

Riverside County Transporation and Land Management Agency - TLMA

Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)

APN	Cell	Cell Group	Acres	Area Plan	Sub Unit
478220014	Not A Part	Independent	8.92	Reche Canyon / Badlands	Not a Part
478220015	Not A Part	Independent	18.19	Reche Canyon / Badlands	Not a Part
478220016	Not A Part	Independent	18.15	Reche Canyon / Badlands	Not a Part
478220017	Not A Part	Independent	8.69	Reche Canyon / Badlands	Not a Part
478220018	Not A Part	Independent	9.25	Reche Canyon / Badlands	Not a Part
478220019	Not A Part	Independent	9.51	Reche Canyon / Badlands	Not a Part
478220020	Not A Part	Independent	8.42	Reche Canyon / Badlands	Not a Part
478220021	Not A Part	Independent	8.6	Reche Canyon / Badlands	Not a Part
478220022	Not A Part	Independent	9.66	Reche Canyon / Badlands	Not a Part
478220023	Not A Part	Independent	9.38	Reche Canyon / Badlands	Not a Part
478220024	Not A Part	Independent	8.8	Reche Canyon / Badlands	Not a Part
478220025	Not A Part	Independent	9.05	Reche Canyon / Badlands	Not a Part
478220026	Not A Part	Independent	9.35	Reche Canyon / Badlands	Not a Part
478220027	Not A Part	Independent	9.45	Reche Canyon / Badlands	Not a Part
478220028	Not A Part	Independent	8.99	Reche Canyon / Badlands	Not a Part
478220029	Not A Part	Independent	3	Reche Canyon / Badlands	Not a Part
478220030	Not A Part	Independent	2.94	Reche Canyon / Badlands	Not a Part
478220031	Not A Part	Independent	3.05	Reche Canyon / Badlands	Not a Part
478230001	Not A Part	Independent	8.1	Reche Canyon / Badlands	Not a Part
478230002	Not A Part	Independent	9.04	Reche Canyon / Badlands	Not a Part

HABITAT ASSESSMENTS

Habitat assessment shall be required and should address at a minimum potential habitat for the following species:

APN	Amphibia Species	Burrowing Owl	Criteria Area Species	Mammalian Species	Narrow Endemic Plant Species	Special Linkage Area
478220014	NO	**YES**	NO	NO	NO	NO
478220015	NO	**YES**	NO	NO	NO	NO

478220016	NO	**YES**	NO	NO	NO	NO
478220017	NO	**YES**	NO	NO	NO	NO
478220018	NO	**YES**	NO	NO	NO	NO
478220019	NO	**YES**	NO	NO	NO	NO
478220020	NO	**YES**	NO	NO	NO	NO
478220021	NO	**YES**	NO	NO	NO	NO
478220022	NO	**YES**	NO	NO	NO	NO
478220023	NO	**YES**	NO	NO	NO	NO
478220024	NO	**YES**	NO	NO	NO	NO
478220025	NO	**YES**	NO	NO	NO	NO
478220026	NO	**YES**	NO	NO	NO	NO
478220027	NO	**YES**	NO	NO	NO	NO
478220028	NO	**YES**	NO	NO	NO	NO
478230001	NO	**YES**	NO	NO	NO	NO
478230002	NO	**YES**	NO	NO	NO	NO

Burrowing Owl

Burrowing owl.

If potential habitat for these species is determined to be located on the property, focused surveys may be required during the appropriate season.

Background

The final MSHCP was approved by the County Board of Supervisors on June 17, 2003. The federal and state permits were issued on June 22, 2004 and implementation of the MSHCP began on June 23, 2004.

For more information concerning the MSHCP, contact your local city or the County of Riverside for the unincorporated areas. Additionally, the Western Riverside County Regional Conservation Authority (RCA), which oversees all the cities and County implementation of the MSHCP, can be reached at:

Western Riverside County Regional Conservation Authority
3403 10th Street, Suite 320
Riverside, CA 92501

Phone: 951-955-9700
Fax: 951-955-8873

www.wrc-rca.org

Go Back To Previous Page

GIS Home Page

TLMA Home Page

Riverside County Transporation and Land Management Agency - TLMA

Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)

APN	Cell	Cell Group	Acres	Area Plan	Sub Unit
478230003	Not A Part	Independent	9.27	Reche Canyon / Badlands	Not a Part
478230004	Not A Part	Independent	8.88	Reche Canyon / Badlands	Not a Part
478230005	Not A Part	Independent	8.88	Reche Canyon / Badlands	Not a Part
478230006	Not A Part	Independent	8.89	Reche Canyon / Badlands	Not a Part
478230007	Not A Part	Independent	73.17	Reche Canyon / Badlands	Not a Part
478230008	Not A Part	Independent	35.7	Reche Canyon / Badlands	Not a Part
478230009	Not A Part	Independent	9.54	Reche Canyon / Badlands	Not a Part
478230010	Not A Part	Independent	8.71	Reche Canyon / Badlands	Not a Part
478230011	Not A Part	Independent	8.97	Reche Canyon / Badlands	Not a Part
478230014	Not A Part	Independent	8.7	Reche Canyon / Badlands	Not a Part
478230015	Not A Part	Independent	8.42	Reche Canyon / Badlands	Not a Part
478230016	Not A Part	Independent	9.28	Reche Canyon / Badlands	Not a Part
478230017	Not A Part	Independent	0.08	Reche Canyon / Badlands	Not a Part
478230019	Not A Part	Independent	9.1	Reche Canyon / Badlands	Not a Part
478230020	Not A Part	Independent	8.7	Reche Canyon / Badlands	Not a Part
478240002	Not A Part	Independent	8.76	Reche Canyon / Badlands	Not a Part
478240003	Not A Part	Independent	8.98	Reche Canyon / Badlands	Not a Part
478240005	Not A Part	Independent	9.06	Reche Canyon / Badlands	Not a Part
478240006	Not A Part	Independent	9	Reche Canyon / Badlands	Not a Part
478240007	Not A Part	Independent	8.58	Reche Canyon / Badlands	Not a Part
478240008	Not A Valid Parcel Number				

HABITAT ASSESSMENTS

Habitat assessment shall be required and should address at a minimum potential habitat for the following species:

APN	Amphibia Species	Burrowing Owl	Criteria Area Species	Mammalian Species	Narrow Endemic Plant Species	Special Linkage Area
478230003	NO	**YES**	NO	NO	NO	NO

Riverside County Transporation and Land Management Agency - TLMA

Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)

APN	Cell	Cell Group	Acres	Area Plan	Sub Unit
478240011	Not A Part	Independent	8.54	Reche Canyon / Badlands	Not a Part
478240017	Not A Part	Independent	8.79	Reche Canyon / Badlands	Not a Part
478240019	Not A Part	Independent	9.27	Reche Canyon / Badlands	Not a Part
478240021	Not A Part	Independent	8.71	Reche Canyon / Badlands	Not a Part
478240022	Not A Part	Independent	8.73	Reche Canyon / Badlands	Not a Part
478240023	Not A Part	Independent	8.26	Reche Canyon / Badlands	Not a Part
478240024	Not A Part	Independent	9.6	Reche Canyon / Badlands	Not a Part
478240025	Not A Part	Independent	9.12	Reche Canyon / Badlands	Not a Part
478240026	Not A Part	Independent	9.71	Reche Canyon / Badlands	Not a Part
478240027	Not A Part	Independent	9.6	Reche Canyon / Badlands	Not a Part
478240028	Not A Part	Independent	8.77	Reche Canyon / Badlands	Not a Part
478240029	Not A Part	Independent	9.25	Reche Canyon / Badlands	Not a Part
478240030	Not A Part	Independent	9.28	Reche Canyon / Badlands	Not a Part
478240031	Not A Part	Independent	2.08	Reche Canyon / Badlands	Not a Part
478240032	Not A Part	Independent	1.95	Reche Canyon / Badlands	Not a Part
478240033	Not A Part	Independent	1.67	Reche Canyon / Badlands	Not a Part
478240034	Not A Part	Independent	1.76	Reche Canyon / Badlands	Not a Part
488350003	Not A Part	Independent	8.6	Reche Canyon / Badlands	Not a Part
488350004	Not A Part	Independent	9.27	Reche Canyon / Badlands	Not a Part
488350005	Not A Part	Independent	9.39	Reche Canyon / Badlands	Not a Part

HABITAT ASSESSMENTS

Habitat assessment shall be required and should address at a minimum potential habitat for the following species:

APN	Amphibia Species	Burrowing Owl	Criteria Area Species	Mammalian Species	Narrow Endemic Plant Species	Special Linkage Area
478240011	NO	**YES**	NO	**YES**	NO	NO
478240017	NO	**YES**	NO	**YES**	NO	NO
478240019	NO	**YES**	NO	**YES**	NO	NO
478240021	NO	**YES**	NO	NO	NO	NO
478240022	NO	**YES**	NO	**YES**	NO	NO
478240023	NO	**YES**	NO	NO	NO	NO
478240024	NO	**YES**	NO	NO	NO	NO
478240025	NO	**YES**	NO	NO	NO	NO
478240026	NO	**YES**	NO	**YES**	NO	NO
478240027	NO	**YES**	NO	**YES**	NO	NO

478240028	NO	**YES**	NO	**YES**	NO	NO
478240029	NO	**YES**	NO	**YES**	NO	NO
478240030	NO	**YES**	NO	**YES**	NO	NO
478240031	NO	**YES**	NO	NO	NO	NO
478240032	NO	**YES**	NO	NO	NO	NO
478240033	NO	**YES**	NO	NO	NO	NO
478240034	NO	**YES**	NO	NO	NO	NO
488350003	NO	**YES**	NO	NO	NO	NO
488350004	NO	**YES**	NO	NO	NO	NO
488350005	NO	**YES**	NO	NO	NO	NO

Burrowing Owl

Burrowing owl.

Mammalian Species

2) L.A. pocket mouse.

If potential habitat for these species is determined to be located on the property, focused surveys may be required during the appropriate season.

Background

The final MSHCP was approved by the County Board of Supervisors on June 17, 2003. The federal and state permits were issued on June 22, 2004 and implementation of the MSHCP began on June 23, 2004.

For more information concerning the MSHCP, contact your local city or the County of Riverside for the unincorporated areas. Additionally, the Western Riverside County Regional Conservation Authority (RCA), which oversees all the cities and County implementation of the MSHCP, can be reached at:

Western Riverside County Regional Conservation Authority
3403 10th Street, Suite 320
Riverside, CA 92501

Phone: 951-955-9700
Fax: 951-955-8873

www.wrc-rca.org

Go Back To Previous Page

GIS Home Page

TLMA Home Page

Riverside County Transporation and Land Management Agency - TLMA

Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)

APN	Cell	Cell Group	Acres	Area Plan	Sub Unit
488350006	Not A Part	Independent	8.88	Reche Canyon / Badlands	Not a Part
488350007	Not A Part	Independent	8.94	Reche Canyon / Badlands	Not a Part
488350008	Not A Part	Independent	9.23	Reche Canyon / Badlands	Not a Part
488350009	Not A Part	Independent	9.44	Reche Canyon / Badlands	Not a Part
488350010	Not A Part	Independent	8.85	Reche Canyon / Badlands	Not a Part
488350012	Not A Valid Parcel Number				
488350013	Not A Valid Parcel Number				
488350014	Not A Valid Parcel Number				
488350015	Not A Part	Independent	33.64	Reche Canyon / Badlands	Not a Part
488350019	Not A Part	Independent	8.3	Reche Canyon / Badlands	Not a Part
488350021	Not A Part	Independent	8.88	Reche Canyon / Badlands	Not a Part
488350023	Not A Part	Independent	8.64	Reche Canyon / Badlands	Not a Part
488350025	Not A Part	Independent	8.44	Reche Canyon / Badlands	Not a Part

HABITAT ASSESSMENTS

Habitat assessment shall be required and should address at a minimum potential habitat for the following species:

APN	Amphibia Species	Burrowing Owl	Criteria Area Species	Mammalian Species	Narrow Endemic Plant Species	Special Linkage Area
488350006	NO	**YES**	NO	NO	NO	NO
488350007	NO	**YES**	NO	NO	NO	NO
488350008	NO	**YES**	NO	NO	NO	NO
488350009	NO	**YES**	NO	NO	NO	NO
488350010	NO	**YES**	NO	NO	NO	NO
488350015	NO	**YES**	NO	NO	NO	NO
488350019	NO	**YES**	NO	NO	NO	NO
488350021	NO	**YES**	NO	NO	NO	NO
488350023	NO	**YES**	NO	NO	NO	NO

488350025	NO	**YES**	NO	NO	NO	NO

Burrowing Owl

Burrowing owl.

If potential habitat for these species is determined to be located on the property, focused surveys may be required during the appropriate season.

Background

The final MSHCP was approved by the County Board of Supervisors on June 17, 2003. The federal and state permits were issued on June 22, 2004 and implementation of the MSHCP began on June 23, 2004.

