

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE
STATE OF CALIFORNIA**

In the Matter of the Application of SOUTHERN
CALIFORNIA EDISON COMPANY (U 338-E)
for a Permit to Construct Electrical Facilities
With Voltages Between 50 kV and 200 kV:
Circle City Substation and Mira Loma-Jefferson
Subtransmission Line Project

Application No. _____

PROPONENT'S ENVIRONMENTAL ASSESSMENT
CIRCLE CITY SUBSTATION AND MIRA LOMA-JEFFERSON 66 kV
SUBTRANSMISSION LINE PROJECT
VOLUME 4 of 6

(Attachment 4.4-D through Attachment 4.5-A)

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Dated: **December 4, 2015**

ATTACHMENT 4.4-D: ADDITIONAL FOCUSED SPECIES SURVEY REPORTS



December 4, 2013
(20509)

Ms. Adelina O. Muñoz
Southern California Edison
265A
1218 S. Fifth Avenue
Monrovia, CA 91016

SUBJECT: FINAL RESULTS OF THE FOCUSED PLANT SURVEYS CONDUCTED FOR THE SOUTHERN CALIFORNIA EDISON CIRCLE CITY TRANSMISSION LINE ROUTE IN THE CITIES OF ONTARIO, EASTVALE, NORCO, AND CORONA IN SAN BERNARDINO AND RIVERSIDE COUNTIES, CALIFORNIA

Dear Ms. Muñoz,

The purpose of this memo report is to summarize the results of the focused plant surveys conducted along the Southern California Edison (SCE) proposed transmission line route and within the associated buffer areas. The route runs mainly through the U.S. Geological Survey (USGS) *Corona North*, California 7.5-minute topographic quadrangle, with termini in the *Guasti* and *Corona South* quadrangles. The elevation range along the route is between 540 and 780 feet above mean sea level (amsl).

SCE proposes to construct a new 66/12 kilovolt (kV) distribution substation (Circle City Substation) with four 66 kV source line segments, six new 12 kV distribution circuit getaways, and a new 66 kV subtransmission line (Mira Loma-Jefferson); upgrade the existing Mira Loma Substation; and install new fiber optic cable and communication equipment to connect the proposed Circle City Substation to SCE's existing telecommunication system (Project). The purpose of the proposed Project is to ensure the availability of safe and reliable electrical services to meet customer electrical demand in needed areas.

The Project route extends from the City of Ontario in San Bernardino County south through the City of Eastvale, the City of Norco, and the City of Corona in Riverside County. The Project route primarily runs north-south to the west of Interstate (I) 15 and north of State Route (SR) 91, with the southern end of the Project route extending south of SR 91 and east of I-15 (Attachments 1 and 2).

METHODS

Prior to conducting surveys, Chambers Group, Inc. (Chambers Group) biologists reviewed the Biological Technical Report for the Project (BonTerra 2012) for the special status plants with potential to occur within the habitats along the preferred Project route and vicinity. The biologists then surveyed for the special status plants which had suitable habitat within the preferred Project route.

Two rounds of focused plant surveys were conducted by Chambers Group botanists Heather Clayton, Jeremy Smith, and Linette Lina on May 6, May 15, and May 17, 2013 (Round 1), and on August 25, 2013 (Round 2). Focused surveys were conducted during the appropriate blooming period when each species would be identifiable and conspicuous. During the surveys, the botanists visually scanned the Project route and included buffers (300 feet on either side of the proposed line) within suitable habitat for the presence of

sensitive plant species. Additional time was spent surveying the Santa Ana River channel along River Road between Archibald Avenue and Bluff Street where high quality riparian scrub vegetation was present and the potential for sensitive plant species was greatest.

The following information is a list of abbreviations used to help determine the significance of biologically sensitive resources potentially occurring along the Project route.

Federal

FE = Federally listed; Endangered

State

SE = State listed; Endangered

California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) Status Codes

- 1A = Plants presumed extinct in California.
- 1B = Plants rare and endangered in California and throughout their range.
- 2 = Plants rare, threatened, or endangered in California but more common elsewhere in their range.
- 3 = Plants about which we need more information; a review list.
- 4 = Plants of limited distribution; a watch list.

CNPS Threat Rank Extensions

- 0.1 = Seriously threatened in California (greater than 80 percent of occurrences threatened/high degree and immediacy of threat).
- 0.2 = Moderately threatened in California (20 to 80 percent occurrences threatened/moderate degree and immediacy of threat).
- 0.3 = Not very threatened in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known).

Western Riverside MSHCP

The Survey Area occurs within the Eastvale, Temescal Canyon, and Cities of Riverside/Norco Area Plans of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

1. Surveys may be required for these species within the Narrow Endemic Plant Species Survey Area as described in Section 6.1.3 of the MSHCP.
2. These Covered Species will be considered to be Covered Species Adequately Conserved when conservation requirements identified in species-specific conservation objectives have been met. Species-specific conservation objectives for these species are presented in Section 9.0 of the MSHCP. Refer to Table 9-3 of the MSHCP for specific conservation objectives that must be met for these species prior to including them on the list of Covered Species Adequately Conserved.
3. Surveys may be required for these species within Criteria Area as described in Section 6.3.2 of the MSHCP.
4. These species are "Covered" by the MSHCP and no additional mitigation is required. These species will be considered Adequately Conserved when conservation requirements identified in species-specific conservation objectives have been met. Species-specific conservation objectives for these species are presented in Section 9.0 of the MSHCP.

The following species were targeted during the focused plant surveys:

Species	Status			MSHCP Coverage*
	USFWS	CDFG	CRPR	
chaparral sand-verbena (<i>Abronia villosa</i> var. <i>aurita</i>)			1B.1	
Coulter's saltbush (<i>Atriplex coulteri</i>)			1B.2	
round-leaved filaree (<i>California macrophylla</i>)			1B.1	
Plummer's mariposa-lily (<i>Calochortus plummerae</i>)			4.2	Covered ²
intermediate mariposa-lily (<i>Calochortus weedii</i> var. <i>intermedius</i>)			1B.2	Covered
Santa Barbara morning-glory (<i>Calystegia sepium</i> subsp. <i>binghamiae</i>)			1B.1	
smooth tarplant (<i>Centromadia pungens</i> ssp. <i>laevis</i>)			1B.1	Covered ³
Parry's spineflower (<i>Chorizanthe parryi</i> var. <i>parryi</i>)			1B.1	Covered ²
California saw-grass (<i>Cladium californicum</i>)			2.2	
slender-horned spineflower (<i>Dodecahema leptoceras</i>)	FE	SE	1B.1	Covered ¹
many-stemmed dudleya (<i>Dudleya multicaulis</i>)			1B.2	Covered ¹
Santa Ana River woollystar (<i>Eriastrum densifolium</i> subsp. <i>sanctorum</i>)	FE	SE	1B.1	Covered
Tecate cypress (<i>Hesperocyparis forbesii</i>)			1B.1	
mesa horkelia (<i>Horkelia cuneata</i> var. <i>puberula</i>)			1B.1	
heart-leaved pitcher sage (<i>Lepechinia cardiophylla</i>)			1B.2	Covered ³
Robinson's pepper-grass (<i>Lepidium virginicum</i> var. <i>robinsonii</i>)			1B.2	
Jokerst's monardella (<i>Monardella australis</i> subsp. <i>jokerstii</i>)			1B.1	
California muhly (<i>Muhlenbergia californica</i>)			4.3	Covered ²
prostrate vernal pool navarretia (<i>Navarretia prostrata</i>)			1B.1	Covered ³
chaparral nolina (<i>Nolina cismontana</i>)			1B.2	
Santiago Peak phacelia (<i>Phacelia keckii</i>)			1B.3	
white rabbit-tobacco (<i>Pseudognaphalium leucocephalum</i>)			2.2	
Salt Spring checkerbloom (<i>Sidalcea neomexicana</i>)			2.2	
San Bernardino aster (<i>Symphotrichum defoliatum</i>)			1B.2	
rigid fringe-pod (<i>Thysanocarpus rigidus</i>)			1B.2	

*See notes for Western Riverside MSHCP, above.

All plant species observed during the surveys were documented (Attachment 3). Plants of uncertain identity were collected and subsequently identified from keys, descriptions, and illustrations in Baldwin et al. (2012), Munz (1974), Roberts et al. (2004), and Clarke et al. (2007). Plant nomenclature follows that of *The Jepson Manual, Vascular Plants of California, Second Edition* (Baldwin et al. 2012).

RESULTS

None of the targeted sensitive plant species were observed during the surveys. Many portions of the Project route were highly disturbed and were being utilized for active dairy farming or were already developed and did not support native vegetation. A total of 249 plant species were observed along the Project route during the surveys including 91 native species and 158 non-native and ornamental landscaping species (Attachment 3).

CONCLUSIONS

The 25 sensitive plant species identified as having suitable habitat and a potential to occur within the vicinity of the Project route were not observed during the focused plant surveys; therefore, these species are considered absent from the Project route. No further surveys for these sensitive plant species are recommended at this time.

Please contact me at (949) 261-5414 ext. 7242 if you have any questions or concerns regarding this memo.

Sincerely,

CHAMBERS GROUP, INC.



Linette Lina
Project Manager

Attachment 1 – Project Vicinity
Attachment 2 - Project Location
Attachment 3 - Plant Species Observed

REFERENCES

- Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken (editors)
2012 *The Jepson Manual: Vascular Plants of California, Second Edition*. University of California Press, Berkeley, CA.
- BonTerra Consulting
2012 *Biological Technical Report, Circle City Substation and Mira Loma – Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties, California*. BonTerra Consulting, Irvine, CA. Prepared for Southern California Edison.
- Clarke, O.F., D. Svehla, G. Ballmer, and A. Montalvo
2007 *Flora of the Santa Ana River and Environs, with References to World Botany*. Heyday Books, Berkeley, CA.
- Munz, P.A.
1974 *A Flora of Southern California*. University of California Press, Berkeley, CA.
- Roberts, F.M. Jr., S.D. White, A.C. Sanders, D.E. Bramlet and S. Boyd
2004 *The Vascular Plants of Western Riverside County, California, an Annotated Checklist*. F.M. Roberts Publications, San Luis Rey, CA.

ATTACHMENT 1 – PROJECT VICINITY





 Project Location









Figure 1
**Circle City & Mira Loma-
 Jefferson Sub Station
 Project Vicinity Map**

Version Date: 7/22/2013

ATTACHMENT 2 – PROJECT LOCATION





- | | |
|--|--|
| Transmission Line |  Staging Yard |
|  Corona - Circle City | Substation |
|  Mira Loma - Corona |  Existing |
|  Tap - Circle City |  Proposed |



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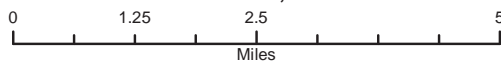


Figure 2
 Circle City & Mira Loma-
 Jefferson Sub Station
 Project Vicinity Map

Version Date: 7/23/2013



ATTACHMENT 3 – PLANT SPECIES OBSERVED



Attachment 3 – Plant Species Observed

Scientific Name	Common Name
FERNS	
EQUISETACEAE	HORSETAIL FAMILY
<i>Equisetum</i> sp.	horsetail
GYMNOSPERMS	
CUPRESSACEAE	CYPRESS FAMILY
<i>Cupressus sempervirens</i> *	Italian cypress
<i>Juniperus</i> sp.*	juniper
GINKGOACEAE	GINKGO FAMILY
<i>Ginkgo biloba</i> *	maidenhair tree
PINACEAE	PINE FAMILY
<i>Pinus pinea</i> *	Italian stone pine
<i>Pinus</i> sp.*	ornamental pine
MAGNOLIIDS	
LAURACEAE	LAUREL FAMILY
<i>Cinnamomum camphora</i> *	camphor tree
MAGNOLIACEAE	MAGNOLIA FAMILY
<i>Magnolia grandiflora</i> *	southern magnolia
SAURURACEAE	LIZARD'S-TAIL FAMILY
<i>Anemopsis californica</i>	yerba mansa
ANGIOSPERMS (EUDICOTS)	
AIZOACEAE	FIG-MARIGOLD FAMILY
<i>Aptenia cordifolia</i> *	baby sun rose
<i>Carpobrotus chilensis</i> *	sea-fig
<i>Mesembryanthemum nodiflorum</i> *	slender-leaved iceplant
<i>Sesuvium verrucosum</i>	western sea-purslane
AMARANTHACEAE	AMARANTH FAMILY
<i>Amaranthus albus</i> *	tumbling pigweed
<i>Amaranthus retroflexus</i> *	rough pigweed
ANACARDIACEAE	SUMAC OR CASHEW FAMILY
<i>Rhus lancea</i> *	African sumac
<i>Schinus molle</i> *	Peruvian pepper tree
<i>Schinus terebinthifolius</i> *	Brazilian pepper tree
APIACEAE	CARROT FAMILY
<i>Apiastrum angustifolium</i>	wild celery
<i>Apium graveolens</i> *	celery
<i>Conium maculatum</i> *	poison hemlock
<i>Yabea microcarpa</i>	yabea

Scientific Name	Common Name
APOCYNACEAE	DOGBANE FAMILY
<i>Nerium oleander</i> *	oleander
<i>Thevetia peruviana</i> *	yellow oleander
<i>Trachelospermum jasminoides</i> *	star jasmine
ARALIACEAE	GINSENG FAMILY
<i>Hedera helix</i> *	English ivy
ASTERACEAE	SUNFLOWER FAMILY
<i>Ambrosia acanthicarpa</i>	annual bur-sage
<i>Arctotis</i> sp.*	African daisy
<i>Artemisia californica</i>	California sagebrush
<i>Artemisia douglasiana</i>	mugwort
<i>Artemisia dracunculus</i>	tarragon
<i>Baccharis pilularis</i>	coyote brush
<i>Baccharis salicifolia</i> subsp. <i>salicifolia</i>	mule fat
<i>Bidens frondosa</i>	straight tick
<i>Bidens</i> sp.*	beggar-ticks
<i>Carduus pycnocephalus</i> subsp. <i>pycnocephalus</i> *	Italian thistle
<i>Centaurea melitensis</i> *	totalote
<i>Centaurea solstitialis</i> *	yellow star-thistle
<i>Cirsium vulgare</i> *	bull thistle
<i>Deinandra fasciculata</i>	fascicled tarweed
<i>Dymondia margaretae</i> *	dymondia
<i>Eclipta prostrata</i>	false daisy
<i>Encelia californica</i>	California bush sunflower
<i>Encelia farinosa</i>	brittlebush
<i>Erigeron bonariensis</i> *	flax-leaved horseweed
<i>Erigeron canadensis</i>	horseweed
<i>Euthamia occidentalis</i>	western goldenrod
<i>Helianthus annuus</i>	common sunflower
<i>Heterotheca grandiflora</i>	telegraph weed
<i>Lactuca serriola</i> *	prickly lettuce
<i>Laennecia coulteri</i>	Coulter's fleabane
<i>Lepidospartum squamatum</i>	scale-broom
<i>Matricaria discoidea</i> *	common pineapple-weed
<i>Pluchea odorata</i> var. <i>odorata</i>	salt marsh fleabane
<i>Pseudognaphalium californicum</i>	California everlasting
<i>Pseudognaphalium luteoalbum</i> *	everlasting cudweed
<i>Pseudognaphalium stramineum</i>	cotton-batting plant
<i>Pulicaria paludosa</i> *	Spanish sunflower
<i>Silybum marianum</i> *	milk thistle

Scientific Name	Common Name
<i>Sonchus asper</i> subsp. <i>asper</i> *	prickly sow thistle
<i>Sonchus oleraceus</i> *	common sow thistle
<i>Stephanomeria virgata</i>	twiggy wreathplant
<i>Symphotrichum subulatum</i> var. <i>parviflorum</i>	annual saltmarsh aster
<i>Taraxacum officinale</i> *	common dandelion
<i>Verbesina encelioides</i> subsp. <i>exauriculata</i>	golden crownbeard
<i>Xanthium strumarium</i>	cocklebur
BERBERIDACEAE	BARBERRY FAMILY
<i>Nandina domestica</i> *	sacred bamboo
BETULACEAE	BIRCH FAMILY
<i>Alnus rhombifolia</i>	white alder
BIGNONIACEAE	BIGNONIA FAMILY
<i>xChitalpa tashkentensis</i> *	pink dawn
<i>Jacaranda mimosifolia</i> *	jacaranda
BORAGINACEAE	BORAGE FAMILY
<i>Amsinckia menziesii</i>	common fiddleneck
<i>Cryptantha</i> sp.	cryptantha
<i>Echium candicans</i> *	pride of Madeira
<i>Heliotropium curassavicum</i> var. <i>oculatum</i>	salt heliotrope
BRASSICACEAE	MUSTARD FAMILY
<i>Brassica rapa</i> *	field mustard
<i>Brassica tournefortii</i> *	wild turnip
<i>Hirschfeldia incana</i> *	shortpod mustard
<i>Lepidium didymium</i> *	wart cress
<i>Lepidium latifolium</i> *	peppergrass
<i>Nasturtium officinale</i>	water-cress
<i>Raphanus sativus</i> *	radish
<i>Sisymbrium irio</i> *	London rocket
<i>Tropidocarpum gracile</i>	slender dobie-pod
CAPRIFOLIACEAE	HONEYSUCKLE FAMILY
<i>Lonicera japonica</i> *	Japanese honeysuckle
CARYOPHYLLACEAE	PINK FAMILY
<i>Polycarpon tetraphyllum</i> *	four-leaved allseed
<i>Spergularia marina</i>	saltmarsh sandspurrey
CHENOPODIACEAE	GOOSEFOOT FAMILY
<i>Atriplex canescens</i>	four-wing saltbush
<i>Atriplex prostrata</i> *	spearscale
<i>Atriplex semibaccata</i> *	Australian saltbush
<i>Atriplex</i> sp.	saltbush
<i>Bassia hyssopifolia</i> *	five-hooked bassia

Scientific Name	Common Name
<i>Chenopodium album</i> *	lamb's quarters
<i>Chenopodium berlandieri</i> var. <i>sinuatum</i>	pitseed goosefoot
<i>Chenopodium californicum</i>	California goosefoot
<i>Kochia scoparia</i> *	kochia
<i>Salsola tragus</i> *	Russian thistle
CISTACEAE	ROCK-ROSE FAMILY
<i>Cistus incanus</i> *	purple rock-rose
CONVOLVULACEAE	MORNING-GLORY FAMILY
<i>Calystegia macrostegia</i>	western bindweed
<i>Convolvulus sabiticus</i> *	blue rock bindweed
<i>Cuscuta subinclusa</i>	canyon dodder
<i>Dichondra micrantha</i> *	Asian ponyfoot
CUCURBITACEAE	GOURD FAMILY
<i>Cucurbita foetidissima</i>	calabazilla
ELAEAGNACEAE	OLEASTER FAMILY
<i>Elaeagnus angustifolia</i> *	Russian-olive
<i>Elaeagnus</i> sp.*	oleaster
EUPHORBIACEAE	SPURGE FAMILY
<i>Chamaesyce maculata</i> *	spotted spurge
<i>Croton californicus</i>	California croton
<i>Ricinus communis</i> *	castor-bean
FABACEAE	LEGUME FAMILY
<i>Acacia longifolia</i> *	Sydney golden wattle
<i>Acmispon americanus</i> var. <i>americanus</i>	Spanish clover
<i>Acmispon glaber</i>	deerweed
<i>Albizia julibrissin</i> *	silktree
<i>Cercis occidentalis</i>	western redbud
<i>Lupinus bicolor</i>	miniature lupine
<i>Medicago polymorpha</i> *	bur clover
<i>Melilotus alba</i> *	white sweetclover
<i>Melilotus indica</i> *	sourclover
<i>Robinia pseudoacacia</i> *	black locust
FAGACEAE	OAK FAMILY
<i>Quercus agrifolia</i>	coast live oak
GERANIACEAE	GERANIUM FAMILY
<i>Erodium botrys</i> *	broad-lobed filaree
<i>Erodium cicutarium</i> *	red-stemmed filaree
<i>Pelargonium peltatum</i> *	ivy geranium
HAMAMELIDACEAE	WITCH-HAZEL FAMILY
<i>Liquidambar styraciflua</i> *	sweet gum

Scientific Name	Common Name
HYPERICACEAE	ST. JOHN'S WORT FAMILY
<i>Hypericum calycinum</i> *	Aaron's beard
LAMIACEAE	MINT FAMILY
<i>Rosmarinus officinalis</i> *	rosemary
<i>Stachys ajugoides</i>	hedge-nettle
LYTHRACEAE	LOOSESTRIFE FAMILY
<i>Ammannia coccinea</i>	valley red-stem
<i>Lagerstroemia indica</i> *	crapemyrtle
MAGNOLIACEAE	MAGNOLIA FAMILY
<i>Magnolia grandiflora</i> *	southern magnolia
MALVACEAE	MALLOW FAMILY
<i>Ceiba speciosa</i> *	silk floss tree
<i>Malva parviflora</i> *	cheeseweed
MORACEAE	MULBERRY FAMILY
<i>Ficus macrophylla</i> *	bay fig
<i>Morus alba</i> *	white mulberry
MYRSINACEAE	MYRSINE FAMILY
<i>Anagallis arvensis</i> *	scarlet pimpernel
MYRTACEAE	MYRTLE FAMILY
<i>Callistemon citrinus</i> *	crimson bottlebrush
<i>Callistemon sp.</i> *	bottlebrush tree
<i>Eucalyptus ficifolia</i> *	red flowering gum
<i>Eucalyptus globulus</i> *	blue gum
<i>Eucalyptus polyanthemos</i> *	silver dollar gum
<i>Lophostemon confertus</i> *	vinegartree
NYCTAGINACEAE	FOUR O'CLOCK FAMILY
<i>Bougainvillea spectabilis</i> *	bougainvillea
OLEACEAE	OLIVE FAMILY
<i>Fraxinus uhdei</i> *	shamel ash
<i>Fraxinus velutina</i>	velvet ash
<i>Ligustrum japonicum</i> *	Japanese privet
<i>Olea europaea</i> *	olive
ONAGRACEAE	EVENING PRIMROSE FAMILY
<i>Camissoniopsis micrantha</i>	small primrose
<i>Epilobium ciliatum</i>	California cottonweed
<i>Oenothera elata</i> subsp. <i>hookeri</i>	evening primrose
<i>Oenothera speciosa</i> *	beautiful evening-primrose
PAPAVERACEAE	POPPY FAMILY
<i>Eschscholzia californica</i>	California poppy

Scientific Name	Common Name
PHRYMACEAE	LOPSEED FAMILY
<i>Mimulus cardinalis</i>	scarlet monkey-flower
<i>Mimulus guttatus</i>	common monkey-flower
PITTOSPORACEAE	TOBIRA FAMILY
<i>Pittosporum tobira</i> 'Variegatum'*	Japanese cheesewood
PLANTAGINACEAE	PLANTAIN FAMILY
<i>Digitalis purpurea</i> *	foxglove
<i>Plantago major</i> *	common plantain
<i>Veronica anagallis-aquatica</i> *	water speedwell
PLATANACEAE	SYCAMORE FAMILY
<i>Platanus xhispanica</i> *	London plane tree
<i>Platanus racemosa</i>	western sycamore
PLUMBAGINACEAE	LEADWORT FAMILY
<i>Limonium perezii</i> *	Perez's marsh-rosemary
POLYGONACEAE	BUCKWHEAT FAMILY
<i>Persicaria hydropiperoides</i>	water pepper
<i>Persicaria lapathifolia</i>	willow-weed
<i>Polygonum arenastrum</i> *	common knotweed
<i>Rumex conglomeratus</i> *	dock
<i>Rumex crispus</i> *	curly dock
PROTEACEAE	PROTEA FAMILY
<i>Grevillea robusta</i> *	silk oak
PUNICACEAE	POMEGRANATE FAMILY
<i>Punica granatum</i> *	pomegranate
RANUNCULACEAE	BUTTERCUP FAMILY
<i>Clematis ligusticifolia</i>	virgin's bower
ROSACEAE	ROSE FAMILY
<i>Eriobotrya deflexa</i> *	bronze loquat
<i>Prunus cerasifera</i> *	cherry plum
<i>Prunus</i> sp.*	cherry
<i>Pyracantha</i> sp.*	firethorn
<i>Rhamphiolepis indica</i> *	Indian hawthorne
<i>Rosa californica</i>	California wild rose
<i>Rosa</i> sp.*	cultivated rose
<i>Rubus ursinus</i>	California blackberry
RUTACEAE	RUE FAMILY
<i>Geijera parviflora</i> *	Australian willow
SALICACEAE	WILLOW FAMILY
<i>Populus fremontii</i> subsp. <i>fremontii</i>	Fremont cottonwood
<i>Salix babylonica</i> *	weeping willow

Scientific Name	Common Name
<i>Salix exigua</i>	narrow-leaved willow
<i>Salix gooddingii</i>	black willow
<i>Salix lasiolepis</i>	arroyo willow
SAPINDACEAE	SOAPBERRY FAMILY
<i>Cupaniopsis anacardioides*</i>	carrotwood
<i>Koelreuteria paniculata*</i>	golden raintree
SCROPHULARIACEAE	FIGWORT FAMILY
<i>Myoporum parvifolium*</i>	creeping myoporum
SIMAROUBACEAE	QUASSIA FAMILY
<i>Ailanthus altissima*</i>	tree of heaven
SOLANACEAE	NIGHTSHADE FAMILY
<i>Datura wrightii</i>	jimson weed
<i>Nicotiana glauca*</i>	tree tobacco
<i>Nicotiana quadrivalvis</i>	Wallace's tobacco
<i>Solanum douglasii</i>	Douglas' nightshade
TAMARICACEAE	TAMARISK FAMILY
<i>Tamarix ramosissima*</i>	Mediterranean tamarisk
ULMACEAE	ELM FAMILY
<i>Ulmus parvifolia*</i>	Chinese elm
URTICACEAE	NETTLE FAMILY
<i>Urtica dioica</i>	stinging nettle
<i>Urtica urens*</i>	dwarf nettle
VERBENACEAE	VERVAIN FAMILY
<i>Lantana montevidensis*</i>	trailing lantana
<i>Verbena lasiostachys</i>	western verbena
VITACEAE	GRAPE FAMILY
<i>Parthenocissus tricuspidata*</i>	Boston ivy
<i>Vitis girdiana</i>	desert wild grape
ZYGOPHYLLACEAE	CALTROP FAMILY
<i>Tribulus terrestris*</i>	puncture vine
ANGIOSPERMS (MONOCOTS)	
AGAVACEAE	AGAVE FAMILY
<i>Agave americana*</i>	century plant
<i>Phormium tenax*</i>	New Zealand flax
<i>Yucca elephantipes*</i>	giant yucca
AMARYLLIDACEAE	AMARYLLIS FAMILY
<i>Agapanthus africanus*</i>	African lily
ARECACEAE	PALM FAMILY
<i>Phoenix canariensis*</i>	Canary Island date palm
<i>Roystonea oleracea*</i>	Caribbean royal palm

Scientific Name	Common Name
<i>Washingtonia filifera</i>	California fan palm
<i>Washingtonia robusta</i> *	Mexican fan palm
ASPHODELACEAE	ASPHODEL FAMILY
<i>Aloe</i> sp.*	aloe
CYPERACEAE	SEDGE FAMILY
<i>Bolboschoenus robustus</i>	Pacific coast bulrush
<i>Cyperus involucratus</i> *	umbrella-plant
<i>Eleocharis palustris</i>	common spike-rush
<i>Schoenoplectus acutus</i> var. <i>occidentalis</i>	tule
<i>Schoenoplectus americanus</i>	winged three-square
<i>Schoenoplectus californicus</i>	California bulrush
HAEMODORACEAE	BLOODWORT FAMILY
<i>Angiozanthos rufus</i> *	kangaroo paws
JUNCACEAE	RUSH FAMILY
<i>Juncus mexicanus</i>	Mexican rush
<i>Juncus</i> sp.	rush
<i>Juncus torreyi</i>	rush
<i>Juncus xiphioides</i>	iris-leaved rush
LILIACEAE	LILY FAMILY
<i>Dietes bicolor</i> *	bicolor fortnight lily
<i>Dietes grandiflora</i> *	wild iris
POACEAE	GRASS FAMILY
<i>Agrostis stolonifera</i> *	redtop
<i>Arundo donax</i> *	giant reed
<i>Avena fatua</i> *	wild oat
<i>Avena sativa</i> *	cultivated oats
<i>Bromus catharticus</i> *	rescue grass
<i>Bromus diandrus</i> *	ripgut grass
<i>Bromus madritensis</i> subsp. <i>rubens</i> *	red brome
<i>Cortaderia selloana</i> *	pampas grass
<i>Crypsis schoenoides</i> *	prickle grass
<i>Cynodon dactylon</i> *	Bermuda grass
<i>Elymus condensatus</i>	giant wild rye
<i>Festuca myuros</i> *	fescue
<i>Festuca perennis</i> *	Italian ryegrass
<i>Festuca</i> sp.	fescue
<i>Hordeum murinum</i> *	glaucous foxtail barley
<i>Muhlenbergia</i> sp.	muhly
<i>Panicum capillare</i>	witchgrass
<i>Paspalum</i> sp.*	dallis grass

Scientific Name	Common Name
<i>Phalaris minor</i> *	Mediterranean canary grass
<i>Phalaris sp.</i> *	phalaris
<i>Poa annua</i> *	annual bluegrass
<i>Polypogon monspeliensis</i> *	annual beard grass
<i>Schismus barbatus</i> *	Mediterranean schismus
<i>Sorghum halepense</i> *	Johnsongrass
<i>Stipa miliacea var. miliacea</i> *	smilo grass
STRELITZIACEAE	BIRD OF PARADISE FAMILY
<i>Strelitzia reginae</i> *	bird of paradise
TYPHACEAE	CATTAIL FAMILY
<i>Typha angustifolia</i>	narrow-leaved cattail
<i>Typha domingensis</i>	slender cattail
<i>Typha latifolia</i>	broad-leaved cattail
XANTHORRHOEACEAE	GRASS TREE FAMILY
<i>Hemerocallis sp.</i> *	day lily

*Non-Native Species

Delhi Sands Flower-Loving Fly
(Rhaphiomidas terminatus abdominalis)
Focused Survey and Technical Report
Circle City Project



Prepared by:

Dicus Biological
Black Canyon City, Arizona

October 2012

Delhi Sands Flower-Loving Fly
(Rhaphiomidas terminatus abdominalis)

Circle City Substation and Transmission Line Project
Riverside and San Bernardino Counties
California

2012 Presence/Absence Survey

Prepared for:

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18 October 2012

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Cover Photo: Delhi Sands Flower-loving Fly (*Rhaphiomidas terminatus abdominalis*) Vicinity of Ontario, California, August, 2001 - John W. Dicus, photographer.

Information Summary

Focused presence/absence surveys for the Delhi sands flower-loving fly were completed for Southern California Edison {265A 1218 S. Fifth Avenue Monrovia, CA 91016}, on September 19, 2012. Surveys were conducted by biologists John Dicus (TE-839960-5), and Melanie Dicus (TE-049175-3). The Circle City Substation and Transmission Line Project (hereafter Circle City Project) contains approximately 65 acres of Delhi Fly survey area located in Township 2S and 3S, Range 7W, Sections 12 and 13 of the USGS Guasti and Sections 13, 23, 24, and 2 of Corona North 7.5-minute series quadrangle maps. The survey areas lie within the incorporated cities of Eastvale and Ontario in Riverside and San Bernardino Counties, California. **No Delhi sands flower-loving flies were observed during the 2012 focused survey season.** This technical report, submitted on October 18, 2012, details the findings of the 2012 focused survey effort.

Introduction

Focused presence/absence surveys for the Delhi sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) (Delhi fly) in survey areas designated the Circle City Project. The site was surveyed in its entirety twice per week between July 1 and September 19, 2012.

The Circle City Project contains approximately 65 acres of Delhi fly suitable habitat located in Township 2S and 3S, Range 7W, Sections 12 and 13 of the USGS Guasti and Sections 13, 23, 24, and 2 of Corona North 7.5-minute series quadrangle maps (APN 021817119, 021817110, 021817118, 021821127, 021821117, 021821124, 021825106, 021833129, 021833130, 021828106, 021832113, 021833118, 021833112, 021832117, 021803304, 021803313, 021832130, 021805201, 021805211, 021832125, 130080006). The survey area is generally located south of Interstate 10, west of Milliken/Hammer Avenue, east of Archibald Avenue, and north of Limonite Avenue in the cities of Eastvale, Riverside County, and Ontario, San Bernardino County, California (Figure 1). The Circle City Project is located within the historic range of the Delhi fly and lies within the Ontario Recovery Unit as established in the Final Recovery Plan For The Delhi Sands Flower-Loving Fly (Service 1997).

Focused surveys and this technical report have been conducted and formatted in accordance with current U.S. Fish and Wildlife Service (Service) guidelines for protocol focused presence/absence surveys for the Delhi fly (Service 1996). The Service reserves the right to reject Delhi fly surveys conducted under the guidelines listed in protocol should the Service determine a survey is inadequate (Service 1996, Section II. B.).

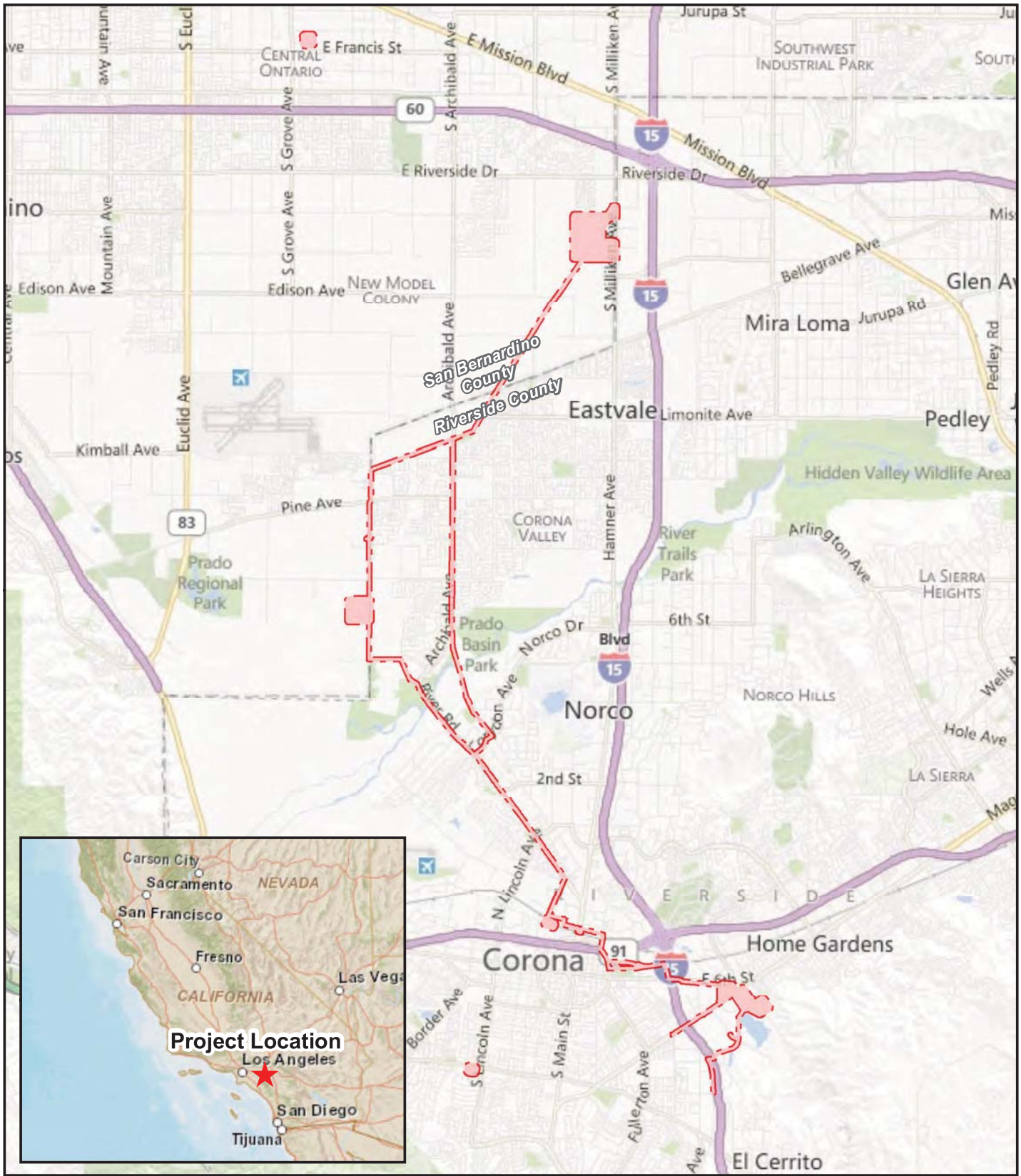
Delhi Sands Flower-loving Fly

The Service listed the Delhi fly as an endangered species on September 23, 1993 under the Endangered Species Act (Act) of 1973, as amended. The Act prohibits “take” of a listed species. “Take” includes, but is not limited to harming, harassing, or killing individuals of a listed species as well as destroying habitat occupied by a listed species.

The Delhi fly is in the Dipteran insect family Mydidae, and is approximately one inch long, orange-brown in color, with dark brown markings on the dorsal surface of the abdomen. This insect species spends most of its life below ground and requires fine-grained sandy soils. As an adult, the Delhi fly is a rapid flyer visible above ground for several weeks between the months of July and September.

The historic range of the Delhi fly is estimated to have included approximately 40 square miles in northwestern Riverside and southwestern San Bernardino counties. Habitat loss has limited the Delhi fly’s current distribution to an estimated 2% of its former range or less (Service 1997).

Delhi fly habitat is limited to areas that contain Delhi fine sand, an aeolian (wind-deposited) soil type. The Service has identified the presence of Delhi Sands as the baseline criterion for the determination of suitable or potentially suitable habitat for this species. Fine unconsolidated soil is required for oviposition (egg-laying), as females must insert their abdomens into the sand



 Project Area



1:103,500



Figure 1
Project Vicinity Map
Circle City Biological Studies

Version Date: 10/16/2012



during this process (Rogers and Mattoni, 1993). Little is known about the larval stages and requirements of the Delhi fly. Development of this species from egg to adult is presumed to take either one or two years.

Appropriate vegetation and percent vegetative ground cover for the species is also largely unknown. Areas currently occupied by Delhi flies tend to contain a mixture of sparsely vegetated to completely open sandy areas among areas of denser native and/or non-native vegetation.

In addition to Delhi series soils, the presence of several “indicator” plant species (those found to be present at many but not all sites occupied by Delhi flies) is generally accepted as evidence suggestive of habitat suitable or potentially suitable for use by the species. Such indicator plant species include California buckwheat, California croton (*Croton californicus*), telegraph weed (*Heterotheca grandiflora*), annual bur-sage (*Ambrosia acanthicarpa*) and other grass and forb species (Service 1997). The Delhi fly has been documented utilizing California buckwheat (*Eriogonum fasciculatum*) as an adult nectar source (Kingsley 1996).

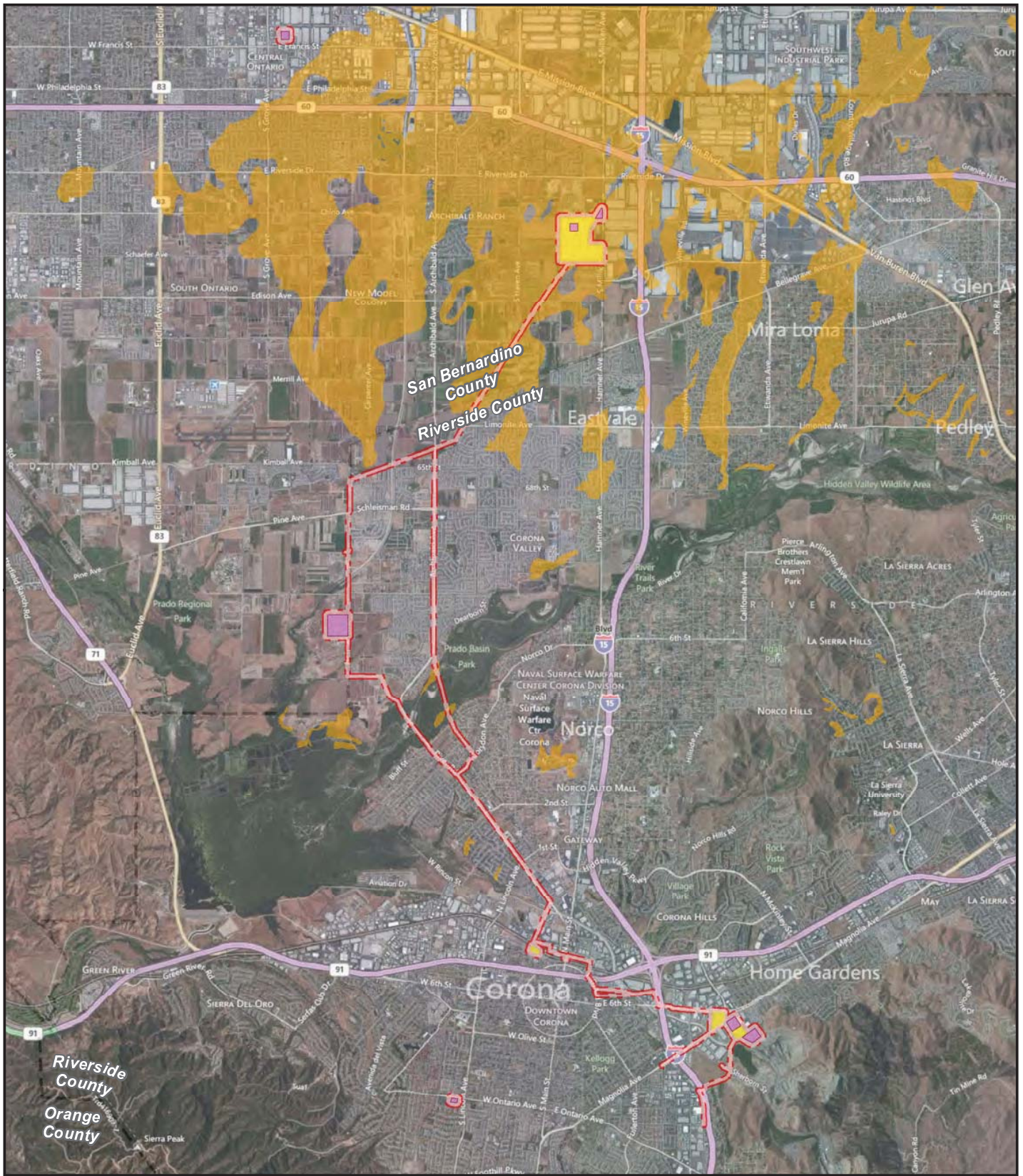
Methods

Site Description

The Circle City Project is a proposed new transmission line between the existing Mira Loma Substation in the City of Ontario to a new proposed substation in the City of Corona. The project consists of a preferred route and alternative route, both of which run in a southwest direction from the Mira Loma Substation, diverge at Archibald Avenue south of Limonite Avenue, and continue south across the Santa Ana River into Corona, California.

Both the preferred and alternate transmission line routes were evaluated for habitat potentially suitable to support the Delhi fly. Areas that do not contain Delhi Series soil were excluded from the surveys, as were some actively farmed agricultural lands (row crops), active dairies, paved surfaces, closed-canopy riparian forest, and residential and commercial development.

Soils on the surveyed portions of the Circle City Project are mapped Delhi Series Soil (Figure 2). Two Delhi fly associated “indicator” plant species, annual bur-sage and telegraph weed, are present in small numbers. The majority of the survey areas are disturbed, dominated by ruderal vegetation, including ripgut brome (*Bromus diandrus*), barley (*Hordeum* spp.), Russian thistle (*Salsola tragus*), common kochia (*Kochia scoparia*), and golden crownbeard (*Verbesina encelioides*). Vegetative cover within the survey areas varies between 10% and 100%, averaging approximately 40% in general. Topography is relatively flat, draining to the south and southwest. Elevation ranges from approximately 800 feet to 500 feet above mean sea level. Recent disturbances to the survey areas include disking, mowing, the presence of cattle and pedestrian traffic, dirt roads, ORV use, and illegal dumping.