For more information concerning the MSHCP, contact your local city or the County of Riverside for the unincorporated areas. Additionally, the Western Riverside County Regional Conservation Authority (RCA), which oversees all the cities and County implementation of the MSHCP, can be reached at:

Western Riverside County Regional Conservation Authority
3403 10th Street, Suite 320
Riverside, CA 92501

Phone: 951-955-9700
Fax: 951-955-8873

www.wrc-rca.org

Go Back To Previous Page

GIS Home Page

TLMA Home Page

Appendix I:
Assessor's Parcel Numbers

Survey Area Parcel Numbers

Assessor's Parcel Numbers				
42204009	42204010	42204014	42204015	422070005
422070006	422070010	422070014	422070017	422070018
422070019	422070020	422070021	422070022	422070029
422070030	422070031	422070032	422070033	422070034
422070035	422070036	422070037	422080001	422080002
422080003	422080004	422110001	422130001	422130002
422130003	423250001	423250002	423250007	423250008
423250009	423250010	423250011	423250012	423250013
423250018	423260001	423260002	423260003	423260004
423260005	423260006	423260007	423260008	423260009
423270003	423270004	423270006	423270007	423270008
423270009	423270017	423270018	423280001	423280002
423280003	423280004	423280005	423280006	423280007
423280008	423280009	423300002	423300004	423300009
423300010	423310001	423310002	423310003	423310004
423310005	423310006	423310008	478210054	478210055
478220001	478220002	478220003	478220004	478220005
478220006	478220007	478220009	478220010	478220011
478220012	478220013	478220014	478220015	478220016
478220017	478220018	478220019	478220020	478220021
478220022	478220023	478220024	478220025	478220026
478220027	478220028	478220029	478220030	478220031
478230001	478230002	478230003	478230004	478230005
478230006	478230007	478230008	478230009	478230010
478230011	478230014	478230015	478230016	478230017
478230019	478230020	478240002	478240003	478240005
478240006	478240007	478240008	478240011	478240012
478240013	478240014	478240015	478240016	478240017
478240019	478240021	478240022	478240023	478240024
478240025	478240026	478240027	478240028	478240029
478240030	478240031	478240032	478240033	478240034
488350003	488350004	488350005	488350006	488350007

Assessor's Parcel Numbers				
488350008	488350009	488350010	488350012	488350013
488350014	488350015	488350019	488350021	488350023
488350025				

Appendix J:
City of Moreno Valley City Council Resolution No. 2004-07

RESOLUTION NO. 2004-07

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MORENO VALLEY TO ESTABLISH PROCEDURES AND REQUIREMENTS FOR IMPLEMENTATION OF THE WESTERN RIVERSIDE COUNTY MULTIPLE SPECIES HABITAT CONSERVATION PLAN

THE CITY COUNCIL OF THE CITY OF MORENO VALLEY DOES HEREBY RESOLVE AS FOLLOWS:

SECTION I. TITLE

This Resolution shall be known as the " Western Riverside County Multiple Species Habitat Conservation Plan Implementation Policy."

SECTION II. FINDINGS AND PURPOSE

A. The City Council finds that the ecosystems of the City of Moreno Valley ("City") and/or western Riverside County and the vegetation communities and sensitive species they support are fragile, irreplaceable resources that are vital to the general welfare of all residents; these vegetation communities and natural areas contain habitat value which contributes to the region's environmental resources; and special protections for these vegetation communities and natural areas must be established to prevent future endangerment of the plant and animal species that are dependent upon them. This Resolution will protect the City's and the region's biological resources, vegetation communities, and natural areas, and prevent their degradation and loss by guiding development outside of biological resource core areas, and by establishing mitigation standards which will be applied to development projects. Adoption and implementation of this Resolution will enable the City to achieve the conservation goals set forth in the Western Riverside County Multiple Species Habitat Conservation Plan ("MSHCP"), to implement the associated Implementing Agreement executed by the City Council on January 13, 2004, and to preserve the ability of affected property owners to make reasonable use of their land consistent with the requirements of the National Environmental Policy Act ("NEPA"), the California Environmental Quality Act ("CEQA"), the Federal Endangered Species Act ("FESA"), the California Endangered Species Act ("CESA"), the California Natural Community Conservation Planning Act ("NCCP Act"), and other applicable laws.

B. The purpose and intent of this Resolution is to maintain and restore biological diversity and the natural ecosystem processes which support this diversity, to protect vegetation communities and natural areas within the City and/or western Riverside County which support species covered under the MSHCP; to maintain a future of economic development within the City by providing a streamlined regulatory process from which development can proceed in an orderly process; and to protect the existing character of the City and the region through the implementation of a system of reserves which will provide for permanent open space, community edges, and habitat conservation for species covered by the MSHCP.

SECTION III. APPLICATION OF REGULATIONS

Except as provided in Section IV, this Resolution shall apply to all land within the City shown on the MSHCP Plan Map, attached as Exhibit "1." Upon application to the City for a development project, an applicant shall be required to comply with the procedures set forth in this Resolution. Upon the City's initiation of a project that is subject to CEQA, the City shall be required to comply with the procedures set forth in this Resolution. No project requiring a discretionary, or certain ministerial permits or approvals that could have adverse impacts to species covered under the MSHCP shall be approved by the City, and no City-initiated public project shall be undertaken, unless the project is consistent with the MSHCP and this Resolution.

SECTION IV. EXEMPTIONS

This Resolution shall not apply to the following:

A. The adoption or amendment of the City's General Plan.

B. The adoption or amendment of any land use or zoning ordinance.

C. Any project for which and to the extent that a vesting tentative map pursuant to the Subdivision Map Act, or a development agreement pursuant to Government Code sections 65864 et seq., approved or executed prior to adoption of this Resolution, confers vested rights under the City's ordinances or state law to proceed with the project notwithstanding the enactment of this Resolution. Projects subject to this exemption must comply with all provisions of any applicable state and federal law.

D. Any project for which the City Council determines that application of this Resolution would result in the property owner being deprived of all reasonable economic use of the property in violation of federal or state constitutional prohibitions against the taking of property without just compensation.

SECTION V. PROCEDURES

A. The City shall implement the requirements for private and public project contributions to the MSHCP Conservation Area as set forth in MSHCP, by electing to comply with one of the following:

1. The City shall implement the Property Owner Initiated Habitat Evaluation and Acquisition Negotiation Process ("HANS"); or

2. Upon receipt of a completed application for a project that is subject to this Resolution, or prior to the City's initiation of a project, the City shall determine whether all or a portion of the real property for the project is located within the boundaries of the Criteria Area. If the City determines that all or a portion of the real property for the project is located within the Criteria Area, then the City shall perform the following:

   a. Determine the design criteria applicable to the project based on the particular USGS section, quadrant, and/or cell grouping in which the project property is located, as set forth in Section 3.2 of the MSHCP; and

   b. Impose as a condition to the City's approval of the project such conditions as are necessary to ensure the project complies with and implements the design criteria applicable to the project.

B. The City shall implement the requirements for the Protection of Riparian/Riverine Areas and Vernal Pools set forth in Section 6.1.2 of the MSHCP in the following manner:

1. As part of the CEQA review of the project, the property owner shall comply, or the City shall comply if the project is City-initiated, with the surveying, mapping, and documentation procedures set forth in Section 6.1.2 of the MSHCP for Riparian/Riverine Areas and Vernal Pools on the project property; and

2. Based on the documentation prepared for the project, the City shall impose as a condition to the City's approval of the project such conditions as are necessary to ensure the project complies with and implements the policies for the Protection of Riparian/Riverine Areas and Vernal Pools set forth in Section 6.1.2 of the MSHCP.

C. The City shall implement the requirements for the Protection of Narrow Endemic Plant Species set forth in Section 6.1.3 of the MSHCP in the following manner:

1. As part of the CEQA review of the project, the property owner shall comply, or the City shall comply if the project is City-initiated, with the site-specific focused survey procedures set forth in Section 6.1.3 of the MSHCP; and

2. Based on the site-specific focused surveys prepared for the project, the City shall impose as a condition to the City's approval of the project such conditions as are necessary to ensure the project complies with and implements the Narrow Endemic Plant Species policies set forth in Section 6.1.3 of the MSHCP.

D. The City shall impose as a condition to the City's approval of a project such conditions as are necessary to ensure the project complies with and implements the Urban/Wildlands Interface Guidelines set forth in Section 6.1.4 of the MSHCP.

E. The City shall impose as a condition to the City's approval of a project such conditions as are necessary to ensure surveys are prepared for the project as required by Section 6.3.2 of the MSHCP.

F. Pursuant to Section V of this Resolution and the MSHCP, the City may transfer any property interest acquired or obtained in fee title or as a conservation easement to the Western Riverside County Regional Conservation Authority for management. The City may also grant a conservation easement to the California Department of Fish and Game for any property interest obtained pursuant to Section V of this Resolution. A Sample conservation easement is attached as Exhibit "2."

SECTION VI. DEFINITIONS

For purposes of this Resolution, the following terms shall have the meaning set forth herein:

A. "Area Plan" means the sixteen areas designated for purposes of providing an organizational framework for the Criteria Area, and for purposes of developing specific design criteria that will be utilized in assembling land within the Criteria Area that will become a part of the MSHCP Conservation Area.

B. "Criteria Area" means the general area designated and denoted on the MSHCP Plan Map as the "Criteria Area," comprised of approximately 310,000 acres from which new habitat conservation within the MSHCP Conservation Area will be assembled.

C. "MSHCP" means the Western Riverside County Multiple Species Habitat Conservation Plan.

D. "MSHCP Plan Map" means the map of the area encompassed by the MSHCP as set forth in the attached Exhibit "1."

E. "Project" means any action or activity that is subject to the City's ministerial or discretionary approval, or any action or activity undertaken directly by the City, for the purpose of developing or improving real property, including, but not limited to, the following: the sale, purchase, or lease of City-owned property; the approval of a tentative subdivision map; the issuance of a license, permit, certificate, variance, or other entitlement for the development or improvement of real property, including the clearing or grading of real property (except for weed or fire hazard abatement); and the construction or improvement of streets, water, sewer, or other public facilities or public works.

SECTION VII. EFFECTIVE DATE

The Mayor shall sign this Resolution and the City Clerk shall attest thereto, and thereupon and thereafter this Resolution shall take effect and be in force according to law.

APPROVED, AND ADOPTED, this 13th day of January, 2004.

Frank West

Frank West, Mayor

ATTEST:

Alice Reed

Alice Reed, City Clerk

APPROVED AS TO FORM:

Robert D. Hewitt

City Attorney

RESOLUTION JURAT

STATE OF CALIFORNIA)

COUNTY OF RIVERSIDE) ss.

CITY OF MORENO VALLEY)

I, ALICE REED, City Clerk of the City of Moreno Valley, California, do hereby certify that Resolution No. 2004-07 was duly and regularly adopted by the City Council of the City of Moreno Valley at a regular meeting thereof held on the 13th of January, 2004 by the following vote:

AYES: Councilmembers Flickinger, Stewart, and White and Mayor West

NOES: None

ABSENT: Councilmember Batey

ABSTAIN: None

Alice Reed

CITY CLERK

(SEAL)