- Staging Yard
- Substation Site
- Delhi Sands
- Survey Area



1:100,000



Figure 2
Delhi Sands Map
 Circle City Biological Studies

Version Date: 10/16/2012



Approximately 65 acres of habitat potentially suitable for Delhi Fly were surveyed during the 2012 season. The survey areas, measuring between 1 acre and 17 acres, support a mixture of land uses, including disked and disturbed open space, fallow agricultural lands, active dairy operations, and dirt roads. At the request of the project proponent, survey areas included a 300-foot right-of-way around staging areas, transmission lines, and access roads. The majority of the survey parcels are located in the north portion of the preferred transmission line route in Eastvale, Riverside County and Ontario, San Bernardino County, California, with one small survey parcel at the south end of the alternative transmission line route, along the Santa Ana River (Figure 3).

The northernmost survey area contains approximately 16 acres of potentially suitable Delhi fly habitat. Located north of the Mira Loma substation along Chino Road, this portion of the survey area is bordered by the Mira Loma substation to the south, by Hamner Avenue and industrial development to the east, and by commercial development and disturbed open space to the north and west. Habitat on-site consists of mowed, ruderal vegetation dominated by non-native grasses, with Russian thistle and golden crownbeard.

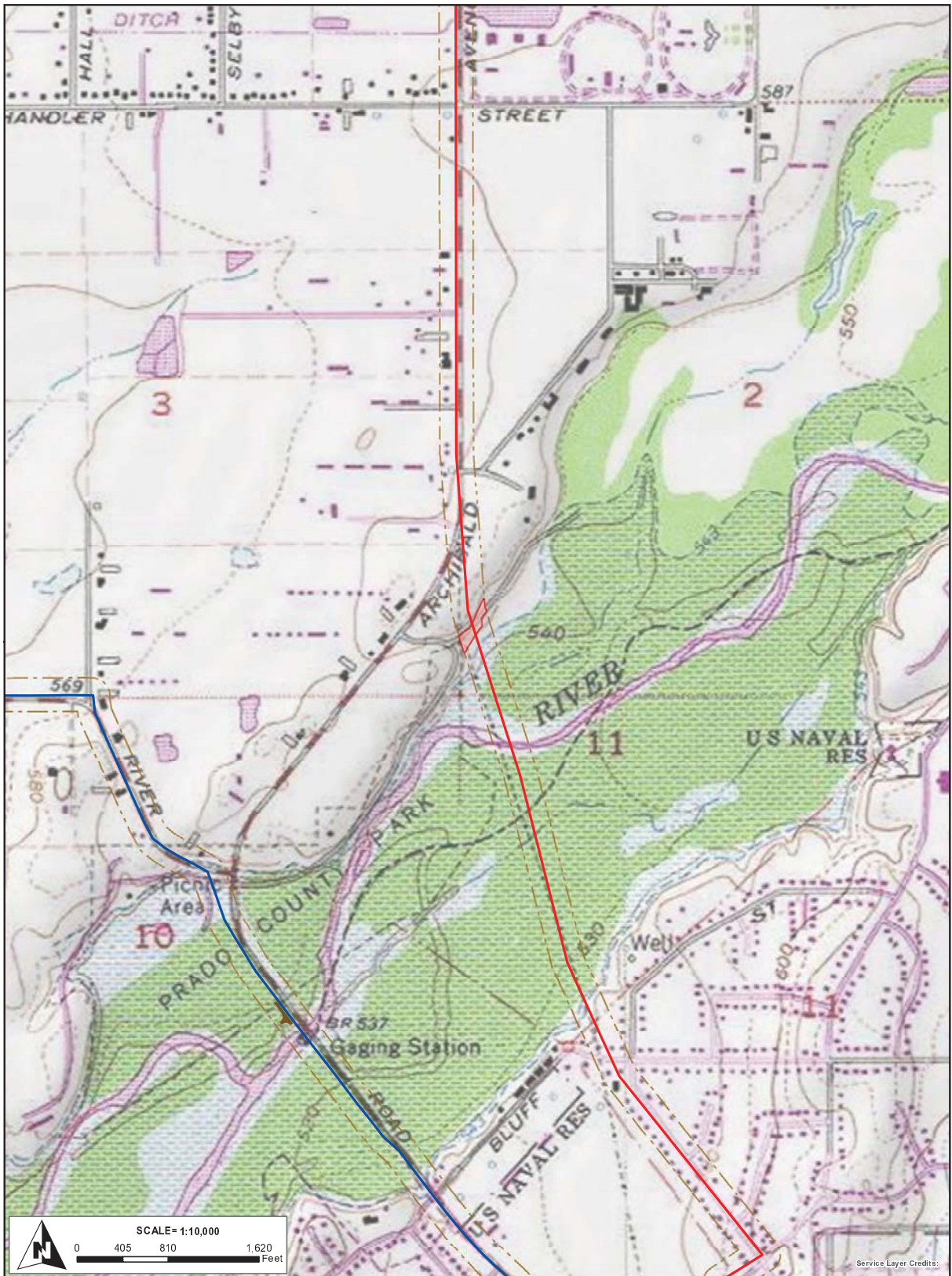
Approximately 16 acres of potentially suitable Delhi fly habitat were surveyed directly south of the Mira Loma substation. This portion of the survey area is bordered to the north by the Mira Loma substation, to the east by Hamner Avenue and industrial development, to the south by disturbed open space (abandoned dairy operations), and to the west by active agriculture (row crops). The habitat in this area is dominated by ruderal vegetation, including non-native grasses, Russian thistle, and golden crownbeard.

Approximately 9 acres of potentially suitable Delhi fly habitat are located along Eucalyptus Avenue and Sumner Avenue within the preferred alignment route. This portion of the survey area is bordered to the north, west, and southwest by active dairy operations, and to the east and south by disturbed open space.

Approximately 17 acres of potentially suitable Delhi fly habitat are located west of Sumner Avenue, north of Bellegrave Avenue within the preferred alignment route. This portion of the survey area is bordered to the north by active dairy operations, to the east, south, and northwest by disturbed open space, and to the southwest by active agriculture (row crops). The majority of this survey area consists of abandoned dairy operations. Vegetation is ruderal, dominated by non-native kochia, Russian thistle, and golden crownbeard.

Approximately 5 acres of potentially suitable Delhi fly habitat are located north of Harrison Avenue and Limonite Avenue within the preferred alignment route. Active agriculture (row crops) border this area to the north and northwest, active dairy operations border it to the southwest, and residential development lies to the southeast. Vegetation is ruderal, consisting of scattered Russian thistle and other non-native herbs.

Approximately 1 acre of potentially suitable Delhi fly habitat is located just north of the Santa Ana River Corridor, east of Archibald Avenue and South Prado Basin Road along the alternative

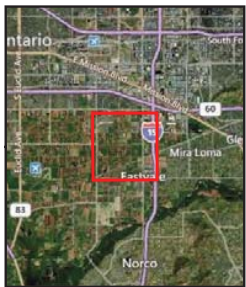
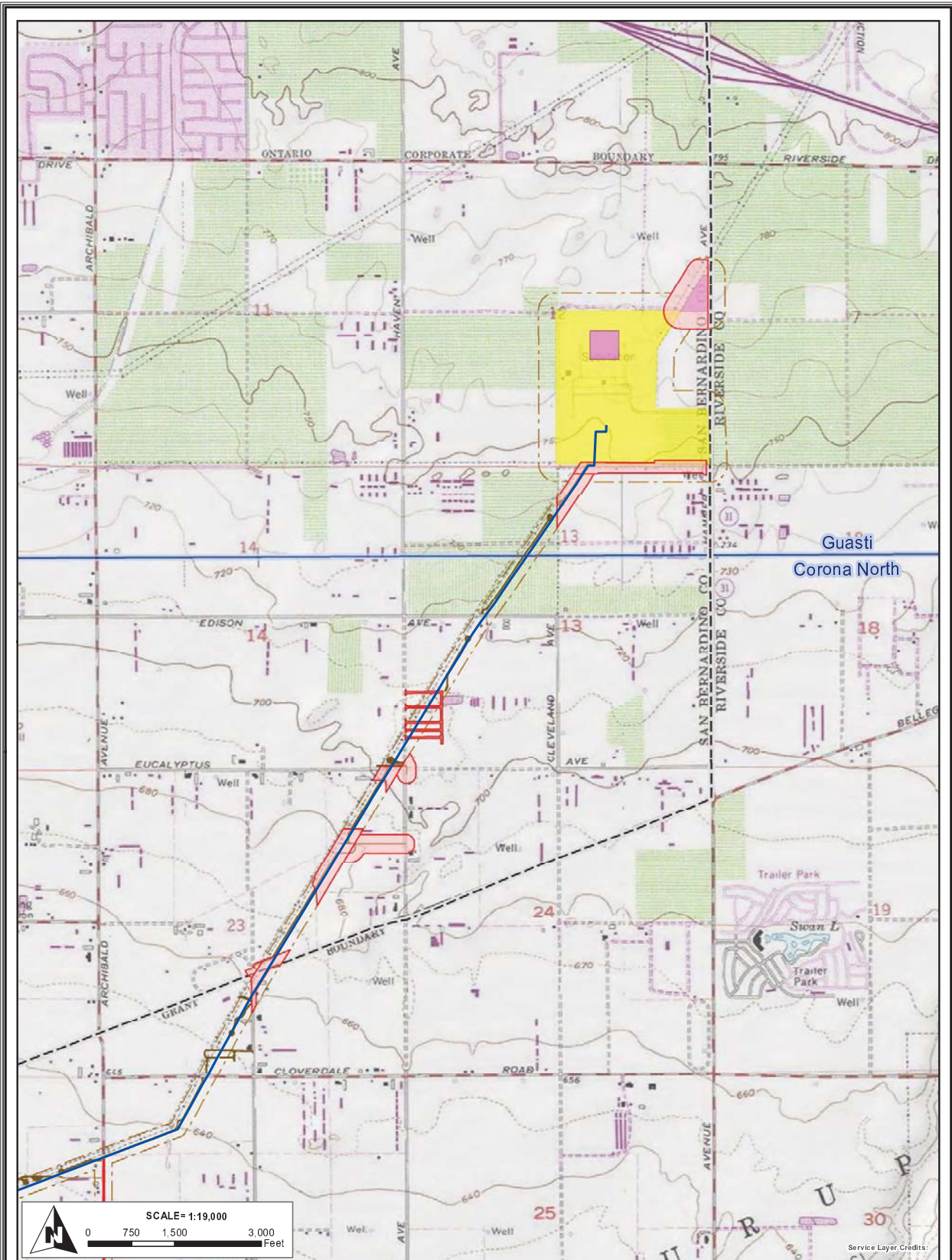


- Project Area
 - Delhi Sands survey area
 - Staging Yard
 - Substation Site
 - Access Roads
 - Counties
 - 7.5-minute Quad
- Subtransmission Line**
 - Corona - Circle City
 - Circle City Substation Alternate Route
 - Tap - Circle City
 - Mira Loma - Corona
 - Mira Loma - Jefferson - Alternate 1

Figure 3a
Circle City Subtransmission Line Project Overview Map

Version Date: 10/18/2012





- Project Area
 - Delhi Sands survey area
 - Staging Yard
 - Substation Site
 - Access Roads
 - Counties
 - 7.5-minute Quad
-
- Subtransmission Line**
 - Corona - Circle City
 - Circle City Substation Alternate Route
 - Tap - Circle City
 - Mira Loma - Corona
 - Mira Loma - Jefferson - Alternate 1

Figure 3b
Circle City Subtransmission Line Project Overview Map

Version Date: 10/18/2012



alignment route. This survey area is bordered to the south by closed-canopy Southern Cottonwood-Willow Riparian Forest, and to the north, east, and west by disturbed open space. Vegetation is mostly ruderal, consisting of non-native Eucalyptus, broad-leaved peppergrass (*Lepidium latifolium*), and contains scattered Delhi fly indicator plants, telegraph weed and annual bur-sage.

2012 Focused Survey

Interim survey guidelines for the Delhi fly recommend that surveys be conducted by federally permitted biologists on non-consecutive days between August 1 and September 18 between the hours of 1000 and 1400 Pacific Daylight Time (Service 1996). No more than 50 acres per day can be surveyed by one biologist (Service 1996). Two consecutive years of surveys with negative results (no flies observed) are required to conclude absence of this species from a survey site (Service 1996).

Since the establishment of interim protocol guidelines in 1996, adult Delhi flies have been observed during the month of July. Subsequent to these observations, in a letter dated June 30, 2004, the Service recommended that 2004 Delhi Fly surveys begin no later than the week of July 1, 2004 and conclude on September 18, 2004 (Jim Bartel, Service, pers. com. 2004). Delhi fly surveys at the Circle City Project were conducted according to current Delhi fly survey protocol and the 2004 agency-recommended changes to the focused survey period.

The Circle City Project was surveyed two times per week between July 1 and September 19, between the hours of 1000 and 1400 by Delhi fly permitted biologists John Dicus (TE-839960-5) and Melanie Dicus (TE-049175-3). The number of visits per week varied depending on whether the visits were conducted by one or both permitted biologists (both biologists together covered the entire survey area twice per week in two visits, whereas one biologist required four visits to completely cover the entire survey area twice per week). The entire ±65-acre survey area was covered a total of 24 times (in 30 total site visits) during the 12-week season. Between 25 and 40 acres per day were covered by each biologist to provide thorough site coverage and to allow for travel time between survey areas. Daily weather data were obtained using a digital anemometer (wind speed measurement in miles per hour), digital thermocouple, and by visual estimation of cloud cover. Detailed daily survey information is summarized in this report (Table 1) and can be found in copies of daily field forms appended to this report (Appendix D).

Transects were walked slowly through the entire survey area in an effort to detect active or resting Delhi flies and discarded exuviae (pupal cases, or skins). A comprehensive plant, invertebrate, and wildlife inventory was not conducted as a portion of the focused survey effort; however, all wildlife and vascular plant species identified on the site incidental to conducting focused Delhi fly surveys were recorded on field forms and are appended to this report (Appendices B & C). Digital site photographs were taken to record the condition of the site during 2012 focused surveys and are appended to this report (Appendix A).

Results

2012 Survey Effort

No Delhi flies were detected during any of the (30) 2012 focused survey season site visits. Daily survey temperatures averaged 88 degrees Fahrenheit, with starting temperatures averaging 81.7 degrees and ending temperatures averaging 94.4 degrees. The minimum starting temperature was 74 degrees, and the maximum ending temperature was 106 degrees. Daily wind speeds averaged 3.54 miles per hour, with starting wind speeds averaging 1.68 mph and ending wind speeds averaging 5.62 mph. Daily cloud cover estimates averaged 8.75 percent, with starting cloud cover averaging 10 percent, and ending cloud cover averaging 7.5 percent. No precipitation was recorded during the surveys. A summary of survey dates, times, weather conditions, surveyor and survey results, is provided in Table 1. All plant and animal species identified on the Circle City Project while conducting the 2012 focused survey are listed in this report (Appendices B & C).

Table 1.
2012 Survey Information

Date	Time PST	Temp °F Begin / End	Wind Speed (mph)	Cloud Cover (%)	Biologist	Acres Surveyed	Results
7-04-12	1000-1400	81 / 83	0-1 / 2-4	0 / 0	JD, MD	± 65	No DSF
7-07-12	1000-1400	79 / 91	2-4 / 5-7	0 / 0	JD, MD	± 65	No DSF
7-12-12	1000-1400	81 / 91	0-2 / 0-1	100 / 100	JD, MD	± 65	No DSF
7-14-12	1000-1400	82 / 93	0-2 / 5-12	0 / 0	JD, MD	± 65	No DSF
7-19-12	1000-1400	86 / 96	1-4 / 8-11	0 / 1	JD, MD	± 65	No DSF
7-21-12	1000-1400	76 / 96	0-2 / 3-7	0 / 0	JD, MD	± 65	No DSF
7-23-12	1000-1400	77 / 92	0-3 / 3-7	0 / 5	JD, MD	± 65	No DSF
7-26-12	1000-1400	77 / 86	0-4 / 1-4	0 / 0	JD, MD	± 65	No DSF
8-02-12	1000-1400	79 / 93	0-1 / 1-5	0 / 0	JD, MD	± 65	No DSF
8-04-12	1000-1400	74 / 90	0-3 / 3-5	25 / 10	JD, MD	± 65	No DSF
8-09-12	1000-1400	93 / 96	0-5 / 2-6	0 / 0	JD, MD	± 65	No DSF
8-11-12	1000-1400	82 / 102	0 / 1-4	0 / 0	JD, MD	± 65	No DSF
8-16-12	1000-1400	91 / 99	1-2 / 2-5	65 / 20	JD, MD	± 65	No DSF
8-18-12	1000-1400	86 / 100	0-2 / 2-5	0 / 5	JD, MD	± 65	No DSF
8-21-12	1000-1400	81 / 92	0-2 / 4-8	0 / 0	JD, MD	± 65	No DSF
8-23-12	1000-1400	78 / 87	0-1 / 3-6	50 / 5	JD, MD	± 65	No DSF
8-26-12	1000-1400	75 / 84	0-3 / 2-9	30 / 0	JD, MD	± 65	No DSF
8-28-12	1000-1400	87 / 102	0-2 / 1-9	0 / 40	JD, MD	± 65	No DSF
9-02-12	1105-1400	88 / 96	2-6 / 3-8	5 / 0	MD	± 25	No DSF
9-04-12	1000-1400	82 / 103	0-2 / 3-9	5 / 5	MD	± 40	No DSF
9-06-12	1000-1255	81 / 90	1-4 / 4-11	0 / 0	MD	± 25	No DSF
9-08-12	1000-1400	79 / 100	0-3 / 5-10	5 / 10	MD	± 40	No DSF
9-09-12	1110-1400	95 / 102	0-4 / 8-14	10 / 20	MD	± 25	No DSF
9-11-12	1000-1400	80 / 85	0-3 / 8-14	5 / 5	MD	± 40	No DSF
9-13-12	1105-1400	92 / 101	1-5 / 3-7	0 / 0	MD	± 25	No DSF
9-15-12	1000-1400	79 / 106	0 / 2-6	0 / 0	MD	± 40	No DSF

9-16-12	1000-1400	88 / 96	2-7 / 6-14	0 / 0	MD	± 25	No DSF
9-17-12	1000-1400	74 / 91	0-2 / 3-12	0 / 0	MD	± 40	No DSF
9-18-12	1000-1400	75 / 93	0-3 / 3-7	0 / 0	MD	± 25	No DSF
9-19-12	1000-1400	75 / 96	0-3 / 4-8	0 / 0	MD	± 40	No DSF

- JD = John Dicus; MD = Melanie Dicus

Conclusions

The Circle City Project was surveyed per the guidelines established in USFWS survey protocol (as amended by the 2004 letter) for the presence/absence of the Delhi fly during 2012 focused survey season. **No Delhi flies were detected.**

DSF Survey Signature Page

± 65-acre Circle City Project
Riverside and San Bernardino Counties, California

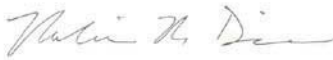
October 18, 2012

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



_____ Date: October 18, 2012

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Black Canyon City, Arizona 85324



_____ Date: October 18, 2012

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Appendix A

Circle City Project—Site Photos and Figures



Photo 1. View of ± 16-acre survey area north of SCE substation, facing west (above). Photo by Melanie Dicus.



Photo 2. View of ± 16-acre survey area south of Mira Loma substation, facing north (above). Photo by Melanie Dicus.

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Photo 3. View of ± 9-acre survey area northeast of intersection of Eucalyptus and Sumner Avenues, facing north (above). Photo by Melanie Dicus.



Photo 4. View of ± 9-acre survey area south of Eucalyptus Avenue, facing southwest (above). Photo by Melanie Dicus.

Dicus Biological



Photo 5. View of \pm 17-acre survey area north of Harrison Avenue, facing southwest (above). Photo by Melanie Dicus.



Photo 6. View of \pm 1-acre survey area north of Santa Ana River, facing south (above). Photo by Melanie Dicus.

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Appendix B

Circle City Project—List of Wildlife Observed

Appendix B. Wildlife Observed or Detected on the Circle City Project During DSF Presence/Absence Surveys, July-September 2012

Order / Family	Latin Name	Common Name
Invertebrates		
Diptera		
Asilidae	<i>Efferia albibarbis</i>	Robber Fly
Asilidae	<i>Mallophora faurix</i>	Bumblebee Robber Fly
Asilidae	<i>Sarapogon luteus</i>	Robber Fly
Asilidae	<i>Stenopogon brevisusculus</i>	Robber Fly
Asilidae	Unidentified	Robber Fly
Bombyliidae	<i>Poecilanthrax</i> species	Bee Fly
Bombyliidae	<i>Toxophora pellucida</i>	Bee Fly
Bombyliidae	<i>Villa atrata</i>	Black Bee Fly
Bombyliidae	Unidentified	Bee Fly
Calliphoridae	<i>Calliphora</i> sp.	Blue Bottle Fly
Calliphoridae	<i>Eucalliphora lilaea</i>	Common Blow Fly
Calliphoridae	<i>Phaenicia sericata</i>	Green Blow Fly
Conopidae	Unidentified	Thick-headed Fly
Dolichopodidae	<i>Condylostylus</i> species	Long-legged Fly
Drosophilidae	Unidentified	Fruit Fly
Muscidae	<i>Musca domestica</i>	House Fly
Mydidae	<i>Nemomydas pantherinus</i>	Mydas Fly
Sarcophagidae	Unidentified	Flesh Fly
Syrphidae	<i>Allograpta obliqua</i>	Hover Fly
Syrphidae	<i>Eristalis tenax</i>	Drone Fly
Tabanidae	<i>Tabanus punctifer</i>	Horse Fly
Hymenoptera		
Ants, Bees, Wasps		
Apidae	<i>Anthophora urbana</i>	Digger Bee
Apidae	<i>Apis mellifera</i>	Honey Bee
Apidae	<i>Melissodes</i> sp.	Long-horned Bee
Apidae	<i>Xylocopa varipuncta</i>	Carpenter Bee
Chrysididae	<i>Parnopes edwardsii</i>	Edwards' Cuckoo Wasp
Crabronidae	<i>Bembix americana</i>	Sand Wasp
Crabronidae	<i>Bembix comata</i>	Western Sand Wasp
Crabronidae	<i>Bicyrtes</i> species	Crabronid Wasp
Crabronidae	<i>Microbembix californicus</i>	Sand Wasp
Crabronidae	<i>Philanthus multimaculatus</i>	Crabronid Wasp
Crabronidae	<i>Philanthus</i> species	Crabronid Wasp
Halictidae	<i>Agapostemon</i> species	Green Sweat Bee
Halictidae	<i>Nomia nevadensis</i>	Alkali Bee
Ichneumonidae	Unidentified	Ichneumon Wasp
Megachilidae	<i>Anthidium</i> species	Leafcutter Bee
Megachilidae	<i>Megachile</i> species	Leafcutter Bee
Mutillidae	<i>Dasymutilla</i> species	Velvet Ant
Sphecidae	<i>Ammophila</i> species	Thread-waisted Wasp
Sphecidae	<i>Chalybion californicus</i>	Blue Mud Wasp

Dicus Biological

Appendix B. Wildlife Observed or Detected on the Circle City Project During DSF Presence/Absence Surveys, July-September 2012 (Continued)

Order / Family	Latin Name	Common Name
Hymenoptera		
Sphecidae	<i>Chlorion aerarium</i>	Ants, Bees, Wasps Blue Cricket Hunter
Sphecidae	<i>Podalonia</i> species	Cutworm Wasp
Sphecidae	<i>Prionyx</i> species	Thread-waisted Wasp
Sphecidae	<i>Sceliphron caementarium</i>	Black and Yellow Mud Dauber
Vespidae	<i>Euodynerus annulatum</i>	Potter Wasp
Vespidae	<i>Polistes apachus</i>	Paper Wasp
Vespidae	<i>Polistes dorsalis</i>	Paper Wasp
Vespidae	<i>Polistes exclamans</i>	Paper Wasp
Vespidae	<i>Polistes fuscatus</i>	Golden Paper Wasp
Coleoptera		
Carabidae	Unidentified	Beetles Ground Beetle
Coccinellidae	<i>Coccinella</i> species	Ladybird Beetle
Coccinellidae	<i>Hippodamia convergens</i>	Convergent Ladybird
Chrysomelidae	<i>Diabrotica balteata</i>	Banded Cucumber Beetle
Chrysomelidae	<i>Diabrotica undecimpunctata</i>	Spotted Cucumber Beetle
Chrysomelidae	<i>Lema trilineata</i>	Three-lined Potato Beetle
Chrysomelidae	<i>Coscinoptera aeneipennis</i>	Hunch-backed Leaf Beetle
Curculionidae	Unidentified	Weevil
Dermestidae	Unidentified	Skin Beetle
Hydrophilidae	Unidentified	Water Scavenger Beetle
Scarabaeidae	<i>Cotinus mutabilis</i>	Green June Beetle
Tenebrionidae	<i>Eleodes</i> species	Darkling Beetle
Hemiptera		
Lygaeidae	<i>Lygaeus kalmii</i>	True Bugs Small Milkweed Bug
Pentatomidae	<i>Bagrada hilaris</i>	African Harlequin Bug
Pentatomidae	<i>Chlorochroa uhleri / sayi</i>	Uhler's/Say's Stink Bug
Pentatomidae	<i>Trichopepla aurora</i>	Stink Bug
Reduviidae	<i>Apiomeris</i> species	Assassin Bug
Reduviidae	<i>Sinea diadema</i>	Spined Assassin Bug
Reduviidae	Unidentified	Assassin Bug
Reduviidae	<i>Zelus tetracanthus</i>	Assassin Bug
Homoptera		
Cercopidae	Unidentified	Aphids, Cicadas, Hoppers Spittle Bug
Cicadidae	Unidentified	Cicada
Dactylopiidae	Unidentified	Cocchineal Scale Insect
Psyllidae	<i>Glycaspis brimblecombei</i>	Red Gum Lerp Psyllid
Neuroptera		
Chrysopidae	Unidentified	Net-winged Insects Green Lacewing
Myrmeleontidae	<i>Brachyneumurus</i> species	Antlion
Myrmeleontidae	<i>Myrmeleon</i> species	Antlion

Dicus Biological

Appendix B. Wildlife Observed or Detected on the Circle City Project During DSF Presence/Absence Surveys, July-September 2012 (Continued)

Order / Family	Latin Name	Common Name
Dermaptera		Earwigs
Forficulidae	<i>Forficula auricularia</i>	European Earwig
Orthoptera		Grasshoppers, Katydid, Mantids
Acrididae	<i>Schistocerca</i> species	Bird Grasshopper
Acrididae	<i>Trimerotropis pallidipennis</i>	Pallid-winged Grasshopper
Acrididae	<i>Trimerotropis</i> sp.	Short-horned Grasshopper
Acrididae	Unidentified	Short-horned Grasshopper
Gryllidae	<i>Gryllus</i> species	Tree Cricket
Odonata		Dragonflies, Damselflies
Aeshnidae	<i>Aeshna multicolor</i>	Blue-eyed Darner
Aeshnidae	<i>Anax junius</i>	Common Green Darner
Coenagrionidae	<i>Argia</i> species	Dancer
Coenagrionidae	<i>Enallagma</i> species	Bluet
Gomphidae	<i>Progomphus borealis</i>	Gray Sanddragon
Libellulidae	<i>Libellula saturata</i>	Red Skimmer
Libellulidae	<i>Perithemis intensa</i>	Mexican Amberwing
Libellulidae	<i>Sympetrum corruptum</i>	Variiegated Meadowhawk
Libellulidae	<i>Tramea lacerata</i>	Black Saddlebags
Libellulidae	<i>Tramea onusta</i>	Brown Saddlebags
Lepidoptera		Butterflies, Moths
Arctiidae	Unidentified	Tiger Moth
Geometridae	Unidentified	Geometer Moth
Hesperiidae	<i>Atalopedes campestris</i>	Sachem
Hesperiidae	<i>Erynnis funeralis</i>	Funereal Duskywing
Hesperiidae	<i>Hylephila phyleus</i>	Fiery Skipper
Hesperiidae	<i>Lerodea eufala</i>	Eufala Skipper
Hesperiidae	<i>Pyrgus albescens</i>	Common Checkered-Skipper
Lycaenidae	<i>Brephidium exilis</i>	Pygmy Blue
Lycaenidae	<i>Leptotes marina</i>	Marine Blue
Lycaenidae	<i>Strymon melinus</i>	Common Hairstreak
Noctuidae	Unidentified	Noctuid Moth
Nymphalidae	<i>Limenitis lorquini</i>	Lorquin's Admiral
Nymphalidae	<i>Nymphalis antiopa</i>	Mourning Cloak
Nymphalidae	<i>Precis coenia</i>	Common Buckeye
Nymphalidae	<i>Vanessa annabella</i>	West Coast Lady
Nymphalidae	<i>Vanessa cardui</i>	Painted Lady
Pieridae	<i>Phoebis sennae</i>	Cloudless Sulfur
Pieridae	<i>Pontia protodice</i>	Checkered White
Pieridae	<i>Pieris rapae</i>	Cabbage White
Papilionidae	<i>Papilio rutulus</i>	Western Tiger Swallowtail
Pyralidae	Unidentified	Snout Moth

Dicus Biological

Appendix B. Wildlife Observed or Detected on the Circle City Project During DSF Presence/Absence Surveys, July-September 2012 (Continued)

Order / Family	Latin Name	Common Name
Isopoda		Woodlice
Armadillidae	Unidentified	Pillbug
Arachnida		Spiders
Araneidae	<i>Argiope trifasciata</i>	Banded Garden Spider
Dipluridae	Unidentified	Funnel Web Spider
Oxyopidae	<i>Peucetia viridans</i>	Green Lynx Spider
Salticidae	<i>Phidippus formosus</i>	Jumping Spider
Salticidae	Unidentified	Jumping Spider
Thomisidae	Unidentified	Crab Spider
Birds		
Suliformes		Cormorants
Phalacrocoracidae	<i>Phalacrocorax auritus</i>	Double-crested Cormorant
Pelecaniformes		Ibises, Egrets, Herons
Ardeidae	<i>Ardea alba</i>	Great Egret
Ardeidae	<i>Bubulcus ibis</i>	Cattle Egret
Threskiornithidae	<i>Plegadis chihi</i>	White-faced Ibis
Anseriformes		Ducks, Geese
Anatidae	<i>Anas cyanoptera</i>	Cinnamon Teal
Anatidae	<i>Anas discors</i>	Blue-winged Teal
Anatidae	<i>Anas platyrhynchos</i>	Mallard
Anatidae	<i>Branta canadensis</i>	Canada Goose
Accipitriformes		Hawks, Eagles, Vultures
Cathartidae	<i>Cathartes aura</i>	Turkey Vulture
Accipitridae	<i>Accipiter cooperii</i>	Cooper's Hawk
Accipitridae	<i>Buteo jamaicensis</i>	Red-tail Hawk
Falconiformes		Falcons
Falconidae	<i>Falco sparverius</i>	American Kestrel
Galliformes		Game Birds
Phasianidae	<i>Pavo cristatus</i>	Common Peafowl*
Gruiformes		Rails
Rallidae	<i>Fulica americana</i>	American Coot
Rallidae	<i>Gallinula galeata (chloropus)</i>	Common Gallinule (Common Moorhen)
Charadriiformes		Plovers, Sandpipers, Phalaropes
Charadriidae	<i>Charadrius vociferus</i>	Killdeer
Recurvirostridae	<i>Himantopus mexicanus</i>	Black-necked Stilt
Recurvirostridae	<i>Recurvirostra americana</i>	American Avocet
Dicus Biological		

Appendix B. Wildlife Observed or Detected on the Circle City Project During DSF Presence/Absence Surveys, July-September 2012 (Continued)

Order / Family	Latin Name	Common Name
Charadriiformes		Plovers, Sandpipers, Phalaropes
Scolopacidae	<i>Actitis macularius</i>	Spotted Sandpiper
Scolopacidae	<i>Calidris minutilla</i>	Least Sandpiper
Scolopacidae	<i>Limnodromus scolopaceus</i>	Long-billed Dowitcher
Scolopacidae	<i>Phalaropus lobatus</i>	Red-necked Phalarope
Scolopacidae	<i>Phalaropus tricolor</i>	Wilson's Phalarope
Columbiformes		Doves
Columbidae	<i>Columba livia</i>	Rock Pigeon*
Columbidae	<i>Columbina passerina</i>	Common Ground-Dove
Columbidae	<i>Streptopelia decaocto</i>	Eurasian Collared-Dove*
Columbidae	<i>Zenaida macroura</i>	Mourning Dove
Strigiformes		Owls
Tytonidae	<i>Tyto alba</i>	Barn Owl
Apodiformes		Hummingbirds, Swifts
Trochilidae	<i>Archilochus alexandri</i>	Black-chinned Hummingbird
Trochilidae	<i>Calypte anna</i>	Anna's Hummingbird
Trochilidae	<i>Selasphorus rufus</i>	Rufous Hummingbird
Piciformes		Woodpeckers
Picidae	<i>Colaptes auratus</i>	Northern Flicker
Picidae	<i>Picooides nuttallii</i>	Nuttall's Woodpecker
Passeriformes		Songbirds
Tyrannidae	<i>Myiarchus cinerascens</i>	Ash-throated Flycatcher
Tyrannidae	<i>Sayornis nigricans</i>	Black Phoebe
Tyrannidae	<i>Sayornis sayi</i>	Say's Phoebe
Tyrannidae	<i>Tyrannus verticalis</i>	Western Kingbird
Tyrannidae	<i>Tyrannus vociferans</i>	Cassin's Kingbird
Laniidae	<i>Lanius ludovicianus</i>	Loggerhead Shrike
Vireonidae	<i>Vireo bellii pusillus</i>	Least Bell's Vireo**
Corvidae	<i>Corvus brachyrhynchos</i>	American Crow
Corvidae	<i>Corvus corax</i>	Common Raven
Alaudidae	<i>Eremophila alpestris</i>	Horned Lark
Hirundinidae	<i>Hirundo rustica</i>	Barn Swallow
Aegithalidae	<i>Psaltriparus minimus</i>	Bushtit
Troglodytidae	<i>Thryomanes bewickii</i>	Bewick's Wren
Troglodytidae	<i>Troglodytes aedon</i>	House Wren
Sylviidae	<i>Chamaea fasciata</i>	Wrentit
Mimidae	<i>Mimus polyglottos</i>	Northern Mockingbird
Mimidae	<i>Toxostoma redivivum</i>	California Thrasher
Sturnidae	<i>Sturnus vulgaris</i>	European Starling*
Parulidae	<i>Geothlypis trichas</i>	Common Yellowthroat
Parulidae	<i>Setophaga petechia</i>	Yellow Warbler

Dicus Biological

Appendix B. Wildlife Observed or Detected on the Circle City Project During DSF Presence/Absence Surveys, July-September 2012 (Continued)

Order / Family	Latin Name	Common Name
Passeriformes		Songbirds
Emberizidae	<i>Melospiza melodia</i>	Song Sparrow
Emberizidae	<i>Pipilo maculatus</i>	Spotted Towhee
Cardinalidae	<i>Passerina caerulea</i>	Blue Grosbeak
Cardinalidae	<i>Pheucticus melanocephalus</i>	Black-headed Grosbeak
Icteridae	<i>Agelaius phoeniceus</i>	Red-winged Blackbird
Icteridae	<i>Euphagus cyanocephalus</i>	Brewer's Blackbird
Icteridae	<i>Icterus bullockii</i>	Bullock's Oriole
Icteridae	<i>Icterus cucullatus</i>	Hooded Oriole
Icteridae	<i>Quiscalus mexicanus</i>	Great-tailed Grackle
Fringillidae	<i>Carpodacus mexicanus</i>	House Finch
Fringillidae	<i>Spinus psaltria</i>	Lesser Goldfinch
Fringillidae	<i>Spinus tristis</i>	American Goldfinch
Passeridae	<i>Passer domesticus</i>	House Sparrow*
Mammals		
Carnivora		Dogs
Canidae	<i>Canis domesticus</i>	Domestic Dog
Felidae	<i>Felis catus</i>	Domestic Cat
Lagomorpha		Hares, Rabbits
Leporidae	<i>Lepus californicus</i>	Black-tailed Jackrabbit
Leporidae	<i>Sylvilagus audubonii</i>	Audubon's Cottontail
Rodentia		Rodents
Geomyidae	<i>Thomomys bottae</i>	Botta's Pocket Gopher
Sciuridae	<i>Spermophilus beecheyi</i>	California Ground Squirrel
Reptiles & Amphibians		
Squamata		Scaled Reptiles
Colubridae	<i>Coluber flagellum piceus</i>	Red Racer (Coachwhip)
Colubridae	<i>Pituophis catenifer</i>	Gopher Snake
Phrynosomatidae	<i>Sceloporus occidentalis</i>	Western Fence Lizard
Phrynosomatidae	<i>Uta stansburiana elegans</i>	Western Side-blotched Lizard

* Denotes non-native or introduced species

** Denotes sensitive species

Appendix C

Circle City Project—Vascular Plant List

Appendix C. Vascular Plants Observed on the Circle City Project during Delhi Fly Presence/Absence Surveys, July-September 2012

Latin Name	Common Name
Amaranthaceae	Amaranth Family
<i>Amaranthus albus</i>	Tumbleweed*
<i>Amaranthus palmeri</i>	Palmer's amaranth*
Asteraceae	Composite Family
<i>Ambrosia acanthicarpa</i>	Annual bur-sage
<i>Artemisia californica</i>	California sagebrush
<i>Artemisia douglasiana</i>	Mugwort
<i>Baccharis pilularis</i>	Coyote brush
<i>Baccharis salicifolia</i>	Mulefat
<i>Carduus pycnocephalus</i>	Italian thistle*
<i>Centaurea melitensis</i>	Tocalote*
<i>Cirsium vulgare</i>	Bull thistle*
<i>Cnicus benedictus</i>	Italian thistle*
<i>Conyza species</i>	Horseweed
<i>Encelia farinosa</i>	Brittlebush
<i>Helianthus annuus</i>	Common sunflower
<i>Heterotheca grandiflora</i>	Telegraph weed
<i>Verbesina encelioides</i>	Golden crownbeard*
<i>Xanthium spinosum</i>	Spiny cocklebur*
<i>Xanthium strumarium</i>	Rough cocklebur
Boraginaceae	Borage Family
<i>Amsinckia menziesii</i>	Rancher's fireweed
<i>Phacelia species</i>	Phacelia
Brassicaceae	Mustard Family
<i>Hirschfeldia incana</i>	Short-pod mustard*
<i>Lepidium latifolium</i>	Broad-leaved peppergrass*
<i>Sisymbrium species</i>	Rocket*
Chenopodiaceae	Goosefoot Family
<i>Kochia scoparia</i>	Common kochia*
<i>Salsola tragus</i>	Russian thistle*
Cucurbitaceae	Cucumber Family
<i>Cucurbita palmata</i>	Coyote melon
Euphorbiaceae	Spurge Family
<i>Croton setigerus</i>	Dove weed
Fabaceae	Legume Family
<i>Melilotus albus</i>	White sweet clover*
Geraniaceae	Geranium Family
<i>Erodium cicutarium</i>	Red-stemmed filaree*
Juglandaceae	Walnut Family
<i>Juglans californica</i>	California walnut
Dicus Biological	

Appendix C. Vascular Plants Observed on the Circle City Project during Delhi Fly Presence/Absence Surveys, July-September 2012 (Continued)

Latin Name	Common Name
Malvaceae <i>Abutilon theophrasti</i>	Mallow Family Velvetleaf*
Martyniaceae <i>Probooscidea louisianica</i> ssp. <i>louisianica</i>	Unicorn-Plant Family Unicorn-plant
Polygonaceae <i>Polygonum arenastrum</i> <i>Rumex crispus</i>	Buckwheat Family Common knotweed* Curly dock*
Portulacaceae <i>Portulaca oleracea</i>	Purslane Family Common purslane*
Salicaceae <i>Salix gooddingii</i> <i>Salix laevigata</i> <i>Salix lasiolepis</i>	Willow Family Black willow Red willow Arroyo willow
Simaroubaceae <i>Ailanthus altissima</i> *	Simarouba Family Tree of heaven*
Solanaceae <i>Datura wrightii</i> <i>Nicotiana glauca</i> <i>Solanum</i> species <i>Solanum rostratum</i>	Nightshade Family Jimsonweed Tree tobacco* White nightshade Buffalo berry
Urticaceae <i>Urtica dioica</i>	Nettle Family Hoary nettle
Zygophyllaceae <i>Tribulus terrestris</i>	Caltrop Family Puncturevine*
Arecaceae <i>Washingtonia</i> sp.	Palm Family Fan palm*
Poaceae <i>Arundo donax</i> <i>Avena</i> species <i>Bromus diandrus</i> <i>Bromus madritensis</i> ssp. <i>rubens</i> <i>Cynodon dactylon</i> <i>Echinochloa</i> species <i>Hordeum</i> species <i>Schismus barbatus</i> <i>Setaria</i> species <i>Sorghum</i> species	Grass Family Giant reed* Wild oat* Ripgut grass* Red brome* Bermuda grass* Jungle rice* Mediterranean barley* Mediterranean grass* Bristlegrass Sorghum*

* Denotes non-native or introduced species

Dicus Biological

Appendix D

Circle City Project—Field Notes

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CAM Portion of Site Surveyed: ALL Acreage Surveyed: 65 Biologist(s): MELANIE DICUS JOHNDICUS

Date: 07-04-12 Time (Start/End): 1000/1400 Cloud Cover (Start/End): 0/0 Temperature in °F (Start/End): 81/83

Arthropod Species Observed: 0-1/2-4 Wind Speed in ^{mph} Beaufort (Start/End): 0-1/2-4 DSF Detected (Circle): Y (N)

Diptera:	<i>Tabanus punctifer</i>	<i>Ichnemon</i> sp.	Pentatomidae	<i>Trimerotropis californica</i>	<i>Pteris rapae</i>
<i>R. terminatus abdominalis</i>	<i>Tachinidae</i>	<i>Dasyommula coccineohirta</i>	<i>Chlorochroa ligata</i>	<i>Trimerotropis pallidipennis</i>	<i>Pentia protodice</i>
<i>Aplocera chrysolasia</i>	<i>Archytas apicifer</i>	<i>Dasyommula californica</i>	Coloptera:	<i>Chlorochroa uhleri</i> <u>(SAY)</u>	<i>Brephidium exilis</i>
<i>Aplocera convergens</i>	<i>Gymnosoma fuliginosum</i>	<i>Dasyommula sackeni</i> (lg.)	Buprestidae	<i>Oecanthus fultoni</i>	<i>Hemiarthus cervaninus</i>
<i>Nemomydas pantherina</i>	<i>Therevidae</i> (Stiletto Fly)	<i>Dasyommula clyemnestra</i>	Carabidae	<i>Tettigoniidae</i>	<i>Icaricia acmon</i>
<i>Asilidae</i>	<i>Ceratitus capitata</i>	<i>Compsoptera tolteca</i>	Cerambycidae	<i>Antianthe expansa</i>	<i>Leptotes marinus</i>
<i>Efferia albarbaris</i>	<i>Tipulidae</i>	<i>Trielis alcionae</i>	Coccinellidae	<i>Scudderia mexicana</i>	<i>Strymon melinus</i>
<i>Malloflora faurix</i>	<i>Pompilidae</i>	<i>Coccinella bipunctata</i>	Chilochorus orbus	<i>Senopelmatus sp.</i>	<i>Apodemia mormo virgulti</i>
<i>Proctocanthus sp.</i>	<i>Pespes milderi</i>	<i>Chilochorus orbus</i>	Harmonia axyridis	<i>Iris oratoria</i>	<i>Agraulis vanillae</i>
<i>Stenopogon brevisculus</i>	<i>Pepsis sp.</i>	<i>Coccinella sp.</i>	Hippodamia convergens	<i>Stagmomantis californica</i>	<i>Danaus gilippus</i>
Baetidae (May Flies)	<i>Sphécidae</i>	<i>Harmonia axyridis</i>	<i>Olla v-nigrum</i>	<i>Danus plexippus</i>	<i>Precis coenia</i>
<i>Callibaetis pacificus</i>	<i>Amphiphila alberti</i>	Hippodamia convergens	Elatridae (Click Beetles)	<i>Vanessa annabella</i>	<i>Vanessa atalanta</i>
Bombbyliidae	<i>Amphiphila sp.</i>	<i>Olla v-nigrum</i>	Chrysomelidae	<i>Vanessa cardui</i>	<i>Vanessa virginiensis</i>
<i>Exoprosopa sp.</i>	<i>Bembix americana</i>	<i>Bembix comata</i>	Chrysomelidae	<i>Libellula saturata</i>	Noctuidae
<i>Ligyra gazophylax</i>	<i>Bembix melananis</i>	<i>Bembix comata</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Pachytiplex longipennis</i>
<i>Mythicomomyia sp.</i>	<i>Bicyrtes sp.</i>	<i>Bicyrtes sp.</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Pantala flavescens</i>
<i>Poecilanthrax arethusa</i>	<i>Cerceris sp.</i>	<i>Cerceris sp.</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Perithemis intensa</i>
<i>Poecilanthrax sp.</i>	<i>Chalobion californicus</i>	<i>Chalobion californicus</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Mogomphus borealis</i>
<i>Villa atrata</i>	<i>Eucerceris insignis</i>	<i>Eucerceris insignis</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Sympetrum illotum</i>
<i>Zenox simpson</i>	<i>Hoplisoides diversus</i>	<i>Hoplisoides diversus</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Tramea lacerata</i>
<i>Calliphora sp.</i>	<i>Hoplisoides sp.</i>	<i>Hoplisoides sp.</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Tramea omata</i>
<i>Eucalliphora lilaea</i>	<i>Isodonti elegans</i>	<i>Isodonti elegans</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Argia sp.</i>
<i>Phaenicia sericata</i>	<i>Microbembix californicus</i>	<i>Microbembix californicus</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Enallagma sp.</i>
<i>Bombus sonorus</i>	<i>Phylanthus multimaculata</i>	<i>Phylanthus multimaculata</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Telebasis salva</i>
<i>Bombus croceus</i>	<i>Phylanthus ventralis</i>	<i>Phylanthus ventralis</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Leucopygus pacificus</i>
<i>Bombus vosnesenskii</i>	<i>Podionia sp.</i>	<i>Podionia sp.</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Erynnis funeralis</i>
Halictidae	<i>Prionyx foxi</i>	<i>Prionyx foxi</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Leucopygus pacificus</i>
<i>Agapostemon sp.</i>	<i>Prionyx sp.</i>	<i>Prionyx sp.</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Salticidae</i>
<i>Nomia nevadensis</i>	<i>Sceliphron caementarium</i>	<i>Sceliphron caementarium</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Phidippus formosus</i>
<i>Megachilidae</i>	<i>Sphex ichneumonius</i>	<i>Sphex ichneumonius</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Thomisidae</i>
<i>Dianthidium sp.</i>	<i>Sizoides remicinctum</i>	<i>Sizoides remicinctum</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Paratrytone melane</i>
<i>Megachile sp.</i>	<i>Tachytes elongatus</i>	<i>Tachytes elongatus</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Polites sabuleti</i>
<i>Perdita sp.</i>	Tiphidae	Tiphidae	Chrysomelidae	<i>Libellula saturata</i>	<i>Papilio cressphonies</i>
Wasps	<i>Vespidae - unidentified</i>	<i>Vespidae - unidentified</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Papilio rutulus</i>
<i>Chalcididae</i>	<i>Eumenes bollii</i>	<i>Eumenes bollii</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Colias eurytheme</i>
<i>Chrysididae</i>	<i>Eumenes crucifera</i>	<i>Eumenes crucifera</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Pyrgus albescens</i>
<i>Chrysididae</i>	<i>Euclypterus annulata</i>	<i>Euclypterus annulata</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Papilio cressphonies</i>
<i>Chrysurus pacifica</i>	<i>Polistes apachus</i>	<i>Polistes apachus</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Papilio rutulus</i>
<i>Parnopes edwardsii</i>	<i>Polistes dorsalis</i>	<i>Polistes dorsalis</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Colias eurytheme</i>
<i>Ichneumonidae</i>	<i>Polistes exclamans</i>	<i>Polistes exclamans</i>	Chrysomelidae	<i>Libellula saturata</i>	<i>Pyrgus albescens</i>

Bird Species Observed:

CALI	TUVU	BASW	COYE	BUSH	COYA	BUSH	LOSH	EUST	CAKI	CAKO	SPID	BLBR	YAWA
EVCO	GTAA	COYA	BUSH	LOSH	EUST	CAKI	CAKO	SPID	BLBR	YAWA			
AMCE	SAPH	BEBL	LGVI*	GTBR	CALO	SPTD	BLBR	YAWA					
HOSP	NOMO	IKUL	MODD	HOFI	HOLA	BWR							

Other Wildlife Species Observed:

UTA	w. FENCE
CAGS	
BTJR	
CONTRAIL	

✓ NYMPHALIS ANTIOPA

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: AU Acreage Surveyed: ~70 Biologist(s): JOHN DUCUS, MELANIE DUCUS
 Date: 07/07/12 Time (Start/End): 1000 / 1400 Cloud Cover (Start/End): 0 / 0 Temperature in °F (Start/End): 71-71 91

Arthropod Species Observed:

Diptera:	<i>Tabanus punctifer</i>	<i>Ichneumon</i> sp.	<i>Polistes fuscatus aurifer</i>	<i>Pentatomidae</i>	<i>Trimerotropis californica</i>
<i>R. terminatus abdominalis</i>	<i>Tachinidae</i>	<i>Dasytomilla coccineohirta</i>	<i>Vespula pennsylvanica</i>	<i>Chlorochroa ligata</i>	<i>Trimerotropis pallidipennis</i>
<i>Apocera chrysolasia</i>	<i>Archytas apicifer</i>	<i>Dasytomilla californica</i>	COLEOPTERA:	<i>Chlorochroa ubleri</i> / <u>SAV1</u>	<i>Gryllus</i> sp.
<i>Gymnosoma convergens</i>	<i>Gymnosoma fuliginosum</i>	<i>Dasytomilla sackeni</i> (lg.)	<i>Buprestidae</i>	<i>Murgantia histrionica</i>	<i>Oecanthus fulvoni</i>
<i>Nemomydas pantherina</i>	<i>Therevidae</i> (Stiletto Fly)	<i>Dasytomilla clytemnestra</i>	<i>Carabidae</i>	<i>Thyantha pallidovirens</i>	<i>Leptotes marina</i>
<i>Asilidae</i>	<i>Ceratitis capitata</i>	<i>Camposomeris tolteca</i>	<i>Cerambycidae</i>	<i>Trichopepla aurora</i>	<i>Strymon melinus</i>
<i>Efferia albarbaris</i>	<i>Tipulidae</i>	<i>Trielis alcione</i>	<i>Coccinellidae</i>	<i>Reduviidae</i>	<i>Apodemus mormo virgulti</i>
<i>Malloflora fautrix</i>	<i>Nephratoma</i> sp.	<i>Pomphiliidae</i>	<i>Adalia bipunctata</i>	<i>Apiomeris crassipes</i>	<i>Agraulis vanillae</i>
<i>Proctocanthus</i> sp.	<i>Pepsis</i> sp.	<i>Pespestis mildeli</i>	<i>Philochorus orbis</i>	<i>Rhytocoris ventralis</i>	<i>Danaus gilippus</i>
Hymenoptera:	<i>Sphociidae</i>	<i>Amphiphila alberti</i>	<i>Coccinella</i> sp.	<i>Zelus tetrocanthus</i>	<i>Danaus plexippus</i>
<i>Stenopogon breviscutus</i>	<i>Hemiptera:</i>	<i>Harmodia oxyridis</i>	<i>Hippodamia convergens</i>	Odonata:	<i>Precis coenia</i>
<i>Betidae</i> (May Flies)	<i>Formicidae</i>	<i>Olla v-nigrum</i>	<i>Olla v-nigrum</i>	<i>Aeshna multicolor</i>	<i>Vanessa annabella</i>
<i>Callibaetis pacificus</i>	<i>Iridomyrmex humilis</i>	<i>Bembix americana</i>	<i>Elatridae</i> (Click Beetles)	<i>Anax junius</i>	<i>Vanessa atalanta</i>
<i>Bombyliidae</i>	<i>Liomotopus occidentale</i>	<i>Bembix comata</i>	<i>Chrysomelidae</i>	<i>Erythemis collocata</i>	<i>Vanessa cardui</i>
<i>Exoprosopa</i> sp.	<i>Messor pergandei</i>	<i>Bembix melanopsis</i>	<i>Homoladica</i> sp.	<i>Libellula croceipennis</i>	<i>Vanessa virginienis</i>
<i>Ligra gazophylax</i>	<i>Pogonomyrmex californica</i>	<i>Bicyrtes</i> sp.	<i>Diatrocha baletata</i>	<i>Libellula saturata</i>	<i>Arctiidae</i>
<i>Mythicomya</i> sp.	<i>Solenopsis</i> sp.	<i>Cerceris</i> sp.	<i>D. undecimpunctata</i>	<i>Pachydiplax longipennis</i>	<i>Noctuidae</i>
<i>Poecilanthrax arethusa</i>	Bees	<i>Chalybion californicus</i>	<i>Lema trilineata</i>	<i>Pantala flavescens</i>	<i>Autographa californica</i>
<i>Poecilanthrax</i> sp.	<i>Anthophoridae</i>	<i>Chlorion aerarium</i>	<i>Tachymela lanticolis</i>	<i>Perithemis intensa</i>	<i>Schinia</i>
<i>Toxophora pellicuda</i>	<i>Anthophora urbana</i>	<i>Eucerceris insignis</i>	<i>Curculionidae</i>	<i>Pragmophus borealis</i>	<i>Geometridae</i>
<i>Villa atrata</i>	<i>Melissodes</i> sp.	<i>Hoplisoides diversus</i>	<i>Haliplidae</i>	<i>Sympetrum corruptum</i>	<i>Pyralidae</i>
<i>Zenox simpson</i>	<i>Xylocopa varipuncta</i>	<i>Hoplisoides</i> sp.	<i>Hydrophyllidae</i>	<i>Sympetrum illotum</i>	<i>Paranthrene robiniae</i>
<i>Calliphora</i> sp.	<i>Apis mellifera</i>	<i>Isodonti aelegans</i>	<i>Meloidae</i>	<i>Tramea lacerata</i>	<i>Hyles lineata</i>
<i>Eucalliphora illaea</i>	<i>Bombus californicus</i>	<i>Microbembix californicus</i>	<i>Nemognatha lurida apicalis</i>	<i>Tramea onusta</i>	<i>Manduca sexta</i>
<i>Phaenicia cuprina</i>	<i>Bombus crotchii</i>	<i>Philanthus multimaculata</i>	<i>Melyridae</i>	<i>Argia</i> sp.	Arachnidae:
<i>Phaenicia sericata</i>	<i>Bombus sonorus</i>	<i>Philanthus ventralis</i>	<i>Chrysopidae</i>	<i>Enallagma</i> sp.	Araneidae
<i>Conopidae</i> sp.	<i>Bombus vosnesenskii</i>	<i>Podalonia</i> sp.	<i>Chrysopa</i> sp.	<i>Telebasis salva</i>	Peucetia viridins
<i>Physiocephala texana</i>	<i>Halicidae</i>	<i>Prioryx foxi</i>	Myrmecotomidae	<i>Telebasis salva</i>	Dipteridae
<i>Culicidae</i> - mosquitoes	<i>Agapostemon</i> sp.	<i>Prioryx</i> sp.	<i>Macrosgaon flavipenne</i>	<i>Myrmelcon</i> sp.	Leptoptera:
<i>Caterebridae</i>	<i>Nomia nevadensis</i>	<i>Sceliphron caementarium</i>	<i>Scarabaeidae</i>	<i>Macrosigaon</i> sp.	<i>Atalopodes campestris</i>
<i>Condylostylus</i> sp.	<i>Megachilidae</i>	<i>Spheg ichneumonius</i>	<i>Cotinus mutabilis</i>	<i>Myrmelcon</i> sp.	<i>Erynnis funeralis</i>
<i>Drosophilidae</i>	<i>Dianthidium</i> sp.	<i>Stizoides remicinctum</i>	<i>Staphylinus maxillosus</i>	<i>Brachymerus</i> sp.	<i>Heliopterus erictorum</i>
<i>Musca domestica</i>	<i>Megachile</i> sp.	<i>Tachyites elongatus</i>	<i>Tenebrionidae</i>	<i>Myrmelcon</i> sp.	<i>Hylephila phyleus</i>
<i>Sarcophagidae</i>	<i>Perdita</i> sp.	Vespidae - unidentified	Hemiptera:	<i>Myrmelcon</i> sp.	<i>Lerodea eufala</i>
<i>Sarcophaga</i> sp.	<i>Wasps</i>	<i>Eumenes bollii</i>	<i>Lygaeidae</i>	<i>Myrmelcon</i> sp.	<i>Paratrytone melane</i>
<i>Stratiomyidae</i>	<i>Chalcididae</i>	<i>Eumenes crucifera</i>	<i>Lygaeidae</i>	<i>Myrmelcon</i> sp.	<i>Paratrytone melane</i>
<i>Syrphidae</i>	<i>Chrysididae</i>	<i>Phaenocarpa annulata</i>	<i>Lygaeidae</i>	<i>Myrmelcon</i> sp.	<i>Polistes sabuleti</i>
<i>Allograpta obliqua</i>	<i>Chrysididae</i>	<i>Polistes apachus</i>	<i>Lygaeidae</i>	<i>Myrmelcon</i> sp.	<i>Polistes sabuleti</i>
<i>Eristalis tenax</i>	<i>Chrysididae</i>	<i>Polistes dorsalis</i>	<i>Lygaeidae</i>	<i>Myrmelcon</i> sp.	<i>Polistes sabuleti</i>
<i>Metasymphus americanus</i>	<i>Chrysididae</i>	<i>Polistes exclamans</i>	<i>Lygaeidae</i>	<i>Myrmelcon</i> sp.	<i>Polistes sabuleti</i>
<i>Volucella mexicana</i>	<i>Chrysididae</i>	<i>Polistes exclamans</i>	<i>Lygaeidae</i>	<i>Myrmelcon</i> sp.	<i>Polistes sabuleti</i>
<i>Tabanidae</i>	<i>Chrysididae</i>	<i>Polistes exclamans</i>	<i>Lygaeidae</i>	<i>Myrmelcon</i> sp.	<i>Polistes sabuleti</i>
PROCTODONTA + AMPHIBIA					

Bird Species Observed:

<i>GTBL</i>	<i>RTHA</i>	<i>EWCO</i>	<i>LOSH</i>	<i>WCKI</i>	<i>BNST</i>	<i>MAW</i>	<i>LEGO</i>
<i>HOSP</i>	<i>BLPH</i>	<i>GRCA</i>	<i>CAKJ</i>	<i>BA5W</i>	<i>KILL</i>	<i>SAPHT</i>	
<i>HOPL</i>	<i>CEBA</i>	<i>WOMO</i>	<i>ARHT</i>	<i>WFIB</i>	<i>ROPI</i>	<i>MOBO</i>	
<i>EVSI</i>	<i>BLPH</i>	<i>GRBL</i>	<i>FVU</i>	<i>AMAY</i>	<i>AMCR</i>	<i>AMKE</i>	

Other Wildlife Species Observed:

W. FENCE VTA
 CAGS COPPER SANDP
 COTTON TAIL BTA
 SPTT COPPER

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: GARCLE CITY Portion of Site Surveyed: AU Acreage Surveyed: 63 Biologist(s): JOHN AUST, MELLEMEIUS

Date: 07-12-12 Time (Start/End): 1000 / 1400 Cloud Cover (Start/End): 100% / 100% Temperature in °F (Start/End): 81 / 91

Arthropod Species Observed: 105-1400 (JD) msh Wind Speed in ~~Beaufort~~ (Start/End): 0-2 / 0-1 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolasta</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> Asilidae <input checked="" type="checkbox"/> <i>Effigia alabarbaris</i> <input checked="" type="checkbox"/> <i>Mallotropa faurix</i> <input type="checkbox"/> <i>Proctocanthus</i> sp. <input type="checkbox"/> <i>Soropogon luteus</i> <input type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae</i> (May Flies) <input checked="" type="checkbox"/> <i>Millobaetes pacificus</i> <input checked="" type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa</i> sp. <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythcombia</i> sp. <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax</i> sp. <input type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Calliphora</i> sp. <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input checked="" type="checkbox"/> <i>Conopidae</i> sp. <input type="checkbox"/> <i>Physoccephala texana</i> <input type="checkbox"/> <i>Culicidae</i> - mosquitoes <input type="checkbox"/> <i>Cuterebridae</i> <input checked="" type="checkbox"/> <i>Agapostemon</i> sp. <input type="checkbox"/> <i>Condylostylus</i> sp. <input type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga</i> sp. <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon</i> sp. <input checked="" type="checkbox"/> <i>Dasyommata coccineohirta</i> <input type="checkbox"/> <i>Dasyommata californica</i> <input type="checkbox"/> <i>Dasyommata sackeni</i> (lg.) <input type="checkbox"/> <i>Dasyommata clytemnestra</i> <input type="checkbox"/> <i>Compsoneris tolteca</i> <input type="checkbox"/> <i>Trielis alicione</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pepsis mildei</i> <input type="checkbox"/> <i>Pepsis</i> sp. <input checked="" type="checkbox"/> <i>Sphécidae</i> <input checked="" type="checkbox"/> <i>Ammophila alberti</i> <input checked="" type="checkbox"/> <i>Ammophila</i> sp. <input checked="" type="checkbox"/> <i>Bembix americana</i> <input checked="" type="checkbox"/> <i>Bembix comata</i> <input checked="" type="checkbox"/> <i>Bembix melanopsis</i> <input type="checkbox"/> <i>Bicyrtes</i> sp. <input checked="" type="checkbox"/> <i>Cæceris</i> sp. <input checked="" type="checkbox"/> <i>Chalybion californicus</i> <input checked="" type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucereeris insignis</i> <input type="checkbox"/> <i>Hoplisoides diversus</i> <input type="checkbox"/> <i>Hoplisoides</i> sp. <input type="checkbox"/> <i>Isodonti ælegans</i> <input checked="" type="checkbox"/> <i>Microbembix californicus</i> <input type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Philanthus ventilabris</i> <input type="checkbox"/> <i>Podalonia</i> sp. <input type="checkbox"/> <i>Prionyx foxi</i> <input type="checkbox"/> <i>Prionyx</i> sp. <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Stizoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidæ</i> - unidentified <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Euodynerus annulata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> <input type="checkbox"/> <i>Vespa pennsylvanica</i> <p>Coloptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Buprestidae</i> <input type="checkbox"/> <i>Carabidae</i> <input type="checkbox"/> <i>Cerambycidae</i> <input type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilocorus orbis</i> <input type="checkbox"/> <i>Coccinella</i> sp. <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elaterridae</i> (Click Beetles) <input type="checkbox"/> <i>Chrysomelidae</i> <input type="checkbox"/> <i>Diabrotica balteata</i> <input type="checkbox"/> <i>D. undecimpunctata</i> <input type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymela laticollis</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Halipidae</i> <input checked="" type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops</i> sp. <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosaigona flavipenne</i> <input type="checkbox"/> <i>Macrosaigona</i> sp. <input type="checkbox"/> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracatopa</i> sp. <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input checked="" type="checkbox"/> <i>Aenebrionidae</i> <input checked="" type="checkbox"/> <i>Eleodes</i> sp. <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Lygaeidae</i> <input type="checkbox"/> <i>Lygaeus kalmii</i> <input type="checkbox"/> <i>Pyrrhocoridae</i> <input type="checkbox"/> <i>Largus cinctus</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Pentatomidae</i> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> (SAV) <input type="checkbox"/> <i>Oryctolagus fulvipes</i> <input type="checkbox"/> <i>Tettigoniidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input type="checkbox"/> <i>Tachopepla aurora</i> <input checked="" type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Apiomeris crassipes</i> <input type="checkbox"/> <i>Chilocorus ventralis</i> <input checked="" type="checkbox"/> <i>Zelus tetracanthus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aphididae</i> <input checked="" type="checkbox"/> <i>Aphis junius</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homolada</i> sp. <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactylopiidae</i> (Coccineal) <input type="checkbox"/> <i>Dactylopius</i> sp. <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input checked="" type="checkbox"/> <i>Psyllidae</i> <input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Ghrysopea</i> sp. <input checked="" type="checkbox"/> <i>Myrmeleontidae</i> <input type="checkbox"/> <i>Myrmeleon</i> sp. <input type="checkbox"/> <i>Raphidiidae</i> (Snakeflies) <p>Dermaptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Disosteira pictipennis</i> <input type="checkbox"/> <i>Leprus intermedium</i> <input type="checkbox"/> <i>Melanoplus</i> sp. <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca</i> sp. 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Trimerotropis californica</i> <input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i> <input type="checkbox"/> <i>Gryllus</i> sp. <input type="checkbox"/> <i>Oecanthus fulvipes</i> <input type="checkbox"/> <i>Tettigoniidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input type="checkbox"/> <i>Scudderita mexicana</i> <input type="checkbox"/> <i>Stenopelmatus</i> sp. <input type="checkbox"/> <i>Iris oratoria</i> <input type="checkbox"/> <i>Stagmomantis californica</i> <input type="checkbox"/> <i>Parabacillus hesperis</i> <p>Odonata:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Aeshna multicolor</i> <input checked="" type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula saturata</i> <input checked="" type="checkbox"/> <i>Noctuidae</i> <input type="checkbox"/> <i>Autographa californica</i> <input type="checkbox"/> <i>Schinia</i> <input checked="" type="checkbox"/> <i>Geometridae</i> <input checked="" type="checkbox"/> <i>Pyralidae</i> <input type="checkbox"/> <i>Progomphus borealis</i> <input type="checkbox"/> <i>Sympetrum corruptum</i> <input type="checkbox"/> <i>Sympetrum illotum</i> <input type="checkbox"/> <i>Tramea lacustrata</i> <input checked="" type="checkbox"/> <i>Tramea onusta</i> <input type="checkbox"/> <i>Argia</i> sp. <input type="checkbox"/> <i>Enallagma</i> sp. <input type="checkbox"/> <i>Telebasis salva</i> <p>Lepidoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Atalopedes campestris</i> <input type="checkbox"/> <i>Erynnis funeralis</i> <input type="checkbox"/> <i>Heliopterus erictorum</i> <input checked="" type="checkbox"/> <i>Hylephila phyleus</i> <input checked="" type="checkbox"/> <i>Phidippus formosus</i> <input checked="" type="checkbox"/> <i>Thomisidae</i> <p>Arachnida:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Araneidae</i> <input checked="" type="checkbox"/> <i>Peucetia viridinis</i> <input checked="" type="checkbox"/> <i>Dipluridae</i> <input type="checkbox"/> <i>Leurotychus pacificus</i> <input checked="" type="checkbox"/> <i>Leurodectus hesperus</i> <input checked="" type="checkbox"/> <i>Salticidae</i> <input type="checkbox"/> <i>Phidippus formosus</i> <input checked="" type="checkbox"/> <i>Thomisidae</i> <p>DECAPODE STADAE</p>
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Bird Species Observed:

<u>ASCP</u>	<u>NORP</u>	<u>CAKI</u>	<u>MODO</u>	<u>SNST</u>	<u>AWBL</u>	<u>Rea Fowl</u>
<u>ANCL</u>	<u>TUVU</u>	<u>BASW</u>	<u>LOPI</u>	<u>MALL</u>	<u>YEWB</u>	<u>BAOW</u>
<u>HOPI</u>	<u>LOSH</u>	<u>WIKI</u>	<u>EUST</u>	<u>WTSW</u>	<u>AMHU</u>	<u>BRBL</u>
<u>BLPH</u>	<u>QMTA</u>	<u>HALZ</u>	<u>ANAV</u>	<u>LALM</u>	<u>BSH</u>	

Other Wildlife Species Observed:
UTA
LOTTONTAIL
W. FENCE
CANS

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: GIRLLE CITY Portion of Site Surveyed: AU Acreage Surveyed: 63 Biologist(s): JOHN AUST, MELANEDRUS

Date: 07-12-12 Time (Start/End): 1000 / 1400 Cloud Cover (Start/End): 100% / 100% Temperature in °F (Start/End): 81 / 91

Arthropod Species Observed: 105-1400 (JD) msh Wind Speed in ~~Beaufort~~ (Start/End): 0-2 / 0-1 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolasta</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> Asilidae <input checked="" type="checkbox"/> <i>Effigia alabarbaris</i> <input checked="" type="checkbox"/> <i>Mallotropa faurix</i> <input type="checkbox"/> <i>Proctocanthus</i> sp. <input type="checkbox"/> <i>Soropogon luteus</i> <input type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae</i> (May Flies) <input checked="" type="checkbox"/> <i>Millobaetis pacificus</i> <input checked="" type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa</i> sp. <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythcombia</i> sp. <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax</i> sp. <input type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Calliphora</i> sp. <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input checked="" type="checkbox"/> <i>Conopidae</i> sp. <input type="checkbox"/> <i>Physoccephala texana</i> <input type="checkbox"/> <i>Culicidae</i> - mosquitoes <input type="checkbox"/> <i>Cuterebridae</i> <input checked="" type="checkbox"/> <i>Agapostemon</i> sp. <input type="checkbox"/> <i>Condylostylus</i> sp. <input type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga</i> sp. <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon</i> sp. <input checked="" type="checkbox"/> <i>Dasyuella coccineohirta</i> <input type="checkbox"/> <i>Dasyuella californica</i> <input type="checkbox"/> <i>Dasyuella sackeni</i> (lg.) <input type="checkbox"/> <i>Dasyuella clytemnestra</i> <input type="checkbox"/> <i>Compsoneris tolteca</i> <input type="checkbox"/> <i>Trielis alicione</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pepsis mildei</i> <input type="checkbox"/> <i>Pepsis</i> sp. <input checked="" type="checkbox"/> <i>Sphécidae</i> <input type="checkbox"/> <i>Amnophila alberti</i> <input type="checkbox"/> <i>Amnophila</i> sp. <input type="checkbox"/> <i>Bembix americana</i> <input type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanopsis</i> <input type="checkbox"/> <i>Bicyrtes</i> sp. <input checked="" type="checkbox"/> <i>Cerberis</i> sp. <input checked="" type="checkbox"/> <i>Chalybion californicus</i> <input checked="" type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucereis insignis</i> <input type="checkbox"/> <i>Hoplisoides diversus</i> <input type="checkbox"/> <i>Hoplisoides</i> sp. <input type="checkbox"/> <i>Isodonti aelegans</i> <input checked="" type="checkbox"/> <i>Microbembix californicus</i> <input type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Philanthus ventilabris</i> <input type="checkbox"/> <i>Podalonia</i> sp. <input type="checkbox"/> <i>Prionyx foxi</i> <input type="checkbox"/> <i>Prionyx</i> sp. <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Stizoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae</i> - unidentified <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Euodynerus annulata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<p>Polistes fuscatus aurifer</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Vespa pennsylvanica</i> <p>Colcontera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Buprestidae</i> <input type="checkbox"/> <i>Carabidae</i> <input type="checkbox"/> <i>Cerambycidae</i> <input type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilocorus orbis</i> <input type="checkbox"/> <i>Coccinella</i> sp. <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elaterridae</i> (Click Beetles) <input type="checkbox"/> <i>Chrysomelidae</i> <input type="checkbox"/> <i>Homaladacra</i> sp. <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactylopiidae</i> (Coccineal) <input type="checkbox"/> <i>Dactylopius</i> sp. <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input checked="" type="checkbox"/> <i>Psyllidae</i> <input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Ghrysoptera</i> sp. <input checked="" type="checkbox"/> <i>Myrmeleontidae</i> <input type="checkbox"/> <i>Brachyneururus</i> sp. <input type="checkbox"/> <i>Myrmeleon</i> sp. <input type="checkbox"/> <i>Raphidiidae</i> (Snakeflies) <p>Dermaptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Disosteira pictipennis</i> <input type="checkbox"/> <i>Leprus intermedium</i> <input type="checkbox"/> <i>Melanoplus</i> sp. <input type="checkbox"/> <i>Pyrrhocoridae</i> <input type="checkbox"/> <i>Largus cinctus</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> (SAV) <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus</i> sp. <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Tachopepla aurora</i> <input checked="" type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Apiomeris crassipes</i> <input type="checkbox"/> <i>Chilocorus ventralis</i> <input checked="" type="checkbox"/> <i>Zelus tetracanthus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aphididae</i> <input checked="" type="checkbox"/> <i>Cercopidae</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homaladacra</i> sp. <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactylopiidae</i> (Coccineal) <input type="checkbox"/> <i>Dactylopius</i> sp. <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input checked="" type="checkbox"/> <i>Psyllidae</i> <input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Ghrysoptera</i> sp. <input checked="" type="checkbox"/> <i>Myrmeleontidae</i> <input type="checkbox"/> <i>Brachyneururus</i> sp. <input type="checkbox"/> <i>Myrmeleon</i> sp. <input type="checkbox"/> <i>Raphidiidae</i> (Snakeflies) <p>Dermaptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Disosteira pictipennis</i> <input type="checkbox"/> <i>Leprus intermedium</i> <input type="checkbox"/> <i>Melanoplus</i> sp. <input type="checkbox"/> <i>Pyrrhocoridae</i> <input type="checkbox"/> <i>Largus cinctus</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Trimerotropis californica</i> <input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i> <input type="checkbox"/> <i>Gryllus</i> sp. <input type="checkbox"/> <i>Oecanthus fulvoni</i> <input type="checkbox"/> <i>Tettigoniidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input type="checkbox"/> <i>Scudderia mexicana</i> <input type="checkbox"/> <i>Stenopelmatus</i> sp. <input type="checkbox"/> <i>Iris oratoria</i> <input type="checkbox"/> <i>Stagmomantis californica</i> <input type="checkbox"/> <i>Parabacillus hesperis</i> <p>Odonata:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Aeshna multicolor</i> <input checked="" type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula saturata</i> <input checked="" type="checkbox"/> <i>Noctuidae</i> <input type="checkbox"/> <i>Autographa californica</i> <input type="checkbox"/> <i>Schinia</i> <input checked="" type="checkbox"/> <i>Geometridae</i> <input checked="" type="checkbox"/> <i>Pyralidae</i> <input type="checkbox"/> <i>Progomphus borealis</i> <input type="checkbox"/> <i>Sympetrum corruptum</i> <input type="checkbox"/> <i>Sympetrum illotum</i> <input type="checkbox"/> <i>Tramea lacerata</i> <input checked="" type="checkbox"/> <i>Tramea onusta</i> <input type="checkbox"/> <i>Argia</i> sp. <input type="checkbox"/> <i>Enallagma</i> sp. <input type="checkbox"/> <i>Telebasis salva</i> <p>Lepidoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Atalopedes campestris</i> <input type="checkbox"/> <i>Erynnis funeralis</i> <input type="checkbox"/> <i>Heliopterus erictorum</i> <input checked="" type="checkbox"/> <i>Hylephila phyleus</i> <input checked="" type="checkbox"/> <i>Phidippus formosus</i> <input checked="" type="checkbox"/> <i>Thomisidae</i> <p>Arachnida:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Araneidae</i> <input type="checkbox"/> <i>Peucetia viridinis</i> <input checked="" type="checkbox"/> <i>Dipluridae</i> <input type="checkbox"/> <i>Leurotychus pacificus</i> <input checked="" type="checkbox"/> <i>Leurodectus hesperus</i> <input checked="" type="checkbox"/> <i>Salticidae</i> <input type="checkbox"/> <i>Phidippus formosus</i> <input checked="" type="checkbox"/> <i>Thomisidae</i> <p>Other Wildlife Species Observed:</p> <p>UTA</p> <p>COTTONTAIL</p> <p>W. FENCE</p> <p>CAINS</p>
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Bird Species Observed:

ASCP	NOPD	CAKI	MODO	SNST	AWBL	Pea Fowl
ANCL	TUVU	BASW	LOPI	MALL	YEWB	BAOW
HOPI	LOSH	WIKI	EUST	WTSW	AMHU	BRBL
BLPH	QMTA	HAL	ANAV	LALM	BSH	

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CANLECTRY Portion of Site Surveyed: ALL Acreage Surveyed: 63 Biologist(s): JWDIVUS, MEDICUS
 Date: 07-14-12 Time (Start/End): 1000/1400 (1.5) Cloud Cover (Start/End): 0/0 Temperature in °F (Start/End): 82/93
 Wind Speed in Beaufort (Start/End): 0-2/5-12 DSF Detected (Circle): Y (N)

Arthropod Species Observed:

Diptera:	<i>Tabanus punctifer</i>	<i>Polistes fuscatus aurifer</i>	Pentatomidae	<i>Primerotropis californica</i>	<input checked="" type="checkbox"/>
<i>R. terminatus abdominalis</i>	<i>Tachinidae</i>	<i>Vespula pennsylvanica</i>	<i>Chlorochroa ligata</i>	<i>Trimerotropis pallidipennis</i>	<input checked="" type="checkbox"/>
<i>Apocera chrysolasia</i>	<i>Dasymutilla coccineohirta</i>	Colcoptera:	<i>Chlorochroa uhleri</i>	<i>Gryllus sp.</i>	<input checked="" type="checkbox"/>
<i>Apocera pantherina</i>	<i>Dasymutilla californica</i>	<i>Buprestidae</i>	<i>Murgantia histrionica</i>	<i>Oecanthus fulvoni</i>	<input checked="" type="checkbox"/>
<i>Nemomydas convergens</i>	<i>Dasymutilla sackeni</i> (lg.)	<i>Carabidae</i>	<i>Podisus sp.</i>	<i>Leptodesma acron</i>	
<i>Asilidae</i>	<i>Dasymutilla clytemnestra</i>	<i>Cerambycidae</i>	<i>Thyanta pallidovirens</i>	<i>Icaricia acron</i>	
<i>Effigia alabarbaris</i>	<i>Campsomeris tolteca</i>	<i>Coccinellidae</i>	<i>Trichoptera aurora</i>	<i>Leptodesma</i>	
<i>Mallotropa faurax</i>	<i>Trielis alcione</i>	<i>Adalia bipunctata</i>	<i>Reduviidae</i>	<i>Stenopelia mormo virgulti</i>	
<i>Proctocanthus sp.</i>	<i>Pempsis mildoi</i>	<i>Chilochorus orbis</i>	<i>Apiomeris crassipes</i>	<i>Agraulis vanillae</i>	
<i>Saropogon luteus</i>	<i>Pepsis sp.</i>	<i>Coccinella sp.</i>	<i>Rhytocoris ventralis</i>	<i>Danaus gilippus</i>	
<i>Stenopogon brevisculus</i>	Sphécidae	<i>Harmonia axyridis</i>	<i>Zelus tetracanthus</i>	<i>Danus plexippus</i>	
<i>Baetidae</i> (May Flies)	<i>Amnophila alberti</i>	<i>Hippodamia convergens</i>		<i>Precis coenia</i>	
<input checked="" type="checkbox"/> <i>Callibaetis pacificus</i>	<i>Bembix americana</i>	<i>Olla v-nigrum</i>	Homoptera:	<i>Yanessa annabella</i>	
<input checked="" type="checkbox"/> <i>Bombyliidae</i>	<i>Bembix comata</i>	<i>Elaeterida</i> (Click Beetles)	<i>Aphididae</i>	<i>Yanessa atalanta</i>	
<i>Exoprosopa sp.</i>	<i>Bembix melanapis</i>	<i>Chrysomelidae</i>	<i>Cercopidae</i>	<i>Yanessa cardui</i>	
<i>Ligyra gazophylax</i>	<i>Bicytes sp.</i>	<i>Diabrotica balteata</i>	<i>Cicadellidae</i>	<i>Yanessa virginiensis</i>	
<i>Mythicomya sp.</i>	<i>Cerceris sp.</i>	<i>D. undecimpunctata</i>	<i>Homoladisca sp.</i>	<i>Arctiidae</i>	
<i>Poecilanthrax arethusa</i>	<i>Chalcidion californicus</i>	<i>Lema trilineata</i>	<i>Cicadidae</i>	<i>Noctuidae</i>	
<i>Poecilanthrax sp.</i>	<i>Chlorion aevarium</i>	<i>Tachymela laticolis</i>	<i>Dactyloptidae</i> (Coccineal)	<i>Pantala flavescens</i>	
<i>Toxophora pellucida</i>	<i>Eucerceris insignis</i>	<i>Carculionidae</i>	<i>Dactylopius sp.</i>	<i>Pachydiplax longipennis</i>	
<i>Villa atrata</i>	<i>Hoplitoides diversus</i>	<i>Halipidae</i>	<i>Membracidae</i>	<i>Autographa californica</i>	
<input checked="" type="checkbox"/> <i>Zenox simpsoni</i>	<i>Hoplitoides sp.</i>	<i>Hydrophylidae</i>	<i>Antimathie expansa</i>	<i>Schinia</i>	
<i>Calliphora sp.</i>	<i>Isodonta elegans</i>	<i>Meloidae</i>	<i>Psyllidae</i>	<i>Geometridae</i>	
<i>Eucalliphora lilaea</i>	<i>Microbembix californicus</i>	<i>Nemognatha lurida apicalis</i>	<i>Glycaspis brimblecombei</i>	<i>Pyralidae</i>	
<i>Phaenicia cuprina</i>	<i>Philanthus ventralis</i>	<i>Collops sp.</i>		<i>Symptetrus borealis</i>	
<i>Phaenicia sericata</i>	<i>Philanthus multimaculatus</i>	<i>Rhipiphoridae</i>	Neuroptera:	<i>Symptetrus illotum</i>	
<i>Physoccephala texana</i>	<i>Podalonia sp.</i>	<i>Macrosaigona flavipenne</i>	<i>Chrysopidae</i>	<i>Tramea lacerata</i>	
<i>Culicidae</i> - mosquitoes	<i>Priopnx. foxi</i>	<i>Macrosaigona sp.</i>	<i>Chrysopa sp.</i>	<i>Tramea onusta</i>	
<input checked="" type="checkbox"/> <i>Guterebridae</i>	<i>Priopnx sp.</i>	<i>Scarabaeidae</i>	<i>Myrmeleon sp.</i>	<i>Argia sp.</i>	
<input checked="" type="checkbox"/> <i>Condylostylus sp.</i>	<i>Sceliphron caementarium</i>	<i>Brachyneururus sp.</i>	<i>Myrmeleon sp.</i>	<i>Telebasis sativa</i>	
<input checked="" type="checkbox"/> <i>Drosophilidae</i>	<i>Sphex ichneumonius</i>	<i>Eleodes sp.</i>	<i>Raphididae</i> (Snakeflies)	Arachnida:	
<i>Musca domestica</i>	<i>Sizoides remicinctum</i>	Hemiptera:	<i>Forficula auricularia</i>	<i>Aracnidae</i>	
<i>Sarcophagidae</i>	<i>Tachytes elongatus</i>	<i>Lygaeidae</i>		<i>Peucetia viridinis</i>	
<i>Sarcophaga sp.</i>	<i>Tiphidae</i>	<i>Lygaeus kalmii</i>		<input checked="" type="checkbox"/> <i>Dipluridae</i>	
<i>Stratiomyidae</i>	<i>Vespidae</i> - unidentified	<i>Pyrrhocoridae</i>		<i>Leurotychus pacificus</i>	
<i>Syrphidae</i>	<i>Emenes bollii</i>	<i>Largus cinctus</i>		<i>Latroectus hesperus</i>	
<i>Allograpta obliqua</i>	<i>Euemes crucifera</i>			<i>Salticidae</i>	
<i>Eristalis tenax</i>	<i>Euoynerus annulata</i>			<i>Phidippus formosus</i>	
<i>Metasyrphus americanus</i>	<i>Polistes apachus</i>			<input checked="" type="checkbox"/> <i>Thomisidae</i>	
<i>Volucella mexicana</i>	<i>Polistes dorsalis</i>				
<i>Tabanidae</i>	<i>Polistes exclamans</i>				

Bird Species Observed:

<i>TUVU</i>	<i>HOFI</i>	<i>YWA</i>	<i>LEGO</i>	<i>AMTU</i>
<i>AMCK</i>	<i>YWA</i>	<i>HOG</i>	<i>WREN</i>	<i>WCO</i>
<i>QHTA</i>	<i>LEGO</i>	<i>WREN</i>	<i>WREN</i>	<i>WCO</i>
<i>ATFL</i>	<i>AMTU</i>	<i>WCO</i>	<i>WREN</i>	<i>WCO</i>

Other Wildlife Species Observed:

<i>COTONTAIL</i>	<i>W</i>	<i>FENCE</i>	<i>1.2</i>
<i>UTA</i>	<i>W</i>	<i>FENCE</i>	<i>1.2</i>
<i>CABS</i>	<i>W</i>	<i>FENCE</i>	<i>1.2</i>
<i>GTJR</i>	<i>W</i>	<i>FENCE</i>	<i>1.2</i>