EXHIBIT "1" IS THE MSHCP PLAN MAP WHICH IS EXHIBIT "A" TO THE IMPLEMENTING AGREEMENT

EXHIBIT "2" IS THE MODEL CONSERVATION EASEMENT

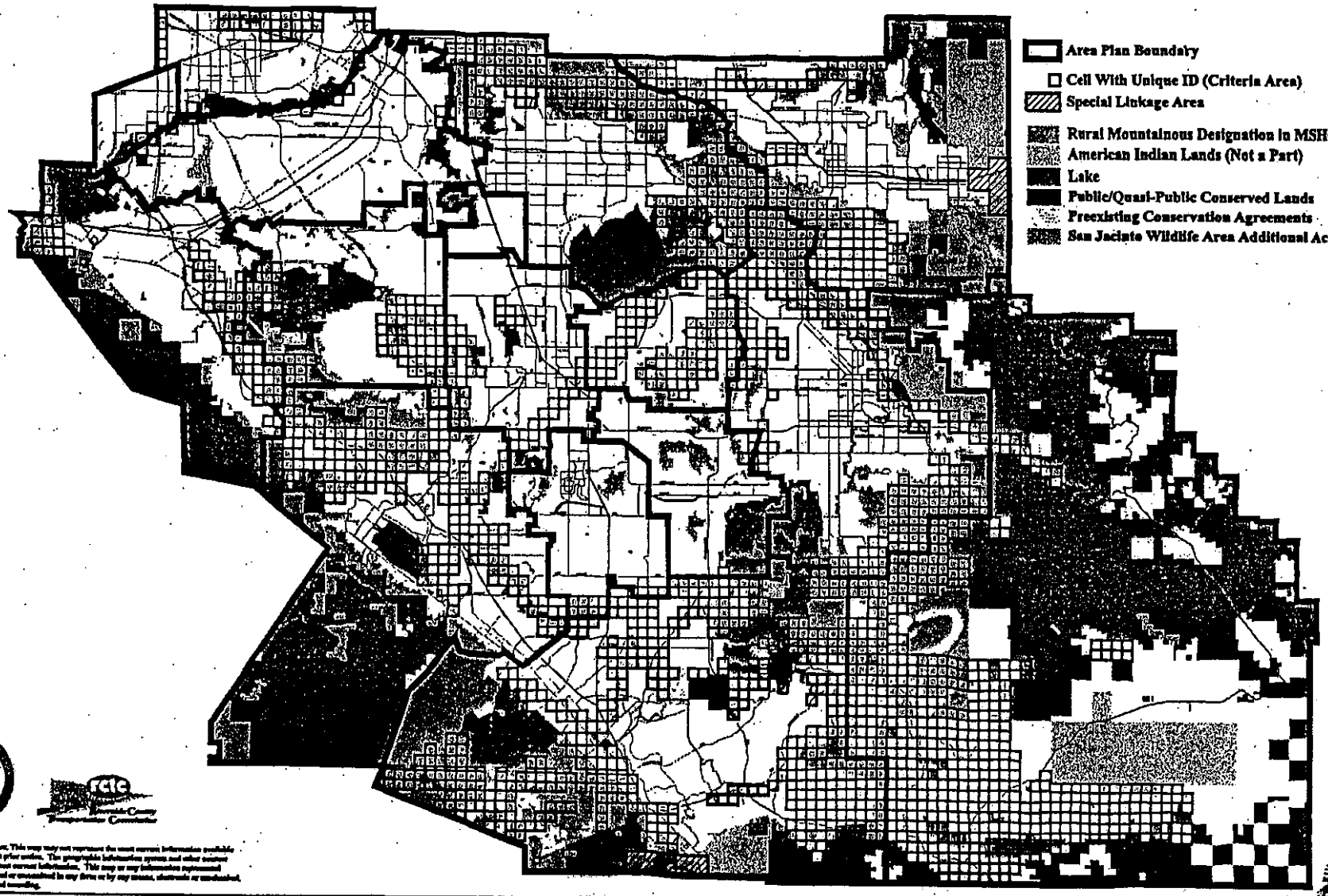


Exhibit: A

0 1 2 3 Miles

MSHCP Plan Map

EXHIBIT 2 TO MODEL CITY RESOLUTION AND MODEL CITY ORDINANCE ADOPTING MSHCP

Ex 2
Reso 2004-07

MODEL CONSERVATION EASEMENT

RECORDING REQUESTED BY AND	)
WHEN RECORDED MAIL TO:	)
	)
State of California	)
Wildlife Conservation Board	)
1807 13th Street, Suite 103	)
Sacramento, CA 95814	)
	)

Space Above Line for Recorder's Use Only

CONSERVATION EASEMENT DEED

THIS CONSERVATION EASEMENT DEED is made this ____ day of _____, 20____, by _____ ("Grantor"), in favor of THE STATE OF CALIFORNIA ("Grantee"), acting by and through its Department of Fish and Game, a subdivision of the California Resources Agency, with reference to the following facts:

RECITALS

A. Grantor is the sole owner in fee simple of certain real property in the County of Riverside, State of California, designated Assessor's Parcel Number _____ and more particularly described in Exhibit "A" attached hereto and incorporated herein by this reference (the "Property");

B. The Property possesses wildlife and habitat values (collectively, "conservation values") of great importance to Grantee, the people of the State of California and the people of the United States;

C. The Property provides high quality habitat for [*list plant and/or animal species*] and contains [*list habitats; native and/or non-native*];

D. The Department of Fish and Game ("DFG") has jurisdiction, pursuant to California Fish and Game Code section 1802, over the conservation, protection, and management of fish, wildlife, native plants and the habitat necessary for biologically sustainable populations of those species, and the Department of Fish and Game is authorized to hold easements for these purposes pursuant to Civil Code section 815.3, Fish and Game Code section 1348, and other provisions of California law;

E. The United States Fish & Wildlife Service ("USFWS") has jurisdiction over the conservation, protection, restoration, enhancement, and management of fish, wildlife, native plants and habitat necessary for biologically sustainable populations of those species to the extent set forth in the Federal Endangered Species Act, 16 U.S.C. § § 1531, *et seq.* ("FESA"), and other federal laws; and

F. This Conservation Easement provides mitigation for certain impacts of [*describe project*] located in the City of [ ], County of Riverside, State of California, pursuant to [*California Natural Community Conservation Planning Act Permit*] dated [ ] ("NCCP Permit"), Permit #_____ dated [ ], issued by USFWS pursuant to Section 10(a) of the FESA ("Section 10(a) Permit"), and the corresponding Implementing Agreement and Western Riverside County Multiple Species Habitat Conservation Plan/Natural Community Conservation Plan ("MSHCP") dated [ ]. The Section 10(a) Permit, the NCCP Permit, the Implementing Agreement, and the MSHCP are all incorporated herein by this reference. Information regarding these documents may be obtained from the USFWS and the DFG, for each respective permit, and from [RCA?] regarding the Implementing Agreement and the MSHCP. Contact information for USFWS and DFG is provided in the notice provision in Section 13 of this Conservation Easement. The RCA may be contacted at [address].

COVENANTS, TERMS, CONDITIONS AND RESTRICTIONS

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and pursuant to California law, including Civil Code sections 815, et seq., Grantor hereby voluntarily grants and conveys to Grantee a conservation easement in perpetuity over the Property.

1. Purpose. The purpose of this Conservation Easement is to ensure the Property will be retained forever in a natural condition and to prevent any use of the Property that will impair or interfere with the conservation values of the Property. Grantor intends that this Conservation Easement will confine the use of the Property to such activities, including, without limitation, those involving the preservation and enhancement of native species and their habitat in a manner consistent with the habitat conservation purposes of this Conservation Easement.

2. Grantee's Rights. To accomplish the purposes of this Conservation Easement, Grantor hereby grants and conveys the following rights to Grantee, and to USFWS as a third party beneficiary hereof, or their designee:

(a) To preserve and protect the conservation values of the Property;

(b) To enter upon the Property at reasonable times in order to monitor Grantor's compliance with and to otherwise enforce the terms of this Conservation Easement, and for scientific research and interpretive purposes by Grantee or its designees, provided that Grantee shall not unreasonably interfere with Grantor's authorized use and quiet enjoyment of the Property;

(c) To enter upon the Property at reasonable times to carry out management and monitoring consistent with the conservation goals, monitoring program, and management plans for the MSHCP;

(d) To prevent any activity on or use of the Property that is inconsistent with the purposes of this Conservation Easement and to require the restoration of such areas or features of the Property that may be damaged by any act, failure to act, or any use that is inconsistent with the purposes of this Conservation Easement;

(e) All mineral, air and water rights necessary to protect and to sustain the biological resources of the Property; and

(f) All present and future development rights.

3. Prohibited Uses. Any activity on or use of the Property inconsistent with the purposes of this Conservation Easement is prohibited. Without limiting the generality of the foregoing, the following uses by Grantor, Grantor's agents, and third parties, are expressly prohibited:

(a) Unseasonal watering; use of fertilizers, pesticides, biocides, herbicides or other agricultural chemicals; weed abatement activities; incompatible fire protection activities; and any and all other activities and uses which may adversely affect the purposes of this Conservation Easement;

(b) Use of off-road vehicles and use of any other motorized vehicles except on existing roadways;

(c) Grazing or other agricultural activity of any kind;

(d) Recreational activities including, but not limited to, horseback riding, biking, hunting or fishing, except as may be specifically permitted under this Conservation Easement;

(e) Commercial or industrial uses;

(f) Any legal or de facto division, subdivision or partitioning of the Property;

(g) Construction, reconstruction or placement of any building, billboard or sign, or any other structure or improvement of any kind;

(h) Depositing or accumulation of soil, trash, ashes, refuse, waste, biosolids or any other materials;

(i) Planting, introduction or dispersal of non-native or exotic plant or animal species;

(j) Filling, dumping, excavating, draining, dredging, mining, drilling, removing or exploring for or extraction of minerals, loam, soil, sands, gravel, rocks or other material on or below the surface of the Property;

(k) Altering the surface or general topography of the Property, including building of roads;

(l) Removing, destroying, or cutting of trees, shrubs or other vegetation, except as required by law for: fire breaks; maintenance of existing foot trails or roads; prevention or treatment of disease; or control of non-native or exotic plants; and

(m) Manipulating, impounding or altering any natural water course, body of water or water circulation on the Property, and activities or uses detrimental to water quality, including but not limited to, degradation or pollution of any surface or subsurface waters.

4. Grantor's Duties. Grantor shall undertake all reasonable actions to prevent the unlawful entry and trespass by persons whose activities may degrade or harm the conservation values of the Property. In addition, Grantor shall undertake all necessary actions to perfect Grantee's rights under Section 2 of this Conservation Easement, including but not limited to, Grantee's water rights.

5. Reserved Rights. Grantor reserves to itself, and to its personal representatives, heirs, successors, and assigns, all rights accruing from its ownership of the Property, including the right to engage in or to permit or invite others to engage in all uses of the Property that are consistent with the purposes of this Conservation Easement.

6. Grantee's Remedies. If Grantee determines that Grantor is in violation of the terms of this Conservation Easement or that a violation is threatened, Grantee shall give written notice to Grantor of such violation and demand in writing the cure of such violation. If Grantor fails to cure the violation within fifteen (15) days after receipt of written notice and demand from Grantee, or if the cure reasonably requires more than fifteen (15) days to complete and Grantor fails to begin the cure within the 15-day period or fails to continue diligently to complete the cure, Grantee may bring an action at law or in equity in a court of competent jurisdiction to enforce compliance by Grantor with the terms of this Conservation Easement, to recover any damages to which Grantee may be entitled for violation by Grantor of the terms of this Conservation Easement or for any injury to the conservation values of the Property, to enjoin the violation, *ex parte* as necessary, by temporary or permanent injunction without the necessity of proving either actual damages or the inadequacy of otherwise available legal remedies, or for other equitable relief, including, but not limited to, the restoration of the Property to the condition in which it existed prior to any such violation or injury. Prior to implementation of any remedial or restorative actions, Grantor shall consult with the USFWS and DFG. Without limiting Grantor's liability therefor, Grantee may apply any damages recovered to the cost of undertaking any corrective action on the Property.

If Grantee, in its sole discretion, determines that circumstances require immediate action to prevent or mitigate damage to the conservation values of the Property, Grantee may pursue its remedies under this Section 6 without prior notice to Grantor or without waiting for the period provided for cure to expire. Grantee's rights under this section apply equally to actual or threatened violations of the terms of this Conservation Easement. Grantor agrees that Grantee's remedies at law for any violation of the terms of this Conservation Easement are inadequate and that Grantee shall be entitled to the injunctive relief described in this section, both prohibitive and mandatory, in addition to such other relief to which Grantee may be entitled, including specific performance of the terms of this Conservation Easement, without the necessity of proving either actual damages or the inadequacy of otherwise available legal remedies. Grantee's remedies described in this section shall be cumulative and shall be in addition to all remedies now or hereafter existing at law or in equity, including but not limited to, the remedies set forth in Civil Code sections 815, et seq., inclusive. The failure of Grantee to discover a violation or to take immediate legal action shall not bar Grantee from taking such action at a later time.

If at any time in the future Grantor, Grantee, or any successor in interest uses or threatens to use the Property for purposes inconsistent with this Conservation Easement, or Grantee or any successor in interest releases or abandons this Conservation Easement in whole or in part, then, notwithstanding Civil Code section 815.7, the California Attorney General, USFWS, or any entity or individual with a justiciable interest in the preservation of this Conservation Easement has standing as interested parties in any proceeding affecting this Conservation Easement.

6.1. Costs of Enforcement. Any costs incurred by Grantee, where Grantee is the prevailing party, in enforcing the terms of this Conservation Easement against Grantor, including, but not limited to, costs of suit and attorneys' and experts' fees, and any costs of restoration necessitated by Grantor's negligence or breach of this Conservation Easement shall be borne by Grantor.

6.2. Grantee's Discretion. Enforcement of the terms of this Conservation Easement by Grantee shall be at the discretion of Grantee, and any forbearance by Grantee to exercise its rights under this Conservation Easement in the event of any breach of any term of this Conservation Easement by Grantor shall not be deemed or construed to be a waiver by Grantee of such term or of any subsequent breach of the same or any other term of this Conservation Easement or of any of Grantee's rights under this Conservation Easement. No delay or omission by Grantee in the exercise of any right or remedy upon any breach by Grantor shall impair such right or remedy or be construed as a waiver.

6.3. Acts Beyond Grantor's Control. Nothing contained in this Conservation Easement shall be construed to entitle Grantee to bring any action against Grantor for any injury to or change in the Property resulting from: (a) any natural cause beyond Grantor's control, including, without limitation, fire not caused by Grantor, flood, storm, and earth movement, or any prudent action taken by Grantor under emergency conditions to prevent, abate, or mitigate significant injury to the Property resulting from such causes; or (b) acts by Grantee or its employees.

6.4. Department of Fish and Game and USFWS Right of Enforcement. All rights and remedies conveyed to Grantee under this Conservation Easement Deed shall extend to and are enforceable by the Department of Fish and Game and USFWS. These rights are in addition to, and do not limit, the rights of enforcement under [*insert title of permits/Agreement described in Recital F, above*].

7. Fence Installation and Maintenance. Grantor shall install and maintain a fence reasonably satisfactory to Grantee and USFWS around the Conservation Easement area to protect the conservation values of the Property, including but not limited to wildlife corridors.