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: ALL Acreage Surveyed: ~63 Biologist(s): A. DICUS, J. DICUS
 Date: 07-19-12 Time (Start/End): 1000/1400 Cloud Cover (Start/End): 0 / 17 Temperature in °F (Start/End): 86 / 96
 Arthropod Species Observed: 1105 Wind Speed in mph (Start/End): 1-4 / 8-11 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apioecera chrysolasia</i> <input type="checkbox"/> <i>Apioecera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> Asilidae <input checked="" type="checkbox"/> <i>Efferia alabarbaris</i> <input type="checkbox"/> <i>Malloflora faurix</i> <input type="checkbox"/> <i>Proctocanthus</i> sp. <input checked="" type="checkbox"/> <i>Saropogon laevis</i> <input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i> Baetidae (May Flies) <input checked="" type="checkbox"/> <i>Gallibaetis pacificus</i> Bombyliidae <input type="checkbox"/> <i>Exoprosopa</i> sp. <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythicomyia</i> sp. <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax</i> sp. <input type="checkbox"/> <i>Toxophora pellicuda</i> <i>Villa atrata</i> <i>Zenox simpson</i> <i>Calliphora</i> sp. <i>Eucalliphora lilaea</i> <input checked="" type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> Onopidae sp. <input checked="" type="checkbox"/> <i>Physocephala texana</i> Culicidae - mosquitoes Cuterebridae <input checked="" type="checkbox"/> <i>Condylostylus</i> sp. <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> sp. <input type="checkbox"/> <i>Stratiomyidae</i> Wasps <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasphyrus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<ul style="list-style-type: none"> <i>Ichneumon</i> sp. <i>Dasytomilla coccineohirta</i> <i>Dasytomilla californica</i> <i>Dasytomilla sackeni</i> (lg.) <i>Dasytomilla clytemnestra</i> <i>Camposomeris tolteca</i> <i>Trielis albione</i> <i>Pompilidae</i> <i>Pepsis mildel</i> <input checked="" type="checkbox"/> <i>Sphécidae</i> <i>Ammophila alberti</i> <i>Ammophila</i> sp. <input checked="" type="checkbox"/> <i>Bembix americana</i> <i>Bembix comata</i> <i>Bembix melanopsis</i> <i>Bicyrtes</i> sp. <i>Chalybion californicus</i> <i>Chlorion aerarium</i> <i>Eucerceris insignis</i> <i>Hoplisoides diversus</i> <i>Hoplisoides</i> sp. <i>Isodonti aelegans</i> <input checked="" type="checkbox"/> <i>Microbembix californicus</i> <input checked="" type="checkbox"/> <i>Philanthus multimaculata</i> <i>Philanthus ventralis</i> <i>Podalonia</i> sp. <input checked="" type="checkbox"/> <i>Prionyx foxi</i> <i>Prionyx</i> sp. <i>Sceliphron caementarium</i> <i>Sphecx ichneumonius</i> <i>Stizoides remicinctum</i> <i>Tachytes elongatus</i> <i>Tiphidae</i> <i>Vespidae</i> - unidentified <i>Eumenes bollii</i> <i>Eumenes crucifera</i> <i>Euothenus annulata</i> <i>Polistes apachus</i> <i>Polistes dorsalis</i> <i>Polistes exclamans</i> 	<ul style="list-style-type: none"> <i>Polistes fuscatus aurifer</i> <i>Vesputia pennsylvanica</i> Collembola: <input checked="" type="checkbox"/> <i>Murgantia histrionica</i> <i>Podisus</i> sp. <i>Thyanta pallidivirens</i> <i>Trichopepla aurora</i> Reduviidae <i>Adalia bipunctata</i> <i>Chilochorus orbis</i> <i>Coccinella</i> sp. <input checked="" type="checkbox"/> <i>Hippodamia convergens</i> <i>Olla v-nigrum</i> Elatridae (Click Beetles) Chrysomelidae <i>Diabrotica balteata</i> <i>D. undecimpunctata</i> <i>Lema trilineata</i> <i>Tachymela laticollis</i> Curculionidae Halipidae Hydrophyllidae Meloidae <i>Nemognatha lurida apicalis</i> Melyridae <i>Collops</i> sp. Rhipiphoridae <i>Macrosaigona flavipenne</i> Macrosgon sp. Scarabaeidae <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <i>Paracotalpa</i> sp. <i>Staphylinus maxillosus</i> Fenebrionidae <input checked="" type="checkbox"/> <i>Eleodes</i> sp. Hemiptera: Lygaeidae <i>Lygaeus kalmii</i> Pyrrhocoridae <i>Largus cinctus</i>
<ul style="list-style-type: none"> Pentatomidae <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> (SAM) Buprestidae Carabidae Cerambycidae Coccinellidae <i>Adalia bipunctata</i> <i>Chilochorus orbis</i> <i>Coccinella</i> sp. <input checked="" type="checkbox"/> <i>Hippodamia convergens</i> <i>Olla v-nigrum</i> Elatridae (Click Beetles) Chrysomelidae <i>Diabrotica balteata</i> <i>D. undecimpunctata</i> <i>Lema trilineata</i> <i>Tachymela laticollis</i> Curculionidae Halipidae Hydrophyllidae Meloidae <i>Nemognatha lurida apicalis</i> Melyridae <i>Collops</i> sp. Rhipiphoridae <i>Macrosaigona flavipenne</i> Macrosgon sp. Scarabaeidae <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <i>Paracotalpa</i> sp. <i>Staphylinus maxillosus</i> Fenebrionidae <input checked="" type="checkbox"/> <i>Eleodes</i> sp. Hemiptera: Lygaeidae <i>Lygaeus kalmii</i> Pyrrhocoridae <i>Largus cinctus</i> 	<ul style="list-style-type: none"> <i>Polistes fuscatus aurifer</i> <i>Vesputia pennsylvanica</i> Collembola: <input checked="" type="checkbox"/> <i>Murgantia histrionica</i> <i>Podisus</i> sp. <i>Thyanta pallidivirens</i> <i>Trichopepla aurora</i> Reduviidae <i>Adalia bipunctata</i> <i>Chilochorus orbis</i> <i>Coccinella</i> sp. <input checked="" type="checkbox"/> <i>Hippodamia convergens</i> <i>Olla v-nigrum</i> Elatridae (Click Beetles) Chrysomelidae <i>Diabrotica balteata</i> <i>D. undecimpunctata</i> <i>Lema trilineata</i> <i>Tachymela laticollis</i> Curculionidae Halipidae Hydrophyllidae Meloidae <i>Nemognatha lurida apicalis</i> Melyridae <i>Collops</i> sp. Rhipiphoridae <i>Macrosaigona flavipenne</i> Macrosgon sp. Scarabaeidae <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <i>Paracotalpa</i> sp. <i>Staphylinus maxillosus</i> Fenebrionidae <input checked="" type="checkbox"/> <i>Eleodes</i> sp. Hemiptera: Lygaeidae <i>Lygaeus kalmii</i> Pyrrhocoridae <i>Largus cinctus</i> 	<ul style="list-style-type: none"> Pentatomidae <input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i> <i>Gryllus</i> sp. <i>Oecanthus fultoni</i> Tettigoniidae <i>Antianthe expansa</i> <i>Scudderita mexicana</i> <i>Strymon melinus</i> <i>Apodemia normo virgultii</i> <i>Agraulis vanillae</i> <i>Danaus gilippus</i> <i>Danus plexippus</i> <i>Precis coenia</i> <input checked="" type="checkbox"/> <i>Vanessa annabella</i> <i>Vanessa atalanta</i> <i>Vanessa cardui</i> <i>Vanessa virginiensis</i> Arctiidae Noctuidae <i>Autographa californica</i> <i>Schinia</i> Geometridae <input checked="" type="checkbox"/> Pyralidae <i>Paranthrene robiniae</i> <i>Hyles lineata</i> <i>Manaduca sexta</i> Arachnidae: Araneidae <i>Peucetia viridins</i> <input checked="" type="checkbox"/> Dipluridae <i>Leurotychus pacificus</i> <i>Latrodectus hesperus</i> Salticidae <input checked="" type="checkbox"/> Phidippidae Thomisidae

Bird Species Observed: AMCR BUSH NOMO COPA GNST BUSH
BLBR AMBO HOSP RAPI MLL KILL
BUOR ALHA LOSH MOOD CITE
COYE TUVU CAKI BASW SAPH G440

Other Wildlife Species Observed:
COTTONTAIL
VTA
CAPS
W.FENCE

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: ALL Acreage Surveyed: 63 Biologist(s): JWD, S, MAD, CUS
 Date: 07-21-12 Time (Start/End): 1000/1400 Cloud Cover (Start/End): 0/0 Temperature in °F (Start/End): 79/96
 Arthropod Species Observed: MD Wind Speed in Beaufort (Start/End): 0-2/3-7 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolasia</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Efferia albarbaris</i> <input type="checkbox"/> <i>Mallopora faurix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input type="checkbox"/> <i>Saropogon luteus</i> <input type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythicomomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input type="checkbox"/> <i>Toxophora pellucida</i> <input checked="" type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input checked="" type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physcephala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input checked="" type="checkbox"/> <i>Condylostylus sp.</i> <input type="checkbox"/> <i>Prosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon sp.</i> <input type="checkbox"/> <i>Dasyneura coccineohirta</i> <input type="checkbox"/> <i>Dasyneura californica</i> <input type="checkbox"/> <i>Dasyneura sackeni (lg.)</i> <input type="checkbox"/> <i>Dasyneura clyemestra</i> <input type="checkbox"/> <i>Camposemeris toleca</i> <input type="checkbox"/> <i>Trielis alcitone</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pepsis mildei</i> <input type="checkbox"/> <i>Pepsis sp.</i> <input checked="" type="checkbox"/> <i>Sphecidae</i> <input type="checkbox"/> <i>Ammophila alberti</i> <input type="checkbox"/> <i>Ammophila sp.</i> <input type="checkbox"/> <i>Bembix americana</i> <input type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanopsis</i> <input type="checkbox"/> <i>Bicyrtes sp.</i> <input type="checkbox"/> <i>Cerceris sp.</i> <input type="checkbox"/> <i>Chalybion californicus</i> <input checked="" type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisoides diversus</i> <input type="checkbox"/> <i>Hoplisoides sp.</i> <input type="checkbox"/> <i>Isodontia aelegans</i> <input checked="" type="checkbox"/> <i>Microbembix californicus</i> <input type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Prionyx foxi</i> <input checked="" type="checkbox"/> <i>Prionyx sp.</i> <input type="checkbox"/> <i>Sphegichneumonius</i> <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sicoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Eudomyrus annulata</i> <input checked="" type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> <input type="checkbox"/> <i>Vespa pennsylvanica</i> <p>Coloptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Buprestidae</i> <input type="checkbox"/> <i>Carabidae</i> <input type="checkbox"/> <i>Cerambycidae</i> <input type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilocorus orbis</i> <input type="checkbox"/> <i>Coccinella sp.</i> <input type="checkbox"/> <i>Harmonia axyridis</i> <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elatridae (Click Beetles)</i> <input type="checkbox"/> <i>Chrysomelidae</i> <input type="checkbox"/> <i>Homaldisca sp.</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input checked="" type="checkbox"/> <i>Libellula saburata</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input type="checkbox"/> <i>Dactylopiidae (Coccinellae)</i> <input type="checkbox"/> <i>Dactylopius sp.</i> <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Antitrophe expansa</i> <input type="checkbox"/> <i>Psyllidae</i> <input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Myrmeleonidae</i> <input type="checkbox"/> <i>Prachyneururus sp.</i> <input checked="" type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Leprus intermedius</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca sp.</i>
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Bird Species Observed:

ANMV	NASW	LELD	COLB	BLGR	TRVU	NOMO	KULL	CAEG	LOMO
BUPH	ANIV	RTXA	BUSH	HOOP	HOEL	CAKI	ORBL	RWBL	RTHA
MODO	AMOR	BLTV	EUST	HOSS	LOSH	EULO	GREU	MAL	COBA
YEMA	COLE	RUHV	SPTO	ROPI	WELI	SAPH	GNST	AMAV	6-76R

Other Wildlife Species Observed:

CAS	BTSR
WFCN	
COPTAIL	
VTA	

NEPTHEMUS AJST 10RA

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: ALL Acreage Surveyed: ~63 Biologist(s): JWDICS, MDIWS
 Date: 07-23-12 Time (Start/End): 1000 / 1400 Cloud Cover (Start/End): 0 / 5 Temperature in °F (Start/End): 77 / 92

Arthropod Species Observed: 1000 Wind Speed in mph Start/End: 0-3 / 3-7 DSF Detected (Circle): Y (N)

Diptera:	Ichneumon sp.	Polistes ruscatus var. rufus	Pentatomidae	Parasitoidae
<i>R. terminans abdominalis</i>	<i>Dasyneumon sp.</i>	<i>Vespula pennsylvanica</i>	<i>Chlorochroa ligata</i>	<i>Microtopis californicus</i> ✓
<i>Apocera chrysolasia</i>	<i>Dasyneumon coccineohirta</i>		<i>Chlorochroa uhleri</i>	<i>Trimerotropis pallidipennis</i> ✓
<i>Apocera convergens</i>	<i>Dasyneumon californica</i>		<i>Murgantia stramonium</i>	<i>Clytus sp.</i> ✓
<i>Nemomydas pantherina</i>	Colletes:		<i>Podisus sp.</i>	<i>Hemitegus cervinus</i>
	<i>Gymnosoma fuliginosum</i>		<i>Thysania pulchrovirens</i>	<i>Leptodes marina</i>
	<i>Therididae (Stiletto Fly)</i>		<i>Trichopoda aurora</i>	<i>Strymon melinus</i>
	<i>Ceratitis capitata</i>		<i>Reduviidae</i>	<i>Apodemia normae virgulti</i>
	<i>Tipulidae</i>		<i>Coccinellidae</i>	<i>Agrotis vanillae</i>
	<i>Nephrotoma sp.</i>		<i>Adalia bipunctata</i>	<i>Danaus gilippus</i>
			<i>Chilocorus orbus</i>	<i>Danus plexippus</i>
Hymenoptera:			<i>Coccinella sp.</i>	<i>Praon coenia</i>
Ants			<i>Harmosta axyridis</i>	<i>Vanessa annabellia</i>
<i>Formicidae</i>	<i>Amnophila albertyi</i>		<i>Hippodamia compositis</i>	<i>Vanessa atalanta</i>
<i>Iridomyrmex humilis</i>	<i>Olla v-nigrum</i>		<i>Elateridae (Click Beetles)</i>	<i>Vanessa cardui</i> ✓
<i>Formica sp.</i>	<i>Bembix americana</i>		<i>Chrysomelidae</i>	<i>Vanessa virginieris</i>
<i>Liometopum occidentale</i>	<i>Bembix comata</i>		<i>Homaldis sp.</i>	<i>Aretidae</i>
<i>Messor pergandei</i>	<i>Bembix melanopsis</i>		<i>Cicadellidae</i>	<i>Noctuidae</i>
<i>Pogonomyrmex californica</i>	<i>Bicyrtus sp.</i>		<i>D. undecimpunctata</i>	<i>Autographa californica</i>
<i>Solenopsis sp.</i>	<i>Ceryrtus sp.</i>		<i>Lema trilineata</i>	<i>Schinia</i>
Bees	<i>Chalybion californicus</i>		<i>Zachvatkini (Cochineal)</i>	<i>Geometridae</i>
<i>Anthophoridae</i>	<i>Chalybion aerarium</i>		<i>Membracidae</i>	<i>Pyralidae</i> ✓
<i>Anthophora urbana</i>	<i>Eucereus insignis</i>		<i>Antillean expanse</i>	<i>Parasphrenea robiniae</i>
<i>Zenopsis simpson</i>	<i>Hoplisoides diversus</i>		<i>Glycaspis humbectonidae</i>	<i>Hyles lineata</i>
<i>Calliphora sp.</i>	<i>Hoplisoides sp.</i>		<i>Neuroptera:</i>	<i>Manduca sexta</i>
<i>Eucalliphora lilaea</i>	<i>Isodontia oelegrus</i>		<i>Chrysopidae</i>	<i>Arachnidae</i>
<i>Phaenicia cuprina</i>	<i>Microbembix californicus</i>		<i>Chrysopa sp.</i>	<i>Araeidae</i>
<i>Phaenicia sericata</i>	<i>Philanthus multimaculata</i>		<i>Myrmecolekidae</i>	<i>Diploidae</i> ✓
<i>Conopidae sp.</i>	<i>Philanthus ventralis</i>		<i>Myrmecoleon sp.</i>	<i>Leucopygus pacificus</i>
<i>Physophaea texana</i>	<i>Priocnax fagi</i>		<i>Raphitidae (Snakeflies)</i>	<i>Leucodactylus hesperus</i>
<i>Phaenicia sericata</i>	<i>Priocnax sp.</i>		<i>Dermoptera:</i>	<i>Phidippus formosus</i>
<i>Conopidae sp.</i>	<i>Sceliphron caementarium</i>		<i>Forficula auricularia</i>	<i>Thomisidae</i>
<i>Culicidae - mosquitoes</i>	<i>Sphegus ichneumonius</i>		<i>Cryptoptera:</i>	
<i>Centrebriidae</i>	<i>Stizoides remicinctum</i>		<i>Acrididae</i> ✓	
<i>Condylostylus sp.</i>	<i>Tachydes elongatus</i>		<i>Dissoptera (stickpin)</i>	
<i>Prosophilidae</i>	<i>Tipulidae</i>		<i>Lygaeidae</i>	
<i>Musca domestica</i>	<i>Vespidae - unidentified</i>		<i>Lygaeus kalmii</i>	
<i>Sarcophagidae</i>	<i>Eumenes bollii</i>		<i>Pyrrhia coridax</i>	
<i>Sarcophaga sp.</i>	<i>Eumenes crucifera</i>		<i>Largus cinctus</i>	
<i>Stratiomyidae</i>	<i>Euchynerus annulata</i>			
<i>Syrphidae</i>	<i>Polistes apachus</i>			
<i>Allograpta obliqua</i>	<i>Polistes dorsalis</i>			
<i>Eristalis tenax</i>	<i>Polistes exclamans</i>			
<i>Metasyphus americanus</i>				
<i>Volucella mexicana</i>				
<i>Tabanidae</i>				

Other Wildlife Species Observed:

<u>CAGS</u>	<u>UTA</u>	<u>COYOTE</u>	<u>W-FENCE</u>
<u>OTR</u>			

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CARLE CITY Portion of Site Surveyed: AL Acreage Surveyed: 0.65 Biologist(s): J. DICUS, M. DICUS
 Date: 07-26-12 Time (Start/End): 1000 / 1400 Cloud Cover (Start/End): 0 / 0 Temperature in °F (Start/End): 77 / 86
 Arthropod Species Observed: 1105 Wind Speed in Beaufort (Start/End): 0-4 / 1-4 DSF Detected (Circle): Y (N)

Diptera:	Ichneumon sp.	Polistes fuscatus aurifer	Entomobryidae	Trimerotropis californica	Aeris rapae
<input type="checkbox"/> <i>R. terminans abdominalis</i>	<input type="checkbox"/> <i>Dasyxylum coccineohirta</i>	<input type="checkbox"/> <i>Vespula pennsylvanica</i>	<input checked="" type="checkbox"/> <i>Chlorochoreia ligata</i>	<input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i>	<input checked="" type="checkbox"/> <i>Aeris rapae</i>
<input type="checkbox"/> <i>Apocera chrysolasia</i>	<input type="checkbox"/> <i>Dasyxylum californica</i>	<input checked="" type="checkbox"/> <i>Chlorochoreia ubleri</i> KMI	<input checked="" type="checkbox"/> <i>Murgantia histrionica</i>	<input type="checkbox"/> <i>Cryllus sp.</i>	<input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i>
<input type="checkbox"/> <i>Apocera convergens</i>	<input type="checkbox"/> <i>Dasyxylum sackeni</i> (lg.)	<input type="checkbox"/> <i>Buprestidae</i>	<input type="checkbox"/> <i>Podisus sp.</i>	<input type="checkbox"/> <i>Cercanthon fulvoni</i>	<input type="checkbox"/> <i>Leontichia aceris</i>
<input checked="" type="checkbox"/> <i>Nemomydas pantherina</i>	<input type="checkbox"/> <i>Dasyxylum clytemnestra</i>	<input type="checkbox"/> <i>Cerambycidae</i>	<input type="checkbox"/> <i>Phytomyza pallidivirens</i>	<input type="checkbox"/> <i>Anilanthus expansa</i>	<input type="checkbox"/> <i>Lepidoptera</i>
<input checked="" type="checkbox"/> <i>Asilidae</i>	<input type="checkbox"/> <i>Campomeris tolteca</i>	<input type="checkbox"/> <i>Cerambycidae</i>	<input type="checkbox"/> <i>Trichoptera aurora</i>	<input type="checkbox"/> <i>Scudderia mexicana</i>	<input type="checkbox"/> <i>Strymon melinus</i>
<input checked="" type="checkbox"/> <i>Efferia alabarbaris</i>	<input type="checkbox"/> <i>Trielis actione</i>	<input type="checkbox"/> <i>Coccinellidae</i>	<input type="checkbox"/> <i>Reduviidae</i>	<input type="checkbox"/> <i>Stenopelmatus sp.</i>	<input type="checkbox"/> <i>Apodemia normi-virgulti</i>
<input type="checkbox"/> <i>Malloflora faurix</i>	<input type="checkbox"/> <i>Pogonipidae</i>	<input type="checkbox"/> <i>Adalia bipunctata</i>	<input type="checkbox"/> <i>Apionidae</i>	<input type="checkbox"/> <i>Iris oratoria</i>	<input type="checkbox"/> <i>Agraulis vanillae</i>
<input type="checkbox"/> <i>Proctocanthus sp.</i>	<input type="checkbox"/> <i>Pogonipidae</i>	<input type="checkbox"/> <i>Chilocorus orbis</i>	<input type="checkbox"/> <i>Rhyacionia ventralis</i>	<input type="checkbox"/> <i>Danaus gilippus</i>	<input type="checkbox"/> <i>Danus plexippus</i>
<input checked="" type="checkbox"/> <i>Xorogon luteus</i>	<input type="checkbox"/> <i>Sphacidae</i>	<input type="checkbox"/> <i>Coccinella sp.</i>	<input type="checkbox"/> <i>Zelus tetraxanthus</i>	<input type="checkbox"/> <i>Parabacillus hisperis</i>	<input type="checkbox"/> <i>Pecis coenia</i>
<input checked="" type="checkbox"/> <i>Stenopogon breviscaulus</i>	<input type="checkbox"/> <i>Hemiptera:</i>	<input type="checkbox"/> <i>Harmostis axyridis</i>		<input checked="" type="checkbox"/> <i>Odonata:</i>	<input checked="" type="checkbox"/> <i>Yanessa annabella</i>
<input type="checkbox"/> <i>Baetidae (May Flies)</i>	<input type="checkbox"/> <i>Amphiphila alberti</i>	<input type="checkbox"/> <i>Hippodamia convergens</i>		<input checked="" type="checkbox"/> <i>Libellula multicolor</i>	<input type="checkbox"/> <i>Yanessa atalanta</i>
<input type="checkbox"/> <i>Pallibaetis pacificus</i>	<input type="checkbox"/> <i>Amphiphila sp.</i>	<input type="checkbox"/> <i>Olla v-nigrum</i>	<input checked="" type="checkbox"/> <i>Hemiptera:</i>	<input type="checkbox"/> <i>Anax junius</i>	<input type="checkbox"/> <i>Yanessa carthi</i>
<input checked="" type="checkbox"/> <i>Bombiliidae</i>	<input type="checkbox"/> <i>Bembix americana</i>	<input type="checkbox"/> <i>Elatride (Click Beetles)</i>	<input checked="" type="checkbox"/> <i>Cicadellidae</i>	<input type="checkbox"/> <i>Erithemis collocata</i>	<input type="checkbox"/> <i>Yanessa virginteris</i>
<input type="checkbox"/> <i>Exoprosopa sp.</i>	<input type="checkbox"/> <i>Bembix comata</i>	<input type="checkbox"/> <i>Chrysomelidae</i>	<input type="checkbox"/> <i>Homalididae sp.</i>	<input checked="" type="checkbox"/> <i>Libellula saururus</i>	<input type="checkbox"/> <i>Aretidae</i>
<input type="checkbox"/> <i>Ligra gazophylax</i>	<input type="checkbox"/> <i>Bembix melanopsis</i>	<input type="checkbox"/> <i>Diabrotica balteata</i>	<input type="checkbox"/> <i>Cicadellidae</i>	<input type="checkbox"/> <i>Fachyplatys leopipennis</i>	<input type="checkbox"/> <i>Noctuidae</i>
<input type="checkbox"/> <i>Mythicomya sp.</i>	<input type="checkbox"/> <i>Bicyrtus sp.</i>	<input checked="" type="checkbox"/> <i>D. undecimpunctata</i>	<input type="checkbox"/> <i>Dactylopiidae (Coccinellae)</i>	<input type="checkbox"/> <i>Fachyplatys leopipennis</i>	<input type="checkbox"/> <i>Schizura</i>
<input type="checkbox"/> <i>Poecilanthrax arethusa</i>	<input type="checkbox"/> <i>Carvers sp.</i>	<input type="checkbox"/> <i>Lema trilineata</i>	<input type="checkbox"/> <i>Dactylopiidae (Coccinellae)</i>	<input type="checkbox"/> <i>Ferithemis intesa</i>	<input type="checkbox"/> <i>Geometridae</i>
<input type="checkbox"/> <i>Poecilanthrax sp.</i>	<input type="checkbox"/> <i>Chalybion californicus</i>	<input type="checkbox"/> <i>Chlorion laticinctus</i>	<input type="checkbox"/> <i>Chlorion laticinctus</i>	<input checked="" type="checkbox"/> <i>Synsperum corruptum</i>	<input type="checkbox"/> <i>Pyralidae</i>
<input type="checkbox"/> <i>Toxophora pellicuda</i>	<input type="checkbox"/> <i>Chlorion aerarium</i>	<input type="checkbox"/> <i>Curculionidae</i>	<input type="checkbox"/> <i>Curculionidae</i>	<input type="checkbox"/> <i>Synsperum illucium</i>	<input type="checkbox"/> <i>Paranitrene robitae</i>
<input type="checkbox"/> <i>Villa arata</i>	<input type="checkbox"/> <i>Eucerceris insignis</i>	<input type="checkbox"/> <i>Haliplicae</i>	<input type="checkbox"/> <i>Haliplicae</i>	<input type="checkbox"/> <i>Trimecia lacerata</i>	<input type="checkbox"/> <i>Manduca sexta</i>
<input type="checkbox"/> <i>Zenon simpson</i>	<input type="checkbox"/> <i>Hoplisoides diversus</i>	<input type="checkbox"/> <i>Meloidae</i>	<input type="checkbox"/> <i>Meloidae</i>	<input type="checkbox"/> <i>Arachnida:</i>	<input type="checkbox"/> <i>Araneidae</i>
<input type="checkbox"/> <i>Calliphora sp.</i>	<input type="checkbox"/> <i>Hoplisoides sp.</i>	<input type="checkbox"/> <i>Nemognatha lurida apicalis</i>	<input type="checkbox"/> <i>Nemognatha lurida apicalis</i>	<input type="checkbox"/> <i>Peuceletia viridinis</i>	<input checked="" type="checkbox"/> <i>Diptera:</i>
<input type="checkbox"/> <i>Eucalliphora lilaea</i>	<input type="checkbox"/> <i>Isodonti aeligans</i>	<input type="checkbox"/> <i>Melyridae</i>	<input type="checkbox"/> <i>Melyridae</i>	<input type="checkbox"/> <i>Leptoptera:</i>	<input type="checkbox"/> <i>Leurocyctus pacificus</i>
<input type="checkbox"/> <i>Phaenicia cuprina</i>	<input type="checkbox"/> <i>Microbembix californicus</i>	<input type="checkbox"/> <i>Collops sp.</i>	<input type="checkbox"/> <i>Collops sp.</i>	<input type="checkbox"/> <i>Aistopodes campostris</i>	<input type="checkbox"/> <i>Larvalectus hesperus</i>
<input type="checkbox"/> <i>Phaenicia sericata</i>	<input checked="" type="checkbox"/> <i>Philanthus multimaculata</i>	<input type="checkbox"/> <i>Rhipiphoridae</i>	<input type="checkbox"/> <i>Rhipiphoridae</i>	<input type="checkbox"/> <i>Erynnis funealis</i>	<input type="checkbox"/> <i>Salticidae</i>
<input type="checkbox"/> <i>Conopidae sp.</i>	<input type="checkbox"/> <i>Philanthus ventralis</i>	<input type="checkbox"/> <i>Macrosalpinx sp.</i>	<input type="checkbox"/> <i>Macrosalpinx sp.</i>	<input checked="" type="checkbox"/> <i>Hyophila phylax</i>	<input checked="" type="checkbox"/> <i>Thomisidae</i>
<input type="checkbox"/> <i>Physocphala texana</i>	<input type="checkbox"/> <i>Prionyx foxi</i>	<input type="checkbox"/> <i>Scarabaeidae</i>	<input type="checkbox"/> <i>Scarabaeidae</i>	<input type="checkbox"/> <i>Leucodea exfolia</i>	
<input type="checkbox"/> <i>Culicidae - mosquitoes</i>	<input checked="" type="checkbox"/> <i>Prionyx sp.</i>	<input type="checkbox"/> <i>Coitinus mutabilis</i>	<input checked="" type="checkbox"/> <i>Coitinus mutabilis</i>	<input type="checkbox"/> <i>Pavonytone melana</i>	
<input checked="" type="checkbox"/> <i>Cuterebridae</i>	<input type="checkbox"/> <i>Sceliphron caementarium</i>	<input type="checkbox"/> <i>Staphylinus macillovus</i>	<input type="checkbox"/> <i>Staphylinus macillovus</i>	<input type="checkbox"/> <i>Fonitex sabulei</i>	
<input type="checkbox"/> <i>Condylostylus sp.</i>	<input type="checkbox"/> <i>Sphex ichneumonius</i>	<input type="checkbox"/> <i>Eleodes sp.</i>	<input checked="" type="checkbox"/> <i>Eleodes sp.</i>	<input type="checkbox"/> <i>Pygus albescens</i>	
<input type="checkbox"/> <i>Physocphala texana</i>	<input type="checkbox"/> <i>Nomia nevadensis</i>	<input type="checkbox"/> <i>Hemiptera:</i>	<input type="checkbox"/> <i>Hemiptera:</i>	<input type="checkbox"/> <i>Passito cressphonia</i>	
<input type="checkbox"/> <i>Musca domestica</i>	<input type="checkbox"/> <i>Megachilidae</i>	<input type="checkbox"/> <i>Lygaeidae</i>	<input type="checkbox"/> <i>Lygaeidae</i>	<input type="checkbox"/> <i>Passito rutilata</i>	
<input checked="" type="checkbox"/> <i>Sarcophagidae</i>	<input type="checkbox"/> <i>Dianthidium sp.</i>	<input type="checkbox"/> <i>Pyrithoconidae</i>	<input type="checkbox"/> <i>Pyrithoconidae</i>	<input checked="" type="checkbox"/> <i>Ceb. us eurythrae</i>	
<input type="checkbox"/> <i>Sarcophaga sp.</i>	<input type="checkbox"/> <i>Megachile sp.</i>	<input type="checkbox"/> <i>Largia cinctus</i>	<input type="checkbox"/> <i>Largia cinctus</i>		
<input type="checkbox"/> <i>Stratiomyidae</i>	<input type="checkbox"/> <i>Perdia sp.</i>				
<input type="checkbox"/> <i>Syrphidae</i>					
<input type="checkbox"/> <i>Allograpta obliqua</i>					
<input type="checkbox"/> <i>Eristalis tenax</i>					
<input type="checkbox"/> <i>Metasymphys americanus</i>					
<input type="checkbox"/> <i>Volucella mexicana</i>					
<input type="checkbox"/> <i>Tabanidae</i>					

Other Wildlife Species Observed:

<u>BTJR</u>
<u>VTA</u>
<u>CAGS</u>

Bird Species Observed:

<u>HOBL</u>	<u>BAOW</u>	<u>NOMO</u>	<u>MODD</u>	<u>TUVV</u>	<u>WFIB</u>
<u>WEKI</u>	<u>BASW</u>	<u>RTHA</u>	<u>SAPH</u>	<u>BLPH</u>	<u>BABL</u>
<u>HUFI</u>	<u>EUCC</u>	<u>LOSH</u>	<u>CAEU</u>	<u>CITE</u>	<u>WAGA</u>
<u>CAKI</u>	<u>CORA</u>	<u>AMCA</u>	<u>GNST</u>	<u>BLBL</u>	<u>ROPI</u>

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: ANAL.COM Portion of Site Surveyed: ALL Acreage Surveyed: 65 Date: 08-02-12 DSF Detected: Y N
 Temperature in °F (Start/End): 79 / 93 Cloud Cover (Start/End): 0 / 0 Biologist: M. DICUS Time (Start/End): 1000 / 1400
 Arthropod Species Observed: Wind Speed in mph (Start/End): 0-1 / 1-5 Biologist: J. DICUS Time (Start/End): 1000 / 1255

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apocera chrysolata</i> <input type="checkbox"/> <i>Apocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asiidae</i> <input checked="" type="checkbox"/> <i>Effigia albobarbaris</i> <input checked="" type="checkbox"/> <i>Mallotropa fautrix</i> <input type="checkbox"/> <i>Proctacanthus</i> sp. <input checked="" type="checkbox"/> <i>Saropogon luteus</i> <input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Bactidae</i> (May Flies) <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa</i> sp. <input type="checkbox"/> <i>Ligra gazophylax</i> <input type="checkbox"/> <i>Mythicomyia</i> sp. <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax</i> sp. <input type="checkbox"/> <i>Toxophora pellucida</i> <input checked="" type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Calliphora</i> sp. <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae</i> sp. <input type="checkbox"/> <i>Physcephala texana</i> <input type="checkbox"/> <i>Culicidae</i> - mosquitoes <input type="checkbox"/> <i>Cuterebridae</i> <input checked="" type="checkbox"/> <i>Agapostemon</i> sp. <input type="checkbox"/> <i>Nomia nevadensis</i> <input checked="" type="checkbox"/> <i>Megachilidae</i> <input checked="" type="checkbox"/> <i>Dianthidium</i> sp. <input checked="" type="checkbox"/> <i>Megachile</i> sp. <input type="checkbox"/> <i>Pergadita</i> sp. <input type="checkbox"/> <i>Wasps</i> <input type="checkbox"/> <i>Chalcididae</i> <input checked="" type="checkbox"/> <i>Chrysididae</i> <input type="checkbox"/> <i>Chrysurus pacifica</i> <input checked="" type="checkbox"/> <i>Parnopes edwardsii</i> <input type="checkbox"/> <i>Ichneumonitidae</i> 	<p><i>Ichneumon</i> sp.</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Dasytomutilla coccineohirta</i> <input type="checkbox"/> <i>Dasytomutilla californica</i> <input type="checkbox"/> <i>Dasytomutilla sackeni</i> (lg.) <input type="checkbox"/> <i>Dasytomutilla cyenestrea</i> <input type="checkbox"/> <i>Campsomis toleca</i> <input type="checkbox"/> <i>Trielis alcione</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pepsis mildei</i> <input type="checkbox"/> <i>Pepsis</i> sp. <input checked="" type="checkbox"/> <i>Sphex</i> sp. <input type="checkbox"/> <i>Amnophila alberti</i> <input checked="" type="checkbox"/> <i>Amnophila</i> sp. <input checked="" type="checkbox"/> <i>Bembix americana</i> <input checked="" type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanopsis</i> <input type="checkbox"/> <i>Bicyrtis</i> sp. <input type="checkbox"/> <i>Cerceris</i> sp. <input type="checkbox"/> <i>Phalythin californicus</i> <input checked="" type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisoides diversus</i> <input type="checkbox"/> <i>Hoplisoides</i> sp. <input type="checkbox"/> <i>Isodonti elegans</i> <input type="checkbox"/> <i>Microbembix californicus</i> <input checked="" type="checkbox"/> <i>Philanthus multimaculata</i> <input checked="" type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Podalonia</i> sp. <input type="checkbox"/> <i>Prionyx foxi</i> <input type="checkbox"/> <i>Pitonyx</i> sp. <input checked="" type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Stizoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae</i> - unidentified <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Eudomyeris annulata</i> <input checked="" type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<p><i>Polistes fuscatus aurifer</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Vespa pennsylvanica</i> <p>Coloptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Buprestidae</i> <input type="checkbox"/> <i>Carabidae</i> <input type="checkbox"/> <i>Cerambycidae</i> <input type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilocorus orbus</i> <input type="checkbox"/> <i>Coccinella</i> sp. <input type="checkbox"/> <i>Harmonia axyridis</i> <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elatridae</i> (Click Beetles) <input type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diatrocha balecta</i> <input checked="" type="checkbox"/> <i>D. undecimpunctata</i> <input type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachyella laticollis</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Halipidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops</i> sp. <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosaigon flavipenne</i> <input type="checkbox"/> <i>Macrosaigon</i> sp. <input type="checkbox"/> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracotalpa</i> sp. <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> <i>Tenebrionidae</i> <input checked="" type="checkbox"/> <i>Eierodes</i> sp. <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Lygaeidae</i> <input type="checkbox"/> <i>Egaeus kalmii</i> <input type="checkbox"/> <i>Pyrrhocoridae</i> <input type="checkbox"/> <i>Largus cinctus</i> 	<p><i>Pentatomidae</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> (SM) <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus</i> sp. <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichoptera aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Aptameris crassipes</i> <input type="checkbox"/> <i>Rhinocoris ventralis</i> <input checked="" type="checkbox"/> <i>Zelus tetracanthus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aeshna multicolor</i> <input checked="" type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homaldisca</i> sp. <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactylopiidae</i> (Coccineal) <input type="checkbox"/> <i>Dactylopius</i> sp. <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input type="checkbox"/> <i>Psyllidae</i> <input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa</i> sp. <input type="checkbox"/> <i>Myrmeleontidae</i> <input checked="" type="checkbox"/> <i>Brachyneururus</i> sp. <input checked="" type="checkbox"/> <i>Myrmeleon</i> sp. <input type="checkbox"/> <i>Raphidiidae</i> (Snakeflies) <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Lygus intermedius</i> <input type="checkbox"/> <i>Melanoplus</i> sp. <input type="checkbox"/> <i>Papilio rufus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i> 	<p><i>Trimerotropis californica</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i> <input type="checkbox"/> <i>Gryllus</i> sp. <input type="checkbox"/> <i>Oecanthus fultoni</i> <input type="checkbox"/> <i>Tettigoniidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input type="checkbox"/> <i>Scudderia mexicana</i> <input checked="" type="checkbox"/> <i>Strymon marinus</i> <input type="checkbox"/> <i>Apodemia mormo virgulti</i> <input type="checkbox"/> <i>Agraulis vanillae</i> <input type="checkbox"/> <i>Danaus gilippus</i> <input type="checkbox"/> <i>Danaus plexippus</i> <input type="checkbox"/> <i>Precis coenia</i> <input checked="" type="checkbox"/> <i>Vanessa annabella</i> <input type="checkbox"/> <i>Vanessa atalanta</i> <input type="checkbox"/> <i>Vanessa cardui</i> <input type="checkbox"/> <i>Vanessa virginiensis</i> <input type="checkbox"/> <i>Arctiidae</i> <input type="checkbox"/> <i>Noctuidae</i> <input type="checkbox"/> <i>Autographa californica</i> <input type="checkbox"/> <i>Schinia</i> <input type="checkbox"/> <i>Geonetridae</i> <input checked="" type="checkbox"/> <i>Pyralidae</i> <input type="checkbox"/> <i>Paranthrene robiniae</i> <input type="checkbox"/> <i>Hyles lineata</i> <input type="checkbox"/> <i>Manduca sexta</i> <p>Arachnida:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Araneidae</i> <input type="checkbox"/> <i>Peucetia viridinis</i> <input checked="" type="checkbox"/> <i>Dipluridae</i> <input type="checkbox"/> <i>Leurogrychus pacificus</i> <input type="checkbox"/> <i>Larrodectus hesperus</i> <input checked="" type="checkbox"/> <i>Salticidae</i> <input type="checkbox"/> <i>Phidippus formosus</i> <input checked="" type="checkbox"/> <i>Thomisidae</i>
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Bird Species Observed:

HOSP	ROPI	BUPH	BNST	CAKI	ANHU	WEST	COMO
GASW	BABL	NOMO	WIPH	AMOR	AMAV	CITE	LOSH
EUST	TUVV	SAPH	ATFL	MODO	RWBL	MUL	
HOFI	ATHA	CORA	BUCO	COPE	LBDO	KUL	

Other Wildlife Species Observed:

VTA DOMESTIC DOGS
 COTTONTAIL W. FENCE
 CATS 3 TUB

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CARLE CITY Portion of Site Surveyed: AU Acreage Surveyed: 63 Date: 08-24-12 DSF Detected: Y N
 Temperature in °F (Start/End): 74 / 90 Cloud Cover (Start/End): 25% / 10% Biologist: J. DICUS Time (Start/End): 1000 / 1400
 Arthropod Species Observed: Wind Speed in mph (Start/End): 0-3 / 3-5 Biologist: M. DIW S Time (Start/End): 1000 / 1255

Diptera: <i>R. terminatus abdominalis</i> <i>Apocera chrysolasia</i> <i>Apocera convergens</i> <i>Nemomydas pantherina</i> <i>Asilidae</i> <i>Efferia albarbaris</i> <i>Mallofora faurix</i> <i>Proctocanthus sp.</i> <i>Saropogon luteus</i> <i>Stenopogon breviscubus</i> <i>Bactidae (May Flies)</i> <i>Callibaetis pacificus</i> <i>Bombyliidae</i> <i>Exoprosopa sp.</i> <i>Ligyra gazophylax</i> <i>Mythicomya sp.</i> <i>Poecilanthrax arethusa</i> <i>Poecilanthrax sp.</i> <i>Toxophora pellucida</i> <i>Villa atrata</i> <i>Zenox simpson</i> <i>Calliphora sp.</i> <i>Eucalliphora lilaea</i> <i>Phaenicia cuprina</i> <i>Phaenicia sericata</i> <i>Conopidae sp.</i> <i>Physocephala texana</i> <i>Culicidae - mosquitoes</i> <i>Outerebridae</i> <i>Condylostylus sp.</i> <i>Drosophilidae</i> <i>Musca domestica</i> <i>Sarcophagidae</i> <i>Sarcophaga sp.</i> <i>Stratiomyidae</i> <i>Syrphidae</i> <i>Allograpta obliqua</i> <i>Eristalis tenax</i> <i>Metasyphus americanus</i> <i>Volucella mexicana</i> <i>Tabanidae</i>	<i>Ichneumon sp.</i> <i>Dasyntulla coccineohirta</i> <i>Dasyntulla californica</i> <i>Dasyntulla sackeni</i> (lg.) <i>Dasyntulla clytemnestra</i> <i>Campsomeris tolteca</i> <i>Trielis alcione</i> <i>Ecerambycidae</i> <i>Coccinellidae</i> <i>Adalia bipunctata</i> <i>Chilocorus orbus</i> <i>Coccinella sp.</i> <i>Harmonia axyridis</i> <i>Hippodamia convergens</i> <i>Olla v-nigrum</i> <i>Platridae (Click Beetles)</i> <i>Chrysomelidae</i> <i>Diabrotica balteata</i> <i>D. undecimpunctata</i> <i>Lema trilineata</i> <i>Tachymela laticollis</i> <i>Curculionidae</i> <i>Halipidae</i> <i>Hydrophilidae</i> <i>Meloidae</i> <i>Nemognatha lurida apicalis</i> <i>Melyridae</i> <i>Collops sp.</i> <i>Rhipiphoridae</i> <i>Macrosaigon flavipenne</i> <i>Macrosaigon sp.</i> <i>Scarabaeidae</i> <i>Cotinus mutabilis</i> <i>Paracatolpa sp.</i> <i>Staphylinus maxillosus</i> <i>Tenebrionidae</i> <i>Eleodes sp.</i> Hemiptera: <i>Lygaeidae</i> <i>Lygaeus kalmii</i> <i>Pyrrhocoridae</i> <i>Largus cinctus</i>	<i>Polistes fuscatus aurifer</i> <i>Vespula pennsylvanica</i> Coloptera: <i>Buprestidae</i> <i>Carabidae</i> <i>Trichoptera pallidovirens</i> <i>Reduviidae</i> <i>Apiomeris crassipes</i> <i>Rhynocoris ventralis</i> <i>Zelus tetracanthus</i> Homoptera: <i>Aphididae</i> <i>Cercopidae</i> <i>Cicadellidae</i> <i>Homaldisca sp.</i> <i>Cicadidae</i> <i>Dactyloptidae (Coccineal)</i> <i>Dactylopius sp.</i> <i>Membracidae</i> <i>Antianthe expansa</i> <i>Psyllidae</i> <i>Glycaspis brimblecombei</i> Neuroptera: <i>Chrysopidae</i> <i>Chrysopa sp.</i> <i>Myrmeleontidae</i> <i>Brachyneururus sp.</i> <i>Myrmeleon sp.</i> <i>Raphidiidae (Snakeflies)</i> Dermaptera: <i>Forficula auricularia</i> Orthoptera: <i>Acrididae</i> <i>Dissosteira pictipennis</i> <i>Leprus intermedius</i> <i>Melanoplus sp.</i> <i>Schistocerca niensis</i> <i>Schistocerca sp.</i>	<i>Pentatomidae</i> <i>Chlorochroa ligata</i> <i>Chlorochroa uhleri / SAH</i> <i>Murgantia histrionica</i> <i>Podisus sp.</i> <i>Thyanta pallidovirens</i> <i>Trichoptera aurora</i> <i>Reduviidae</i> <i>Apiomeris crassipes</i> <i>Rhynocoris ventralis</i> <i>Zelus tetracanthus</i> Odonata: <i>Aeschna multicolor</i> <i>Anax junius</i> <i>Erythemis collocata</i> <i>Libellula croceipennis</i> <i>Libellula saturata</i> <i>Pantala flavescens</i> <i>Pantala flavescens</i> <i>Perithemis intensa</i> <i>Progomphus borealis</i> <i>Sympetrum corruptum</i> <i>Sympetrum illotum</i> <i>Tramea lacerata</i> <i>Tramea onusta</i> <i>Argia sp.</i> <i>Enallagma sp.</i> <i>Telebasis salva</i> Lepidoptera: <i>Atalopedes campestris</i> <i>Erynnis funeralis</i> <i>Haliopetes erictorum</i> <i>Hylephila phyleus</i> <i>Lerodea eufala</i> <i>Paratrytone melane</i> <i>Polites sabuleti</i> <i>Pyrgus albescens</i> <i>Papilio cressphonis</i> <i>Papilio rutulus</i> <i>Colias eurytheme</i>
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Bird Species Observed:

<u>ANR</u>	<u>RTA</u>	<u>COA</u>	<u>COVE</u>	<u>BHAR</u>	<u>LOSH</u>	<u>FVST</u>	<u>EVCO</u>	<u>GNST</u>	<u>WELI</u>	Other Wildlife Species Observed:
<u>ANTU</u>	<u>YBWA</u>	<u>HOSP</u>	<u>BASW</u>	<u>KILW</u>	<u>TUVU</u>	<u>ROMO</u>	<u>MAIL</u>	<u>WESA</u>	<u>WETA</u>	<u>UTA</u>
<u>COAL</u>	<u>BLOR</u>	<u>ANKE</u>	<u>ALPH</u>	<u>ROFI</u>	<u>ALPH</u>	<u>ANKE</u>	<u>ALWB</u>	<u>LOMO</u>	<u>WENKE</u>	<u>WENKE</u>
<u>MOBO</u>	<u>HOPI</u>	<u>LEBO</u>	<u>SO SP</u>	<u>OBAL</u>	<u>COPE</u>	<u>CAKI</u>	<u>VFIB</u>	<u>RSHA</u>	<u>CONONTAIL</u>	<u>CONONTAIL</u>

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: ALL Acreage Surveyed: 6.5 Date: 08-09-12 DSF Detected: Y N
 Temperature in °F (Start/End): 93/96 Cloud Cover (Start/End): 0/0 Biologist: SW DICUS Time (Start/End): 1051/1400
 Arthropod Species Observed: Wind Speed in mph (Start/End): 0-5/2-6 Biologist: M. DICUS Time (Start/End): 1000/1400

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolasta</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input type="checkbox"/> <i>Efferia alabarbaris</i> <input type="checkbox"/> <i>Malloflora faurix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input checked="" type="checkbox"/> <i>Saropogon luteus</i> <input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae</i> (May Flies) <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input checked="" type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythicomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input type="checkbox"/> <i>Taxophora pellicuda</i> <input type="checkbox"/> <i>Villa arata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physoccephala texana</i> <input type="checkbox"/> <i>Callicidae - mosquitoes</i> <input type="checkbox"/> <i>Catterbridgeae</i> <input checked="" type="checkbox"/> <i>Condylostylus sp.</i> <input checked="" type="checkbox"/> <i>Prosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasymphus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon sp.</i> <input type="checkbox"/> <i>Dasymutilla coccineohirta</i> <input type="checkbox"/> <i>Dasymutilla californica</i> <input type="checkbox"/> <i>Dasymutilla sackeni</i> (lg.) <input type="checkbox"/> <i>Dasymutilla chymenestra</i> <input type="checkbox"/> <i>Campomeris tolteca</i> <input type="checkbox"/> <i>Trielis alcionae</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pezopsis mildeli</i> <input type="checkbox"/> <i>Pepsis sp.</i> <input checked="" type="checkbox"/> <i>Sphecidae</i> <input type="checkbox"/> <i>Ammophila alberti</i> <input type="checkbox"/> <i>Ammophila sp.</i> <input checked="" type="checkbox"/> <i>Bembix americana</i> <input type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanopsis</i> <input type="checkbox"/> <i>Bicyrtes sp.</i> <input type="checkbox"/> <i>Cerceris sp.</i> <input type="checkbox"/> <i>Chalybion californicus</i> <input checked="" type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisoides diversus</i> <input type="checkbox"/> <i>Hoplisoides sp.</i> <input type="checkbox"/> <i>Isodontia aelegans</i> <input checked="" type="checkbox"/> <i>Microbembix californicus</i> <input checked="" type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Prionyx foxi</i> <input type="checkbox"/> <i>Prionyx sp.</i> <input checked="" type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Spheg ichneumonius</i> <input type="checkbox"/> <i>Stizoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Euoxynerus annulata</i> <input checked="" type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Polistes fuscatus aurifer</i> <input checked="" type="checkbox"/> <i>Vespa pennsylvanica</i> <p>COLEOPTERA:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Buprestidae</i> <input type="checkbox"/> <i>Carabidae</i> <input checked="" type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilochoerus orbis</i> <input type="checkbox"/> <i>Coccinella sp.</i> <input type="checkbox"/> <i>Harmonia axyridis</i> <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elateridae</i> (Click Beetles) <input type="checkbox"/> <i>Chrysomelidae</i> <input type="checkbox"/> <i>Diabrotica balteata</i> <input type="checkbox"/> <i>D. undecimpunctata</i> <input type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymela laticollis</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Haliplicidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops sp.</i> <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosaigona flavipenne</i> <input type="checkbox"/> <i>Macrosaigona sp.</i> <input type="checkbox"/> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracatopa sp.</i> <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> <i>Venebrionidae</i> <input type="checkbox"/> <i>Eleodes sp.</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Lygaeidae</i> <input type="checkbox"/> <i>Lygaeus kalmii</i> <input type="checkbox"/> <i>Pyrrhocoridae</i> <input checked="" type="checkbox"/> <i>Largus cinctus</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Pentatomidae</i> <input checked="" type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> <u>SMI</u> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichopoda aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Apiomeris crassipes</i> <input type="checkbox"/> <i>Rhynocoris ventralis</i> <input type="checkbox"/> <i>Zelus tetracanthus</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aphididae</i> <input checked="" type="checkbox"/> <i>Cercopidae</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homaldisca sp.</i> <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactyloptidae</i> (Cocchineal) <input type="checkbox"/> <i>Dactylopius sp.</i> <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input type="checkbox"/> <i>Psyllidae</i> <input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input checked="" type="checkbox"/> <i>Myrmeleontidae</i> <input type="checkbox"/> <i>Brachyneurum sp.</i> <input type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae</i> (Snakeflies) <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissoxiteira pictipennis</i> <input type="checkbox"/> <i>Leprus intermedius</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input checked="" type="checkbox"/> <i>Schistocerca nitens</i> <input checked="" type="checkbox"/> <i>Schistocerca sp.</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ymerotropis californica</i> <input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i> <input checked="" type="checkbox"/> <i>Gryllus sp.</i> <input type="checkbox"/> <i>Oecanthus fulvoni</i> <input type="checkbox"/> <i>Tettigoniidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input type="checkbox"/> <i>Scudderia mexicana</i> <input type="checkbox"/> <i>Stenopelmatus sp.</i> <input type="checkbox"/> <i>Iris oratoria</i> <input type="checkbox"/> <i>Stagmomantis californica</i> <input type="checkbox"/> <i>Parabacillus hesperis</i> <p>Odonata:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aethia multicolor</i> <input checked="" type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula saturata</i> <input checked="" type="checkbox"/> <i>Noctuidae</i> <input type="checkbox"/> <i>Autographa californica</i> <input type="checkbox"/> <i>Schinia</i> <input type="checkbox"/> <i>Geometridae</i> <input checked="" type="checkbox"/> <i>Pyralidae</i> <input type="checkbox"/> <i>Paranthrene robiniae</i> <input type="checkbox"/> <i>Hyles lineata</i> <input type="checkbox"/> <i>Manduca sexta</i> <p>Arachnida:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Araneidae</i> <input checked="" type="checkbox"/> <i>Peucetia viridinis</i> <input type="checkbox"/> <i>Dipluridae</i> <input type="checkbox"/> <i>Leuroyechus pacificus</i> <input type="checkbox"/> <i>Latreolectus hesperus</i> <input checked="" type="checkbox"/> <i>Salticidae</i> <input checked="" type="checkbox"/> <i>Phidippus formosus</i> <input checked="" type="checkbox"/> <i>Thomisidae</i>
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Bird Species Observed:

CAKI	HOE1	MOO0	BRBL	WF1B	WST	YEA4
HO5P	BRNA	LO5H	WESA	BRBT	FICO	
NO MO	FUVU	ROPI	LUU	MAU	LUBL	
COCA	BA5W	GLPH	WIPH	CITE	SHCO	

Other Wildlife Species Observed:
CAUS CONONTAIL
UTA
W.FENCE

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: AL Acreage Surveyed: 65 Date: 08-11-12 DSF Detected: Y N
 Temperature in °F (Start/End): 82/102 Cloud Cover (Start/End): 0/100 Biologist: J.W.D.I.V.S Time (Start/End): 1000/1400
 Arthropod Species Observed: Wind Speed in mph (Start/End): 0/14 Biologist: A.R.D.I.V.S Time (Start/End): 1000/1125

<p>Diptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolasta</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Effigia albarbaris</i> <input type="checkbox"/> <i>Malloflora faurix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input type="checkbox"/> <i>Saropogon luteus</i> <input type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Gallibaetis pacificus</i> <input checked="" type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligra gazophylax</i> <input type="checkbox"/> <i>Mythicomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenax simpson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physoccephala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input checked="" type="checkbox"/> <i>Condylostylus sp.</i> <input type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyphus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichneumon sp.</i></p> <p><i>Dasyneulla coccineohirta</i></p> <p><i>Dasyneulla californica</i></p> <p><i>Dasyneulla sackeni</i> (lg.)</p> <p><i>Dasyneulla clytemnestra</i></p> <p><i>Compsoomeris tolteca</i></p> <p><i>Trielis alcione</i></p> <p><i>Pompilidae</i></p> <p><i>Pepsis mildei</i></p> <p><i>Pepsis sp.</i></p> <p><input checked="" type="checkbox"/> <i>Sphécidae</i></p> <p><i>Ammophila alberti</i></p> <p><i>Ammophila sp.</i></p> <p><input checked="" type="checkbox"/> <i>Bembix americana</i></p> <p><i>Bembix comata</i></p> <p><i>Bembix melanopsis</i></p> <p><i>Bicyrtis sp.</i></p> <p><input checked="" type="checkbox"/> <i>Cadybon californicus</i></p> <p><input checked="" type="checkbox"/> <i>Chlorion aerarium</i></p> <p><i>Eucerevis insignis</i></p> <p><i>Hoplisoides diversus</i></p> <p><i>Hoplisoides sp.</i></p> <p><i>Isodonta aelegans</i></p> <p><input checked="" type="checkbox"/> <i>Microbembix californicus</i></p> <p><i>Philanthus ventralis</i></p> <p><i>Philanthus sp.</i></p> <p><i>Podalonia sp.</i></p> <p><i>Prionyx foxi</i></p> <p><i>Prionyx sp.</i></p> <p><input checked="" type="checkbox"/> <i>Sceliphron caementarium</i></p> <p><i>Sphex ichneumonius</i></p> <p><i>Stizoides remicinctum</i></p> <p><i>Tachytes elongatus</i></p> <p><i>Tiphidae</i></p> <p><i>Vespidae - unidentified</i></p> <p><i>Eumenes bollii</i></p> <p><i>Eumenes crucifera</i></p> <p><i>Euoodynerus annulata</i></p> <p><i>Polistes apachus</i></p> <p><i>Polistes dorsalis</i></p> <p><i>Polistes exclamans</i></p>	<p><i>Polistes fuscatus aurifer</i></p> <p><i>Vespusula pennsylvanica</i></p> <p>Coloptera:</p> <p><i>Buprestidae</i></p> <p><i>Cerambycidae</i></p> <p><i>Coccinellidae</i></p> <p><i>Adalia bipunctata</i></p> <p><i>Chilocorus orbus</i></p> <p><i>Coccinella sp.</i></p> <p><i>Harmonia axyridis</i></p> <p><i>Hippodamia convergens</i></p> <p><i>Olla v-nigrum</i></p> <p><i>Elaterridae (Click Beetles)</i></p> <p><i>Chrysomelidae</i></p> <p><i>Diabrotica balteata</i></p> <p><i>D. undecimpunctata</i></p> <p><i>Lema trilineata</i></p> <p><i>Tachyella laticollis</i></p> <p><input checked="" type="checkbox"/> <i>Curculionidae</i></p> <p><i>Halipidae</i></p> <p><i>Hydrophilidae</i></p> <p><i>Meloidae</i></p> <p><i>Nemognatha lurida apicalis</i></p> <p><i>Melyridae</i></p> <p><i>Collaps sp.</i></p> <p><i>Rhipiphoridae</i></p> <p><i>Macrosagion flavipenne</i></p> <p><i>Macrosagion sp.</i></p> <p><i>Scarabaeidae</i></p> <p><input checked="" type="checkbox"/> <i>Cotinus mutabilis</i></p> <p><i>Paracotalpa sp.</i></p> <p><i>Staphylinus maxillosus</i></p> <p><i>Tenebrionidae</i></p> <p><input checked="" type="checkbox"/> <i>Eleodes sp.</i></p> <p>Hemiptera:</p> <p><i>Lygaeidae</i></p> <p><i>Lygaeus kalmii</i></p> <p><i>Pyrrhocoridae</i></p> <p><i>Largus cinctus</i></p>	<p>Pentatomidae</p> <p><input checked="" type="checkbox"/> <i>Chlorochroa ligata</i></p> <p><input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> <u>5441</u></p> <p><i>Murgantia histrionica</i></p> <p><i>Podisus sp.</i></p> <p><input checked="" type="checkbox"/> <i>Thyanta pallidivirens</i></p> <p><i>Reduviidae</i></p> <p><i>Apiomeris crassipes</i></p> <p><i>Rhynocoris ventralis</i></p> <p><i>Zelus tetracanthus</i></p> <p>Odonata:</p> <p><i>Aeshna multicolor</i></p> <p><input checked="" type="checkbox"/> <i>Anax junius</i></p> <p><i>Erythemis collocata</i></p> <p><i>Libellula croceipennis</i></p> <p><i>Aretiidae</i></p> <p><i>Noctuidae</i></p> <p><i>Autographa californica</i></p> <p><i>Schinia</i></p> <p><i>Geometridae</i></p> <p><input checked="" type="checkbox"/> <i>Pyralidae</i></p> <p><i>Paranthrene robiniae</i></p> <p><i>Hyles lineata</i></p> <p><i>Manduca sexta</i></p> <p>Arachnida:</p> <p><i>Araneidae</i></p> <p><input checked="" type="checkbox"/> <i>Peucetia viridins</i></p> <p>Dipluridae</p> <p><i>Leurostichus pacificus</i></p> <p><i>Latroectus hesperus</i></p> <p><input checked="" type="checkbox"/> <i>Salticidae</i></p> <p><input checked="" type="checkbox"/> <i>Phidippus formosus</i></p> <p><i>Thomisidae</i></p>	<p>Homoptera:</p> <p><i>Aphididae</i></p> <p><input checked="" type="checkbox"/> <i>Cercopidae</i></p> <p><i>Cicadellidae</i></p> <p><i>Homaldisca sp.</i></p> <p><i>Cicadidae</i></p> <p><i>Dactylopiidae (Coccineal)</i></p> <p><i>Dactylopius sp.</i></p> <p><i>Membracidae</i></p> <p><i>Antianthe expansa</i></p> <p><i>Psyllidae</i></p> <p><input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i></p> <p>Neuroptera:</p> <p><i>Chrysopidae</i></p> <p><i>Chrysopa sp.</i></p> <p><input checked="" type="checkbox"/> <i>Myrmeleontidae</i></p> <p><i>Brachyneururus sp.</i></p> <p><i>Myrmeleon sp.</i></p> <p><i>Raphidiidae (Snakeflies)</i></p> <p>Dermaptera:</p> <p><i>Forficula auricularia</i></p> <p>Orthoptera:</p> <p><input checked="" type="checkbox"/> <i>Acrididae</i></p> <p><i>Disosteira pictipennis</i></p> <p><i>Lepurus intermedius</i></p> <p><i>Melanoplus sp.</i></p> <p><i>Schistocerca nitens</i></p> <p><input checked="" type="checkbox"/> <i>Schistocerca sp.</i></p>
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Bird Species Observed:

<u>ANVU</u>	<u>ANKE</u>	<u>MOOR</u>	<u>EUGO</u>	<u>KULL</u>	<u>WESA</u>	<u>CITE</u>	<u>GHCO</u>	<u>NOMO</u>
<u>BUSH</u>	<u>ALHA</u>	<u>COEA</u>	<u>NOPI</u>	<u>AMOR</u>	<u>WDDO</u>	<u>WPHH</u>	<u>WIPHT</u>	<u>LOSH</u>
<u>COYE</u>	<u>RWTV</u>	<u>HOFI</u>	<u>MOSE</u>	<u>TUVU</u>	<u>ANST</u>	<u>BLGL</u>	<u>CAIKI</u>	
<u>MOVO</u>	<u>YKWA</u>	<u>COHA</u>	<u>BASW</u>	<u>BLPH</u>	<u>MAIL</u>	<u>RWBL</u>	<u>EUST</u>	

Other Wildlife Species Observed:
COTONTAIL
CATS
UTA

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CALVE CITY Portion of Site Surveyed: ALU Acreage Surveyed: 65 Date: 08/16/12 DSF Detected: Y (N)

Temperature in °F (Start/End): 91 / 99 Cloud Cover (Start/End): 65 / 20 Biologist: J. DAVIS Time (Start/End): 1105 / 1400

Arthropod Species Observed: Wind Speed in mph (Start/End): 1-2 / 2-5 Biologist: M. DAVIS Time (Start/End): 1000 / 1400

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolasia</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input type="checkbox"/> <i>Nemomydas pantherina</i> <input checked="" type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Effigia alabarbaris</i> <input checked="" type="checkbox"/> <i>Malloflora faurix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligra gazophylax</i> <input type="checkbox"/> <i>Mythicomya sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input checked="" type="checkbox"/> <i>Toxophora pellucida</i> <input checked="" type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenos simpson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input checked="" type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physcocephala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input checked="" type="checkbox"/> <i>Condylostylus sp.</i> <input type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input checked="" type="checkbox"/> <i>Syrphidae</i> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><input type="checkbox"/> <i>Ichneumon sp.</i></p> <p><input type="checkbox"/> <i>Dasytomilla coccineohirta</i></p> <p><input checked="" type="checkbox"/> <i>Dasytomilla californica</i></p> <p>Coleoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Dasytomilla sackeni (lg.)</i> <input type="checkbox"/> <i>Dasytomilla clytemnestra</i> <input type="checkbox"/> <i>Campomeris tolteca</i> <input type="checkbox"/> <i>Trielis albione</i> <input checked="" type="checkbox"/> <i>Pomphiliidae</i> <input type="checkbox"/> <i>Pesopsis mildei</i> <input type="checkbox"/> <i>Pesopsis sp.</i> <input checked="" type="checkbox"/> <i>Sphacidae</i> <input type="checkbox"/> <i>Amnophila alberti</i> <input type="checkbox"/> <i>Amnophila sp.</i> <input checked="" type="checkbox"/> <i>Bembix americana</i> <input type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanopsis</i> <input type="checkbox"/> <i>Bicyrtes sp.</i> <input type="checkbox"/> <i>Cerceris sp.</i> <input type="checkbox"/> <i>Chalybion californicus</i> <input checked="" type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisoidea diversus</i> <input type="checkbox"/> <i>Hoplisoidea sp.</i> <input type="checkbox"/> <i>Isodonti oelegans</i> <input type="checkbox"/> <i>Microbembix californicus</i> <input type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Prionyx foxi</i> <input checked="" type="checkbox"/> <i>Prionyx sp.</i> <input checked="" type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Stizoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input checked="" type="checkbox"/> <i>Euodynerus annulata</i> <input checked="" type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<p><input checked="" type="checkbox"/> <i>Polistes fuscatus aurifer</i></p> <p><input checked="" type="checkbox"/> <i>Vespula pennsylvanica</i></p> <p><input type="checkbox"/> <i>Polistidae</i></p> <p><input checked="" type="checkbox"/> <i>Chlorochroa ligata</i></p> <p><input checked="" type="checkbox"/> <i>Chlorochroa ubleri</i></p> <p><input type="checkbox"/> <i>Murgantia histrionica</i></p> <p><input type="checkbox"/> <i>Podisus sp.</i></p> <p><input type="checkbox"/> <i>Thyanta pallidovirens</i></p> <p><input type="checkbox"/> <i>Trichoptera aurora</i></p> <p><input type="checkbox"/> <i>Reduviidae</i></p> <p><input type="checkbox"/> <i>Apiomeris crassipes</i></p> <p><input type="checkbox"/> <i>Rhyocoris ventralis</i></p> <p><input type="checkbox"/> <i>Zelus tetracanthus</i></p> <p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input checked="" type="checkbox"/> <i>Elatridae (Click Beetles)</i> <input type="checkbox"/> <i>Chrysomelidae</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homalididae sp.</i> <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>D. undecimpunctata</i> <input type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymela laticollis</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Antiantilla expansa</i> <input type="checkbox"/> <i>Psyllidae</i> <input type="checkbox"/> <i>Glycaspis brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Myrmeleontidae</i> <input type="checkbox"/> <i>Brachymerurus sp.</i> <input type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Leprus intermedium</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Pyrrhonoridae</i> <input type="checkbox"/> <i>Largus cinctus</i> 	<p><input type="checkbox"/> <i>Trimerotropis californica</i></p> <p><input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i></p> <p><input checked="" type="checkbox"/> <i>Gryllus sp.</i></p> <p><input type="checkbox"/> <i>Oecanthus fulvoni</i></p> <p><input type="checkbox"/> <i>Tettigoniidae</i></p> <p><input type="checkbox"/> <i>Antiantilla expansa</i></p> <p><input type="checkbox"/> <i>Scudderia mexicana</i></p> <p><input type="checkbox"/> <i>Stenopelmatus sp.</i></p> <p><input type="checkbox"/> <i>Iris oratoria</i></p> <p><input type="checkbox"/> <i>Stagmomantis californica</i></p> <p><input type="checkbox"/> <i>Parabacillus hesperis</i></p> <p>Odonata:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aeshna multicolor</i> <input type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula saturata</i> <input checked="" type="checkbox"/> <i>Noctuidae</i> <input type="checkbox"/> <i>Autographa californica</i> <input type="checkbox"/> <i>Schinia</i> <input type="checkbox"/> <i>Geometridae</i> <input checked="" type="checkbox"/> <i>Pyralidae</i> <input type="checkbox"/> <i>Paranthrene robiniae</i> <input type="checkbox"/> <i>Hyles lineata</i> <input type="checkbox"/> <i>Manduca sexta</i> <p>Arachnida:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Araneidae</i> <input checked="" type="checkbox"/> <i>Peucetia viridinis</i> <input type="checkbox"/> <i>Dipluridae</i> <input type="checkbox"/> <i>Leuroyachus pacificus</i> <input type="checkbox"/> <i>Latreolactus hesperus</i> <input type="checkbox"/> <i>Salticidae</i> <input type="checkbox"/> <i>Phidippus formosus</i> <input checked="" type="checkbox"/> <i>Thomisidae</i>
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Bird Species Observed:

CAKI	BASN	HO SP	PEAFOWL	YBDO	EWBL
HOFL	CAJA	ORJA	SNST	MAUL	BARL
HO DO	HOPI	JUVV	WESA	CITE	BHCO
EVCO	LOSH	NOMO	KAL	YUWA	

Other Wildlife Species Observed:
CALPS
CORNAIL
UTA

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLECITY Portion of Site Surveyed: AU Acreage Surveyed: 65 Date: 08-18-12 DSF Detected: Y (N)
 Temperature in °F (Start/End): 86/100 Cloud Cover (Start/End): 0-7/5% Biologist: J. DAVIS Time (Start/End): 1000/1400
 Arthropod Species Observed: Wind Speed in mph (Start/End): 0-2/1-5 Biologist: M. DAVIS Time (Start/End): 1000/1255

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apioecera chrysolista</i> <input type="checkbox"/> <i>Apioecera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Efferia alabarbaris</i> <input type="checkbox"/> <i>Malloflora fatrix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input type="checkbox"/> <i>Saropogon luteus</i> <input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythicomomya sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input checked="" type="checkbox"/> <i>Toxophora pellicuda</i> <input checked="" type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physoccephala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input checked="" type="checkbox"/> <i>Gondylosylus sp.</i> <input type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metataphus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichneumon sp.</i></p> <p><i>Dasymutilla coccineohirta</i></p> <p><i>Dasymutilla californica</i></p> <p><i>Dasymutilla sackeni</i> (lg.)</p> <p>COLEOPTERA:</p> <p><i>Dasymutilla chytrenestra</i></p> <p><i>Compsoemeris tollata</i></p> <p><i>Trielis alcionae</i></p> <p><i>Cerambycidae</i></p> <p><i>Coccinellidae</i></p> <p><i>Adalia bipunctata</i></p> <p><i>Chilocorus orbus</i></p> <p><i>Coccinella sp.</i></p> <p><i>Harmonia axyridis</i></p> <p><i>Hippodamia convergens</i></p> <p><i>Olla v-nigrum</i></p> <p><i>Elateridae (Click Beetles)</i></p> <p><i>Chrysomelidae</i></p> <p><i>Diabrotica balteata</i></p> <p><input checked="" type="checkbox"/> <i>D. undecimpunctata</i></p> <p><input checked="" type="checkbox"/> <i>Lema trilineata</i></p> <p><i>Tachymela laticollis</i></p> <p><i>Curculionidae</i></p> <p><i>Halpilitidae</i></p> <p><i>Hydrophilidae</i></p> <p><i>Meloidae</i></p> <p><i>Nemognatha lurida apicalis</i></p> <p><i>Melyridae</i></p> <p><i>Collops sp.</i></p> <p><i>Rhipiphoridae</i></p> <p><i>Macrostrigon flavipenne</i></p> <p><i>Macrosaigona sp.</i></p> <p><i>Scarabaeidae</i></p> <p><input checked="" type="checkbox"/> <i>Cotinus mutabilis</i></p> <p><i>Paracatapa sp.</i></p> <p><i>Staphylinus maxillosus</i></p> <p><i>Tenebrionidae</i></p> <p><input checked="" type="checkbox"/> <i>Eleodes sp.</i></p> <p>Hemiptera:</p> <p><i>Lygaeidae</i></p> <p><i>Lygaeus kalmii</i></p> <p><i>Pyrrhocoridae</i></p> <p><i>Largus cinctus</i></p>	<p><i>Polistes fuscatus aurifer</i></p> <p><input checked="" type="checkbox"/> <i>Vespula pennsylvanica</i></p> <p><i>Chlorochroa ligata</i></p> <p><i>Chlorochroa uhleri</i></p> <p><i>Oecanthus fulvoni</i></p> <p><i>Podisus sp.</i></p> <p><i>Thyanta pallidovirens</i></p> <p><i>Trichoptera aurora</i></p> <p><i>Reduviidae</i></p> <p><i>Apiomeris crassipes</i></p> <p><i>Rhynocoris ventralis</i></p> <p><i>Zelus tetracanthus</i></p> <p>Homoptera:</p> <p><i>Aphididae</i></p> <p><input checked="" type="checkbox"/> <i>Aeshna multicolor</i></p> <p><input checked="" type="checkbox"/> <i>Anax junius</i></p> <p><i>Erythemis collocata</i></p> <p><i>Homaldisca sp.</i></p> <p><i>Cicadidae</i></p> <p><i>Dactyloptera (Cocchineal)</i></p> <p><i>Dactyloptus sp.</i></p> <p><i>Membracidae</i></p> <p><i>Antianthe expansa</i></p> <p><i>Psyllidae</i></p> <p><input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i></p> <p>Neuroptera:</p> <p><i>Chrysopidae</i></p> <p><i>Chrysopa sp.</i></p> <p><i>Enallagma sp.</i></p> <p><i>Telebasis salva</i></p> <p>Lepidoptera:</p> <p><i>Atalopedes campestris</i></p> <p><i>Erynnis funeralis</i></p> <p><i>Heliopterus erictorum</i></p> <p><input checked="" type="checkbox"/> <i>Myiophila phyleus</i></p> <p><input checked="" type="checkbox"/> <i>Lerodea eufala</i></p> <p><i>Paratytona melane</i></p> <p><i>Polites sabuleti</i></p> <p><i>Pyrgus albescens</i></p> <p><i>Papilio cresphontes</i></p> <p><input checked="" type="checkbox"/> <i>Papilio rutulus</i></p> <p><input checked="" type="checkbox"/> <i>Colias eurytheme</i></p>
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Bird Species Observed:

HOSP	ANJW	LTJA	SOSL	WREN	ROPI	ANCO	WESA	BHCO	SAPH
CALI	MADO	LEBO	YBWA	KUL	ASW	CONO	WIPH	BBBL	
AMDE	HOFI	COYE	COLA	EUCO	TUVU	BAST	RNPH	AWBL	
BLPH	QHWV	HOOR	AMOR	LOSH	SPSA	MAU	COTE	EUST	

Other Wildlife Species Observed:

CATS COTONTAK
 W. FENCE ORIENTAL OUP
 VTA QTR

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLECITY Portion of Site Surveyed: ALL Acreage Surveyed: 65 Date: 08-21-12 DSF Detected: Y (N)
 Temperature in °F (Start/End): 86° / 92 Cloud Cover (Start/End): 0 / 0 Biologist: N. D. RUS Time (Start/End): 1000 / 1400
 Arthropod Species Observed: Wind Speed in mph (Start/End): 0-2 / 4-8 Biologist: J. D. RUS Time (Start/End): 1000 / 1255

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apioecera chrysolasia</i> <input type="checkbox"/> <i>Apioecera panthers</i> <input type="checkbox"/> <i>Nemomydas pantherina</i> <input checked="" type="checkbox"/> <i>Asilidae</i> <input type="checkbox"/> <i>Efferia alabarbaris</i> <input type="checkbox"/> <i>Mallofora faurix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input type="checkbox"/> <i>Saropogon latus</i> <input checked="" type="checkbox"/> <i>Stenopogon breviscutus</i> <input type="checkbox"/> <i>Bsetidae (May Flies)</i> <input type="checkbox"/> <i>Callibaetis pacificus</i> <input checked="" type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythicomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input checked="" type="checkbox"/> <i>Toxophora pellicuda</i> <input checked="" type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input checked="" type="checkbox"/> <i>Excaliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physoccephala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input checked="" type="checkbox"/> <i>Condylostylus sp.</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyphus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichnumon sp.</i></p> <p><i>Dasyneura coccineohirta</i></p> <p><i>Dasyneura californica</i></p> <p><i>Dasyneura sackeni</i> (lg.)</p> <p><i>Dasyneura chytymestra</i></p> <p><i>Campsomeris tolteca</i></p> <p><i>Trielis alcione</i></p> <p><i>Carabidae</i></p> <p><i>Coccinellidae</i></p> <p><i>Adalia bipunctata</i></p> <p><i>Chilocorus orbus</i></p> <p><i>Coccinella sp.</i></p> <p><i>Harmonia axyridis</i></p> <p><i>Hippodamia convergens</i></p> <p><i>Olla v-nigrum</i></p> <p><i>Elateridae (Click Beetles)</i></p> <p><i>Chrysomelidae</i></p> <p><i>Diabrotica balteata</i></p> <p><input checked="" type="checkbox"/> <i>P. undecimpunctata</i></p> <p><i>Lema trilineata</i></p> <p><i>Tachymela laticollis</i></p> <p><i>Curculionidae</i></p> <p><i>Halplidae</i></p> <p><i>Hydrophilidae</i></p> <p><i>Meloidae</i></p> <p><i>Nemognatha lurida apicalis</i></p> <p><i>Melyridae</i></p> <p><i>Collops sp.</i></p> <p><i>Rhipiphoridae</i></p> <p><i>Macrosaigona flavipenne</i></p> <p><i>Macrosaigona sp.</i></p> <p><i>Scarabaeidae</i></p> <p><i>Cotinus multibilis</i></p> <p><i>Paracatopa sp.</i></p> <p><i>Staphylinus maxillosus</i></p> <p><i>Tenebrionidae</i></p> <p><i>Eleodes sp.</i></p> <p>Hemiptera:</p> <p><i>Lygaeidae</i></p> <p><i>Lygaeus kalmii</i></p> <p><i>Pyrrhocoridae</i></p> <p><i>Largus cinctus</i></p>	<p><i>Polistes fuscatus aurifer</i></p> <p><i>Vespa pennsylvanica</i></p> <p>Coleoptera:</p> <p><i>Buprestidae</i></p> <p><i>Carabidae</i></p> <p><i>Coccinellidae</i></p> <p><i>Adalia bipunctata</i></p> <p><i>Chilocorus orbus</i></p> <p><i>Coccinella sp.</i></p> <p><i>Harmonia axyridis</i></p> <p><i>Hippodamia convergens</i></p> <p><i>Olla v-nigrum</i></p> <p><i>Elateridae (Click Beetles)</i></p> <p><i>Chrysomelidae</i></p> <p><i>Diabrotica balteata</i></p> <p><input checked="" type="checkbox"/> <i>P. undecimpunctata</i></p> <p><i>Lema trilineata</i></p> <p><i>Tachymela laticollis</i></p> <p><i>Curculionidae</i></p> <p><i>Halplidae</i></p> <p><i>Hydrophilidae</i></p> <p><i>Meloidae</i></p> <p><i>Nemognatha lurida apicalis</i></p> <p><i>Melyridae</i></p> <p><i>Collops sp.</i></p> <p><i>Rhipiphoridae</i></p> <p><i>Macrosaigona flavipenne</i></p> <p><i>Macrosaigona sp.</i></p> <p><i>Scarabaeidae</i></p> <p><i>Cotinus multibilis</i></p> <p><i>Paracatopa sp.</i></p> <p><i>Staphylinus maxillosus</i></p> <p><i>Tenebrionidae</i></p> <p><i>Eleodes sp.</i></p> <p>Hemiptera:</p> <p><i>Lygaeidae</i></p> <p><i>Lygaeus kalmii</i></p> <p><i>Pyrrhocoridae</i></p> <p><i>Largus cinctus</i></p>
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<p>Bird Species Observed:</p> <ul style="list-style-type: none"> <u>CORA</u> <u>ASHA</u> <u>BUSH</u> <u>NUWO</u> <u>SPTO</u> <u>(BASN)</u> <u>COYE</u> <u>AMTU</u> <u>RUTHU</u> <u>BUO</u> <u>MOFI</u> <u>LEDO</u> <u>KILL</u> <u>BLPH</u> <u>TUVU</u> <u>AMKE</u> <u>MOBP</u> <u>EUST</u> <u>ROPI</u> <u>AMUR</u> <u>CAKI</u> <u>ROBL</u> <u>BAAL</u> <u>MOO</u> <u>BNST</u> <u>DO</u> <u>MALL</u> <u>WIPH</u> <u>WESA</u> <u>WIFE</u> <u>CONO</u> <u>ANCO</u> <u>WISSA</u> <u>SSSA</u> <u>LOSH</u> <u>COHA</u> <u>NOHO</u> 	<p>Other Wildlife Species Observed:</p> <ul style="list-style-type: none"> <u>UTA</u> <u>COTTONTAIL</u> <u>CAGS</u> <u>DOMESTIC CAT</u> <u>W. FENCE</u> 	<p>Arachnida:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Araneidae</i> <input type="checkbox"/> <i>Peuceia viridinis</i> <input checked="" type="checkbox"/> <i>Dipluridae</i> <input type="checkbox"/> <i>Leuroyechus pacificus</i> <input type="checkbox"/> <i>Latrodectus hesperus</i> <input type="checkbox"/> <i>Salticidae</i> <input checked="" type="checkbox"/> <i>Phidippus formosus</i> <input type="checkbox"/> <i>Thomisidae</i> <p>Lepidoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Atalopedes campestris</i> <input type="checkbox"/> <i>Erynnis funerals</i> <input checked="" type="checkbox"/> <i>Heliopterus erictorum</i> <input checked="" type="checkbox"/> <i>Hylephila phyleus</i> <input checked="" type="checkbox"/> <i>Lerodea eufala</i> <input type="checkbox"/> <i>Pararytone melane</i> <input type="checkbox"/> <i>Polites sabuleti</i> <input checked="" type="checkbox"/> <i>Pyrgus albescens</i> <input checked="" type="checkbox"/> <i>Papilio cresphontes</i> <input checked="" type="checkbox"/> <i>Papilio raietus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissoxiteira pictipennis</i> <input type="checkbox"/> <i>Lepritis intermedium</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca sp.</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Myrmeleontidae</i> <input type="checkbox"/> <i>Brachyneurium sp.</i> <input checked="" type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Tracheoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Trimerotropis californica</i> <input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i> <input type="checkbox"/> <i>Gryllus sp.</i> <input type="checkbox"/> <i>Chlorochroa uhleri</i> <u>(SAY)</u> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input checked="" type="checkbox"/> <i>Triehopllea aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Apiomeris crassipes</i> <input type="checkbox"/> <i>Rhynocoris ventralis</i> <input type="checkbox"/> <i>Zelus tetracanthus</i> <p>Odonata:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Aeshna multicolor</i> <input checked="" type="checkbox"/> <i>Anax junius</i> <input checked="" type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Homalicta sp.</i> <input checked="" type="checkbox"/> <i>Libellula saturata</i> <input type="checkbox"/> <i>Noctuidae</i> <input type="checkbox"/> <i>Autographa californica</i> <input type="checkbox"/> <i>Schinia</i> <input type="checkbox"/> <i>Geometridae</i> <input checked="" type="checkbox"/> <i>Pyralidae</i> <input type="checkbox"/> <i>Paranthrene robiniae</i> <input type="checkbox"/> <i>Hyles lineata</i> <input type="checkbox"/> <i>Manduca sexta</i> <p>Pentatomidae:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> <u>(SAY)</u> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Triehopllea aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Apiomeris crassipes</i> <input type="checkbox"/> <i>Rhynocoris ventralis</i> <input type="checkbox"/> <i>Zelus tetracanthus</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> <input type="checkbox"/> <i>Vespa pennsylvanica</i>
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Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: AV Acreage Surveyed: ~65 Date: 08-23-12 DSF Detected: Y N
 Temperature in °F (Start/End): 78 / 87 Cloud Cover (Start/End): 50% / 5% Biologist: J. DICUS Time (Start/End): 1000 / 1400
 Arthropod Species Observed: Wind Speed in mph (Start/End): 0-1 / 3-6 Biologist: M. DICUS Time (Start/End): 1000 / 1255

Diptera: <i>R. terminatus abdominalis</i> <i>Apiocera chrysolasia</i> <i>Apiocera convergens</i> <i>Nemomyia pantherina</i> Asilidae <i>Efferia alabarbaris</i> <i>Proctocanthus sp.</i> <i>Stenopogon luteus</i> <i>Stenopogon breviscutus</i> Baetidae (May Flies) <i>Callibaetis pacificus</i> Bombyliidae <i>Exoprosopa sp.</i> <i>Ligya gazophylax</i> <i>Mythicomya sp.</i> <i>Poecilanthrax arethusa</i> <i>Poecilanthrax sp.</i> <i>Foxophora pellucida</i> <i>Villa atrata</i> <i>Zenox simpson</i> <i>Calliphora sp.</i> <i>Eucalliphora tilaea</i> <i>Phaenicia cuprina</i> <i>Phaenicia sericata</i> <i>Gonopidae sp.</i> <i>Physoccephala texana</i> <i>Culicidae - mosquitoes</i> Guterebridae <i>Condylostylus sp.</i> Drosophilidae <i>Musca domestica</i> Sarcophagidae <i>Sarcophaga sp.</i> Stratiomyidae Syrphidae <i>Allograpta obliqua</i> <i>Eristalis tenax</i> <i>Metasyrphus americanus</i> <i>Volucella mexicana</i> Tabanidae	<i>Ichneumon sp.</i> <i>Dasymutilla coccineohirta</i> <i>Dasymutilla californica</i> <i>Dasymutilla sackeni</i> (lg.) <i>Dasymutilla clytemnestra</i> Camposmeris tolteca Trielidae Carabidae Cerambycidae Coccinellidae <i>Adalia bipunctata</i> <i>Chilocorus orbus</i> <i>Coccinella sp.</i> Harmonia axyridis Hippodamia convergens <i>Olla v-nigrum</i> Elateridae (Click Beetles) Chrysomelidae <i>Diabrotica balteata</i> <i>D. undecimpunctata</i> <i>Lema trilineata</i> <i>Tachyella lenticollis</i> Curculionidae Halplidae Hydrophilidae Meloidae <i>Nemognatha lurida apicalis</i> Melyridae Collops sp. Rhipiphoridae Macrosaigona flavipenne Macrosaigona sp. Scarabaeidae <i>Colinus mutabilis</i> Paracatolpa sp. Venebrionidae Eleodes sp. Hemiptera: Lygaeidae <i>Lygaeus kalmii</i> Pyrrhocoridae <i>Largus cinctus</i>	Pentatomidae <i>Chlorochroa ligata</i> <i>Chlorochroa uhleri</i> (SAYI) Murgantia histrionica Podisus sp. Tetrigonidae Antianthe expansa Stuedderia mexicana Scutelleridae <i>Iris oratoria</i> Stagmomantis californica Parabacillus hesperis Odonata: Aeshna multicolor Anax junius Erythemis collocata Libellula croceipennis Libellula saturata Dactyloptera (Cocchineal) Dactylopterus sp. Membracidae Antianthe expansa Psyllidae Glycaspis brimblecombei Neuroptera: Chrysopidae <i>Chrysopa sp.</i> Myrmeleontidae Brachyneurum sp. Myrmeleon sp. Raphidiidae (Snakeflies) Dermaptera: Forficula auricularia Orthoptera: Acrididae Dissosteira pictipennis <i>Leprus intermedius</i> Melanoplus sp. Schistocerca nitens Schistocerca sp.
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Bird Species Observed:

<i>Bush</i>	<i>Basw</i>	<i>NOFL</i>	<i>SPTO</i>	<i>HOFL</i>	<i>KILL</i>	<i>BOBL</i>	<i>LBDO</i>	<i>MALL</i>	<i>ANCO</i>
<i>Amile</i>	<i>CAKI</i>	<i>SOSP</i>	<i>ROFR</i>	<i>BLPH</i>	<i>HOFP</i>	<i>BLAL</i>	<i>COOD</i>	<i>WIPH</i>	<i>LOSH</i>
<i>MOOD</i>	<i>RTTA</i>	<i>CORA</i>	<i>GETV</i>	<i>SAPH</i>	<i>WFIB</i>	<i>EUCO</i>	<i>KILL</i>	<i>WESA</i>	<i>WEKJ</i>
<i>ROPI</i>	<i>NOMO</i>	<i>COYE</i>	<i>CATH</i>	<i>TUVU</i>	<i>EVST</i>	<i>BNST</i>	<i>CITE</i>	<i>SPSA</i>	

Other Wildlife Species Observed:

CAGS *W FENCE*
UTA
COMONTAIL

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: AL Acreage Surveyed: 65 Date: 08-26-12 DSF Detected: Y N
 Temperature in °F (Start/End): 75 / 84 Cloud Cover (Start/End): 30% / 0% Biologist: J. DICUS Time (Start/End): 1000 / 1255
 Arthropod Species Observed: Wind Speed in mph (Start/End): 0-3 / 2-9 Biologist: M. DICUS Time (Start/End): 1000 / 1400