8. Access. This Conservation Easement does not convey a general right of access to the public.

9. Costs and Liabilities. Grantor retains all responsibilities and shall bear all costs and liabilities of any kind related to the ownership, operation, upkeep, and maintenance of the Property. Grantor agrees that Grantee shall have no duty or responsibility for the operation or maintenance of the Property, the monitoring of hazardous conditions thereon, or the protection of Grantor, the public or any third parties from risks relating to conditions on the Property. Grantor remains solely responsible for obtaining any applicable governmental permits and approvals for any activity or use permitted by this Conservation Easement Deed, and any activity or use shall be undertaken in accordance with all applicable federal, state, local and administrative agency statutes, ordinances, rules, regulations, orders and requirements.

9.1. Taxes; No Liens. Grantor shall pay before delinquency all taxes, assessments, fees, and charges of whatever description levied on or assessed against the Property by competent authority (collectively "taxes"), including any taxes imposed upon, or incurred as a result of, this Conservation Easement, and shall furnish Grantee with satisfactory evidence of payment upon request. Grantor shall keep Grantee's interest in the Property free from any liens, including those arising out of any obligations incurred by Grantor or any labor or materials furnished or alleged to have been furnished to or for Grantor at or for use on the Property.

9.2. Hold Harmless. Grantor shall hold harmless, protect and indemnify Grantee and its directors, officers, employees, agents, contractors, and representatives and the heirs, personal representatives, successors and assigns of each of them (each an "Indemnified Party" and, collectively, "Indemnified Parties") from and against any and all liabilities, penalties, costs, losses, damages, expenses (including, without limitation, reasonable attorneys' fees and experts' fees), causes of action, claims, demands, orders, liens or judgments (each a "Claim" and, collectively, "Claims"), arising from or in any way connected with: (a) injury to or the death of any person, or physical damage to any property, resulting from any act, omission, condition, or other matter related to or occurring on or about the Property, regardless of cause, unless due solely to the negligence of Grantee or any of its employees; (b) the obligations specified in Sections 4, 9, and 9.1; and (c) the existence or administration of this Conservation Easement. If any action or proceeding is brought against any of the Indemnified Parties by reason of any such Claim, Grantor shall, at the election of and upon written notice from Grantee, defend such action or proceeding by counsel reasonably

acceptable to the Indemnified Party or reimburse Grantee for all charges incurred for services of the Attorney General in defending the action or proceeding.

9.3. Condemnation. The purposes of the Conservation Easement are presumed to be the best and most necessary public use as defined at Code of Civil Procedure section 1240.680 notwithstanding Code of Civil Procedure sections 1240.690 and 1240.700.

10. Assignment. This Conservation Easement is transferable, but Grantee or any successor in interest shall give Grantor, USFWS, and DFG, if applicable, at least thirty (30) days prior written notice of the transfer. Grantee or any successor in interest may assign its rights and obligations under this Conservation Easement only in a form reasonably approved in writing by both DFG and USFWS in favor of an entity or organization authorized to acquire and hold conservation easements pursuant to Civil Code section 815.3. Grantee or any successor in interest shall require the assignee to agree in writing that the conservation purposes that this grant is intended to advance shall continue to be fulfilled by such assignee in accordance with the NCCP Permit and the Section 10(a) Permit and shall require the assignee to record the assignment in the county where the Property is located.

11. Release or Abandonment. Grantee or any successor in interest shall not release, modify, relinquish or abandon its rights and obligations under this Conservation Easement without the prior written consent of USFWS and DFG.

12. Subsequent Transfers. Grantor agrees to incorporate the terms of this Conservation Easement in any deed or other legal instrument by which Grantor divests itself of any interest in all or any portion of the Property, including, without limitation, a leasehold interest. Grantor further agrees to give written notice to Grantee and USFWS of the intent to transfer any interest at least thirty (30) days prior to the date of such transfer. Grantee shall have the right to prevent subsequent transfers in which prospective subsequent claimants or transferees are not given notice of the covenants, terms, conditions and restrictions of this Conservation Easement. The failure of Grantor or Grantee to perform any act provided in this section shall not impair the validity of this Conservation Easement or limit its enforceability in any way.

13. Notices. Any notice, demand, request, consent, approval, or communication that either party desires or is required to give to the other shall be in writing and be served personally or sent by recognized overnight courier that guarantees next-day delivery or by first class mail, postage fully prepaid, addressed as follows:

To Grantor:

To Grantee: Department of Fish and Game
Region __
[Region's address]
Attn: Regional Manager

With a copy to: Department of Fish and Game
Office of the General Counsel
1416 Ninth Street, 12th Floor
Sacramento, California 95814-2090
Attn: General Counsel

To USFWS: U.S. Fish and Wildlife Office
Attn: Field Supervisor
2730 Loker Avenue West
Carlsbad, CA 92008

or to such other address as either party shall designate by written notice to the other. Notice shall be deemed effective upon delivery in the case of personal delivery or delivery by overnight courier or, in the case of delivery by first class mail, five (5) days after deposit into the United States mail.

14. Amendment. This Conservation Easement may be amended by Grantor and Grantee only by mutual written agreement. Any such amendment shall be consistent with the purposes of this Conservation Easement and shall not affect its perpetual duration. Any such amendment shall be recorded in the official records of Riverside County, State of California.

15. General Provisions.

(a) Controlling Law. The interpretation and performance of this Conservation Easement shall be governed by the laws of the State of California, disregarding the conflicts of law principles of such state.

(b) Liberal Construction. Any general rule of construction to the contrary notwithstanding, this Conservation Easement shall be liberally construed to effect the purposes of this Conservation Easement and the policy and purpose of Civil Code sections 815, et seq. If any provision in this instrument is found to be ambiguous, an interpretation consistent with the purposes of this Conservation Easement that would render the provision valid shall be favored over any interpretation that would render it invalid.

(c) Severability. If a court of competent jurisdiction voids or invalidates on its face any provision of this Conservation Easement Deed, such action shall not affect the remainder of this Conservation Easement Deed. If a court of competent jurisdiction voids or invalidates the application of any provision of this Conservation Easement Deed to a person or circumstance, such action shall not affect the application of the provision to other persons or circumstances.

(d) Entire Agreement. This instrument sets forth the entire agreement of the parties with respect to the Conservation Easement and supersedes all prior discussions, negotiations, understandings, or agreements relating to the Conservation Easement. No alteration or variation of this instrument shall be valid or binding unless contained in an amendment in accordance with Section 13.

(e) No Forfeiture. Nothing contained herein will result in a forfeiture or reversion of Grantor's title in any respect.

(f) Successors. The covenants, terms, conditions, and restrictions of this Conservation Easement Deed shall be binding upon, and inure to the benefit of, the parties hereto and their respective personal representatives, heirs, successors, and assigns and shall constitute a servitude running in perpetuity with the Property.

(g) Termination of Rights and Obligations. A party's rights and obligations under this Conservation Easement terminate upon transfer of the party's interest in the Conservation Easement or Property, except that liability for acts or omissions occurring prior to transfer shall survive transfer.

(h) Captions. The captions in this instrument have been inserted solely for convenience of reference and are not a part of this instrument and shall have no effect upon its construction or interpretation.

(i) No Hazardous Materials Liability. Grantor represents and warrants that it has no knowledge of any release or threatened release of Hazardous Materials (defined below) in, on, under, about or affecting the Property. Without limiting the obligations of Grantor under Section 9.2, Grantor agrees to indemnify, protect and hold harmless the Indemnified Parties (defined in Section 9.2) against any and all Claims (defined in Section 9.2) arising from or connected with any Hazardous Materials present, alleged to be present, or otherwise associated with the Property at any time, except any Hazardous Materials placed, disposed or released by Grantee, its employees or agents. If any action or proceeding is brought against any of the Indemnified Parties by reason of any such Claim, Grantor shall, at the election of and upon written notice from Grantee, defend such action or proceeding by counsel reasonably acceptable to the Indemnified Party or reimburse Grantee for all charges incurred for services of the Attorney General in defending the action or proceeding.

Despite any contrary provision of this Conservation Easement Deed, the parties do not intend this Conservation Easement to be, and this Conservation Easement shall not be, construed such that it creates in or gives to Grantee any of the following:

(1) The obligations or liabilities of an "owner" or "operator," as those terms are defined and used in Environmental Laws (defined below), including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (42 U.S.C. sections 9601 et seq.; hereinafter, "CERCLA"); or

(2) The obligations or liabilities of a person described in 42 U.S.C. section 9607(a)(3) or (4); or

(3) The obligations of a responsible person under any applicable Environmental Laws; or

(4) The right to investigate and remediate any Hazardous Materials associated with the Property; or

(5) Any control over Grantor's ability to investigate, remove, remediate or otherwise clean up any Hazardous Materials associated with the Property.

The term "Hazardous Materials" includes, without limitation, (a) material that is flammable, explosive or radioactive; (b) petroleum products, including by-products and fractions thereof; and (c) hazardous materials, hazardous wastes, hazardous or toxic substances, or related materials defined in CERCLA, the Hazardous Materials Transportation Act (49 U.S.C. sections 6901 et seq.); the Hazardous Waste Control Law (California Health & Safety Code sections 25100 et seq.); the Hazardous Substance Account Act (California Health & Safety Code Section 25300 et seq.), and in the regulations adopted and publications promulgated pursuant to them, or any other applicable federal, state or local laws, ordinances, rules, regulations or orders now in effect or enacted after the date of this Conservation Easement Deed.

The term "Environmental Laws" includes, without limitation, any federal, state, local or administrative agency statute, ordinance, rule, regulation, order or requirement relating to pollution, protection of human health or safety, the environment or Hazardous Materials. Grantor represents, warrants and covenants to Grantee that Grantor's activities upon and use of the Property will comply with all Environmental Laws.

(j) Warranty. Grantor represents and warrants that there are no outstanding mortgages, liens, encumbrances or other interests in the Property which have not been expressly subordinated to this Conservation Easement Deed, and that the Property is not subject to any other conservation easement.

(k) Additional Easements. Grantor shall not grant any additional easements, rights of way or other interests in the Property (other than a security interest that is subordinate to this Conservation Easement Deed), or grant or otherwise abandon or relinquish any water agreement relating to the Property, without first obtaining the written consent of Grantee. Grantee may withhold such consent if it determines that the proposed interest or transfer is inconsistent with the purposes of this Conservation Easement or will impair or interfere with the conservation values of the Property. This Section 14(k) shall not prohibit transfer of a fee or

leasehold interest in the Property that is subject to this Conservation Easement Deed and complies with Section 11.

(l) Counterparts. The parties may execute this instrument in two or more counterparts, which shall, in the aggregate, be signed by both parties; each counterpart shall be deemed an original instrument as against any party who has signed it. In the event of any disparity between the counterparts produced, the recorded counterpart shall be controlling.

IN WITNESS WHEREOF Grantor has executed this Conservation Easement Deed the day and year first above written.

GRANTOR:

BY: _____

NAME: _____

TITLE: _____

DATE: _____

Approved as to form:

General Counsel
State of California
Department of Fish and Game

BY: _____

CERTIFICATE OF ACCEPTANCE

This is to certify that the interest in real property conveyed by the Conservation Easement Deed by _____, dated _____, to the State of California, grantee, acting by and through its Department of Fish and Game (the "Department"), a governmental agency (under Government Code section 27281), is hereby accepted by the undersigned officer on behalf of the Department, pursuant to authority conferred by resolution of the California Fish and Game Commission on _____.

GRANTEE:

STATE OF CALIFORNIA, by and through its
DEPARTMENT OF FISH AND GAME

By: _____

Title: _____
Authorized Representative

Date: _____

Appendix K:
Burrowing Owl Relocation Plan

Burrowing Owl Relocation Plan
World Logistics Center Specific Plan
City of Moreno Valley, Riverside County, California

Sunnymead and El Casco USGS 7.5-minute Topographic Quadrangles
Sections 1, 10, 11, 12, 13, and 14 Township 3 South, Range 2 West and
Sections 5, 6, 7, 8, 9, 16, 17, 18, 19, 20, and 21 Township 3 South, Range 3 West

Prepared for:

Highland Fairview Operating Company
14225 Corporate Way
Moreno Valley, CA 92553
310.201.0262

Contact: Mr. Wayne Peterson,
Vice President, Community Planning

Prepared by:

FirstCarbon Solutions | Michael Brandman Associates
220 Commerce, Suite 200
Irvine, CA 92602
714.508.4100

Contact: Scott A. Crawford M.A.
Section Manager of Natural Resources

Report Date: October 1, 2014

Table of Contents

Acronyms and Abbreviations v

Section 1: Introduction 1
- 1.1 - Survey Area Location 2
- 1.2 - Project Description 2

Section 2: Methodology 11
- 2.1 - Pre-Construction Avoidance Surveys 12
- 2.2 - Adverse Effects to Burrowing Owls, Avoidance, and Buffer Zones 13
- 2.3 - General Burrowing Owl Protective Measures 16
- 2.4 - Site-Specific Protection Measures 17
  - 2.4.1 - Burrowing Owl Avoidance if Present 17
  - 2.4.2 - Burrowing Owl Relocation Standards 17
- 2.5 - MSHCP Burrowing Owl Measures 20