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Archyias chrysolasia</i> <input type="checkbox"/> <i>Apocera convergens</i> <input type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Efferia albarbaris</i> <input type="checkbox"/> <i>Mallajora faurix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input checked="" type="checkbox"/> <i>Saropogon luteus</i> <input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input type="checkbox"/> <i>Callibaetis pacificus</i> <input checked="" type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input type="checkbox"/> <i>Taxophora pellicuda</i> <input checked="" type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input checked="" type="checkbox"/> <i>Eucalliphora litaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physcephala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input checked="" type="checkbox"/> <i>Condylostylus sp.</i> <input type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input checked="" type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input checked="" type="checkbox"/> <i>Syrphidae</i> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasphyrus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichneumon sp.</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Dasyntilla coccineohirta</i> <input checked="" type="checkbox"/> <i>Dasyntilla californica</i> <input type="checkbox"/> <i>Dasyntilla sackeni (lg.)</i> <input type="checkbox"/> <i>Dasyntilla cyenemestra</i> <input type="checkbox"/> <i>Campomeris tolteca</i> <input type="checkbox"/> <i>Trielis alicione</i> <input type="checkbox"/> <i>Pomphiliidae</i> <input type="checkbox"/> <i>Pespsis mildei</i> <input checked="" type="checkbox"/> <i>Pepsis sp.</i> <input type="checkbox"/> <i>Sphécidae</i> <input type="checkbox"/> <i>Amnophila alberti</i> <input checked="" type="checkbox"/> <i>Amnophila sp.</i> <input checked="" type="checkbox"/> <i>Bembix americana</i> <input checked="" type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanopsis</i> <input type="checkbox"/> <i>Bicyrtis sp.</i> <input type="checkbox"/> <i>Carceris sp.</i> <input checked="" type="checkbox"/> <i>Chalybion californicus</i> <input checked="" type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucereceris insignis</i> <input type="checkbox"/> <i>Hoplisoides diversus</i> <input type="checkbox"/> <i>Hoplisoides sp.</i> <input type="checkbox"/> <i>Isodontis aelagans</i> <input checked="" type="checkbox"/> <i>Microbembix californicus</i> <input checked="" type="checkbox"/> <i>Philanthus multimaculata</i> <input checked="" type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Prionyx foxi</i> <input type="checkbox"/> <i>Prionyx sp.</i> <input checked="" type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Sizioides remicinctus</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input checked="" type="checkbox"/> <i>Euodynerus annulata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<p>Polistes fasciatus aurifer</p> <p><i>Vespula pennsylvanica</i></p> <p>Coleoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Buprestidae</i> <input type="checkbox"/> <i>Carabidae</i> <input type="checkbox"/> <i>Cerambycidae</i> <input type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilochorus orbis</i> <input type="checkbox"/> <i>Coccinella sp.</i> <input type="checkbox"/> <i>Harmonia axyridis</i> <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elateridae (Click Beetles)</i> <input type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input checked="" type="checkbox"/> <i>D. undecimpunctata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymela laticolis</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Halipitidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collaps sp.</i> <input type="checkbox"/> <i>Rhipiphoridae</i> <input checked="" type="checkbox"/> <i>Chrysopa sp.</i> <input checked="" type="checkbox"/> <i>Myrmeloidae</i> <input checked="" type="checkbox"/> <i>Brachynemurus sp.</i> <input checked="" type="checkbox"/> <i>Myrmelon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Lepus intermedius</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input checked="" type="checkbox"/> <i>Xiphocerca niens</i> <input checked="" type="checkbox"/> <i>Schistocerca sp.</i>
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Bird Species Observed:

TUVU	MOBO	GOYE	SOSP	BASW	WFIB	CANO	WESA	WEKI	LOSH
HOFL	BASW	CORA	GOBL	SAPT	EUST	WIPH	SPSA	COPE	LETO
MTA	FOVY	ANTV	HOSP	LOPI	AMKE	CITE	LBDO	RABL	CAKI
BLNR	RUHU	HOWR	BLEH	KILL	ANCO	MAU	BNST	GULO	

Other Wildlife Species Observed:

USA	WFEAL
CABS	COACAWHIP

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: GAUCLE CITY Portion of Site Surveyed: AW Acreage Surveyed: 65 Biologist(s): JDWS, MPJWS
 Date: 07-28-12 Time (Start/End): 1000 / 1400 (P) Cloud Cover (Start/End): 0 / 40% Temperature in °F (Start/End): 87 / 102
 Wind Speed in Beaufort (Start/End): 0-2 / 1-9 DSF Detected (Circle): Y (N)

Arthropod Species Observed:

<p>Diptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>R. terminatus abdominalis</i> <input checked="" type="checkbox"/> <i>Apiocera chrysolasia</i> <input checked="" type="checkbox"/> <i>Apiocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input checked="" type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Efferia albarbaris</i> <input checked="" type="checkbox"/> <i>Malloflora faurix</i> <input checked="" type="checkbox"/> <i>Proctocaninus sp.</i> <input checked="" type="checkbox"/> <i>Saropogon luteus</i> <input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i> <input checked="" type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input checked="" type="checkbox"/> <i>Bombyliidae</i> <input checked="" type="checkbox"/> <i>Exoprosopa sp.</i> <input checked="" type="checkbox"/> <i>Ligra gazophylax</i> <input checked="" type="checkbox"/> <i>Mythicomya sp.</i> <input checked="" type="checkbox"/> <i>Poecilanthrax arethusa</i> <input checked="" type="checkbox"/> <i>Poecilanthrax sp.</i> <input checked="" type="checkbox"/> <i>Toxophora pellucida</i> <input checked="" type="checkbox"/> <i>Villa atrata</i> <input checked="" type="checkbox"/> <i>Zenox simpson</i> <input checked="" type="checkbox"/> <i>Galliphora sp.</i> <input checked="" type="checkbox"/> <i>Eucalliphora illaea</i> <input checked="" type="checkbox"/> <i>Phaenicia cuprina</i> <input checked="" type="checkbox"/> <i>Phaenicia sericata</i> <input checked="" type="checkbox"/> <i>Conopidae sp.</i> <input checked="" type="checkbox"/> <i>Physcocephala texana</i> <input checked="" type="checkbox"/> <i>Culicidae - mosquitoes</i> <input checked="" type="checkbox"/> <i>Caterebridae</i> <input checked="" type="checkbox"/> <i>Condylostylus sp.</i> <input checked="" type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input checked="" type="checkbox"/> <i>Sarcophaga sp.</i> <input checked="" type="checkbox"/> <i>Stratiomyidae</i> <input checked="" type="checkbox"/> <i>Syrphidae</i> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input checked="" type="checkbox"/> <i>Eristalis tenax</i> <input checked="" type="checkbox"/> <i>Metasyphus americanus</i> <input checked="" type="checkbox"/> <i>Volucella mexicana</i> <input checked="" type="checkbox"/> <i>Tabanidae</i> 	<p><i>Polistes fuscatus aurifer</i></p> <p><i>Chlorochroa ligata</i></p> <p><input checked="" type="checkbox"/> <i>Chlorochroa uhleri (rare)</i></p> <p><i>Margantia histriónica</i></p> <p><i>Podisus sp.</i></p> <p><i>Thyanta pallidivirens</i></p> <p><i>Trichopepla aurora</i></p> <p><i>Reduviidae</i></p> <p><i>Apiomeris crassipes</i></p> <p><i>Chilochorus orbis</i></p> <p><i>Coccinella sp.</i></p> <p><i>Harmonia axyridis</i></p> <p><i>Hippodamia convergens</i></p> <p><i>Olla v-nigrum</i></p> <p><i>Elaterridae (Click Beetles)</i></p> <p><i>Chrysomelidae</i></p> <p><i>Diabrotica balteata</i></p> <p><i>D. undecimpunctata</i></p> <p><i>Lema trilineata</i></p> <p><i>Tachymela laticollis</i></p> <p><i>Curculionidae</i></p> <p><i>Halipidae</i></p> <p><i>Hydrophyllidae</i></p> <p><i>Meloidae</i></p> <p><i>Nemognatha lurida apicalis</i></p> <p><i>Melyridae</i></p> <p><i>Collaps sp.</i></p> <p><i>Rhipiphoridae</i></p> <p><i>Macrosaigona flavipenne</i></p> <p><i>Macrosaigona sp.</i></p> <p><i>Senariidae</i></p> <p><input checked="" type="checkbox"/> <i>Cotinus mutabilis</i></p> <p><i>Paracotalpa sp.</i></p> <p><i>Staphylinus maxillosus</i></p> <p><i>Tenebrionidae</i></p> <p><input checked="" type="checkbox"/> <i>Eleodes sp.</i></p> <p>Hemiptera:</p> <p><i>Lygaeidae</i></p> <p><i>Lygaeus kalmii</i></p> <p><i>Pyrrhocoridae</i></p> <p><i>Largus cinctus</i></p>	<p><i>Pentatomidae</i></p> <p><i>Trimerotropis californica</i></p> <p><input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i></p> <p><i>Gryllus sp.</i></p> <p><i>Oecanthus fulloni</i></p> <p><i>Tettigoniidae</i></p> <p><i>Antianthe expansa</i></p> <p><i>Scudderia mexicana</i></p> <p><i>Senopelmatus sp.</i></p> <p><i>Iris oratoria</i></p> <p><i>Stagmomantis californica</i></p> <p><i>Parabacillus hesperis</i></p> <p>Odonata:</p> <p><input checked="" type="checkbox"/> <i>Aesha multicolor</i></p> <p><i>Anax junius</i></p> <p><i>Erythemis collocata</i></p> <p><i>Libellula croceipennis</i></p> <p><input checked="" type="checkbox"/> <i>Libellula saturata</i></p> <p><i>Noctuidae</i></p> <p><i>Autographa californica</i></p> <p><i>Schinia</i></p> <p><i>Geometridae</i></p> <p><input checked="" type="checkbox"/> <i>Pyralidae</i></p> <p><i>Paranthrene robiniae</i></p> <p><i>Hyles lineata</i></p> <p><i>Manduca sexta</i></p> <p>Arachnida:</p> <p><input checked="" type="checkbox"/> <i>Araneidae</i></p> <p><i>Peucetia viridins</i></p> <p><input checked="" type="checkbox"/> <i>Dipluridae</i></p> <p><i>Leuroxychus pacificus</i></p> <p><i>Latrodectus hesperus</i></p> <p><i>Salticidae</i></p> <p><i>Phidippus formosus</i></p> <p><input checked="" type="checkbox"/> <i>Thomisidae</i></p>
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Bird Species Observed:

<p><i>MODO</i></p> <p><i>ANLE</i></p> <p><i>CTHA</i></p> <p><i>ANFU</i></p>	<p><i>FWV</i></p> <p><i>BLP</i></p> <p><i>BLP</i></p> <p><i>BLP</i></p>	<p><i>WV</i></p> <p><i>WV</i></p> <p><i>WV</i></p> <p><i>WV</i></p>
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Other Wildlife Species Observed:

<p><i>CABBY</i></p> <p><i>UTA</i></p> <p><i>DOMESTIC DOG</i></p> <p><i>W.F.W.C.</i></p>	<p><i>CONANTAIL</i></p> <p><i>W.F.W.C.</i></p>	<p><i>W.F.W.C.</i></p>
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Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: GAUCLE CITY Portion of Site Surveyed: NOV 7A Acreage Surveyed: 25 Biologist(s): M. DICUS
 Date: 09-02-12 Time (Start/End): 1105/1400 Cloud Cover (Start/End): 57/02 Temperature in °F (Start/End): 88/96

Arthropod Species Observed: Wind Speed in Beaufort (Start/End): 2-6/3-8 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apocera chrysolasia</i> <input type="checkbox"/> <i>Apocera convergens</i> <input type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Efferia albarbaris</i> <input type="checkbox"/> <i>Mallotera faurix</i> <input type="checkbox"/> <i>Proctocanthus</i> sp. <input type="checkbox"/> <i>Stenopogon luteus</i> <input checked="" type="checkbox"/> <i>Stenopogon breviscutulus</i> <input type="checkbox"/> <i>Bactridae</i> (May Flies) <input checked="" type="checkbox"/> <i>Gallbaetis pacificus</i> <input checked="" type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa</i> sp. <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythicomyia</i> sp. <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input checked="" type="checkbox"/> <i>Poecilanthrax</i> sp. <input checked="" type="checkbox"/> <i>Axophora pelliculida</i> <input checked="" type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Calliphora</i> sp. <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input checked="" type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae</i> sp. <input type="checkbox"/> <i>Physophephala texana</i> <input type="checkbox"/> <i>Culicidae</i> - mosquitoes <input type="checkbox"/> <i>Cuterebridae</i> <input type="checkbox"/> <i>Condylostylus</i> sp. <input checked="" type="checkbox"/> <i>Prosophiidae</i> <input type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga</i> sp. <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichneumon</i> sp.</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Dasyuutilla coccineohirta</i> <input type="checkbox"/> <i>Dasyuutilla californica</i> <input type="checkbox"/> <i>Dasyuutilla sackeni</i> (lg.) <input type="checkbox"/> <i>Dasyuutilla clyemnestra</i> <input type="checkbox"/> <i>Campsomermis tolteca</i> <input type="checkbox"/> <i>Trielis alcone</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pepsis mildel</i> <input type="checkbox"/> <i>Pepsis</i> sp. <input type="checkbox"/> <i>Sphexidae</i> <input type="checkbox"/> <i>Ammophila alberti</i> <input type="checkbox"/> <i>Ammophila</i> sp. <input type="checkbox"/> <i>Bembix americana</i> <input checked="" type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanapsis</i> <input type="checkbox"/> <i>Bicyrtes</i> sp. <input checked="" type="checkbox"/> <i>Chalybion californicus</i> <input type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisoides diversus</i> <input type="checkbox"/> <i>Hoplisoides</i> sp. <input type="checkbox"/> <i>Isodonti aeligans</i> <input checked="" type="checkbox"/> <i>Microbembix californicus</i> <input type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Philanthus ventilabris</i> <input type="checkbox"/> <i>Podalonia</i> sp. <input type="checkbox"/> <i>Prionyx foxi</i> <input type="checkbox"/> <i>Prionyx</i> sp. <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Sizoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae</i> - unidentified <input type="checkbox"/> <i>Eumenes bolli</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input checked="" type="checkbox"/> <i>Euclypterus annulata</i> <input checked="" type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<p>Polistes fuscatus aurifer</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Vespa pennsylvanica</i> <p>Coloptrinae:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Buprestidae</i> <input type="checkbox"/> <i>Carabidae</i> <input type="checkbox"/> <i>Cerambycidae</i> <input type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilocorus orbis</i> <input type="checkbox"/> <i>Coccinella</i> sp. <input type="checkbox"/> <i>Harmonia axyridis</i> <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elateridae</i> (Click Beetles) <input type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input checked="" type="checkbox"/> <i>D. undecimpunctata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymeria laticollis</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Haliplidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops</i> sp. <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosoma flavipenne</i> <input type="checkbox"/> <i>Macrosoma</i> sp. <input checked="" type="checkbox"/> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracotilpa</i> sp. <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> <i>Tenebrionidae</i> <input type="checkbox"/> <i>Eleodes</i> sp. <p>Hemiptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Lygaeidae</i> <input checked="" type="checkbox"/> <i>Lygaeus kalmii</i> <input type="checkbox"/> <i>Pyrrhocoridae</i> <input type="checkbox"/> <i>Largus cinctus</i> 	<p>Pentatomidae (6.14.2008)</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus</i> sp. <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichopepla aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Aptomeris crassipes</i> <input type="checkbox"/> <i>Rhynocoris ventralis</i> <input type="checkbox"/> <i>Zelus tetracanthus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aphididae</i> <input type="checkbox"/> <i>Cercopidae</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homaldisca</i> sp. <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactylopiidae</i> (Coccinellal) <input type="checkbox"/> <i>Dactylopius</i> sp. <input type="checkbox"/> <i>Perithemis intensa</i> <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input type="checkbox"/> <i>Psyllidae</i> <input type="checkbox"/> <i>Glycaspis brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa</i> sp. <input type="checkbox"/> <i>Myrmeleontidae</i> <input checked="" type="checkbox"/> <i>Brachyneururus</i> sp. <input checked="" type="checkbox"/> <i>Myrmeleon</i> sp. <input type="checkbox"/> <i>Raphidiidae</i> (Snakeflies) <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Lepus intermedius</i> <input type="checkbox"/> <i>Melanoplus</i> sp. <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca</i> sp. 	<p>Trimerotropis californica</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Pieris rapae</i> <input type="checkbox"/> <i>Trimerotropis pallidipennis</i> <input checked="" type="checkbox"/> <i>Gryllus</i> sp. <input type="checkbox"/> <i>Hemiaris ceratulus</i> <input type="checkbox"/> <i>Icaricia acmon</i> <input type="checkbox"/> <i>Anitontha expansa</i> <input type="checkbox"/> <i>Scudderita mexicana</i> <input type="checkbox"/> <i>Stenopelmatus</i> sp. <input type="checkbox"/> <i>Iris oratoria</i> <input type="checkbox"/> <i>Agraulis vanillae</i> <input type="checkbox"/> <i>Danaus gilippus</i> <input type="checkbox"/> <i>Danus plexippus</i> <input type="checkbox"/> <i>Prectis coenia</i> <input type="checkbox"/> <i>Vanessa annabella</i> <input checked="" type="checkbox"/> <i>Vanessa atalanta</i> <input type="checkbox"/> <i>Vanessa cardui</i> <input type="checkbox"/> <i>Vanessa virginiensis</i> <input type="checkbox"/> <i>Arctiidae</i> <input type="checkbox"/> <i>Noctuidae</i> <input type="checkbox"/> <i>Autographa californica</i> <input type="checkbox"/> <i>Schinia</i> <input type="checkbox"/> <i>Cecometriidae</i> <input checked="" type="checkbox"/> <i>Pyralidae</i> <input type="checkbox"/> <i>Paraniphrene robinetae</i> <input type="checkbox"/> <i>Hyles ineata</i> <input type="checkbox"/> <i>Manduca sexta</i> <p>Arachnida:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Araneidae</i> <input checked="" type="checkbox"/> <i>Peuceia viridans</i> <input type="checkbox"/> <i>Dipluridae</i> <input type="checkbox"/> <i>Leurotychus pacificus</i> <input type="checkbox"/> <i>Latrosectus hesperus</i> <input type="checkbox"/> <i>Salticidae</i> <input type="checkbox"/> <i>Phidippus formosus</i> <input type="checkbox"/> <i>Thomisidae</i>
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Bird Species Observed: WEEK BUPH AMKE B2BL LBDO
TUVU RTHA BLPH KILL MAIL
CAKI COBA CUCC BNST B2BL
HOFI AMOR ROP1 B1PH B2GW

Other Wildlife Species Observed:
UTA

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: South Acreage Surveyed: 40 Biologist(s): M. Dicus
 Date: 09-04-12 Time (Start/End): 1000/1400 Cloud Cover (Start/End): 5% / 5% Temperature in °F (Start/End): 82 / 103

Arthropod Species Observed: Wind Speed in Beaufort (Start/End): 0-3 / 3-9 DSF Detected (Circle): Y N

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Tabanus punctifer</i> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apocera chrysolasia</i> <input type="checkbox"/> <i>Apocera convergens</i> <input type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Efferia alabarbaris</i> <input type="checkbox"/> <i>Mallopora faurix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input checked="" type="checkbox"/> <i>Saropogon luteus</i> <input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input checked="" type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligya gazophylax</i> <input type="checkbox"/> <i>Mythicomya sp.</i> <input checked="" type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input type="checkbox"/> <i>Toxophora pellicuda</i> <input type="checkbox"/> <i>Villa arata</i> <input type="checkbox"/> <i>Zenon simpson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physocephala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input checked="" type="checkbox"/> <i>Condylostylus sp.</i> <input type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyphus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichneumon sp.</i></p> <p><i>Dasyommata coccineohirta</i></p> <p><i>Dasyommata californica</i></p> <p><i>Dasyommata sackeni</i> (lg.)</p> <p><i>Dasyommata cythemestra</i></p> <p><i>Campomeris tolteca</i></p> <p><i>Trielis alione</i></p> <p><i>Pompilidae</i></p> <p><i>Adalia bipunctata</i></p> <p><i>Chilocorus orbis</i></p> <p><i>Coccinella sp.</i></p> <p><i>Harmonia axyridis</i></p> <p><input checked="" type="checkbox"/> <i>Hippodamia convergens</i></p> <p><i>Olla v-nigrum</i></p> <p><i>Elatridae (Click Beetles)</i></p> <p><i>Chrysomelidae</i></p> <p><input checked="" type="checkbox"/> <i>Diabrotica balteata</i></p> <p><input checked="" type="checkbox"/> <i>D. undecimpunctata</i></p> <p><input checked="" type="checkbox"/> <i>Lema trilineata</i></p> <p><i>Tachymeta lanticois</i></p> <p><i>Curculionidae</i></p> <p><i>Halpiliidae</i></p> <p><i>Hydrophyllidae</i></p> <p><i>Meloidae</i></p> <p><i>Nemognatha lurida apicalis</i></p> <p><i>Melyridae</i></p> <p><i>Collops sp.</i></p> <p><i>Rhipiphoridae</i></p> <p><i>Macrosaigona flavipenne</i></p> <p><i>Macrogastra sp.</i></p> <p><input checked="" type="checkbox"/> <i>Scarabaeidae</i></p> <p><i>Cotinus mutabilis</i></p> <p><i>Staphylinus maxillosus</i></p> <p><i>Tenebrionidae</i></p> <p><input checked="" type="checkbox"/> <i>Eleodes sp.</i></p> <p>Hemiptera:</p> <p><i>Lygaeidae</i></p> <p><i>Lygaeus kalmii</i></p> <p><i>Pyrrhocoridae</i></p> <p><input checked="" type="checkbox"/> <i>Largus cinctus</i></p>	<p><i>Polistes fuscatus aurifer</i></p> <p><i>Vespula pennsylvanica</i></p> <p>Coleoptera:</p> <p><i>Murgantia histrionica</i></p> <p><i>Podisus sp.</i></p> <p><i>Thyanta pallidovirens</i></p> <p><i>Trichoptera aurora</i></p> <p><i>Reduviidae</i></p> <p><i>Apionemris crassipes</i></p> <p><input checked="" type="checkbox"/> <i>Rhyacionis ventralis</i></p> <p><i>Zelus tetracanthus</i></p> <p>Hemiptera:</p> <p><i>Aphididae</i></p> <p><input checked="" type="checkbox"/> <i>Cercopidae</i></p> <p><i>Cicadellidae</i></p> <p><i>Homalidae sp.</i></p> <p><i>Cicadidae</i></p> <p><input checked="" type="checkbox"/> <i>Dactylopiidae (Coccineal)</i></p> <p><i>Dactylopius sp.</i></p> <p><i>Membracidae</i></p> <p><i>Antiantennae expansa</i></p> <p><i>Psyllidae</i></p> <p><input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i></p> <p>Neuroptera:</p> <p><i>Chrysopidae</i></p> <p><i>Chrysopa sp.</i></p> <p><i>Myrmeleontidae</i></p> <p><i>Brachyneururus sp.</i></p> <p><i>Myrmeleon sp.</i></p> <p><i>Raphidiidae (Snakeflies)</i></p> <p>Dermaptera:</p> <p><i>Forficula auricularia</i></p> <p>Oryzoptera:</p> <p><input checked="" type="checkbox"/> <i>Acrididae</i></p> <p><i>Dissosteira pictipennis</i></p> <p><i>Leprus intermedium</i></p> <p><i>Melanoplus sp.</i></p> <p><i>Schistocerca nitens</i></p> <p><input checked="" type="checkbox"/> <i>Schistocerca sp.</i></p>
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Bird Species Observed:

- TUVU HOWR BUSH HOSP WFB BASW
- BAKI LEGO ANTV SAPH EUST NOMO
- SOSP HOFI BLPH CORA QBAL LOSH
- RTHA NUWO ROPI KILL AMOR AMKE

Other Wildlife Species Observed:

- CABS
- M-FENCE
- COTONTAIL
- UTA

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: NORTH Acreage Surveyed: 25 Biologist(s): M. O'NEIL
 Date: 09-06-12 Time (Start/End): 1000/1255 Cloud Cover (Start/End): 0% / 0 Temperature in °F (Start/End): 81 / 90

Arthropod Species Observed: 1-4 / 4-11 Wind Speed in Beaufort (Start/End): 1-4 / 4-11 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Tabanus punctifer</i> <input type="checkbox"/> <i>R. minutus abdominalis</i> <input type="checkbox"/> <i>Aplocera chrysolasia</i> <input type="checkbox"/> <i>Aplocera convergens</i> <input type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input type="checkbox"/> <i>Efferia albobarbaris</i> <input type="checkbox"/> <i>Mallotora laurix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input checked="" type="checkbox"/> <i>Saropogon luteus</i> <input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Bactiidae (May Flies)</i> <input type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mylucomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input checked="" type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physoccephala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input type="checkbox"/> <i>Condylostylus sp.</i> <input type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Lehemum sp.</i> <input checked="" type="checkbox"/> <i>Dasyneutilla coccineohirta</i> <input checked="" type="checkbox"/> <i>Dasyneutilla californica</i> <input checked="" type="checkbox"/> <i>Dasyneutilla sackeni (lg.)</i> <input type="checkbox"/> <i>Dasyneutilla clytemnestra</i> <input type="checkbox"/> <i>Trielis atcione</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pepsis mildoi</i> <input type="checkbox"/> <i>Pepsis sp.</i> <input type="checkbox"/> <i>Spheroidea</i> <input type="checkbox"/> <i>Amimophila alberti</i> <input type="checkbox"/> <i>Amimophila sp.</i> <input checked="" type="checkbox"/> <i>Bembix americana</i> <input checked="" type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanopsis</i> <input type="checkbox"/> <i>Bicyrtis sp.</i> <input type="checkbox"/> <i>Cerceris sp.</i> <input type="checkbox"/> <i>Chabychion californicus</i> <input type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisoides diversus</i> <input type="checkbox"/> <i>Hoplisoides sp.</i> <input type="checkbox"/> <i>Isodonti aeligons</i> <input checked="" type="checkbox"/> <i>Microbembix californicus</i> <input type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Prionyx foxi</i> <input type="checkbox"/> <i>Prionyx sp.</i> <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Stizoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Euclypterus annulata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Pentatomidae (B. A. M. A. S.)</i> <input checked="" type="checkbox"/> <i>Triemerotropis pallidipennis</i> <input checked="" type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Gryllus sp.</i> <input type="checkbox"/> <i>Oecanthus fulvoni</i> <input type="checkbox"/> <i>Tettigoniidae</i> <input type="checkbox"/> <i>Anitanthie expansa</i> <input type="checkbox"/> <i>Scudderia mexicana</i> <input type="checkbox"/> <i>Stenopelmatus sp.</i> <input type="checkbox"/> <i>Iris oratoria</i> <input type="checkbox"/> <i>Apodemia mormo virgulti</i> <input type="checkbox"/> <i>Agraulis vanillae</i> <input type="checkbox"/> <i>Danaus gilippus</i> <input type="checkbox"/> <i>Danaus plexippus</i> <input type="checkbox"/> <i>Parabacillus hesperis</i> <input type="checkbox"/> <i>Precia coenia</i> <input type="checkbox"/> <i>Vanessa annabella</i> <input type="checkbox"/> <i>Vanessa atalanta</i> <input checked="" type="checkbox"/> <i>Vanessa cardui</i> <input type="checkbox"/> <i>Vanessa virginiensis</i> <input type="checkbox"/> <i>Arctiidae</i> <input type="checkbox"/> <i>Noctuidae</i> <input type="checkbox"/> <i>Autographa californica</i> <input type="checkbox"/> <i>Schinia</i> <input type="checkbox"/> <i>Geometridae</i> <input checked="" type="checkbox"/> <i>Pyralidae</i> <input type="checkbox"/> <i>Paranthrene robiniae</i> <input type="checkbox"/> <i>Hyles lineata</i> <input type="checkbox"/> <i>Manduca sexta</i> <input type="checkbox"/> Arachnidae: <input type="checkbox"/> <i>Araneidae</i> <input checked="" type="checkbox"/> <i>Peuceetia viridans</i> <input checked="" type="checkbox"/> <i>Dipluridae</i> <input type="checkbox"/> <i>Leurogryllus pacificus</i> <input checked="" type="checkbox"/> <i>Pantodectus hesperus</i> <input checked="" type="checkbox"/> <i>Salticidae</i> <input checked="" type="checkbox"/> <i>Phidippus formosus</i> <input checked="" type="checkbox"/> <i>Thomisidae</i> <input type="checkbox"/> <i>Alalopedes campestris</i> <input type="checkbox"/> <i>Erynnis funealis</i> <input checked="" type="checkbox"/> <i>Hylephila phyleus</i> <input checked="" type="checkbox"/> <i>Lerodea eufala</i> <input type="checkbox"/> <i>Paratyone melane</i> <input checked="" type="checkbox"/> <i>Poites sabulieri</i> <input type="checkbox"/> <i>Pyrgus albescens</i> <input type="checkbox"/> <i>Papilio cressphontes</i> <input type="checkbox"/> <i>Papilio rutulus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i> 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Polistes fuscatus aurifer</i> <input type="checkbox"/> <i>Vespa pennsylvanica</i> <input type="checkbox"/> Coleoptera: <input type="checkbox"/> <i>Buprestidae</i> <input type="checkbox"/> <i>Carabidae</i> <input type="checkbox"/> <i>Cerambycidae</i> <input type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilocorus orbus</i> <input type="checkbox"/> <i>Coccinella sp.</i> <input type="checkbox"/> <i>Harmonia axyridis</i> <input checked="" type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elaterridae (Click Beetles)</i> <input type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input type="checkbox"/> <i>D. undecimpunctata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymia laticollis</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Haliplidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input checked="" type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops sp.</i> <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosigona flavipenne</i> <input type="checkbox"/> <i>Macrosigona sp.</i> <input type="checkbox"/> Scarabaeidae <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracotopa sp.</i> <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> <i>Tenebrionidae</i> <input type="checkbox"/> <i>Eleodes sp.</i> <input type="checkbox"/> Hemiptera: <input type="checkbox"/> <i>Lygaeidae</i> <input type="checkbox"/> <i>Leptus intermedius</i> <input type="checkbox"/> <i>Lygaeus kalmii</i> <input type="checkbox"/> <i>Pyrrhocoridae</i> <input type="checkbox"/> <i>Largus cinctus</i>
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Bird Species Observed: TUVU HOFI LESA WFIB CAKI
GORA BABL BNST KILL BLPH
EUST RTAA RWBL WIPH
EUCO ROP1 MU NOMO

Other Wildlife Species Observed:
JTA

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: SOUTH Acreage Surveyed: ~40 Biologist(s): M. DICUS
 Date: 09-08-12 Time (Start/End): 1000/1400 Cloud Cover (Start/End): 5% / 10% Temperature in °F (Start/End): 79 / 100

Arthropod Species Observed: Wind Speed in Beaufort (Start/End): 0-3 / 5-10 DSF Detected (Circle): Y N

<p>Diptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>R. terminatus abdominalis</i> <input checked="" type="checkbox"/> <i>Apocera chrysolasia</i> <input checked="" type="checkbox"/> <i>Apocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input checked="" type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Efferia alabarbaris</i> <input checked="" type="checkbox"/> <i>Mallotropa faurix</i> <input checked="" type="checkbox"/> <i>Proctocanthus</i> sp. <input checked="" type="checkbox"/> <i>Saropogon luteus</i> <input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i> <input checked="" type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Galibaeis pacificus</i> <input checked="" type="checkbox"/> <i>Bombyliidae</i> <input checked="" type="checkbox"/> <i>Exoprosopa</i> sp. <input checked="" type="checkbox"/> <i>Ligya gazophylax</i> <input checked="" type="checkbox"/> <i>Mythicomyla</i> sp. <input checked="" type="checkbox"/> <i>Poecilanthrax arethusa</i> <input checked="" type="checkbox"/> <i>Poecilanthrax</i> sp. <input checked="" type="checkbox"/> <i>Toxophora pellicuda</i> <input checked="" type="checkbox"/> <i>Villa atrata</i> <input checked="" type="checkbox"/> <i>Zenox simpson</i> <input checked="" type="checkbox"/> <i>Calliphora</i> sp. <input checked="" type="checkbox"/> <i>Eucalliphora lilaea</i> <input checked="" type="checkbox"/> <i>Phaenicia cuprina</i> <input checked="" type="checkbox"/> <i>Phaenicia sericata</i> <input checked="" type="checkbox"/> <i>Conopidae</i> sp. <input checked="" type="checkbox"/> <i>Physocephala texana</i> <input checked="" type="checkbox"/> <i>Culicidae - mosquitoes</i> <input checked="" type="checkbox"/> <i>Cuterebridae</i> <input checked="" type="checkbox"/> <i>Condylostylus</i> sp. <input checked="" type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input checked="" type="checkbox"/> <i>Sarcophaga</i> sp. <input checked="" type="checkbox"/> <i>Stratiomyidae</i> <input checked="" type="checkbox"/> <i>Syrphidae</i> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input checked="" type="checkbox"/> <i>Eristalis tenax</i> <input checked="" type="checkbox"/> <i>Metasyrphus americanus</i> <input checked="" type="checkbox"/> <i>Volucella mexicana</i> <input checked="" type="checkbox"/> <i>Tabanidae</i> 	<p><input checked="" type="checkbox"/> <i>Polistes fuscatus aurifer</i></p> <p><input checked="" type="checkbox"/> <i>Vespula pennsylvanica</i></p> <p>Coleoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Murgantilla histrionica</i> <input checked="" type="checkbox"/> <i>Podisus</i> sp. <input checked="" type="checkbox"/> <i>Thyanta pallidivirens</i> <input checked="" type="checkbox"/> <i>Trichoptera aurora</i> <input checked="" type="checkbox"/> <i>Reduviidae</i> <input checked="" type="checkbox"/> <i>Adalia bipunctata</i> <input checked="" type="checkbox"/> <i>Chilocorus orbis</i> <input checked="" type="checkbox"/> <i>Coccinella</i> sp. <input checked="" type="checkbox"/> <i>Hippodamia convergens</i> <input checked="" type="checkbox"/> <i>Olla v-nigrum</i> <input checked="" type="checkbox"/> <i>Elateridae (Click Beetles)</i> <input checked="" type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input checked="" type="checkbox"/> <i>P. undecimpunctata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input checked="" type="checkbox"/> <i>Tachymela laticollis</i> <input checked="" type="checkbox"/> <i>Curculionidae</i> <input checked="" type="checkbox"/> <i>Halipitidae</i> <input checked="" type="checkbox"/> <i>Hydrophyllidae</i> <input checked="" type="checkbox"/> <i>Meloidae</i> <input checked="" type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input checked="" type="checkbox"/> <i>Melyridae</i> <input checked="" type="checkbox"/> <i>Collops</i> sp. <input checked="" type="checkbox"/> <i>Rhipiphoridae</i> <input checked="" type="checkbox"/> <i>Macrosaigona flavipenne</i> <input checked="" type="checkbox"/> <i>Macrosaigona</i> sp. <input checked="" type="checkbox"/> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input checked="" type="checkbox"/> <i>Paracotalpa</i> sp. <input checked="" type="checkbox"/> <i>Staphylinus maxillosus</i> <input checked="" type="checkbox"/> <i>Tenebrionidae</i> <input checked="" type="checkbox"/> <i>Eleodes</i> sp. <p>Hemiptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Lygaeidae</i> <input checked="" type="checkbox"/> <i>Lygaeus kalmii</i> <input checked="" type="checkbox"/> <i>Pyrrhocoridae</i> <input checked="" type="checkbox"/> <i>Largus cinctus</i> 	<p><input checked="" type="checkbox"/> <i>Pentatomidae</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> <u>SAVI</u> <input checked="" type="checkbox"/> <i>Murgantilla histrionica</i> <input checked="" type="checkbox"/> <i>Podisus</i> sp. <input checked="" type="checkbox"/> <i>Thyanta pallidivirens</i> <input checked="" type="checkbox"/> <i>Trichoptera aurora</i> <input checked="" type="checkbox"/> <i>Reduviidae</i> <input checked="" type="checkbox"/> <i>Adalia bipunctata</i> <input checked="" type="checkbox"/> <i>Chilocorus orbis</i> <input checked="" type="checkbox"/> <i>Coccinella</i> sp. <input checked="" type="checkbox"/> <i>Hippodamia convergens</i> <input checked="" type="checkbox"/> <i>Olla v-nigrum</i> <input checked="" type="checkbox"/> <i>Elateridae (Click Beetles)</i> <input checked="" type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input checked="" type="checkbox"/> <i>P. undecimpunctata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input checked="" type="checkbox"/> <i>Tachymela laticollis</i> <input checked="" type="checkbox"/> <i>Curculionidae</i> <input checked="" type="checkbox"/> <i>Halipitidae</i> <input checked="" type="checkbox"/> <i>Hydrophyllidae</i> <input checked="" type="checkbox"/> <i>Meloidae</i> <input checked="" type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input checked="" type="checkbox"/> <i>Melyridae</i> <input checked="" type="checkbox"/> <i>Collops</i> sp. <input checked="" type="checkbox"/> <i>Rhipiphoridae</i> <input checked="" type="checkbox"/> <i>Macrosaigona flavipenne</i> <input checked="" type="checkbox"/> <i>Macrosaigona</i> sp. <input checked="" type="checkbox"/> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input checked="" type="checkbox"/> <i>Paracotalpa</i> sp. <input checked="" type="checkbox"/> <i>Staphylinus maxillosus</i> <input checked="" type="checkbox"/> <i>Tenebrionidae</i> <input checked="" type="checkbox"/> <i>Eleodes</i> sp. <p>Hemiptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Lygaeidae</i> <input checked="" type="checkbox"/> <i>Lygaeus kalmii</i> <input checked="" type="checkbox"/> <i>Pyrrhocoridae</i> <input checked="" type="checkbox"/> <i>Largus cinctus</i>
<p>Neuroptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Chrysopidae</i> <input checked="" type="checkbox"/> <i>Chrysopa</i> sp. <input checked="" type="checkbox"/> <i>Myrmeleontidae</i> <input checked="" type="checkbox"/> <i>Brachynemurus</i> sp. <input checked="" type="checkbox"/> <i>Myrmeleon</i> sp. <input checked="" type="checkbox"/> <i>Raphididae (Snakeflies)</i> <p>Dermaptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input checked="" type="checkbox"/> <i>Disosteira pictipennis</i> <input checked="" type="checkbox"/> <i>Leprus intermedium</i> <input checked="" type="checkbox"/> <i>Melanoplus</i> sp. <input checked="" type="checkbox"/> <i>Schistocerca nitens</i> <input checked="" type="checkbox"/> <i>Schistocerca</i> sp. 	<p><input checked="" type="checkbox"/> <i>Polistes fuscatus aurifer</i></p> <p><input checked="" type="checkbox"/> <i>Vespula pennsylvanica</i></p> <p>Homoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Aphis multicolor</i> <input checked="" type="checkbox"/> <i>Anax junius</i> <input checked="" type="checkbox"/> <i>Erythemis collocata</i> <input checked="" type="checkbox"/> <i>Libellula croceipennis</i> <input checked="" type="checkbox"/> <i>Libellula saturata</i> <input checked="" type="checkbox"/> <i>Noctuidae</i> <input checked="" type="checkbox"/> <i>Pantala flavescens</i> <input checked="" type="checkbox"/> <i>Perithemis intensa</i> <input checked="" type="checkbox"/> <i>Progomphus borealis</i> <input checked="" type="checkbox"/> <i>Sympetrum corruptum</i> <input checked="" type="checkbox"/> <i>Sympetrum illotum</i> <input checked="" type="checkbox"/> <i>Tramea lacerata</i> <input checked="" type="checkbox"/> <i>Tramea onusta</i> <input checked="" type="checkbox"/> <i>Argia</i> sp. <input checked="" type="checkbox"/> <i>Endallagma</i> sp. <input checked="" type="checkbox"/> <i>Telebasis salva</i> <p>Lepidoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Agalopedes campestris</i> <input checked="" type="checkbox"/> <i>Erynnis funeralis</i> <input checked="" type="checkbox"/> <i>Heliopterus erictorum</i> <input checked="" type="checkbox"/> <i>Hylephila phyleus</i> <input checked="" type="checkbox"/> <i>Lerodea eufela</i> <input checked="" type="checkbox"/> <i>Paratrytone melane</i> <input checked="" type="checkbox"/> <i>Polites sabuleti</i> <input checked="" type="checkbox"/> <i>Pyrgus albescens</i> <input checked="" type="checkbox"/> <i>Papilio cresphontes</i> <input checked="" type="checkbox"/> <i>Papilio rutulus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i> 	<p><input checked="" type="checkbox"/> <i>Pentatomidae</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> <u>SAVI</u> <input checked="" type="checkbox"/> <i>Murgantilla histrionica</i> <input checked="" type="checkbox"/> <i>Podisus</i> sp. <input checked="" type="checkbox"/> <i>Thyanta pallidivirens</i> <input checked="" type="checkbox"/> <i>Trichoptera aurora</i> <input checked="" type="checkbox"/> <i>Reduviidae</i> <input checked="" type="checkbox"/> <i>Adalia bipunctata</i> <input checked="" type="checkbox"/> <i>Chilocorus orbis</i> <input checked="" type="checkbox"/> <i>Coccinella</i> sp. <input checked="" type="checkbox"/> <i>Hippodamia convergens</i> <input checked="" type="checkbox"/> <i>Olla v-nigrum</i> <input checked="" type="checkbox"/> <i>Elateridae (Click Beetles)</i> <input checked="" type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input checked="" type="checkbox"/> <i>P. undecimpunctata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input checked="" type="checkbox"/> <i>Tachymela laticollis</i> <input checked="" type="checkbox"/> <i>Curculionidae</i> <input checked="" type="checkbox"/> <i>Halipitidae</i> <input checked="" type="checkbox"/> <i>Hydrophyllidae</i> <input checked="" type="checkbox"/> <i>Meloidae</i> <input checked="" type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input checked="" type="checkbox"/> <i>Melyridae</i> <input checked="" type="checkbox"/> <i>Collops</i> sp. <input checked="" type="checkbox"/> <i>Rhipiphoridae</i> <input checked="" type="checkbox"/> <i>Macrosaigona flavipenne</i> <input checked="" type="checkbox"/> <i>Macrosaigona</i> sp. <input checked="" type="checkbox"/> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input checked="" type="checkbox"/> <i>Paracotalpa</i> sp. <input checked="" type="checkbox"/> <i>Staphylinus maxillosus</i> <input checked="" type="checkbox"/> <i>Tenebrionidae</i> <input checked="" type="checkbox"/> <i>Eleodes</i> sp. <p>Hemiptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Lygaeidae</i> <input checked="" type="checkbox"/> <i>Lygaeus kalmii</i> <input checked="" type="checkbox"/> <i>Pyrrhocoridae</i> <input checked="" type="checkbox"/> <i>Largus cinctus</i>

Bird Species Observed: MODO SOSP COLB COAR COYK HOWL TUVU HOFL HOWL AMKE AMKE BLPH BLPH RTHA RTHA
SOSP COLB COAR COYK HOWL TUVU HOFL HOWL AMKE AMKE BLPH BLPH RTHA
ANTV COAR COYK HOWL TUVU HOFL HOWL AMKE AMKE BLPH BLPH RTHA
LEBO COYK COAR COYK HOWL TUVU HOFL HOWL AMKE AMKE BLPH BLPH RTHA

Other Wildlife Species Observed:
W. FENCE
VTA
CAWS
COTONTAIL

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: NORTHA Acreage Surveyed: 0.25 Biologist(s): M. D. CUS
 Date: 09-09-12 Time (Start/End): 11:00-11:40 Cloud Cover (Start/End): 100%/20% Temperature in °F (Start/End): 93/102
 Arthropod Species Observed: 0-4 / 8-14 DSF Detected (Circle): Y (N)