Section 3: Conclusion 21

Section 4: Certification 23

Section 5: Project Responsibility 25

Section 6: References 27

Appendix A: Assessor's Parcel Numbers

List of Exhibits

Exhibit 1: Regional Location Map 3

Exhibit 2: Local Vicinity Map - Topographic Base 5

Exhibit 3: Local Vicinity Map - Aerial Base 7

Exhibit 4: Survey Area Components 9

ACRONYMS AND ABBREVIATIONS

APNs	Assessor's Parcel Numbers
BMP	Best Management Practice
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFG	California Fish and Game
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CSC	California Species of Concern
CWA	Clean Water Act
DBESP	Determination of Biologically Equivalent or Superior Preservation
DE	diesel emissions
DPM	diesel particulate matter
EEP	Employee Education Program
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
ESA	Environmentally Sensitive Area
FCS-MBA	FirstCarbon Solutions | Michael Brandman Associates
FESA	Federal Endangered Species Act
GIS	Geographic Information Systems
GPS	Global Positioning System
HCP	Habitat Conservation Plan
HRA	Health Risk Assessment
I	Interstate
JPR	Joint Project Review
LPSRA	Lake Perris State Recreation Area
MBA	Michael Brandman Associates
MBTA	Migratory Bird Treaty Act
MSHCP	Multiple Species Habitat Conservation Plan
MWD	Metropolitan Water District
NCCP	Natural Communities Conservation Plan
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System

OEHHA	Office of Environmental Health Hazard Assessment (State of California)
OHWM	ordinary high water mark
PQP	Public/Quasi-Public
RCA	Regional Conservation Authority
RCIP	Riverside County Integrated Project
RPW	Relatively Permanent Water
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SCE	Southern California Edison
SDG&E	San Diego Gas and Electric
SJWA	San Jacinto Wildlife Area
SKR	Stephens' kangaroo rat
sq ft	square feet
SR	State Route
SWANCC	Solid Waste Agency of Northern Cook County
SWPPP	Storm Water Pollution Prevention Plan
TNW	Traditional Navigable Water
USACE	United States Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WDR	Waste Discharge Requirement
WLCSP	World Logistics Center Specific Plan

SECTION 1: INTRODUCTION

At the request of Highland Fairview Operating Company, FirstCarbon Solutions | Michael Brandman Associates (FCS-MBA) prepared this Burrowing Owl Relocation Plan to comply with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) at the request of the Regional Conservation Authority (RCA). This document is part of the Habitat Assessment and MSHCP Consistency Analysis and is provided as part of the MSHCP consistency documentation with regard to burrowing owl relocation, if required following project-specific analysis.

The western burrowing owl is protected under the federal Migratory Bird Treaty Act (MBTA) of 1918 and is designated as a Species of Special Concern by the California Department of Fish and Wildlife (CDFW). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR (Code of Federal Regulation) Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21).

Sections 3503, 3503.5, and 3513 of the CDFW Code prohibit the take, possession, or destruction of birds, their nests or their eggs. To avoid violations of these federal and state regulations, provisions of these laws generally require that project-related disturbance at active nesting territories be reduced or eliminated during the nesting season, from February 1 to August 31. Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) may be considered "take," and is potentially punishable by fines and/or imprisonment. Individual burrowing owls are protected, regardless of season, in order to ensure that a viable breeding population of this owl species persists in the wild.

The purpose of this relocation plan is to ensure that standard protection, avoidance, and minimization measures will be implemented to avoid and reduce adverse effects of the project to western burrowing owls. This Burrowing Owl Relocation Plan will establish standard guidelines for the relocation of western burrowing owls, should that become necessary. The burrowing owl is a covered species under the MSHCP; however, it is not considered adequately conserved by the plan, and additional conservation is required until the conservation goal for this species has been met. Until then, additional assessments and conservation considerations may be required.

Presence/absence survey methods will follow the current MSHCP standards. All active/passive relocation efforts, if necessary, will be coordinated in consultation with CDFW and RCA and will follow the most current methods at the time of project development. This may include on-site conservation or off-site purchase of additional land in order to conserve burrowing owl under the MSHCP. Mitigation requirements will be negotiated with City of Moreno Valley, in consultation with RCA and CDFW at the time of future project development.

In addition, for those areas within the World Logistics Center Specific Plan (WLCSP) that continue to provide suitable habitat for burrowing owl, regardless of whether the habitat is currently occupied, new protocol-level burrowing owl surveys will be completed. Based on previous observations within the WLCSP over a 10-year span, no more than one pair of burrowing owl has ever been observed

during a single nesting season. This statement is based on protocol-level surveys conducted within the project site since 2005, which provides sufficient data to support these findings.

1.1 - Survey Area Location

The survey area is generally located north of State Route 74 (SR-74), south of SR-60, east of Interstate (I) 215, and west of SR-79 (Exhibit 1). Specifically, the survey area is located within Sections 1, 2, 10, 11, 12, 13, and 14 of Township 3 South, Range 2 West; and Sections 5, 6, 7, 8, 9, 16, 17, 18, 19, 20, and 21 of Township 3 South, Range 3 West as depicted on the Sunnymead and El Casco, California, United States Geological Survey (USGS) 7.5-minute topographic maps (Exhibit 2). The survey area is specifically located south of SR-60, east of Redlands Boulevard and west of Gilman Springs Road (Exhibit 3). The survey area encompasses several contiguous parcels totaling approximately 6,063 acres, including potential off-site improvements on the eastern, northern, and western margins of the WLCSP to assess indirect impacts to "wildlands areas." Highland Fairview Operating Company is proposing to develop the WLCSP on 2,610 acres of the northern portions of the survey area (Exhibit 4). The WLCSP consists of the Assessor's Parcel Numbers (APNs) listed in Appendix A.

1.2 - Project Description

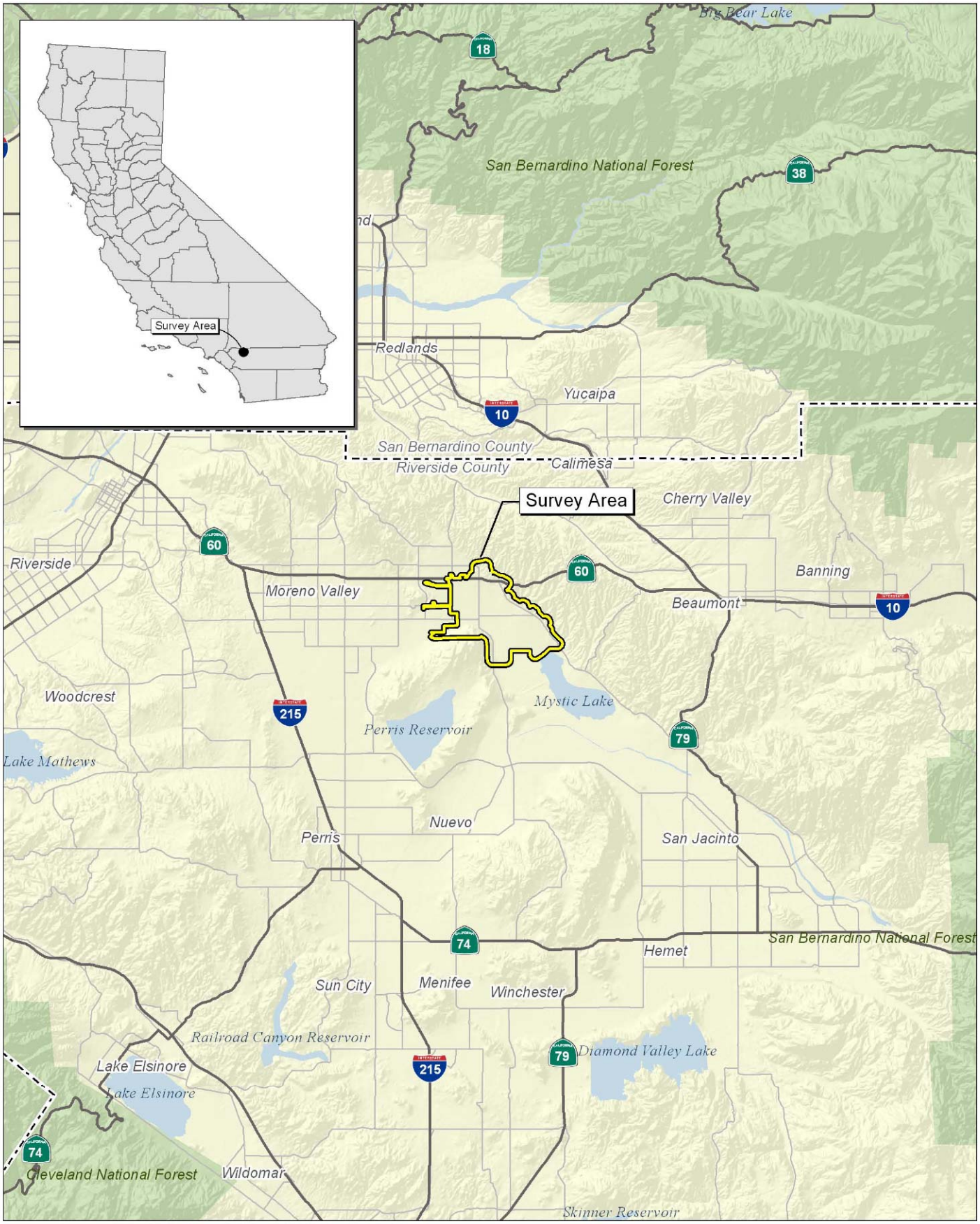
The overall project site covers 3,819acres in the Rancho Belago area of the City of Moreno Valley. It includes 3,713 acres of land that is the subject of various entitlements, plus 106 acres of land affected by off-site improvements needed to support the proposed development.

A General Plan Amendment is proposed covering 3,713 acres which re-designates approximately 70 percent of the area (2,610 acres) for logistics warehousing (the World Logistics Center project), and the remaining 30 percent (1,103 acres) for permanent open space and public facilities. The following elements of the General Plan are included in the proposed Amendment: Community Development (land use), Circulation, Parks, Recreation, and Open Space, Safety, Conservation, and the General Plan Goals and Objectives. A new Specific Plan is proposed to govern development of the 2,610-acre World Logistics Center project.

The Specific Plan will be adopted through the zone change process. A separate zone change is also proposed to re-zone 1,103 acres for open space and public facilities uses. This acreage is currently zoned for a variety of development uses under the existing Moreno Highlands Specific Plan. This area is not part of the proposed WLC Specific Plan. In addition to the General Plan Amendment, Specific Plan, and Zone Change, the project includes a Tentative Parcel Map covering 1,539 acres (property owned by the project applicant, Highland Fairview) within the project site. This subdivision map is for financing purposes only and will not confer any development rights. The project also includes pre-annexation zoning for an 85-acre parcel of land within the proposed Specific Plan. This area is already within the City's adopted Sphere of Influence. This project proposes to complete the annexation process for this 85-acre parcel.

Finally, a Development Agreement between the City and Highland Fairview (the project applicant) is included as one of the project entitlements.

The details of these project entitlements are included in Section 3.4 of the EIR (Project Characteristics).

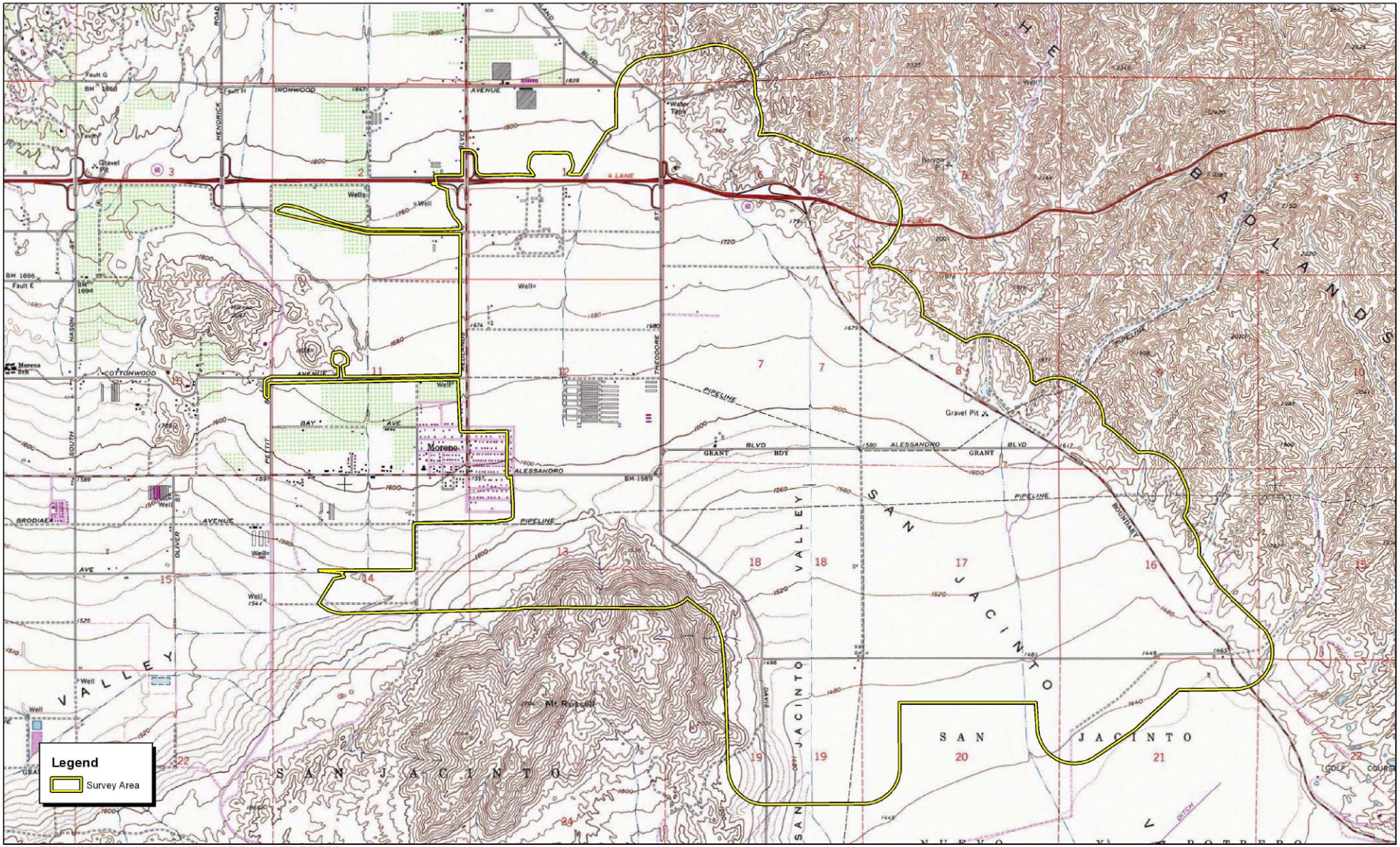


Source: Census 2000 Data, The CaSIL, FCS-MBA GIS 2014.

FirstCarbon® SOLUTIONS
MICHAEL BRANDMAN ASSOCIATES

5 2.5 0 5
Miles

Exhibit 1
Regional Location Map

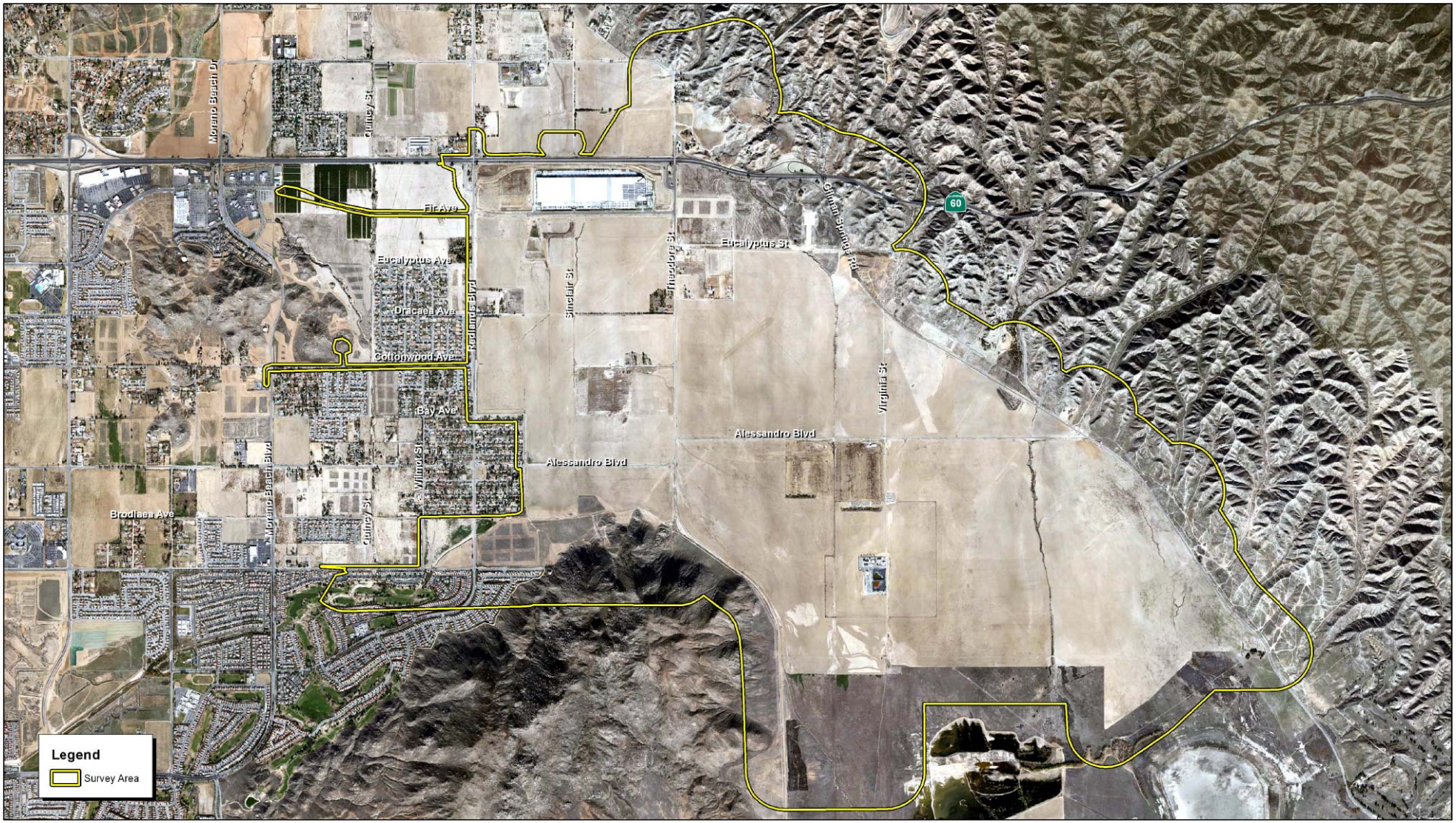


Source: TOPO! USGS Sunnymead, CA (1978) and El Casco (1976) 7.5' DRG.

FirstCarbon SOLUTIONS

2,400 1,200 0 2,400 Feet

Exhibit 2
Local Vicinity Map
Topographic Base

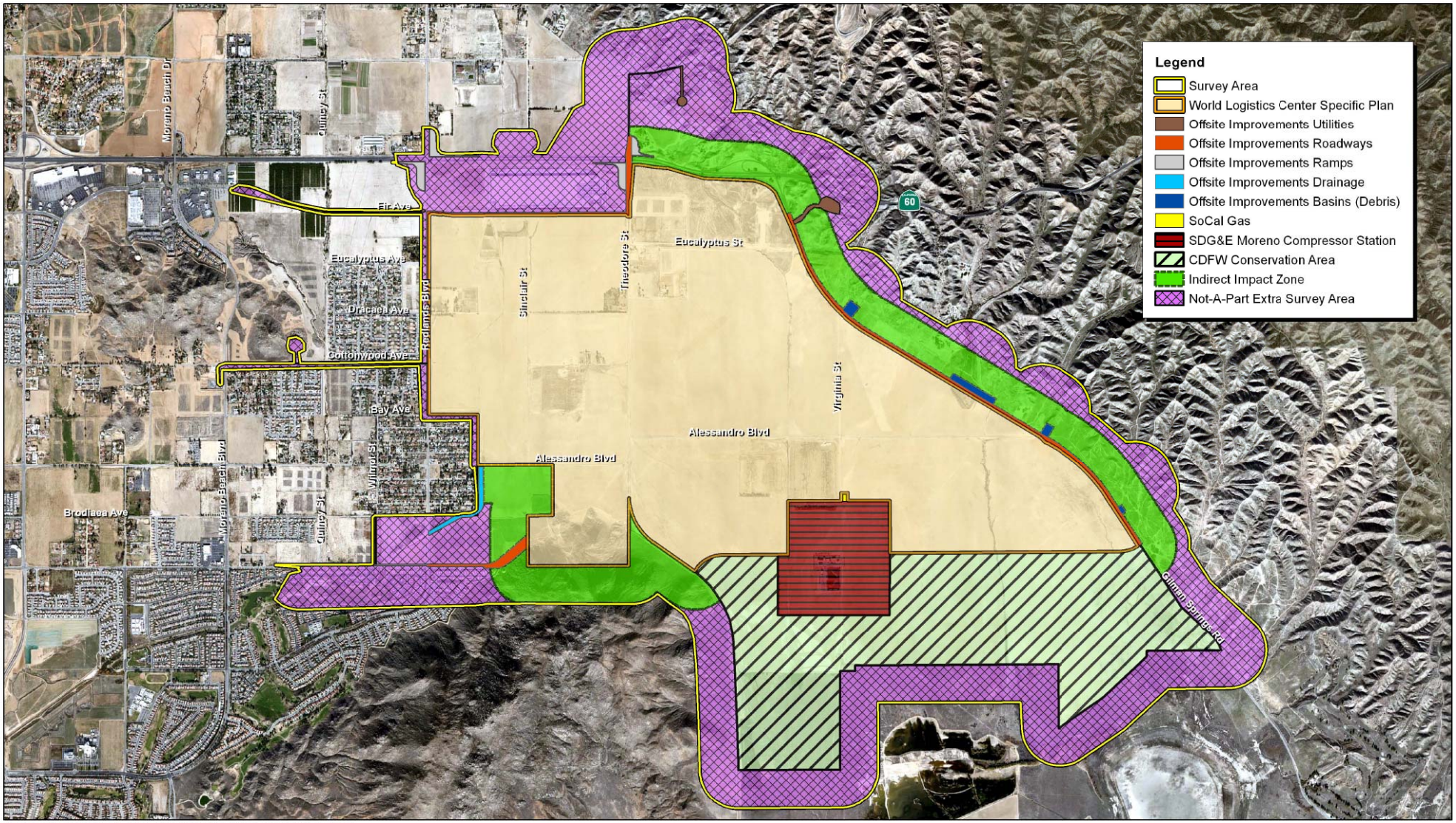


Source: Google Earth Pro, 2012. FCS-MBA Field Survey and GIS Data, 2014.

FirstCarbon SOLUTIONS

2,400 1,200 0 2,400 Feet

Exhibit 3
Local Vicinity Map
Aerial Base



Source: Google Earth Pro, 2012. FCS-MBA Field Survey and GIS Data, 2014.

FirstCarbon SOLUTIONS

2,400 1,200 0 2,400 Feet

Exhibit 4
Survey Area Components

SECTION 2: METHODOLOGY

This section provides standard information on protection, avoidance, and minimization measures for burrowing owl, site-specific mitigation measures, and information on relocation strategies.

Implementation of the measures provided below is intended to minimize the adverse effects of the WLCSP on burrowing owls and the resources that support viable burrowing owl populations. These measures are adopted from standard guidelines published by the CDFW (CDFW 2012) and MSHCP, which are intended to provide a decision-making process that should be implemented whenever there is the potential for an action or project to adversely affect burrowing owls or their resources.

Protocol-level surveys have been completed covering most of the WLC project area over the course of a 10-year span (see Table 1) and burrowing owls are known to occur sporadically within the WLCSP, and they could be present on any portion of the WLCSP prior to initiation of construction activities over the projected 15-year phased construction. A total of 66 days of protocol-level burrowing owl surveys and 136 person-days of effort have been completed within portions of the WLCSP.

Typically, burrowing owl protocol-level surveys are considered current if they are no more than one year old. Full protocol-level surveys following MSHCP guidelines (MSHCP 2003) are warranted because the presence of burrowing owls has been established and the buildout of the WLCSP will be completed over a span of 15-years. A project-specific MSHCP analysis for future projects covered under the WLCSP is required and updated protocol-level burrowing owl surveys will be conducted at the discretion of the City of Moreno Valley, in consultation with the RCA and CDFW, and should be conducted in the same year approvals for plot plans, grading permits, and tentative tract maps are sought. In most instances, a 30-day pre-construction survey will also be required, prior to any ground-disturbing or vegetation removal activities, especially if the specific project site contains suitable burrowing owl habitat. If burrowing owls are found during project specific development, this plan will be adhered to, in consultation with the RCA and CDFW.

Table 1: Summary of Survey Types, Dates, Locations, and Staff

Report Year	Field Survey Date(s)	Survey	Parcel Name	Staff
2005	May 10, 20, 23 Aug 29	Biological Resource Assessment Survey	Bel Lago	S. Crawford
2005	May 10, 20, 23 Aug 29	Burrowing Owl Focused Surveys	Bel Lago	S. Crawford
2006	August 16, 17, 19, 22	Burrowing Owl Focused Surveys	Tentative Tract Map 34848 (Bel Lago South)	M. Romich J. Hickman S. Hongola

Table 1 (cont.): Summary of Survey Types, Dates, Locations, and Staff

Report Year	Field Survey Date(s)	Survey	Parcel Name	Staff
2007	May 1, 2, 3, 4	Burrowing Owl Focused Surveys	Highland Fairview Corporate Park Property	S. Crawford K. Workman S. Hongola K. Osmundson
2007	May 15-18, 22-24, 30-31, June 1, 5-7, 12-14, 19-20, 26, July 3, 6, 11, 12	Burrowing Owl Focused Surveys	Highland Fairview Properties	S. Crawford
2007	August 15, 16, 22, 23 2006	Burrowing Owl Focused Survey	398-Acre Anderson Property	K. Workman K. Osmundson
2010	June 9 through 24	Burrowing Owl Focused Surveys	Highland Specific Plan	S. Crawford
2012	June 28, July 5, 6 and 9	Burrowing Owl Focused Surveys	WLCSP	T. Molioo D. Lloyd D. Hameister
2013	June 13, 20, 21, 27, July 3, 7, and 9	Burrowing Owl Focused Surveys	WLCSP	D. Hameister T. Molioo S. Crawford Z. Ziade L. Westmoreland C. Lytle

Pre-construction surveys will be implemented prior to construction, repairs, maintenance, and/or any other construction related activities that result in site disturbance. The standards for these surveys and other related measures are presented below.