Diptera:	Wind Speed in Beaufort (Start/End):	Pentatomidae	Pteris rapae
<input type="checkbox"/> <i>Tabanus punctifer</i>	<u>Ichneumon sp.</u>	<input type="checkbox"/> <i>Chlorochroa ligata</i>	<input type="checkbox"/> <i>Trimerotropis californica</i>
<input type="checkbox"/> <i>Tachinidae</i>	<input checked="" type="checkbox"/> <i>Dasymyiella coccineohirta</i>	<input checked="" type="checkbox"/> <i>Chlorochroa whleri</i> / <u>SAV</u>	<input type="checkbox"/> <i>Pontia protodice</i>
<input type="checkbox"/> <i>Archytas apicifer</i>	<input type="checkbox"/> <i>Dasymyiella californica</i>	Coreoptera: <input type="checkbox"/> <i>Murgantia histrionica</i>	<input checked="" type="checkbox"/> <i>Brephidium exilis</i>
<input type="checkbox"/> <i>Gymnosoma fuliginosum</i>	<input type="checkbox"/> <i>Dasymyiella sackeni</i> (lg.)	<input type="checkbox"/> <i>Buprestidae</i>	<input type="checkbox"/> <i>Hemiaricus ceramurus</i>
<input type="checkbox"/> <i>Apiocera convergens</i>	<input type="checkbox"/> <i>Dasymyiella cyenemestra</i>	<input type="checkbox"/> <i>Carabidae</i>	<input type="checkbox"/> <i>Icaricia acmon</i>
<input type="checkbox"/> <i>Nemomydas pantherina</i>	<input type="checkbox"/> <i>Campsoneris toleca</i>	<input type="checkbox"/> <i>Cerambycidae</i>	<input type="checkbox"/> <i>Leptotes marina</i>
<input type="checkbox"/> <i>Asilidae</i>	<input type="checkbox"/> <i>Trielis alcione</i>	<input type="checkbox"/> <i>Coccinellidae</i>	<input checked="" type="checkbox"/> <i>Strymon melinus</i>
<input checked="" type="checkbox"/> <i>Effigia albarabaris</i>	<input type="checkbox"/> <i>Pomphiliidae</i>	<input type="checkbox"/> <i>Adalia bipunctata</i>	<input type="checkbox"/> <i>Apodemia mormo virgulti</i>
<input type="checkbox"/> <i>Mallotropa faurix</i>	<input type="checkbox"/> <i>Pegasis mildi</i>	<input type="checkbox"/> <i>Chilochorus orbis</i>	<input type="checkbox"/> <i>Agraulis vanillae</i>
<input type="checkbox"/> <i>Proctocanthus sp.</i>	<input type="checkbox"/> <i>Pegasis sp.</i>	<input type="checkbox"/> <i>Coccinella sp.</i>	<input type="checkbox"/> <i>Danaus gilippus</i>
<input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i>	<input type="checkbox"/> <i>Sphexidae</i>	<input type="checkbox"/> <i>Harmonia axyridis</i>	<input type="checkbox"/> <i>Damus plexippus</i>
<input type="checkbox"/> <i>Baetidae</i> (May Flies)	<input type="checkbox"/> <i>Ammophila alberti</i>	<input type="checkbox"/> <i>Hippodamia convergens</i>	<input type="checkbox"/> <i>Praon coenia</i>
<input type="checkbox"/> <i>Callibaetis pacificus</i>	<input type="checkbox"/> <i>Ammophila sp.</i>	<input type="checkbox"/> <i>Olla v-nigrum</i>	<input type="checkbox"/> <i>Vanessa annabella</i>
<input type="checkbox"/> <i>Bombyliidae</i>	<input type="checkbox"/> <i>Bembix americana</i>	<input type="checkbox"/> <i>Elatereidae</i> (Click Beetles)	<input checked="" type="checkbox"/> <i>Vanessa atalanta</i>
<input type="checkbox"/> <i>Exoprosopa sp.</i>	<input checked="" type="checkbox"/> <i>Bembix comata</i>	<input type="checkbox"/> <i>Chrysomelidae</i>	<input type="checkbox"/> <i>Vanessa cardui</i>
<input type="checkbox"/> <i>Ligyra gazophylax</i>	<input type="checkbox"/> <i>Bembix melanapxia</i>	<input type="checkbox"/> <i>Homaldisca sp.</i>	<input type="checkbox"/> <i>Vanessa virginiensis</i>
<input type="checkbox"/> <i>Mythicomyia sp.</i>	<input checked="" type="checkbox"/> <i>Bicyrtes sp.</i>	<input type="checkbox"/> <i>D. undecimpunctata</i>	<input type="checkbox"/> <i>Arctidae</i>
<input checked="" type="checkbox"/> <i>Poecilanthrax arethusa</i>	<input type="checkbox"/> <i>Cerceris sp.</i>	<input type="checkbox"/> <i>Lema trilineata</i>	<input type="checkbox"/> <i>Noctuidae</i>
<input type="checkbox"/> <i>Poecilanthrax sp.</i>	<input type="checkbox"/> <i>Chalybion californicus</i>	<input type="checkbox"/> <i>Tachymeria lanticolis</i>	<input type="checkbox"/> <i>Autographa californica</i>
<input checked="" type="checkbox"/> <i>Villa atrata</i>	<input type="checkbox"/> <i>Chlorion aerarium</i>	<input type="checkbox"/> <i>Curculionidae</i>	<input type="checkbox"/> <i>Schinia</i>
<input type="checkbox"/> <i>Zenax simpson</i>	<input type="checkbox"/> <i>Eucerceris insignis</i>	<input type="checkbox"/> <i>Haliplidae</i>	<input checked="" type="checkbox"/> <i>Geometridae</i>
<input type="checkbox"/> <i>Calliphora sp.</i>	<input type="checkbox"/> <i>Hoplosides diversus</i>	<input type="checkbox"/> <i>Hydrophilidae</i>	<input type="checkbox"/> <i>Pyraltidae</i>
<input checked="" type="checkbox"/> <i>Eucalliphora lilaeca</i>	<input type="checkbox"/> <i>Hoplosides sp.</i>	<input checked="" type="checkbox"/> <i>Hydrophilidae</i>	<input type="checkbox"/> <i>Paranthrene robiniae</i>
<input type="checkbox"/> <i>Phaenicia cuprina</i>	<input type="checkbox"/> <i>Isodonti aelegans</i>	<input type="checkbox"/> <i>Meloidae</i>	<input type="checkbox"/> <i>Hyles lineata</i>
<input type="checkbox"/> <i>Phaenicia sericata</i>	<input checked="" type="checkbox"/> <i>Microbembix californicus</i>	<input type="checkbox"/> <i>Nemognatha lurida apicalis</i>	<input type="checkbox"/> <i>Manduca sexta</i>
<input type="checkbox"/> <i>Conopidae sp.</i>	<input type="checkbox"/> <i>Philanthus ventralis</i>	<input type="checkbox"/> <i>Melyridae</i>	Arachnida:
<input type="checkbox"/> <i>Physopcephala texana</i>	<input checked="" type="checkbox"/> <i>Philanthus multimaculata</i>	<input type="checkbox"/> <i>Collops sp.</i>	<input type="checkbox"/> <i>Araneidae</i>
<input type="checkbox"/> <i>Culicidae</i> - mosquitoes	<input checked="" type="checkbox"/> <i>Podolonia sp.</i>	<input type="checkbox"/> <i>Rhipiphoridae</i>	<input type="checkbox"/> <i>Peucetia viridinis</i>
<input type="checkbox"/> <i>Cuterebridae</i>	<input checked="" type="checkbox"/> <i>Prionyx foxi</i>	<input type="checkbox"/> <i>Macrosiagon flavipennis</i>	<input checked="" type="checkbox"/> <i>Dipluridae</i>
<input type="checkbox"/> <i>Drosophilidae</i>	<input checked="" type="checkbox"/> <i>Prionyx sp.</i>	<input type="checkbox"/> <i>Scarabaeidae</i>	<input type="checkbox"/> <i>Leurotychus pacificus</i>
<input checked="" type="checkbox"/> <i>Musca domestica</i>	<input type="checkbox"/> <i>Sceliphron caementarium</i>	<input type="checkbox"/> <i>Cotinus mutibilis</i>	<input type="checkbox"/> <i>Larrodectus hesperus</i>
<input type="checkbox"/> <i>Sarcophagidae</i>	<input type="checkbox"/> <i>Sphex ichneumonius</i>	<input type="checkbox"/> <i>Paracotalpa sp.</i>	<input type="checkbox"/> <i>Salticidae</i>
<input type="checkbox"/> <i>Sarcophaga sp.</i>	<input type="checkbox"/> <i>Sitoides romicinctum</i>	<input type="checkbox"/> <i>Staphylinus maxillosus</i>	<input checked="" type="checkbox"/> <i>Phidippus formosus</i>
<input type="checkbox"/> <i>Stratiomyidae</i>	<input type="checkbox"/> <i>Tachytes elongatus</i>	<input type="checkbox"/> <i>Tenebrionidae</i>	<input type="checkbox"/> <i>Thomisidae</i>
<input type="checkbox"/> <i>Syrphidae</i>	<input type="checkbox"/> <i>Tiphidae</i>	<input checked="" type="checkbox"/> <i>Eleodes sp.</i>	<input type="checkbox"/> <i>Arachnida:</i>
<input type="checkbox"/> <i>Allograpta obliqua</i>	<input type="checkbox"/> <i>Vespidae</i> - unidentified	Hemiptera:	<input type="checkbox"/> <i>Araneidae</i>
<input type="checkbox"/> <i>Eristalis tenax</i>	<input type="checkbox"/> <i>Eumenes bollii</i>	<input type="checkbox"/> <i>Lygaeidae</i>	<input type="checkbox"/> <i>Peucetia viridinis</i>
<input type="checkbox"/> <i>Metasymphus americanus</i>	<input type="checkbox"/> <i>Eumenes crucifera</i>	<input type="checkbox"/> <i>Lygaeus kalmii</i>	<input checked="" type="checkbox"/> <i>U. HILARUS</i>
<input type="checkbox"/> <i>Vulcella mexicana</i>	<input type="checkbox"/> <i>Euodynerus annulata</i>	<input type="checkbox"/> <i>Pyrrhocoridae</i>	<input type="checkbox"/> <i>Thomisidae</i>
<input type="checkbox"/> <i>Tabanidae</i>	<input type="checkbox"/> <i>Polistes apachus</i>	<input type="checkbox"/> <i>Largus cinctus</i>	<input type="checkbox"/> <i>Thomisidae</i>
	<input type="checkbox"/> <i>Polistes dorsalis</i>		
	<input type="checkbox"/> <i>Polistes exclamans</i>		

Bird Species Observed:
AMKE CAKI GAG7 BRBL LESA
TUVV BASW BLPH RTHA RWBL
HOFI SOSP KILL EVST WF10
FEVG CQRA ONST Nomo MAL

Other Wildlife Species Observed:
UTA

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: SOUTH Acreage Surveyed: ~40 Biologist(s): M. DICKS
 Date: 09-11-12 Time (Start/End): 1000/1400 Cloud Cover (Start/End): 50%/50% Temperature in °F (Start/End): 80/85

Wind Speed in Beaufort (Start/End): 0-3/8-14 DSF Detected (Circle): Y N

<p>Diptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>R. terminatus abdominalis</i> <input checked="" type="checkbox"/> <i>Apocera chrysolasia</i> <input checked="" type="checkbox"/> <i>Gymnosoma convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input checked="" type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Efferia albarbaris</i> <input checked="" type="checkbox"/> <i>Mallifora faurix</i> <input checked="" type="checkbox"/> <i>Proctocanthus sp.</i> <input checked="" type="checkbox"/> <i>Saropogon luteus</i> <input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i> <input checked="" type="checkbox"/> <i>Bactidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Gallibaetis pacificus</i> <input checked="" type="checkbox"/> <i>Bombyliidae</i> <input checked="" type="checkbox"/> <i>Exoprosopa sp.</i> <input checked="" type="checkbox"/> <i>Ligyra gazophylax</i> <input checked="" type="checkbox"/> <i>Myhricomyia sp.</i> <input checked="" type="checkbox"/> <i>Poecilanthrax arethusa</i> <input checked="" type="checkbox"/> <i>Poecilanthrax sp.</i> <input checked="" type="checkbox"/> <i>Toxophora pellicida</i> <input checked="" type="checkbox"/> <i>Villa atrata</i> <input checked="" type="checkbox"/> <i>Zenopsis simpson</i> <input checked="" type="checkbox"/> <i>Calliphora sp.</i> <input checked="" type="checkbox"/> <i>Phacalliphora lilaea</i> <input checked="" type="checkbox"/> <i>Phegocentrus cuprina</i> <input checked="" type="checkbox"/> <i>Phaenicia sericata</i> <input checked="" type="checkbox"/> <i>Conopidae sp.</i> <input checked="" type="checkbox"/> <i>Physoccephala texana</i> <input checked="" type="checkbox"/> <i>Culicidae - mosquitoes</i> <input checked="" type="checkbox"/> <i>Cuterebridae</i> <input checked="" type="checkbox"/> <i>Candylossylus sp.</i> <input checked="" type="checkbox"/> <i>Prosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input checked="" type="checkbox"/> <i>Sarcophaga sp.</i> <input checked="" type="checkbox"/> <i>Stratiomyidae</i> <input checked="" type="checkbox"/> <i>Syrphidae</i> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input checked="" type="checkbox"/> <i>Eristalis tenax</i> <input checked="" type="checkbox"/> <i>Metasyrphus americanus</i> <input checked="" type="checkbox"/> <i>Youweia mexicana</i> <input checked="" type="checkbox"/> <i>Tabanidae</i> 	<p><input checked="" type="checkbox"/> <i>Polistes fuscatus aurifer</i></p> <p><i>Ichneumon sp.</i></p> <p><i>Dasyuettilla coccineohirta</i></p> <p><i>Dasyuettilla californica</i></p> <p><i>Dasyuettilla sackeni (lg.)</i></p> <p><i>Dasyuettilla cytemestra</i></p> <p><i>Campsomermis tolteca</i></p> <p><i>Trieis alcyone</i></p> <p><i>Pompilidae</i></p> <p><i>Pepsis mildi</i></p> <p><i>Pepsis sp.</i></p> <p><input checked="" type="checkbox"/> <i>Sphécidae</i></p> <p><i>Ammophila alberti</i></p> <p><i>Ammophila sp.</i></p> <p><input checked="" type="checkbox"/> <i>Bembix americana</i></p> <p><input checked="" type="checkbox"/> <i>Bembix comata</i></p> <p><i>Bembix melanapsis</i></p> <p><i>Bicytes sp.</i></p> <p><i>Cerceris sp.</i></p> <p><i>Chalybion californicus</i></p> <p><i>Chlorion aerarium</i></p> <p><i>Eucerceris insignis</i></p> <p><i>Hoplisoidea diversus</i></p> <p><i>Hoplisoidea sp.</i></p> <p><i>Isodonti aelegans</i></p> <p><input checked="" type="checkbox"/> <i>Microbembix californicus</i></p> <p><input checked="" type="checkbox"/> <i>Philanthus multimaculata</i></p> <p><input checked="" type="checkbox"/> <i>Philanthus ventralis</i></p> <p><i>Podalonia sp.</i></p> <p><input checked="" type="checkbox"/> <i>Prionyx foxi</i></p> <p><i>Prionyx sp.</i></p> <p><i>Sceliphron caementarium</i></p> <p><i>Sphex ichneumonius</i></p> <p><i>Stizoides remicinctum</i></p> <p><i>Tachytes elongatus</i></p> <p><i>Tiphidae</i></p> <p><i>Vespidae - unidentified</i></p> <p><i>Eumenes bollii</i></p> <p><i>Eumenes crucifera</i></p> <p><i>Eudomyrus annulata</i></p> <p><i>Polistes apachus</i></p> <p><input checked="" type="checkbox"/> <i>Polistes dorsalis</i></p> <p><i>Polistes exclamans</i></p>	<p>Hymenoptera:</p> <p><i>Formicidae</i></p> <p><i>Iridomyrmex humilis</i></p> <p><i>Formica sp.</i></p> <p><i>Liometopum occidentale</i></p> <p><i>Messor pergandei</i></p> <p><input checked="" type="checkbox"/> <i>Pogonomyrmex californica</i></p> <p><i>Solenopsis sp.</i></p> <p>Bees</p> <p><input checked="" type="checkbox"/> <i>Anthophoridae</i></p> <p><i>Anthophora urbana</i></p> <p><input checked="" type="checkbox"/> <i>Melissodes sp.</i></p> <p><input checked="" type="checkbox"/> <i>Xylocopa varipuncta</i></p> <p><input checked="" type="checkbox"/> <i>Apis mellifera</i></p> <p><i>Bombus californicus</i></p> <p><i>Bombus cratchii</i></p> <p><i>Bombus sonor</i></p> <p><i>Bombus vosnesenskii</i></p> <p><i>Halictidae</i></p> <p><input checked="" type="checkbox"/> <i>Agapostemon sp.</i></p> <p><input checked="" type="checkbox"/> <i>Nomia nevadensis</i></p> <p><i>Megachilidae</i></p> <p><i>Dianthidium sp.</i></p> <p><input checked="" type="checkbox"/> <i>Megachile sp.</i></p> <p><i>Perdita sp.</i></p> <p>Wasps</p> <p><i>Chalcididae</i></p> <p><i>Chrysididae</i></p> <p><i>Chrysura pacifica</i></p> <p><input checked="" type="checkbox"/> <i>Parnopsis edwardsii</i></p> <p><i>Ichneumonidae</i></p>	<p>Pentatomidae</p> <p><i>Chlorochroa ligata</i></p> <p><input checked="" type="checkbox"/> <i>Chlorochroa uhleri / SAYI</i></p> <p><i>Murgantia histrionica</i></p> <p><i>Podisus sp.</i></p> <p><i>Thyanta pallidivirens</i></p> <p><i>Trichopleura aurora</i></p> <p><i>Reduviidae</i></p> <p><i>Apiomeris crassipes</i></p> <p><i>Rhynocoris ventralis</i></p> <p><i>Zelus tetracanthus</i></p> <p>Homoptera:</p> <p><i>Aphididae</i></p> <p><input checked="" type="checkbox"/> <i>Cercopidae</i></p> <p><i>Cicadellidae</i></p> <p><i>Homaldisca sp.</i></p> <p><i>Cicadidae</i></p> <p><input checked="" type="checkbox"/> <i>Dactylopiidae (Coccinea)</i></p> <p><i>Dactylopius sp.</i></p> <p><i>Membracidae</i></p> <p><i>Antianthe expansa</i></p> <p><i>Psyllidae</i></p> <p><input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i></p> <p>Neuroptera:</p> <p><i>Chrysopidae</i></p> <p><i>Chrysopa sp.</i></p> <p><i>Myrmeleontidae</i></p> <p><i>Trachyneururus sp.</i></p> <p><input checked="" type="checkbox"/> <i>Myrmeleon sp.</i></p> <p><i>Raphidiidae (Snakeflies)</i></p> <p>Dermaptera:</p> <p><i>Forficula auricularia</i></p> <p>Orthoptera:</p> <p><i>Acrididae</i></p> <p><i>Dissostera pictipennis</i></p> <p><i>Leprurus intermedius</i></p> <p><i>Melanoplus sp.</i></p> <p><i>Schistocerca nitens</i></p> <p><i>Schistocerca sp.</i></p>	<p><i>Trimerotropis californica</i></p> <p><i>Trimerotropis pallidipennis</i></p> <p><i>Gryllus sp.</i></p> <p><i>Oecanthus fultoni</i></p> <p><i>Tettigoniidae</i></p> <p><i>Antianthe expansa</i></p> <p><i>Scudderella mexicana</i></p> <p><input checked="" type="checkbox"/> <i>Strymon melinus</i></p> <p><i>Senopie inachus sp.</i></p> <p><i>Iris oratoria</i></p> <p><i>Stagmomantis californica</i></p> <p><i>Danaus gilippus</i></p> <p><i>Damus plexippus</i></p> <p><i>Precis coenia</i></p> <p><i>Vanessa annabella</i></p> <p><i>Vanessa atalanta</i></p> <p><input checked="" type="checkbox"/> <i>Vanessa cardui</i></p> <p><i>Vanessa virginiensis</i></p> <p><i>Arctiidae</i></p> <p><i>Noctuidae</i></p> <p><i>Autographa californica</i></p> <p><i>Schinia</i></p> <p><i>Geometridae</i></p> <p><input checked="" type="checkbox"/> <i>Pyralidae</i></p> <p><i>Paranthrene robiniae</i></p> <p><i>Hyles lineata</i></p> <p><i>Manduca sexta</i></p> <p>Arachnida:</p> <p><i>Araneidae</i></p> <p><i>Peucea viridus</i></p> <p><i>Dipluridae</i></p> <p><i>Leuroptichus pacificus</i></p> <p><i>Larodectus hesperus</i></p> <p><i>Salticidae</i></p> <p><input checked="" type="checkbox"/> <i>Phidippus formosus</i></p> <p><input checked="" type="checkbox"/> <i>Thomisidae</i></p> <p><i>Thomisidae</i></p> <p><input checked="" type="checkbox"/> <i>L. HILANS</i></p>
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Bird Species Observed:

BLPH CORA COYE FOFI GRHV RTHA NOMO SAPH SOSP BASW EVST LOSH ROPI WKL

Other Wildlife Species Observed:

UTA
W. FENCE
COTTONTAIL

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: NORRA Acreage Surveyed: 25 Biologist(s): A. DICUS
 Date: 09-13-12 Time (Start/End): 1105/1400 Cloud Cover (Start/End): 0/0 Temperature in °F (Start/End): 92/101
 Arthropod Species Observed: 1-5/13-7 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>R. terminatus chrysolasia</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input type="checkbox"/> <i>Apiocera pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Efferia alabarbaris</i> <input type="checkbox"/> <i>Malloflora fauix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input type="checkbox"/> <i>Sarcophaga lateris</i> <input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input type="checkbox"/> <i>Gallibaetis pacificus</i> <input checked="" type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Lygria gazophylax</i> <input type="checkbox"/> <i>Mythomyia sp.</i> <input type="checkbox"/> <i>Pocillanthrax arethusa</i> <input type="checkbox"/> <i>Pocillanthrax sp.</i> <input checked="" type="checkbox"/> <i>Toxophora pellicuda</i> <input type="checkbox"/> <i>Villa arata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physocephala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input type="checkbox"/> <i>Condylostylus sp.</i> <input type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyphus americanus</i> <input type="checkbox"/> <i>Yohwechia mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichneumon sp.</i></p> <p><i>Dasyneura coccineohirta</i></p> <p><i>Dasyneura californica</i></p> <p><i>Dasyneura sackeni</i> (lg.)</p> <p><i>Dasyneura clytemnestra</i></p> <p><i>Camponeris tolteca</i></p> <p><i>Trelis alcione</i></p> <p><i>Pompilidae</i></p> <p><i>Pegaspis mildoi</i></p> <p><i>Sphecidae</i></p> <p><i>Ammophila alberti</i></p> <p><i>Ammophila sp.</i></p> <p><i>Bembix americana</i></p> <p><input checked="" type="checkbox"/> <i>Bembix comata</i></p> <p><i>Bembix melanopsis</i></p> <p><i>Bicyrtis sp.</i></p> <p><i>Cerceris sp.</i></p> <p><i>Chalybion californicus</i></p> <p><i>Chlorion aerarium</i></p> <p><i>Eucerceris insignis</i></p> <p><i>Hoplisoides diversus</i></p> <p><i>Hoplisoides sp.</i></p> <p><i>Isodonti aelegans</i></p> <p><i>Microbembix californicus</i></p> <p><input checked="" type="checkbox"/> <i>Philanthus multimaculata</i></p> <p><i>Philanthus ventralis</i></p> <p><i>Psoklania sp.</i></p> <p><i>Prionyx foxi</i></p> <p><input checked="" type="checkbox"/> <i>Prionyx sp.</i></p> <p><i>Sceliphron caementarium</i></p> <p><i>Sphex ichneumonius</i></p> <p><i>Sizioides remicinctum</i></p> <p><i>Tachytes elongatus</i></p> <p><i>Tiphidae</i></p> <p><i>Vespidae - unidentified</i></p> <p><i>Eumenes bollii</i></p> <p><i>Eumenes crucifera</i></p> <p><i>Euclyptus annulata</i></p> <p><i>Polistes apachus</i></p> <p><input checked="" type="checkbox"/> <i>Polistes dorsalis</i></p> <p><i>Polistes exclamans</i></p>	<p><i>Polistes fuscatus aurifer</i></p> <p><i>Yespula pennsylvanica</i></p> <p>COLEOPTERA:</p> <p><input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> (SAY)</p> <p><i>Murgantia histrionica</i></p> <p><i>Podisus sp.</i></p> <p><i>Thyanta pallidovirens</i></p> <p><i>Trichoptera aurora</i></p> <p><i>Reduviidae</i></p> <p><i>Apiomeris crassipes</i></p> <p><i>Rhynocoris ventralis</i></p> <p><i>Zelus tetracanthus</i></p> <p>HOMOPTERA:</p> <p><i>Aphididae</i></p> <p><i>Cercopidae</i></p> <p><i>Cicadellidae</i></p> <p><i>Homaldisa sp.</i></p> <p><i>Cicadidae</i></p> <p><input checked="" type="checkbox"/> <i>Libellula saturata</i></p> <p><i>Dactylopiidae (Cochineal)</i></p> <p><i>Dactylopius sp.</i></p> <p><i>Membracidae</i></p> <p><i>Antianthe expansa</i></p> <p><i>Psyllidae</i></p> <p><input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i></p> <p>NEUROPTERA:</p> <p><i>Chrysopidae</i></p> <p><i>Chrysopa sp.</i></p> <p><i>Myrmeleontidae</i></p> <p><input checked="" type="checkbox"/> <i>Brachyneurum sp.</i></p> <p><i>Myrmeleon sp.</i></p> <p><i>Raphidiidae (Snakeflies)</i></p> <p>DERMAPTERA:</p> <p><i>Forficula auricularia</i></p> <p>ORTHOPTERA:</p> <p><input checked="" type="checkbox"/> <i>Acrididae</i></p> <p><i>Dissosteira pictipennis</i></p> <p><i>Lepurus intermedius</i></p> <p><i>Melanoplus sp.</i></p> <p><i>Schistocerca nitens</i></p> <p><i>Schistocerca sp.</i></p>	<p><i>Pentatomidae</i></p> <p><i>Chlorochroa ligata</i></p> <p><i>Chlorochroa uhleri</i> (SAY)</p> <p><i>Murgantia histrionica</i></p> <p><i>Podisus sp.</i></p> <p><i>Thyanta pallidovirens</i></p> <p><i>Trichoptera aurora</i></p> <p><i>Reduviidae</i></p> <p><i>Apiomeris crassipes</i></p> <p><i>Rhynocoris ventralis</i></p> <p><i>Zelus tetracanthus</i></p> <p>ODONATA:</p> <p><i>Aeshna multicolor</i></p> <p><i>Anax junius</i></p> <p><i>Erythemis collocata</i></p> <p><i>Libellula croceipennis</i></p> <p><input checked="" type="checkbox"/> <i>Libellula saturata</i></p> <p><i>Noctuidae</i></p> <p><i>Pachyplax longipennis</i></p> <p><i>Pantala flavescens</i></p> <p><i>Perithemis intensa</i></p> <p><i>Progomphus borealis</i></p> <p><i>Sympetrum corruptum</i></p> <p><i>Sympetrum illotum</i></p> <p><i>Tramea lacerata</i></p> <p><i>Tramea onusta</i></p> <p><i>Argia sp.</i></p> <p><input checked="" type="checkbox"/> <i>Enallagma sp.</i></p> <p><i>Telebasis salva</i></p> <p>LEPIDOPTERA:</p> <p><i>Atalopodes campestris</i></p> <p><i>Erynnis funerals</i></p> <p><i>Heliopterus erictorum</i></p> <p><input checked="" type="checkbox"/> <i>Hylephila phyleus</i></p> <p><input checked="" type="checkbox"/> <i>Lerodea eufala</i></p> <p><i>Paratrytone melane</i></p> <p><i>Polites sabuleti</i></p> <p><i>Pyrgus albescens</i></p> <p><i>Papilio cressphonies</i></p> <p><i>Papilio rutilius</i></p> <p><input checked="" type="checkbox"/> <i>Colias eurytheme</i></p>	<p><i>Pteris rapae</i></p> <p><input checked="" type="checkbox"/> <i>Pontia protodice</i></p> <p><input checked="" type="checkbox"/> <i>Brephidium exilis</i></p> <p><i>Hemiarthus ceramius</i></p> <p><i>Icaricia acmon</i></p> <p><input checked="" type="checkbox"/> <i>Leptotes marina</i></p> <p><i>Strymon melinus</i></p> <p><i>Apodemia mormo virgulti</i></p> <p><i>Agraulis vanillae</i></p> <p><i>Danaus gilippus</i></p> <p><i>Danus plexippus</i></p> <p><i>Precis coenia</i></p> <p><i>Vanessa annabella</i></p> <p><input checked="" type="checkbox"/> <i>Vanessa atalanta</i></p> <p><input checked="" type="checkbox"/> <i>Vanessa cardui</i></p> <p><i>Vanessa virginiensis</i></p> <p><i>Arctiidae</i></p> <p><i>Noctuidae</i></p> <p><i>Autographa californica</i></p> <p><i>Schinia</i></p> <p><input checked="" type="checkbox"/> <i>Geometridae</i></p> <p><input checked="" type="checkbox"/> <i>Pyralidae</i></p> <p><i>Paranthrene robiniae</i></p> <p><i>Hyles lineata</i></p> <p><i>Manduca sexta</i></p> <p>ARACHNIDA:</p> <p><i>Araneidae</i></p> <p><i>Paucita viridins</i></p> <p><input checked="" type="checkbox"/> <i>Dipluridae</i></p> <p><i>Leurotychus pacificus</i></p> <p><i>Katrodectus hesperus</i></p> <p><input checked="" type="checkbox"/> <i>Salticidae</i></p> <p><input checked="" type="checkbox"/> <i>Phidippus formosus</i></p> <p><input checked="" type="checkbox"/> <i>Thomisidae</i></p>
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Bird Species Observed:

<u>BLFH</u>	<u>HOPI</u>	<u>KUL</u>	<u>ORCO</u>	<u>LOMO</u>
<u>HOSP</u>	<u>OTHA</u>	<u>MAUL</u>	<u>TUVU</u>	<u>BBDO</u>
<u>CORA</u>	<u>BOBL</u>	<u>ROPI</u>	<u>LESA</u>	<u>AWBL</u>
<u>EVST</u>	<u>CAKI</u>	<u>GNST</u>	<u>LODO</u>	<u>AMCO</u>

Other Wildlife Species Observed:

VTA

GOPHER

W. FENCE

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: SOUTH Acreage Surveyed: 40 Biologist(s): M. DICKS
 Date: 09-15-12 Time (Start/End): 1000 / 1400 Cloud Cover (Start/End): 0 / 0 Temperature in °F (Start/End): 79 / 106

Arthropod Species Observed: Beaufort (Start/End): 0 / 2-6 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apocera chrysolata</i> <input type="checkbox"/> <i>Apocera convergens</i> <input type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input type="checkbox"/> <i>Efferia alababarbarris</i> <input type="checkbox"/> <i>Mallifora faurix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input type="checkbox"/> <i>Saropogon luteus</i> <input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> Beetidae (May Flies) <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> Bombyliidae <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligya gazophylax</i> <input type="checkbox"/> <i>Mythicomya sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input type="checkbox"/> <i>Toxophora pellicuda</i> <input type="checkbox"/> <i>Villa arata</i> <input type="checkbox"/> <i>Zenon simpson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> Conopidae sp. <input type="checkbox"/> <i>Physopcephala texana</i> <input type="checkbox"/> Culicidae - mosquitoes <input type="checkbox"/> Guterebridae <input checked="" type="checkbox"/> <i>Condylostylus sp.</i> <input type="checkbox"/> Drosophilidae <input checked="" type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> Sarcophagidae <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> Stratiomyidae <input type="checkbox"/> Syrphidae <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> Tabanidae 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon sp.</i> <input type="checkbox"/> <i>Dasymyllia coccineohirta</i> <input type="checkbox"/> <i>Dasymyllia californica</i> <input type="checkbox"/> Colletes: <input type="checkbox"/> Buprestidae <input type="checkbox"/> Carabidae <input type="checkbox"/> Cerambycidae <input type="checkbox"/> Coccinellidae <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilochorus orbis</i> <input type="checkbox"/> <i>Coccinella sp.</i> <input type="checkbox"/> <i>Harmonia axyridis</i> <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> Elateridae (Click Beetles) <input type="checkbox"/> Chrysomelidae <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input type="checkbox"/> <i>D. undecimpunctata</i> <input type="checkbox"/> <i>Lema trilineata</i> <input checked="" type="checkbox"/> Dactylopiidae (Coccineal) <input type="checkbox"/> <i>Pachylopius sp.</i> <input checked="" type="checkbox"/> Curculionidae <input type="checkbox"/> Halipidae <input type="checkbox"/> Hydrophyllidae <input type="checkbox"/> Meloidae <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> Melyridae <input type="checkbox"/> <i>Collops sp.</i> <input type="checkbox"/> Rhipiphoridae <input type="checkbox"/> <i>Macrosaigon flavipenne</i> <input type="checkbox"/> <i>Macrosaigon sp.</i> <input type="checkbox"/> Scarabaeidae <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracotalpa sp.</i> <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> Tenebrionidae <input checked="" type="checkbox"/> <i>Eleodes sp.</i> <input type="checkbox"/> Hemiptera: <input type="checkbox"/> Lygaeidae <input type="checkbox"/> <i>Lygaeus kalmii</i> <input type="checkbox"/> Pyrrhocoridae <input type="checkbox"/> <i>Largus cinctus</i> 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Pentatomidae <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> / <u>SAVI</u> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Thyanta pallidovirens</i> <input checked="" type="checkbox"/> <i>Trichocheila aurora</i> <input type="checkbox"/> Reduviidae <input checked="" type="checkbox"/> <i>Apicomeris crassipes</i> <input checked="" type="checkbox"/> <i>Rhyocoris ventralis</i> <input type="checkbox"/> <i>Zelus tetracanthus</i> <input type="checkbox"/> Homoptera: <input checked="" type="checkbox"/> Aphididae <input type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula saturata</i> <input type="checkbox"/> <i>Pachyplax longipennis</i> <input type="checkbox"/> <i>Pantala flavescens</i> <input type="checkbox"/> <i>Perithemis intensa</i> <input checked="" type="checkbox"/> Pyralidae <input type="checkbox"/> <i>Progomphus borealis</i> <input checked="" type="checkbox"/> <i>Sympetrum corruptum</i> <input type="checkbox"/> <i>Sympetrum illotum</i> <input type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea onusta</i> <input checked="" type="checkbox"/> <i>Argia sp.</i> <input type="checkbox"/> <i>Enallagma sp.</i> <input type="checkbox"/> <i>Telebasis salva</i> <input type="checkbox"/> Lepidoptera: <input type="checkbox"/> <i>Atalopodes campestris</i> <input type="checkbox"/> <i>Erynnis funeralis</i> <input type="checkbox"/> <i>Heliopterus ericeorum</i> <input checked="" type="checkbox"/> <i>Hylephila phyleus</i> <input type="checkbox"/> <i>Lerodea eufala</i> <input type="checkbox"/> <i>Paratrytone melane</i> <input type="checkbox"/> <i>Polites sabuleti</i> <input type="checkbox"/> <i>Pyrgus albescens</i> <input type="checkbox"/> <i>Papilio cresphontes</i> <input type="checkbox"/> <i>Papilio rutulus</i> <input type="checkbox"/> <i>Colias eurytheme</i> 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Trimerotropis californica</i> <input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i> <input type="checkbox"/> <i>Gryllus sp.</i> <input type="checkbox"/> <i>Hemitaraxus ceramius</i> <input type="checkbox"/> <i>Leptotarsus acron</i> <input checked="" type="checkbox"/> <i>Lepidoptes marina</i> <input checked="" type="checkbox"/> <i>Strymon melinus</i> <input type="checkbox"/> <i>Apodemia normo virgulti</i> <input type="checkbox"/> <i>Agraulis vanillae</i> <input type="checkbox"/> <i>Danaus gilippus</i> <input type="checkbox"/> <i>Danus plexippus</i> <input type="checkbox"/> <i>Precis coenia</i> <input type="checkbox"/> <i>Vanessa annabella</i> <input checked="" type="checkbox"/> <i>Vanessa atalanta</i> <input type="checkbox"/> <i>Vanessa cardui</i> <input type="checkbox"/> <i>Vanessa virginiensis</i> <input type="checkbox"/> Arctiidae <input type="checkbox"/> Noctuidae <input type="checkbox"/> <i>Autographa californica</i> <input type="checkbox"/> <i>Sphinxia</i> <input checked="" type="checkbox"/> Geometridae <input checked="" type="checkbox"/> Pyralidae <input type="checkbox"/> <i>Paranthrene robiniae</i> <input type="checkbox"/> <i>Hyles lineata</i> <input type="checkbox"/> <i>Manduca sexta</i> <input type="checkbox"/> Arachnida: <input checked="" type="checkbox"/> Araneidae <input type="checkbox"/> <i>Peucetia viridians</i> <input checked="" type="checkbox"/> Dipteridae <input type="checkbox"/> <i>Leurotychus pacificus</i> <input type="checkbox"/> <i>Latrodectus hesperus</i> <input type="checkbox"/> Salticidae <input checked="" type="checkbox"/> <i>Phidippus formosus</i> <input type="checkbox"/> Thomisidae <input type="checkbox"/> Uta <input checked="" type="checkbox"/> A. MILVANS
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Bird Species Observed:

- SOSP COYE ANTU ROPI ANKK
- USPO HOFI HOWB KILL NOMO
- CAKI MODO RTHA HOSP
- COLA TUVU WFKI BLPH

Other Wildlife Species Observed:

- UTA
- COTTONTAIL
- CATS

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: GIRLE CITY Portion of Site Surveyed: NORTH Acreage Surveyed: 25 Biologist(s): M. Dicus
 Date: 09-16-12 Time (Start/End): 1105 / 1400 Cloud Cover (Start/End): 0 / 0 Temperature in °F (Start/End): 88 / 96

Arthropod Species Observed: 27 / 6-14 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolasia</i> <input type="checkbox"/> <i>Apiocera congens</i> <input type="checkbox"/> <i>Nemomydas pantherina</i> <input checked="" type="checkbox"/> <i>Asilidae</i> <input type="checkbox"/> <i>Efferia albarabaris</i> <input type="checkbox"/> <i>Mallotora faurix</i> <input type="checkbox"/> <i>Proctocanthus</i> sp. <input checked="" type="checkbox"/> <i>Saropogon luteus</i> <input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae</i> (May Flies) <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa</i> sp. <input type="checkbox"/> <i>Ligya gazophylax</i> <input type="checkbox"/> <i>Mythicomyia</i> sp. <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax</i> sp. <input type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Calliphora</i> sp. <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae</i> sp. <input type="checkbox"/> <i>Physcocephala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input checked="" type="checkbox"/> <i>Cuterebridae</i> <input checked="" type="checkbox"/> <i>Comptosia</i> sp. <input checked="" type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga</i> sp. <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasphyrus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichneumon</i> sp.</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Dasyuettilla coccineohirta</i> <input type="checkbox"/> <i>Dasyuettilla californica</i> <input type="checkbox"/> <i>Dasyuettilla sackeni</i> (lg.) <input type="checkbox"/> <i>Dasyuettilla clytemnestra</i> <input type="checkbox"/> <i>Campsomeris toleca</i> <input type="checkbox"/> <i>Trielis albione</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pepsis mildel</i> <input type="checkbox"/> <i>Pepsis</i> sp. <input checked="" type="checkbox"/> <i>Sphexidae</i> <input type="checkbox"/> <i>Ammophila alberti</i> <input type="checkbox"/> <i>Ammophila</i> sp. <input type="checkbox"/> <i>Bembix americana</i> <input checked="" type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanopsis</i> <input type="checkbox"/> <i>Bicytes</i> sp. <input type="checkbox"/> <i>Cerceris</i> sp. <input type="checkbox"/> <i>Chabylon californicus</i> <input checked="" type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisoides diversus</i> <input type="checkbox"/> <i>Hoplisoides</i> sp. <input type="checkbox"/> <i>Isodonti aelegans</i> <input type="checkbox"/> <i>Microbembix californicus</i> <input type="checkbox"/> <i>Philanthus multimauculata</i> <input type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Podalonia</i> sp. <input type="checkbox"/> <i>Prionyx foxi</i> <input checked="" type="checkbox"/> <i>Prionyx</i> sp. <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Sitzoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Faodynerus annulata</i> <input checked="" type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<p>Polistes fuscatus aurifer</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Vespa pennsylvanica</i> <p>Coloptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Buprestidae</i> <input type="checkbox"/> <i>Carabidae</i> <input type="checkbox"/> <i>Cerambycidae</i> <input type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilocorus orbus</i> <input type="checkbox"/> <i>Coccinella</i> sp. <input type="checkbox"/> <i>Harmonia axyridis</i> <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Cercoptidae</i> <input type="checkbox"/> <i>Elateridae</i> (Click Beetles) <input type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input checked="" type="checkbox"/> <i>D-undecimpunctata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Taenymela laticollis</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Halipidae</i> <input type="checkbox"/> <i>Hydrophyllidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops</i> sp. <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosaigon flavipenne</i> <input type="checkbox"/> <i>Macrosaigon</i> sp. <input type="checkbox"/> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracatapa</i> sp. <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> <i>Tenebrionidae</i> <input checked="" type="checkbox"/> <i>Eleodes</i> sp. <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Lygaeidae</i> <input type="checkbox"/> <i>Lygaeus kalmii</i> <input type="checkbox"/> <i>Pyrrhocoridae</i> <input type="checkbox"/> <i>Largus cinctus</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> / <u>SAV</u> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus</i> sp. <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichocephala aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Apiomeris crassipes</i> <input type="checkbox"/> <i>Rhynocoris ventralis</i> <input type="checkbox"/> <i>Zelus tetracanthus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aphididae</i> <input type="checkbox"/> <i>Cercopidae</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homoladisca</i> sp. <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactylopiidae</i> (Coccininal) <input type="checkbox"/> <i>Dactylopius</i> sp. <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input checked="" type="checkbox"/> <i>Psyllidae</i> <input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa</i> sp. <input type="checkbox"/> <i>Myrmeleontidae</i> <input checked="" type="checkbox"/> <i>Brachyneururus</i> sp. <input checked="" type="checkbox"/> <i>Myrmeleon</i> sp. <input type="checkbox"/> <i>Raphidiidae</i> (Snakeflies) <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Lepyrus inermis</i> <input type="checkbox"/> <i>Melanoplus</i> sp. <input type="checkbox"/> <i>Schistocerca niensis</i> <input checked="" type="checkbox"/> <i>Schistocerca</i> sp. 	<p>Trimerotropis californica</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i> <input type="checkbox"/> <i>Pontia protodice</i> <input type="checkbox"/> <i>Brephidam exilis</i> <input type="checkbox"/> <i>Hemiaragus ceramius</i> <input type="checkbox"/> <i>Oecanthus fultoni</i> <input type="checkbox"/> <i>Tettigoniidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input type="checkbox"/> <i>Scudderia mexicana</i> <input checked="" type="checkbox"/> <i>Strymon melinus</i> <input type="checkbox"/> <i>Apodemita normo virgulti</i> <input type="checkbox"/> <i>Agraulis vanillae</i> <input type="checkbox"/> <i>Danaus gilippus</i> <input type="checkbox"/> <i>Damus plexippus</i> <input type="checkbox"/> <i>Paracallix hesperis</i> <input type="checkbox"/> <i>Vanessa annabella</i> <input type="checkbox"/> <i>Vanessa atalanta</i> <input checked="" type="checkbox"/> <i>Vanessa cardui</i> <input type="checkbox"/> <i>Vanessa virginiensis</i> <input type="checkbox"/> <i>Arctiidae</i> <input type="checkbox"/> <i>Noctuidae</i> <input type="checkbox"/> <i>Autographa californica</i> <input type="checkbox"/> <i>Schinia</i> <input checked="" type="checkbox"/> <i>Geometridae</i> <input type="checkbox"/> <i>Pyralidae</i> <input type="checkbox"/> <i>Paranthrene robiniae</i> <input type="checkbox"/> <i>Hyles lineata</i> <input type="checkbox"/> <i>Manduca sexta</i> <p>Arachnida:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Araneidae</i> <input type="checkbox"/> <i>Peucecea viridinis</i> <input checked="" type="checkbox"/> <i>Dipluridae</i> <input type="checkbox"/> <i>Leurotychus pacificus</i> <input type="checkbox"/> <i>Latrodectus hesperus</i> <input type="checkbox"/> <i>Salticidae</i> <input checked="" type="checkbox"/> <i>Phidippus formosus</i> <input type="checkbox"/> <i>Thomisidae</i>
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Other Wildlife Species Observed:

VTA

Bird Species Observed:

<u>CAKI</u>	<u>HOBI</u>	<u>FVST</u>	<u>LESA</u>	<u>WFIB</u>
<u>TWU</u>	<u>BAST</u>	<u>BRAL</u>	<u>MALL</u>	<u>AMCO</u>
<u>BLPH</u>	<u>GLEB</u>	<u>HOSP</u>	<u>KILL</u>	<u>COMO</u>
<u>LOPI</u>	<u>RTTA</u>	<u>EUVO</u>	<u>BWTE</u>	