2.1 - Pre-Construction Avoidance Surveys

Prior to ground-disturbing activities, a qualified biologist will conduct pre-construction surveys for burrowing owls over the entire project site and a 500-foot (approx. 150 meters) buffer. Pedestrian surveys will be conducted and transects will be spaced to provide 100 percent visual coverage of the project site. Transects will be spaced approximately 100 feet (30 meters) apart unless variation in the terrain requires shorter distances to accomplish 100 percent visual coverage. The surveys will be conducted no more than 30 days prior to ground-disturbing activities. If more than 30 days lapse between the time of the pre-construction survey and the start of ground-disturbing activities, another pre-construction survey must be completed.

2.2 - Adverse Effects to Burrowing Owls, Avoidance, and Buffer Zones

Whenever possible, burrowing owls and their habitat will be protected in place by the use of buffer zones, visual screens, and education programs for construction workers while project activities are occurring in order to minimize disturbance. As a general guideline for establishing buffers, 150-foot (approximately 50-meter) buffers will be implemented during the non-breeding season (September 1 through January 31), and 250-foot (approximately 75 meter) buffers will be implemented during the breeding season (February 1 through August 31), but these may be adjusted by a qualified biologist in consultation with CDFW and RCA to address site-specific conditions and temperament of burrowing owls. A qualified biologist is one who has the following minimum qualifications as described in the CDFW 2012 staff report on burrowing owl:

1. Familiarity with the species and its local ecology;
2. Experience conducting habitat assessments and non-breeding and breeding season surveys, or experience with these surveys conducted under the direction of an experienced surveyor;
3. Familiarity with the appropriate state and federal statutes related to burrowing owls, scientific research, and conservation;
4. Experience with analyzing impacts of development on burrowing owls and their habitat.

The qualified biologist requires previous experience with burrowing owl monitoring during construction activities. Adjustments to these buffer areas must not lead to abandonment of nests, disruption to breeding activities (e.g., nesting, rearing or feeding of young), or temporary or permanent abandonment of a burrow site. Pre-construction, construction, and post-construction monitoring is required to ensure that no burrowing owl is adversely affected by project development. A more detailed description of the required monitoring effort is discussed below and is separated by the three different construction scenarios below.

Based on the overall length of WLCSP buildout, several construction scenarios were developed to describe the different construction phases that may take place during project development. The three scenarios include (1) construction activities when no burrowing owls are observed during pre-construction surveys, (2) construction activities when burrowing owl is observed within an off-site location but not within the project site, and (3) construction activities when burrowing owl is observed within the project site.

Under Scenario 1, if pre-construction surveys are negative and burrowing owls are not present within the proposed project and the 500-foot buffer surrounding the project site, then no further construction monitoring is required.

Under Scenario 2, if burrowing owls are observed within the 500-foot buffer area surrounding the project site, but not within the project site, a construction buffer area will be established based on the general guidelines mentioned above and a construction safety fence installed to protect the burrowing owl prior to any vegetation removal or ground-disturbing activities.

If burrowing owl are present within the 500-foot buffer but the 150-foot or 250-foot buffer area occurs outside of the proposed project development, then no further construction monitoring is required because construction activities will not encroach within the buffer area surrounding the burrowing owl location.

If the 150-foot or 250-foot burrowing owl buffer area encroaches into the proposed development, the project site will require periodic monitoring to ensure no impacts occur to burrowing owl. Daily monitoring will be required for the first week to determine the appropriateness of the buffer area size. If burrowing owls appear to be agitated or otherwise disturbed by the construction activities, then the buffer area should be enlarged at the discretion of the qualified biologist. Daily monitoring will be extended for projects that require a buffer area adjustment for one week following the establishment of the new buffer area. This may require several attempts to ensure that the burrowing owl buffer distance is sufficient. The burrowing owls that have been observed within the project site have generally been located immediately adjacent to human development and appear to have acclimated to human activities and disturbances. Therefore, it should be assumed that the above-mentioned buffer distances should be adequate.

An Employee Education Program (EEP) will be implemented at the beginning of each project to inform the construction workers on the general natural history of burrowing owl and what to do if burrowing owl are encountered during construction activities. If any construction-related activities encroach within the 150-foot or 250-foot buffer area or burrowing owl encroach within the construction area, the biological monitor should be contacted immediately to ensure that no burrowing owl are impacted. Once the construction safety fence has been installed or buffer area re-established, daily monitoring shall be conducted for the first week to establish or re-establish the appropriate buffer area.

Following the first week of construction, if construction activities stay outside of the buffer area, weekly spot-checks will be required by the qualified biologist during the duration of construction activities to ensure that construction-related activities do not affect burrowing owl. If construction activities must occur within the 150-foot or 250-foot buffer area, a qualified biologist will be present daily to monitor the burrowing owls. This action is solely at the discretion of the biological monitor, and construction activities may be stopped at any time to ensure that burrowing owls will not be affected by project construction.

The qualified monitor may stop construction monitoring altogether, only if the qualified monitor has determined that burrowing owl are no longer present, either by predation or if they voluntarily leave the area. This action is solely at the discretion of the biological monitor in consultation with CDFW and RCA, and there must be substantial evidence that burrowing owls are no longer present such as the presence of a fresh carcass, a general lack of new white-wash or owl castings, or a prolonged absence (greater than three weeks) with no sign of occupancy.

A monthly spot-check of the burrowing owls will be required for the first year of post-construction activities. This monitoring activity will document the long-term effects of the project on the adjacent burrowing owls to ensure that construction-related activities do not have a prolonged

indirect impact on burrowing owls. Because of the extended length of time that the WLCSP will be built out, the most current monitoring requirements will be assessed and recommended as part of the mitigation requirements. This will occur on a project-by-project basis during individual project development and subsequent environmental review.

Under Scenario 3, a qualified biologist will assess the proposed construction activities as it relates to any burrowing owl that occurs within the project boundary and the timing of the construction activities. Construction activities will have to avoid any impacts to burrowing owl and the established 250-foot buffer area during the nesting season to ensure that construction-related activities will not cause a burrowing owl nest to fail. Construction monitoring will be conducted similar to Scenario 2, as long as the construction activities can avoid the buffer area.

Daily monitoring will be required for the first week to determine the appropriateness of the buffer area size. If burrowing owls appear to be agitated or otherwise disturbed by the construction activities, then the buffer area should be enlarged at the discretion of the monitoring biologist.

Following the first week of construction, if construction activities stay outside of the buffer area, weekly spot-checks will be required by the qualified biologist to ensure that construction related activities do not affect burrowing owl. When construction-related activities need to proceed within the fenced area, the biological monitor should be contacted immediately to passively or actively relocate the burrowing owls. Burrowing owl relocation will follow established methods as deemed acceptable by CDFW and/or RCA at the time of construction. If active relocation methods are used, in coordination with the RCA, the owls must be banded to confirm relocation success. The qualified biologist conducting the relocation task must have previous burrowing owl relocation and bird banding experience. All methods of relocation and monitoring will be based on the most current and acceptable methods and be agreed upon in coordination with RCA prior to project development and as part of the subsequent environmental review on a project-by-project basis.

Once burrowing owls have been relocated, either by passive or active relocation, daily monitoring will be required at the original burrow as well as the burrow used for relocation for the first week to determine the effectiveness of the relocation and to ensure that burrowing owl have not returned. Following the week of daily surveys, a weekly survey will be conducted for the next three weeks to confirm relocation success. If there are no burrowing owl observations within the construction footprint and the 500-foot buffer after the first month of burrowing owl relocation, a monthly survey will be conducted for the next two months, for a total monitoring time of three months following relocation. Once the burrowing owl relocation is complete and no owls are observed within the project site within three months following the relocation, based on the monitoring program described above, no further monitoring will be required.

Post-construction monitoring will include monthly spot-checks during the first year following construction activities. Currently, RCA has no specific timeframe for post-construction monitoring requirements. Therefore, post-construction-related monitoring requirements will be further assessed, discussed, and approved by RCA on a project-by-project basis prior to development and as part of the subsequent environmental review.

2.3 - General Burrowing Owl Protective Measures

To ensure the protection of burrowing owls, the following project-related measures will be implemented:

- Before work may begin within areas where burrowing owls are known to occur, the contractor's personnel must receive Employee Education Program (EEP) training, which will be presented by a qualified biologist. A record of each employee completing the training will be maintained on site by the contractor. No personnel may begin work on site, including delivery of materials and mobilization, until the personnel have received this training. All contractor personnel, having completed the EEP training, as well as the qualified biologist, will be responsible for identifying any species in harm's way within the project limits and stopping work in the immediate area, should the need arise.
- On-site personnel will comply with directions from qualified biologists, whose role is to help on-site personnel with compliance guidelines and environmental laws. Biologists may need to complete certain tasks during construction activities, and while they will not attempt to slow construction, some activities may necessitate this in order for biologists to fulfill their responsibilities. Biologists have the authority to temporarily halt construction activities that could harm sensitive biological resources, including nests and burrows. Such direction, when provided by the biologist, will not be the basis for a claim by the contractor.
- A qualified biologist will be onsite daily during all initial grading activities in areas where burrowing owl are present, which includes vegetation clearing and any ground-disturbing activities, until a buffer area is established. Once a buffer area is established, the project site will be visited daily for the first week to determine the effectiveness of the buffer area. If the buffer area is effective, weekly spot-checks will be required during all construction-related activities. The buffer area may be adjusted at the discretion of the qualified biologist.
- The qualified biologist will be available for on-call responses to site situations through the duration of on-site construction activities.
- For each day the biologist is in the field or required for on-call activities, the monitor will complete a daily log that documents the date, time, and weather conditions on site, biological monitoring activities, species observations, protective mitigation measures implemented, and any other pertinent biological data. A copy of the daily log will be incorporated into a final monitoring report, if required by the City.
- Under no circumstances is travel, equipment, or earth moving permitted in areas flagged, fenced, or otherwise identified as environmentally sensitive.
- No burrowing owl or active migratory bird nests may be touched. If a burrowing owl or active bird nest is observed, it must be reported immediately to the designated on-call biologist.
- If a burrowing owl or bird nest is harmed or animal killed, accidental or otherwise, the lead biologist should be contacted immediately. The lead biologist will then contact the USFWS

and the CDFW immediately. Full details of the circumstances of the death or injury will be provided within 24 hours of incident. Contacts for these reporting requirements are:

- CDFW, Region VI office, 3602 Inland Empire Blvd, Suite C-220, Ontario, CA 91764. 909.484-0167 and
- USFWS, 2177 Salk Avenue, Suite 250, Carlsbad, CA 92008-7385. 760.431.9440

2.4 - Site-Specific Protection Measures

2.4.1 - Burrowing Owl Avoidance if Present

No disturbance should occur within 150 feet (50 meters) of occupied by burrowing owl or nest burrows and/or satellite burrows around the nest that show evidence of use in the non-breeding season and 250 feet (75 meters) in the breeding season. This area will be fenced and marked as an Environmentally Sensitive Area (ESA) as described below, and will remain in place while construction activities occur in the vicinity (within 500 feet of the ESA).

The integrity of the ESA fencing will be maintained by performing an inspection of the fence twice weekly, and implementing any needed repairs within the same day of discovery. Fencing should consist of orange safety fence or similar construction material. For the fencing to be considered in suitable condition, it must exhibit the following:

- All posts that mark the boundary of the ESA area must be in an upright condition and spaced at approximately 30-foot intervals. All downed posts must be reset;
- The safety fence must be secured to the posts and stretched tight between the posts. The fence must not sag to the point of touching the ground, and efforts should be made to keep the height of the fence no lower than three feet from ground level; and
- The safety fence should be installed around the entire ESA with no gaps.
- The posts used should be small in diameter to prevent perching by larger raptors.
- If safety fencing is being used by larger raptors for perching, pin-flags or other flagging material may be used to delineate the ESA boundary.

In many instances, the protected areas are temporary in nature and will be avoided by all construction and ground-clearing activities until the burrowing owl nesting season is complete and the burrowing owls have vacated the burrow. A qualified biologist will be present during the removal of the ESA fencing to ensure that no burrowing owls will be affected.

2.4.2 - Burrowing Owl Relocation Standards

Relocation of burrowing owls will only occur during the non-breeding season (September 1 through January 31), but may occur in the breeding season (February 1 through August 31) at the discretion of the qualified biologist in consultation with CDFW. If a qualified biologist verifies that the burrowing owls have not begun nesting activities or that the juveniles from those burrows are

foraging independently and are capable of independent survival, then relocation during the breeding season may occur.

If burrowing owls cannot be avoided and must be moved away from the disturbance area, passive relocation techniques may be used to relocate burrowing owls. Passive relocation is to occur within 100 meters of a burrow. If this cannot occur, then active relocation is required.

Passive relocation is defined as encouraging owls to move from occupied burrows to alternate natural or artificial burrows that are beyond 100 meters from the impact zone, and that are within or contiguous to suitable foraging habitat for relocated owls. In addition, the area that owls are relocated to will need to be conserved via a conservation easement. If this is not possible, active relocation should be considered. Passive relocation may not commence until September 1 and must be completed by February 1 (except as otherwise noted above). Four or more weeks may be needed to accomplish passive relocation and allow the owls to acclimate to the alternate burrows. Passive relocation may only be conducted by a qualified biologist or ornithologist who can demonstrate knowledge of burrowing owls and the ability to conduct passive relocation as described in the CDFW 2012 staff report on burrowing owl. After passive relocation has occurred, the area where owls were originally located and its immediate vicinity (500 feet) will be monitored by a qualified biologist daily for one week and once per month for a year to document that owls are not re-occupying the site. Passive relocation of burrowing owls is most effective with the use of a one-way door system. However, If this method fails, or the criteria for use of passive relocation (e.g., within 100 meters of the nest) cannot be met, then active relocation may be used.

Due to the extended length of time that the WLCSP will be built-out, the most up-to-date and acceptable monitoring requirements will be assessed and recommended as part of the mitigation requirements on a project-by-project basis during individual project development.

Passive Relocation using One-Way Doors

Burrowing owls may be excluded from burrows that are located within an impact zone or within 150 feet of an impact zone by passive relocation. This type of relocation should only be used if a suitable relocation area is within 50 to 100 meters of the occupied burrow. Passive relocation typically occurs by installing one-way doors on burrow entrances. One-way doors should be left in place for 3 to 4 days (Trulio 1995) to ensure burrowing owls have left the burrow before the burrow is excavated. The impact area should be monitored daily for one week to confirm burrowing owl use of the site has ceased prior to excavating burrows. Burrows will be excavated using hand tools and will be backfilled to prevent burrowing owls from re-occupying them. Artificial burrows will be created and installed at no less than a 1:1 ratio in adjacent suitable habitat that is contiguous with the foraging habitat of the affected burrowing owls in consultation with CDFW and RCA. The mitigation ratio will be established on a project-by-project at the time of project development in consultation with CDFW and RCA. Each pair of burrowing owls (or a single burrowing owl) that has been displaced will be provided sufficient foraging habitat at the relocation site. The amount of suitable habitat provided for each pair or individual burrowing owl will be based on the quality of habitat on a project-by-project basis in consultation with CDFW and RCA.

To ensure proper installation of artificial burrows, the User's Guide to Installation of Artificial Burrows for Burrowing Owls (Johnson et al. 2013) will be followed.

Active Relocation

There is little published information regarding the efficacy of translocating burrowing owls. At this time, USFWS is unable to authorize the capture and relocation of burrowing owls except within the context of scientific research (FGC §1002) or a Natural Communities Conservation Plan (NCCP) conservation strategy. The MSHCP qualifies as an NCCP conservation strategy and thus active relocation is allowable. Under the MSHCP, active relocation is preferred because there is no requirement for how far away the burrowing owls need to be relocated as is required with passive relocation. Active relocation is allowable as long as the following measures are implemented:

1) Conduct a biological assessment that describes habitat suitability and carrying capacity for burrowing owls. A biological report must be produced that maps and describes the habitat on site, and ranks habitat suitability for a) nesting and foraging based on scientific studies of burrowing owl habitat requirements, and b) potential foraging range based on surrounding land uses.

2) Legally secure the release site with conservation easement or similar protective measures (Deed Restriction) before translocation is attempted. Owls may be relocated to an existing Core Area within the MSHCP. Core Area H is designated as an appropriate relocation area for burrowing owl, and there are no recorded occurrences of burrowing owl in the northern portion of the SJWA (otherwise known as the CDFW conservation buffer area).

3) Avoid significant impacts to any recipient population of burrowing owls, if present. Consider carrying capacity, territoriality, attracting predators, alteration of reproductive behaviors, and other factors, during development of a feasibility assessment for the potential translocation project.

4) In order to ensure the potential for naturally occurring genetic processes, and permit local adaptation, owls may not be translocated across ecological boundaries or vast distances. If owls require translocation across ecological boundaries or vast distances, consultation with CDFW and RCA will be required.

5) Significant impacts to sensitive, Threatened, and Endangered species must be avoided or minimized at the release site.

6) All necessary CEQA or NEPA procedures must be followed by the appropriate lead agency prior to initiating translocation, in consultation with the USFWS. The project impacting owls and the translocation project itself are each subject to the requirements of disclosure of potentially significant environmental effects and any necessary mitigation.

7) Qualified biologists must be secured under contract or via some other means to conduct the necessary monitoring. Sufficient funding must exist for adequate monitoring to document the success of the relocation and provide full biological reporting of results in standard scientific format. Final reports will be submitted to USFWS, CDFW, and RCA.

2.5 - MSHCP Burrowing Owl Measures

In the event that more than three pairs of burrowing owl are observed within a project site during pre-construction surveys, 90 percent of the suitable habitat within that specific project site will require conservation and avoidance until the conservation goals for Burrowing Owl under the MSHCP have been met. If 90 percent cannot be avoided, then a Determination of Biologically Equivalent or Superior Preservation (DBESP) will be required for impacts to burrowing owl. The DBESP will require appropriate avoidance, minimization, and mitigation measures necessary to reduce impacts to burrowing owl and provide a biological equivalent or superior preservation for the long-term conservation of the species. The avoidance, minimization, and mitigation measures will be consistent with MSHCP requirements and will be based on the 2012 CDFW staff report in consultation with CDFW.

If off-site purchase of mitigation land is required, mitigation credits from a City of Moreno Valley and CDFW-approved mitigation bank, such as the San Jacinto Basin Regional Conservation District or similar conservation agency, will be purchased. In addition, if no credits are available, new conservation lands with owls or owl habitat may be purchased and secured as new conservation lands.

The General Plan Amendment land use changes for the CDFW Conservation Buffer Area and the Moreno Compressor Plant are not associated with any direct or indirect impacts to burrowing owl. Since these areas will remain undisturbed, the land use changes are consistent with the long-term conservation goals of the MSHCP.

SECTION 3: CONCLUSION

The techniques described above will be implemented as needed prior to construction, operations, and maintenance of the WLCSP. Implementation of the described protection measures and relocation standards for burrowing owls will reduce project-related adverse effects to burrowing owls that currently occupy the WLCSP and/or adjacent habitat. New focused surveys will be conducted on all areas with suitable burrowing owl habitat and relocations will occur in accordance with this plan, should owls be found during the focused surveys or pre-construction surveys. These measures will also reduce adverse effects to burrowing owls that may become established on the WLCSP once the individual projects begin construction. Conducting pre-construction surveys, avoiding burrowing owls whenever possible, and passively or actively removing burrowing owls from construction areas when necessary and then releasing them into artificial burrows within designated open-space areas will reduce adverse effects of the WLCSP to this species. All protocol surveys, pre-construction surveys, passive relocation, and active relocation efforts will follow the most current methods at the time of project development. This Burrowing Owl Relocation Plan is prepared at a program level and provides general guidelines for future projects that will be developed over a 15-year span. If burrowing owl is observed within the project site during a project-level protocol survey or 30-day pre-construction survey, a project-level Burrowing Owl Relocation Plan will be prepared and approved by the CDFW and RCA, prior to project developoment.

SECTION 4: 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: October 1, 2014 Signed: _____

Scott A. Crawford M.A.
Senior Scientist
FirstCarbon Solutions | Michael Brandman Associates
Irvine, California

SECTION 5: PROJECT RESPONSIBILITY

Project Director ..... Kenneth J. Lord, Ph.D.
Senior Project Biologist..... Scott A. Crawford, M.A.
Project Manager ..... Kenneth J. Lord, Ph.D.
Project Biologist..... Scott A. Crawford, M.A.
Burrowing Owl Relocation Plan: Primary Author ..... Scott A. Crawford, M.A.
Technical Review of Biological Resources Study..... Kelly Rios
Kenneth J. Lord, Ph.D.
Editor ..... Ed Livingston
GIS Technician..... Karlee McCracken
Reprographics..... Octavio Perez
Photography ..... Scott A. Crawford, M.A.

All staff responsible for report preparation and fieldwork are FCS | MBA employees and can be contacted at 714.508.4100.

SECTION 6: REFERENCES

California Burrowing Owl Consortium. 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines. Tech. Rep. Burrowing Owl Consortium, Alviso, California. April.

California Burrowing Owl Consortium. 1997. Burrowing owl survey protocol and mitigation guidelines. Journal of Raptor Research Report 9:171-177.

California Department of Fish and Game (CDFG). 1988. California's Wildlife, Volume II: Birds. State of California Resources Agency. Sacramento, California.

California Department of Fish and Game (CDFG). 2010. 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. September.

California Department of Fish and Game (CDFG). 2011. Special Animals List. The Resources Agency of California, Department of Fish and Game, Natural Heritage Division, Natural Diversity Data Base. Sacramento, California. January.

California Department of Fish and Game (CDFW). 2014. RareFind 5 personal computer program. Data Base Record Search for Information on Threatened, Endangered, Rare, or Otherwise Sensitive Species for the Lakeview, Sunnymead, and El Casco, California, USGS Topographic Quadrangles. California Department of Fish and Game, State of California Resources Agency. Sacramento, California.

California Department of Fish and Wildlife (CDFW). 2012. Staff Report on Burrowing Owl Mitigation.

California Department of Fish and Wildlife (CDFW). 2013. Endangered and Threatened Animals List. The Resources Agency of California, Department of Fish and Game, Natural Heritage Division, Natural Diversity Data Base. Sacramento, California. January.

California, State of. 1989. Fish and Game Code.

Fierro, Paul. Senior Site Superintendent. Personal communication: verbal. March 16, 2012.

Google Earth Version 4.3. 2013. Aerial Photographs.

Historic Aerials.com. Aerial Photographs.

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.

Johnson, D.H., D.C. Gillis, M.A. Gregg, J.L. Rebholz, J.L. Lincer, and J.R. Belthoff. 2013. Users Guide to Installation of Artificial Burrows for Burrowing Owls. Tree Top Inc., Selah, Washington. 34 pp. Version 2.

Michael Brandman Associates (MBA). 2005. Focused Burrowing Owl Survey Report for the 1,178-acre Bel Lago Property, City of Moreno Valley, Riverside County, California. September 12.

Michael Brandman Associates (MBA). 2006. Burrowing Owl Focused Survey, 12.4-Acre Tentative Tract Map 3477, Moreno Valley, Riverside County, California. October 30.

Michael Brandman Associates (MBA). 2008. Burrowing Owl Focused Survey, Highland Fairview Corporate Park, City of Moreno Valley, Riverside County, California. February 5.

Michael Brandman Associates (MBA). 2010. Burrowing Owl Focused Survey, Highlands Specific Plan, City of Moreno Valley, Riverside County, California. December 13.

Michael Brandman Associates (MBA). 2013. Burrowing Owl Protocol Survey for the World Logistics Center Specific Plan. City of Moreno Valley, Riverside County, California August.

Thomas, Dr. S. Understanding the Plants and Animals of the Western Riverside County MSHCP. University of California, Riverside, Department of Earth Sciences, Dr. Scott Thomas Lab. Website: http://ecoregion.ucr.edu/list_head.asp. Accessed October 1, 2007.

Trulio, L.A. 1995. Passive relocation: a method to preserve burrowing owls on disturbed sites. Journal of Field Ornithology 66:99-106.

United States Geological Survey (USGS). 1979. El Casco, California 7.5-Minute Topographic Quadrangle Map. Department of the Interior. U.S. Government Printing Office. Washington D.C.

United States Geological Survey (USGS). 1980. Sunnymead, California 7.5-Minute Topographic Quadrangle Map. Department of the Interior. U.S. Government Printing Office. Washington D.C.

Appendix A:
Assessor's Parcel Numbers

Assessor's Parcel Numbers				
42204009	42204010	42204014	42204015	422070005
422070006	422070010	422070014	422070017	422070018
422070019	422070020	422070021	422070022	422070029
422070030	422070031	422070032	422070033	422070034
422070035	422070036	422070037	422080001	422080002
422080003	422080004	422110001	422130001	422130002
422130003	423250001	423250002	423250007	423250008
423250009	423250010	423250011	423250012	423250013
423250018	423260001	423260002	423260003	423260004
423260005	423260006	423260007	423260008	423260009
423270003	423270004	423270006	423270007	423270008
423270009	423270017	423270018	423280001	423280002
423280003	423280004	423280005	423280006	423280007
423280008	423280009	423300002	423300004	423300009
423300010	423310001	423310002	423310003	423310004
423310005	423310006	423310008	478210054	478210055
478220001	478220002	478220003	478220004	478220005
478220006	478220007	478220009	478220010	478220011
478220012	478220013	478220014	478220015	478220016
478220017	478220018	478220019	478220020	478220021
478220022	478220023	478220024	478220025	478220026
478220027	478220028	478220029	478220030	478220031
478230001	478230002	478230003	478230004	478230005
478230006	478230007	478230008	478230009	478230010
478230011	478230014	478230015	478230016	478230017
478230019	478230020	478240002	478240003	478240005
478240006	478240007	478240008	478240011	478240012
478240013	478240014	478240015	478240016	478240017
478240019	478240021	478240022	478240023	478240024
478240025	478240026	478240027	478240028	478240029
478240030	478240031	478240032	478240033	478240034
488350003	488350004	488350005	488350006	488350007
488350008	488350009	488350010	488350012	488350013
488350014	488350015	488350019	488350021	488350023
488350025				