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: SOUTH Acreage Surveyed: ~40 Biologist(s): M. DICUS
 Date: 09-17-12 Time (Start/End): 1000/1400 Cloud Cover (Start/End): 0/10 Temperature in °F (Start/End): 74/91
 Arthropod Species Observed: 0-2/3-12 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apocera chrysolasia</i> <input type="checkbox"/> <i>Apocera convergens</i> <input type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input type="checkbox"/> <i>Efferia alabarbaris</i> <input type="checkbox"/> <i>Mallifora faurix</i> <input type="checkbox"/> <i>Proctacanthus sp.</i> <input checked="" type="checkbox"/> <i>Saropogon luteus</i> <input checked="" type="checkbox"/> <i>Stenopogon breviscutus</i> <input type="checkbox"/> <i>Beeidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input checked="" type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythicomya sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input checked="" type="checkbox"/> <i>Tachina atrata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input checked="" type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physocphala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Guterebridae</i> <input checked="" type="checkbox"/> <i>Condylostylus sp.</i> <input checked="" type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyphus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichneumon sp.</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Dasytomilla coccineohirta</i> <input type="checkbox"/> <i>Dasytomilla californica</i> <input type="checkbox"/> <i>Dasytomilla sackeni</i> (lg.) <input type="checkbox"/> <i>Dasytomilla clytemnestra</i> <input type="checkbox"/> <i>Campsommeris tolteca</i> <input type="checkbox"/> <i>Trielis albione</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pesopsis mildei</i> <input checked="" type="checkbox"/> <i>Pesopsis sp.</i> <input type="checkbox"/> <i>Sphécidae</i> <input checked="" type="checkbox"/> <i>Ammophila alberti</i> <input checked="" type="checkbox"/> <i>Ammophila sp.</i> <input checked="" type="checkbox"/> <i>Bembix americana</i> <input checked="" type="checkbox"/> <i>Bembix comata</i> <input checked="" type="checkbox"/> <i>Bembix melanopsis</i> <input type="checkbox"/> <i>Bigyrtes sp.</i> <input checked="" type="checkbox"/> <i>Chalybion californicus</i> <input type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisoidea diversus</i> <input type="checkbox"/> <i>Hoplisoidea sp.</i> <input type="checkbox"/> <i>Isodonti aelegans</i> <input type="checkbox"/> <i>Microbembix californicus</i> <input type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input checked="" type="checkbox"/> <i>Prioxys foxi</i> <input type="checkbox"/> <i>Prioxys sp.</i> <input checked="" type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Spheg ichneumonius</i> <input type="checkbox"/> <i>Stizoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Euodynerus annulata</i> <input checked="" type="checkbox"/> <i>Polistes apachus</i> <input checked="" type="checkbox"/> <i>Polistes dorsalis</i> <input checked="" type="checkbox"/> <i>Polistes exclamans</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> / <u>SAYI</u> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichopepla aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Apiomeris crassipes</i> <input checked="" type="checkbox"/> <i>Phytocoris ventralis</i> <input checked="" type="checkbox"/> <i>Zelus tetracanthus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aphididae</i> <input type="checkbox"/> <i>Cercopidae</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homaldisca sp.</i> <input type="checkbox"/> <i>Ectadidae</i> <input checked="" type="checkbox"/> <i>Dactylopiidae (Coccinell)</i> <input type="checkbox"/> <i>Tachymela laticolus</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Halipidae</i> <input type="checkbox"/> <i>Hydrophyllidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Myrmelbonitidae</i> <input type="checkbox"/> <i>Brachyneururus sp.</i> <input type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Leprus intermedius</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Schistocerca nilens</i> <input type="checkbox"/> <i>Schistocerca sp.</i> 	<p>Pterotropa californica</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i> <input type="checkbox"/> <i>Gryllus sp.</i> <input type="checkbox"/> <i>Oecanthus fultoni</i> <input type="checkbox"/> <i>Tettigoniidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input type="checkbox"/> <i>Scudderia mexicana</i> <input type="checkbox"/> <i>Senopelmatus sp.</i> <input type="checkbox"/> <i>Iris oratoria</i> <input checked="" type="checkbox"/> <i>Stagmomantis californica</i> <input type="checkbox"/> <i>Parabacillus hesperis</i> <p>Odonata:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Aeshna multicolor</i> <input checked="" type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula saturata</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input type="checkbox"/> <i>Pantala flavescens</i> <input checked="" type="checkbox"/> <i>Perithemis intensa</i> <input type="checkbox"/> <i>Progomphus borealis</i> <input type="checkbox"/> <i>Sympetrum corruptum</i> <input type="checkbox"/> <i>Sympetrum illotum</i> <input type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea onusta</i> <input checked="" type="checkbox"/> <i>Argia sp.</i> <input type="checkbox"/> <i>Enallagma sp.</i> <input type="checkbox"/> <i>Telebasis salva</i> <p>Lepidoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Atalopedes campestris</i> <input type="checkbox"/> <i>Erynnis funeralis</i> <input type="checkbox"/> <i>Heliopterus erictorum</i> <input checked="" type="checkbox"/> <i>Hyalephila phyleus</i> <input checked="" type="checkbox"/> <i>Lerodea eufala</i> <input type="checkbox"/> <i>Paratyton melane</i> <input type="checkbox"/> <i>Polites sabuleti</i> <input type="checkbox"/> <i>Pyrgus albescens</i> <input type="checkbox"/> <i>Papilio cresphontes</i> <input type="checkbox"/> <i>Papilio rutulus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i> <p>Arachnida:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Araneidae</i> <input checked="" type="checkbox"/> <i>Peucetia viridans</i> <input type="checkbox"/> <i>Dipluridae</i> <input type="checkbox"/> <i>Leurodychus pacificus</i> <input type="checkbox"/> <i>Larodectus hesperus</i> <input type="checkbox"/> <i>Selcidae</i> <input checked="" type="checkbox"/> <i>Phidippus formosus</i> <input checked="" type="checkbox"/> <i>Thomisidae</i>
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Bird Species Observed:

HOFI	SPTO	AWAV	SOSP	ROPI	LOSH	ORBL
SAPH	BUPH	HOWR	PAIKI	AMEK	EUST	EULO
ORHA	NULD	COYE	NOFL	NOMO	WFIB	
TUVU	MOLO	WESC	MOGP	KILL	CORA	

Other Wildlife Species Observed:

UJA
N.FENCE
CAGS
COTONTAIL

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CACLECITY Portion of Site Surveyed: NORTH Acreage Surveyed: 25 Biologist(s): M. JICKS
 Date: 09-18-12 Time (Start/End): 1000/1255 Cloud Cover (Start/End): 0/0 Temperature in °F (Start/End): 75/93
 Arthropod Species Observed: Wind Speed in Beaufort (Start/End): 0-3/3-7 DSF Detected (Circle): Y (N)

<p>DIPTERA:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apocera chrysolasia</i> <input type="checkbox"/> <i>Apocera convergens</i> <input type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input type="checkbox"/> <i>Efferia alabarbaris</i> <input type="checkbox"/> <i>Mallopora faurix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input type="checkbox"/> <i>Stenopogon luteus</i> <input checked="" type="checkbox"/> <i>Stenopogon breviscubus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mithomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input checked="" type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physoccephala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input type="checkbox"/> <i>Condylostylus sp.</i> <input type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> <i>Sarcophagiidae</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichneumon sp.</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Dasyommilla coccineohirta</i> <input type="checkbox"/> <i>Dasyommilla californica</i> <input type="checkbox"/> <i>Dasyommilla sackeni (lg.)</i> <input type="checkbox"/> <i>Dasyommilla clytemnestra</i> <input type="checkbox"/> <i>Camposomeris tolteca</i> <input type="checkbox"/> <i>Trielis alicione</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pepsis mildoi</i> <input checked="" type="checkbox"/> <i>Pepsis sp.</i> <input type="checkbox"/> <i>Sphécidae</i> <input type="checkbox"/> <i>Ammophila alberti</i> <input type="checkbox"/> <i>Ammophila sp.</i> <input type="checkbox"/> <i>Bembix americana</i> <input checked="" type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanopus</i> <input type="checkbox"/> <i>Bicyrtis sp.</i> <input type="checkbox"/> <i>Cerceris sp.</i> <input type="checkbox"/> <i>Chalybion californicus</i> <input type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisoides diversus</i> <input type="checkbox"/> <i>Hoplisoides sp.</i> <input type="checkbox"/> <i>Isodontia elegans</i> <input type="checkbox"/> <i>Microbembix californicus</i> <input type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Prionyx foxi</i> <input checked="" type="checkbox"/> <i>Prionyx sp.</i> <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Stizoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Euclypterus annulata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input type="checkbox"/> <i>Chlorochroa uhleri</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Trichopepla pallidivirens</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Apiomeris crassipes</i> <input type="checkbox"/> <i>Rhynocoris ventralis</i> <input type="checkbox"/> <i>Zelus terrocanthus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aphididae</i> <input type="checkbox"/> <i>Cercopidae</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homaldisca sp.</i> <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactyloptidae (Coccinellae)</i> <input type="checkbox"/> <i>Dactyloptis sp.</i> <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input type="checkbox"/> <i>Psyllidae</i> <input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Myrmeleontidae</i> <input type="checkbox"/> <i>Brachyneururus sp.</i> <input checked="" type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphididae (Snakeflies)</i> <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Leprus intermedius</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Pyrrhocoridae</i> <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca sp.</i>
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Bird Species Observed:
COA KUL WFB LBDO AMCR EUCO LESA
EUST BLFH WPHF WSP ROPI HOSP
TUVU CAKI BABL MAU SAPH HOPI
NOND NTHA BNST RWBL COA GOLO

Other Wildlife Species Observed:
UTA
W FEJCE
GOAHLL
CAS

V. B. GARDNER

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CACLECITY Portion of Site Surveyed: NORTH Acreage Surveyed: 25 Biologist(s): M. JICKS
 Date: 09-18-12 Time (Start/End): 1000/1255 Cloud Cover (Start/End): 0/0 Temperature in °F (Start/End): 75/93
 Arthropod Species Observed: _____ Wind Speed in Beaufort (Start/End): 0-3/3-7 DSF Detected (Circle): Y N

DIPTERA: <i>R. terminatus abdominalis</i> <i>Apocera chrysolasia</i> <i>Apocera convergens</i> <i>Nemomydas pantherina</i> <i>Asilidae</i> <i>Efferia alabarbaris</i> <i>Mallopora faurix</i> <i>Proctocanthus sp.</i> <i>Stenopogon luteus</i> <i>Stenopogon brevisculus</i> <i>Baetidae (May Flies)</i> <i>Callibaetis pacificus</i> <i>Bombyliidae</i> <i>Exoprosopa sp.</i> <i>Ligyra gazophylax</i> <i>Mithomyia sp.</i> <i>Poecilanthrax arethusa</i> <i>Poecilanthrax sp.</i> <i>Axophora pellucida</i> <i>Villa atrata</i> <i>Zenox simpson</i> <i>Calliphora sp.</i> <i>Eucalliphora lilaea</i> <i>Phaenicia cuprina</i> <i>Phaenicia sericata</i> <i>Conopidae sp.</i> <i>Physoccephala texana</i> <i>Culicidae - mosquitoes</i> <i>Cuterebridae</i> <i>Condylostylus sp.</i> <i>Drosophilidae</i> <i>Musca domestica</i> <i>Sarcophagiidae</i> <i>Megachile sp.</i> <i>Stratiomyidae</i> <i>Syrphidae</i> <i>Allograpta obliqua</i> <i>Eristalis tenax</i> <i>Metasyrphus americanus</i> <i>Volucella mexicana</i> <i>Tabanidae</i>	<i>Ichneumon sp.</i> <i>Dasyneura coccineohirta</i> <i>Dasyneura californica</i> <i>Dasyneura sackeni (lg.)</i> <i>Dasyneura clytemnestra</i> <i>Camposomeris tolteca</i> <i>Trielis alcione</i> <i>Pompilidae</i> <i>Pepsis mildei</i> <i>Pepsis sp.</i> <i>Sphécidae</i> <i>Ammophila alberti</i> <i>Ammophila sp.</i> <i>Bembix americana</i> <i>Bembix comata</i> <i>Bembix melanopus</i> <i>Bicyrtis sp.</i> <i>Cerceris sp.</i> <i>Chalcidion californicus</i> <i>Chlorion aerarium</i> <i>Eucerceris insignis</i> <i>Hoplisoides diversus</i> <i>Hoplisoides sp.</i> <i>Isodontia aelegans</i> <i>Microbembix californicus</i> <i>Philanthus multimaculata</i> <i>Philanthus ventralis</i> <i>Podalonia sp.</i> <i>Prionyx foxi</i> <i>Prionyx sp.</i> <i>Sceliphron caementarium</i> <i>Sphex ichneumonius</i> <i>Stizoides remicinctum</i> <i>Tachytes elongatus</i> <i>Tiphidae</i> <i>Vespidae - unidentified</i> <i>Eumenes bollii</i> <i>Eumenes crucifera</i> <i>Euclypterus annulata</i> <i>Polistes apachus</i> <i>Polistes dorsalis</i> <i>Polistes exclamans</i>	<i>Polistes fuscatus aurifer</i> <i>Vespa pennsylvanica</i> COLEOPTERA: <i>Buprestidae</i> <i>Carabidae</i> <i>Cerambycidae</i> <i>Coccinellidae</i> <i>Adalia bipunctata</i> <i>Chilocorus orbis</i> <i>Coccinella sp.</i> <i>Harmonia axyridis</i> <i>Hippodamia convergens</i> <i>Olla v-nigrum</i> <i>Elatridae (Click Beetles)</i> <i>Chrysomelidae</i> <i>Diatribita baileata</i> <i>D. undecimpunctata</i> <i>Lema trilineata</i> <i>Tachymela laticollis</i> <i>Curculionidae</i> <i>Halipidae</i> <i>Hydrophilidae</i> <i>Meloidae</i> <i>Nemognatha lurida apicalis</i> <i>Melyridae</i> <i>Collops sp.</i> <i>Rhipiphoridae</i> <i>Macrosiagon flavipenne</i> <i>Scarabaeidae</i> <i>Cottus mutabilis</i> <i>Paracatopa sp.</i> <i>Staphylinus maxillosus</i> <i>Tenebrionidae</i> <i>Eleodes sp.</i> Hemiptera: <i>Lygaeidae</i> <i>Lygaeus kalmii</i> <i>Pyrrhocoridae</i> <i>Largus cinctus</i>	<i>Pentatomidae</i> <i>Chlorochroa ligata</i> <i>Chlorochroa uhleri</i> <i>Murgantia histrionica</i> <i>Podisus sp.</i> <i>Trichoptera pallidivirens</i> <i>Reduviidae</i> <i>Apiomeris crassipes</i> <i>Rhynocoris ventralis</i> <i>Zelus terocanthus</i> HOMOPTERA: <i>Aphididae</i> <i>Anax junius</i> <i>Cicadellidae</i> <i>Homaldisca sp.</i> <i>Cicadidae</i> <i>Dactyloptidae (Coccinellae)</i> <i>Dactyloptis sp.</i> <i>Membracidae</i> <i>Antianthe expansa</i> <i>Psyllidae</i> <i>Glycaspis brimblecombei</i> NEUROPTERA: <i>Chrysopidae</i> <i>Chrysopa sp.</i> <i>Myrmeleontidae</i> <i>Brachyneururus sp.</i> <i>Myrmeleon sp.</i> <i>Raphidiidae (Snakeflies)</i> DERMAPTERA: <i>Forficula auricularia</i> ORTHOPTERA: <i>Acrididae</i> <i>Dissosteira pictipennis</i> <i>Leprus intermedium</i> <i>Melanoplus sp.</i> <i>Schistocerca nitens</i> <i>Schistocerca sp.</i>	<i>Theriotropis californica</i> <i>Trimerotropis pallidipennis</i> <i>Gryllus sp.</i> <i>Oecanthus fulvoni</i> <i>Tettigoniidae</i> <i>Antianthe expansa</i> <i>Scudderia mexicana</i> <i>Stenopelmatus sp.</i> <i>Iris oratoria</i> <i>Stagmomantis californica</i> <i>Parabacillus hesperis</i> ODONATA: <i>Aeshna multicolor</i> <i>Anax junius</i> <i>Erythemis collocata</i> <i>Libellula croceipennis</i> <i>Libellula saturata</i> <i>Pachydiplax longipennis</i> <i>Pantala flavescens</i> <i>Perithemis intensa</i> <i>Progomphus borealis</i> <i>Sympetrum corruptum</i> <i>Sympetrum illotum</i> <i>Tramea lacerata</i> <i>Tramea onusta</i> <i>Argia sp.</i> <i>Enallagma sp.</i> <i>Telebasis salva</i> LEPIDOPTERA: <i>Atalopedes campestris</i> <i>Erynnis funeralis</i> <i>Heliopterus erictorum</i> <i>Hyalephila phyleus</i> <i>Lerodea eufala</i> <i>Paratrytone melane</i> <i>Polites sabuleti</i> <i>Pyrgus albescens</i> <i>Papilio cressphontes</i> <i>Papilio rutillus</i> <i>Colias eurytheme</i> ARACHNIDA: <i>Araneidae</i> <i>Psecitia viridinis</i> DIPLURIDA: <i>Leurodychus pacificus</i> <i>Larodectus hesperus</i> <i>Salticidae</i> <i>Phidippus formosus</i> <i>Thomisidae</i> INSECTA: <u>W. FEJCE</u> <u>GOOAHLL</u> <u>CABS</u>
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Other Wildlife Species Observed: _____

Bird Species Observed: _____

<u>COA</u>	<u>KLW</u>	<u>WFB</u>	<u>LBDO</u>	<u>AMCR</u>	<u>EUO</u>	<u>LESA</u>
<u>FUST</u>	<u>BLTH</u>	<u>WPH</u>	<u>WPH</u>	<u>ROPI</u>	<u>HOSP</u>	
<u>TUVU</u>	<u>CAKI</u>	<u>MAU</u>	<u>MAU</u>	<u>SAPH</u>	<u>HOFI</u>	
<u>NOND</u>	<u>NTHA</u>	<u>BNST</u>	<u>RWB</u>	<u>COA</u>	<u>GOLO</u>	

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: 3000H Acreage Surveyed: 40 Biologist(s): M. DICKS
 Date: 09-19-12 Time (Start/End): 1000/1400 Cloud Cover (Start/End): 0/0 Temperature in °F (Start/End): 75/96

Arthropod Species Observed: Wind Speed in Beaufort (Start/End): 0-3/4-8 DSF Detected (Circle): Y

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminalis abdominalis</i> <input type="checkbox"/> <i>Aplocera chrysolasta</i> <input type="checkbox"/> <i>Aplocera convergens</i> <input type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> Asilidae <input type="checkbox"/> <i>Efferia alabarbaris</i> <input type="checkbox"/> <i>Mallifera faurix</i> <input type="checkbox"/> <i>Proctocanthus</i> sp. <input type="checkbox"/> <i>Saropogon luteus</i> <input checked="" type="checkbox"/> <i>Stenopogon breviscutis</i> <input type="checkbox"/> Beetidae (May Flies) <input checked="" type="checkbox"/> <i>Gallibaetis pacificus</i> <input checked="" type="checkbox"/> Bombyliidae <input type="checkbox"/> <i>Exoprosopa</i> sp. <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythicomyia</i> sp. <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax</i> sp. <input type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Calliphora</i> sp. <input type="checkbox"/> <i>Escalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Conopidae</i> sp. <input type="checkbox"/> <i>Physocophala texana</i> <input type="checkbox"/> Culicidae - mosquitoes <input type="checkbox"/> Cuterebridae <input checked="" type="checkbox"/> <i>Comptosivivus</i> sp. <input checked="" type="checkbox"/> Prosophiidae <input checked="" type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> Sarcophagidae <input type="checkbox"/> <i>Sarcophaga</i> sp. <input type="checkbox"/> Stratiomyidae <input type="checkbox"/> Syrphidae <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> Tabanidae 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Tabanus punctifer</i> <input type="checkbox"/> Tachinidae <input type="checkbox"/> <i>Archyia aptifer</i> <input type="checkbox"/> <i>Gynosomea fuliginosum</i> <input type="checkbox"/> Therevidae (Slitello Fly) <input type="checkbox"/> <i>Ceratitis capitata</i> <input type="checkbox"/> Tipulidae <input type="checkbox"/> <i>Nephrotoma</i> sp. <input type="checkbox"/> Hymenoptera: <input type="checkbox"/> Ants <input type="checkbox"/> Formicidae <input type="checkbox"/> <i>Iridomyrmex humilis</i> <input type="checkbox"/> <i>Formica</i> sp. <input type="checkbox"/> <i>Liometopum occidentale</i> <input type="checkbox"/> <i>Messor pergandei</i> <input checked="" type="checkbox"/> <i>Megonyx mex californica</i> <input checked="" type="checkbox"/> <i>Solenopsis</i> sp. <input type="checkbox"/> Bees <input checked="" type="checkbox"/> Anthophoridae <input type="checkbox"/> <i>Anthophora urbana</i> <input type="checkbox"/> Melissodes sp. <input checked="" type="checkbox"/> <i>Xylocopa varipuncta</i> <input type="checkbox"/> <i>Apis mellifera</i> <input type="checkbox"/> <i>Bombus californicus</i> <input type="checkbox"/> <i>Bombus croceus</i> <input type="checkbox"/> <i>Bombus sonorus</i> <input type="checkbox"/> <i>Bombus vosnesenskii</i> <input type="checkbox"/> Halictidae <input checked="" type="checkbox"/> <i>Agapostemon</i> sp. <input type="checkbox"/> <i>Nomia nevadensis</i> <input type="checkbox"/> Megachilidae <input checked="" type="checkbox"/> <i>Dianthidium</i> sp. <input checked="" type="checkbox"/> <i>Megachile</i> sp. <input type="checkbox"/> <i>Perdita</i> sp. <input type="checkbox"/> Wasps <input type="checkbox"/> Syrphidae <input type="checkbox"/> <i>Allograpta obliqua</i> <input checked="" type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> Tabanidae 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Polistes fuscatus aurifer</i> <input type="checkbox"/> <i>Vespa pennsylvanica</i> <input type="checkbox"/> Coloptera: <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> (SAVI) <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> Podisus sp. <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichopepla aurora</i> <input type="checkbox"/> Reduviidae <input type="checkbox"/> <i>Pezomachus crassipes</i> <input checked="" type="checkbox"/> <i>Rhynocoris ventralis</i> <input type="checkbox"/> <i>Zelus tetracanthus</i> <input type="checkbox"/> Homoptera: <input type="checkbox"/> Aphididae <input checked="" type="checkbox"/> Cercopidae <input type="checkbox"/> Cicadellidae <input type="checkbox"/> <i>Homaldisca</i> sp. <input type="checkbox"/> Cecadidae <input checked="" type="checkbox"/> <i>Dactylopiidae</i> (Coccinellid) <input type="checkbox"/> <i>Ducylopiidae</i> sp. <input type="checkbox"/> Membrocidae <input type="checkbox"/> <i>Antianthe expansa</i> <input type="checkbox"/> Psyllidae <input type="checkbox"/> <i>Glycaspis brimblecombei</i> <input type="checkbox"/> Neuroptera: <input type="checkbox"/> Chrysopidae <input type="checkbox"/> <i>Chrysopa</i> sp. <input type="checkbox"/> Myrmeleontidae <input checked="" type="checkbox"/> <i>Brachymeururus</i> sp. <input type="checkbox"/> <i>Myrmeleon</i> sp. <input type="checkbox"/> Raphidiidae (Snakeflies) <input type="checkbox"/> Dermaptera: <input type="checkbox"/> <i>Forficula auricularia</i> <input type="checkbox"/> Orthoptera: <input checked="" type="checkbox"/> Acrididae <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Lappus intermedius</i> <input type="checkbox"/> <i>Melanoplus</i> sp. <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca</i> sp. 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Pentatomidae</i> (B. HILARIS) <input checked="" type="checkbox"/> <i>Triemerotropis californica</i> <input type="checkbox"/> <i>Triemerotropis pallidipennis</i> <input type="checkbox"/> <i>Gryllus</i> sp. <input type="checkbox"/> <i>Oecanthus fulvoni</i> <input type="checkbox"/> Tettigoniidae <input type="checkbox"/> <i>Antanthe expansa</i> <input type="checkbox"/> <i>Scudderia mexicana</i> <input type="checkbox"/> <i>Stenopelmatus</i> sp. <input type="checkbox"/> <i>Iris oratoria</i> <input type="checkbox"/> <i>Stagmomantis californica</i> <input type="checkbox"/> <i>Parabacillus hesperis</i> <input type="checkbox"/> Odonata: <input checked="" type="checkbox"/> <i>Aeshna multicolor</i> <input type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula saurata</i> <input type="checkbox"/> Noctuidae <input type="checkbox"/> <i>Pachylaplex longipennis</i> <input type="checkbox"/> <i>Pantala flavescens</i> <input type="checkbox"/> <i>Schinia</i> <input type="checkbox"/> Geometridae <input checked="" type="checkbox"/> Pyralidae <input type="checkbox"/> <i>Paranithrene robiniae</i> <input type="checkbox"/> <i>Hyles lineata</i> <input type="checkbox"/> <i>Manduca sexta</i> <input type="checkbox"/> Arachnida: <input type="checkbox"/> Aranidae <input type="checkbox"/> <i>Peucetia viridius</i> <input checked="" type="checkbox"/> Dipteridae <input type="checkbox"/> <i>Leuroyechus pacificus</i> <input type="checkbox"/> <i>Larroeetus hesperis</i> <input type="checkbox"/> Salticidae <input type="checkbox"/> <i>Phidippus formosus</i> <input checked="" type="checkbox"/> Thomisidae
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Bird Species Observed: SOSP BCAV LENO ATHA TUVU CORA ROPI
BASW ANHV GERR MONO EUST KILL SAPH
COVE HOKI SPTD NOMO CORA HOLA LOSH
WREN BLPH NUWO HOSP GRGL AMEX

Other Wildlife Species Observed: CALGS
VTA
COTONTAIL

Appendix E

Circle City Project—CNDDDB Form

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDDB@dfg.ca.gov

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 09/18/2012

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Rhaphiomidas terminatus abdominalis*

Common Name: Delhi Sands Flower-Loving Fly

Species Found? Yes No _____
If not, why?

Total No. Individuals _____ Subsequent Visit? yes no

Is this an existing NDDDB occurrence? _____ no unk.
Yes, Occ. # _____

Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: John and Melanie Dicus

Address: PO Box 1333
Black Canyon City, AZ 85324

E-mail Address: JWDicus@aol.com

Phone: (623) 203-3096

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown _____
 wintering breeding nesting rookery burrow site other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

The survey areas consists of approximately 65 acres generally located south of Interstate 60, west of Hamner/Milliken Avenue, north of Santa Ana River corridor, and east of Archibald Avenue.

County: Riverside and San Bernardino Landowner / Mgr.: S. California Edison transmission line easement

Quad Name: Guasti Elevation: 500-800 feet

T 2S R 7W Sec 12, _____ ¼ of _____ ¼, Meridian: H M S Source of Coordinates (GPS, topo. map & type): 7.5-minute

T 2S R 7W Sec 13, NE ¼ of _____ ¼, Meridian: H M S GPS Make & Model _____

DATUM: NAD27 NAD83 WGS84 Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 UTM Zone 11 OR Geographic (Latitude & Longitude)

Coordinates: Additional survey areas are located in the southwest corner of Section 13, northwest corner of Section 24, east half of Section 23, and southwest corner of section 2 in the Corona North quadrangle map.

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

Habitat: Disturbed, ruderal vegetation dominated by non-native grasses (Bromus diandrus, Hordeum species), Russian thistle (Salsola tragus), common kochia (Kochia scoparia), and golden crownbeard (Verbesina enceliodes). Vegetative cover ranges from 0% to 100%, averaging 40% over the 65-acres survey area. Former land uses include fallow agriculture, abandoned dairy operations, dirt roads, and disked open space. Soils within the survey area are Delhi series, and topography is relatively flat, gently sloping to the south and southwest.

Please fill out separate form for other rare taxa seen at this site. None detected

Site Information Overall site/occurrence quality/viability (site + population): Excellent Good Fair Poor

Immediate AND surrounding land use: Surrounding use: residential/commercial development, disturbed o/s, active dairy/agriculture operations

Visible disturbances: Disking; non-native vegetation; ORV, pedestrian, and equestrian traffic; illegal dumping

Threats:

Comments: This site was surveyed in its entirety by federally permitted biologists twice per week, according to DSF protocol, between July 1, 2012 and September 19, 2012. No Delhi flies were observed.

Determination: (check one or more, and fill in blanks)

- Keyed (cite reference): _____
- Compared with specimen housed at: _____
- Compared with photo / drawing in: _____
- By another person (name): _____
- Other: _____

Photographs: (check one or more)

Slide Print Digital
Plant / animal
Habitat
Diagnostic feature

May we obtain duplicates at our expense? yes no

FINAL

**DELHI SANDS FLOWER-LOVING FLY
2013 PRESENCE/ABSENCE SURVEY**

**CIRCLE CITY SUBSTATION AND
TRANSMISSION LINE PROJECT
RIVERSIDE AND SAN BERNARDINO
COUNTIES
CALIFORNIA**

Prepared for:

SOUTHERN CALIFORNIA EDISON
1218 S. Fifth Avenue, 265A
Monrovia, CA 91016

Prepared by:

DICUS BIOLOGICAL
P.O. Box 1333
Black Canyon City, AZ 85324
Tel: 623.203.3096

and

CHAMBERS GROUP, INC.
5 Hutton Centre Drive, Suite 750
Santa Ana, California 92707
(949) 261-5414

January 2014

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EXECUTIVE SUMMARY

Focused presence/absence surveys for the Delhi Sands flower-loving fly were completed for Southern California Edison (SCE), on September 18, 2013. Surveys were conducted by biologists John Dicus (TE-839960-6), and Melanie Dicus (TE-049175-3). The Circle City Substation and Transmission Line Project (Circle City Project) preferred route contains approximately 64 acres of Delhi Sands fly suitable habitat located in Township 2S and 3S, Range 7W, Sections 12 and 13 of the United States Geological Survey (USGS) *Guasti* and Sections 13, 23, 24, and 2 of *Corona North* 7.5-minute series quadrangle maps. Because some areas were inaccessible, the biologists surveyed 54 acres during the 2013 survey season. The survey areas lie within the incorporated cities of Eastvale in Riverside County and Ontario in San Bernardino County, California. No Delhi Sands flower-loving flies were observed during the 2013 focused survey season. This technical report, submitted on October 17, 2013, details the findings of the 2013 focused survey effort.

SECTION 1.0 – INTRODUCTION

Focused presence/absence surveys were conducted for the Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) (Delhi Sands fly) in survey areas designated the Circle City Project. The site was surveyed in its entirety twice per week between July 1 and September 18, 2013.

The Circle City Project is located in Township 2S and 3S, Range 7W, Sections 12 and 13 of the USGS *Guasti* and Sections 13, 23, 24, and 2 of *Corona North* 7.5-minute series quadrangle maps (APN 021817119, 021817110, 021817118, 021821127, 021821117, 021821124, 021825106, 021833129, 021833130, 021833118, 021833112, 021832117, 021803304, 021803313, 021832130, 021805201, 021805211, and 021832125). The project site contains approximately 64 acres of suitable habitat for Delhi Sands fly. The survey area is generally located south of Interstate 10, west of Milliken/Hammer Avenue, east of Archibald Avenue, and north of Limonite Avenue in the cities of Eastvale in Riverside County and Ontario in San Bernardino County, California (Figure 1). The Circle City Project is located within the historic range of the Delhi fly and lies within the Ontario Recovery Unit as established in the Final Recovery Plan For The Delhi Sands Flower-Loving Fly (USFWS 1997).

Focused surveys and this technical report have been conducted and formatted in accordance with current United States Fish and Wildlife Service (USFWS) guidelines for protocol focused presence/absence surveys for the Delhi Sands fly (USFWS 1996). USFWS reserves the right to reject Delhi fly surveys conducted under the guidelines listed in protocol should USFWS determine a survey is inadequate (USFWS 1996, Section II. B.).

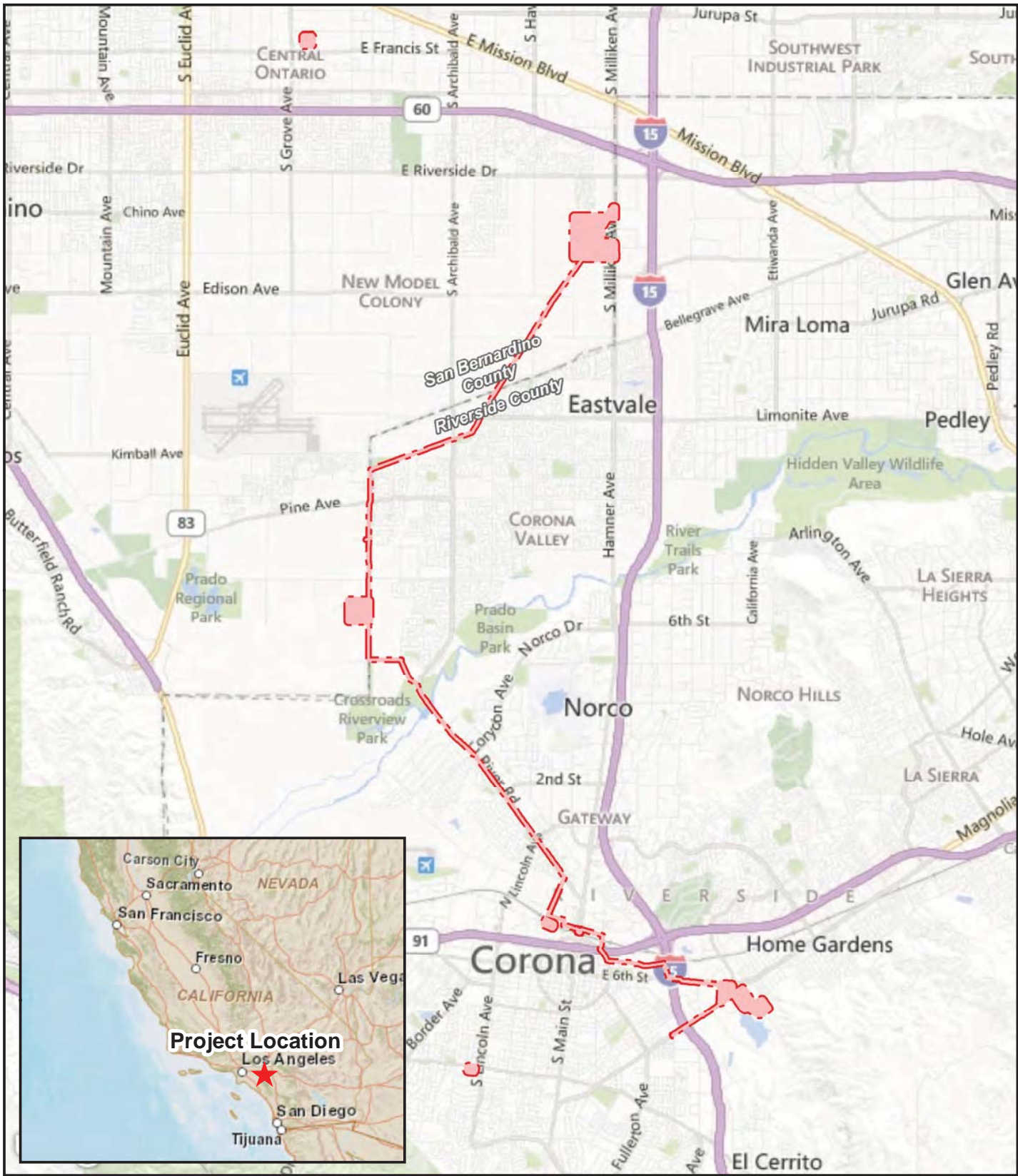
1.1 DELHI SANDS FLOWER-LOVING FLY

USFWS listed the Delhi Sands fly as an endangered species on September 23, 1993, under the Endangered Species Act (Act) of 1973, as amended. The Act prohibits “take” of a listed species. “Take” includes but is not limited to harming, harassing, or killing individuals of a listed species as well as destroying habitat occupied by a listed species.

The Delhi Sands fly is in the Dipteran insect family Mydidae and is approximately 1 inch long and orange-brown in color with dark brown markings on the dorsal surface of the abdomen. This insect species spends most of its life below ground and requires fine-grained sandy soils. As an adult, the Delhi Sands fly is a rapid flyer, visible above ground for several weeks between the months of July and September.

The historic range of the Delhi Sands fly is estimated to have included approximately 40 square miles in northwestern Riverside and southwestern San Bernardino counties. Habitat loss has limited the Delhi Sands fly’s current distribution to an estimated 2 percent of its former range or less (USFWS 1997).

Delhi Sands fly habitat is limited to areas that contain Delhi fine sand, an aeolian (wind-deposited) soil type. USFWS has identified the presence of Delhi Sands as the baseline criterion for the determination of suitable or potentially suitable habitat for this species. Fine, unconsolidated soil is required for oviposition (egg-laying), as females must insert their abdomens into the sand during this process (Rogers and Mattoni 1993). Little is known about the larval stages and requirements of the Delhi Sands fly. Development of this species from egg to adult is presumed to take either one or two years.



 Project Area



1:103,500



Figure 1
Project Vicinity Map
Circle City Biological Studies

Version Date: 1/6/2014



Appropriate vegetation and percent vegetative ground cover for the species is also largely unknown. Areas currently occupied by Delhi Sands flies tend to contain a mixture of sparsely vegetated to completely open sandy areas among areas of denser native and/or non-native vegetation.

In addition to Delhi series soils, the presence of several “indicator” plant species (those found to be present at many but not all sites occupied by Delhi Sands flies) is generally accepted as evidence suggestive of habitat suitable or potentially suitable for use by the species. Such indicator plant species include California buckwheat (*Eriogonum fasciculatum*), California croton (*Croton californicus*), telegraph weed (*Heterotheca grandiflora*), annual bur-sage (*Ambrosia acanthicarpa*), and other grass and forb species (USFWS 1997). The Delhi Sands fly has been documented utilizing California buckwheat as an adult nectar source (Kingsley 1996).

SECTION 2.0 – METHODS

2.1 SITE DESCRIPTION

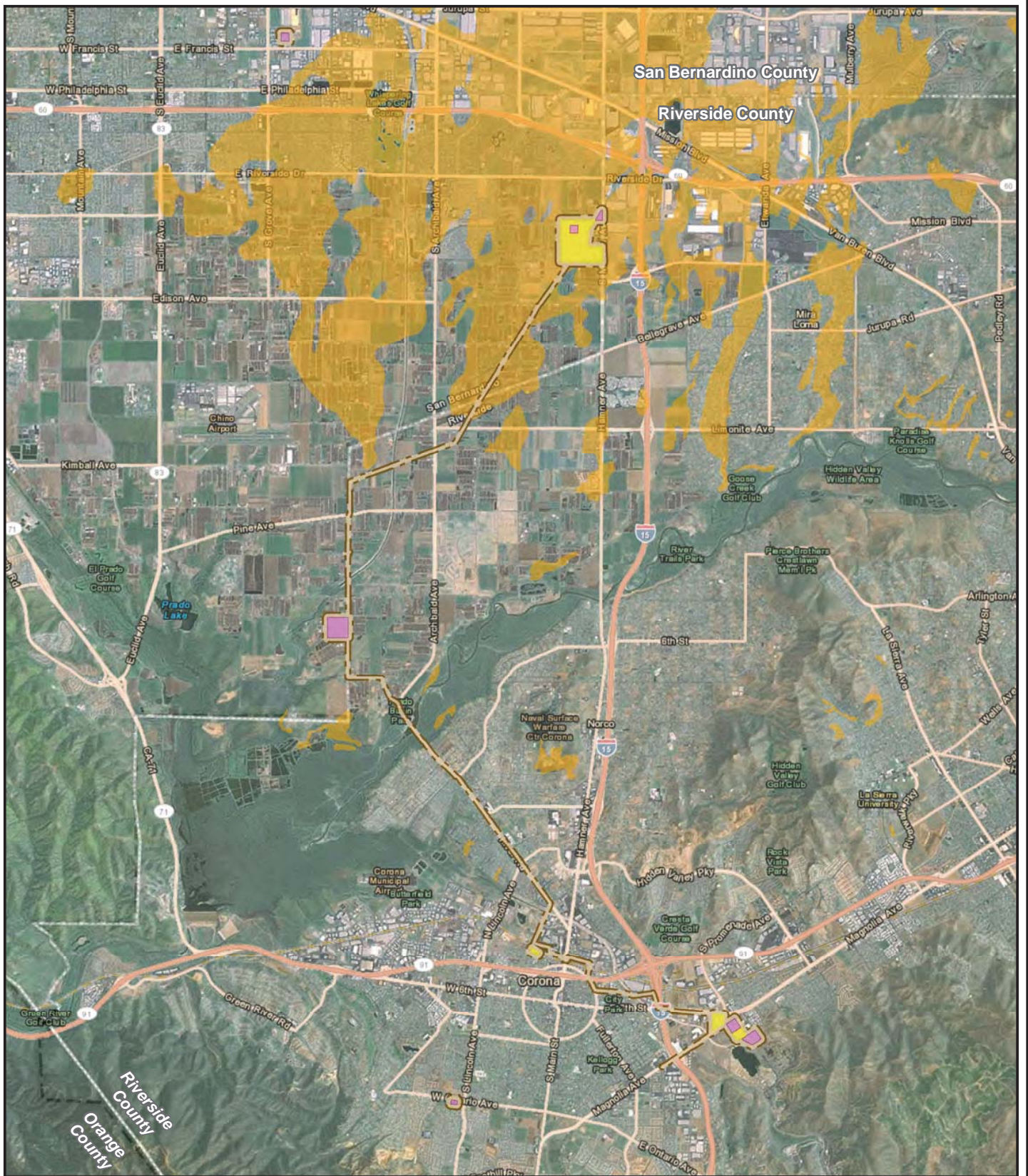
The Circle City Project is a proposed new substation and transmission line between the existing Mira Loma Substation in the City of Ontario to a new proposed substation in the City of Corona. The preferred route runs in a southwest direction from the Mira Loma Substation, heads south along Hellman Avenue, and continues southeast across the Santa Ana River into Corona, California.

The preferred transmission line route was evaluated for habitat potentially suitable to support the Delhi Sands fly. Areas that do not contain Delhi series soil were excluded from the surveys, as were some actively farmed agricultural lands (row crops), active dairies, paved surfaces, closed-canopy riparian forest, and residential and commercial development.

Soils on the surveyed portions of the Circle City Project are mapped Delhi Series Soil (Figure 2). Two Delhi Sands fly associated “indicator” plant species, annual bur-sage and telegraph weed, are present in small numbers. The majority of the survey areas are disturbed, dominated by ruderal vegetation, including riggut brome (*Bromus diandrus*), barley (*Hordeum* spp.), Russian thistle (*Salsola tragus*), common kochia (*Kochia scoparia*), and golden crownbeard (*Verbesina encelioides*). Vegetative cover within the survey areas varies between 10 percent and 100 percent, averaging approximately 40 percent in general. Topography is relatively flat, draining to the south and southwest. Elevation ranges from approximately 800 feet to 500 feet above mean sea level. Recent disturbances to the survey areas include disking, mowing, the presence of cattle and pedestrian traffic, dirt roads, off-road vehicle use, and illegal dumping.

Approximately 54 acres of habitat potentially suitable for Delhi Sands fly were surveyed during the 2013 season. Approximately 10 acres that were surveyed during the 2012 season were not accessible during the 2013 season. The survey areas, measuring between 1 acre and 17 acres, support a mixture of land uses, including disked and disturbed open space, fallow agricultural lands, active dairy operations, and dirt roads. At the request of the project proponent, survey areas included a 300-foot right-of-way around staging areas, transmission lines, and access roads. The majority of the survey parcels are located in the north portion of the preferred transmission line route in Eastvale and Ontario, with one small survey parcel at the south end of the alternative transmission line route, along the Santa Ana River (Figure 3).

The northernmost survey area contains approximately 16 acres of potentially suitable Delhi Sands fly habitat. Located north of the Mira Loma substation along Chino Road, this portion of the survey area is bordered by the Mira Loma substation to the south, by Hamner Avenue and industrial development to the east, and by commercial development and disturbed open space to the north and west. Habitat onsite consists of mowed, ruderal vegetation dominated by non-native grasses with Russian thistle and golden crownbeard.



- Staging Yard
- Substation Site
- Project Area
- Delhi Sands



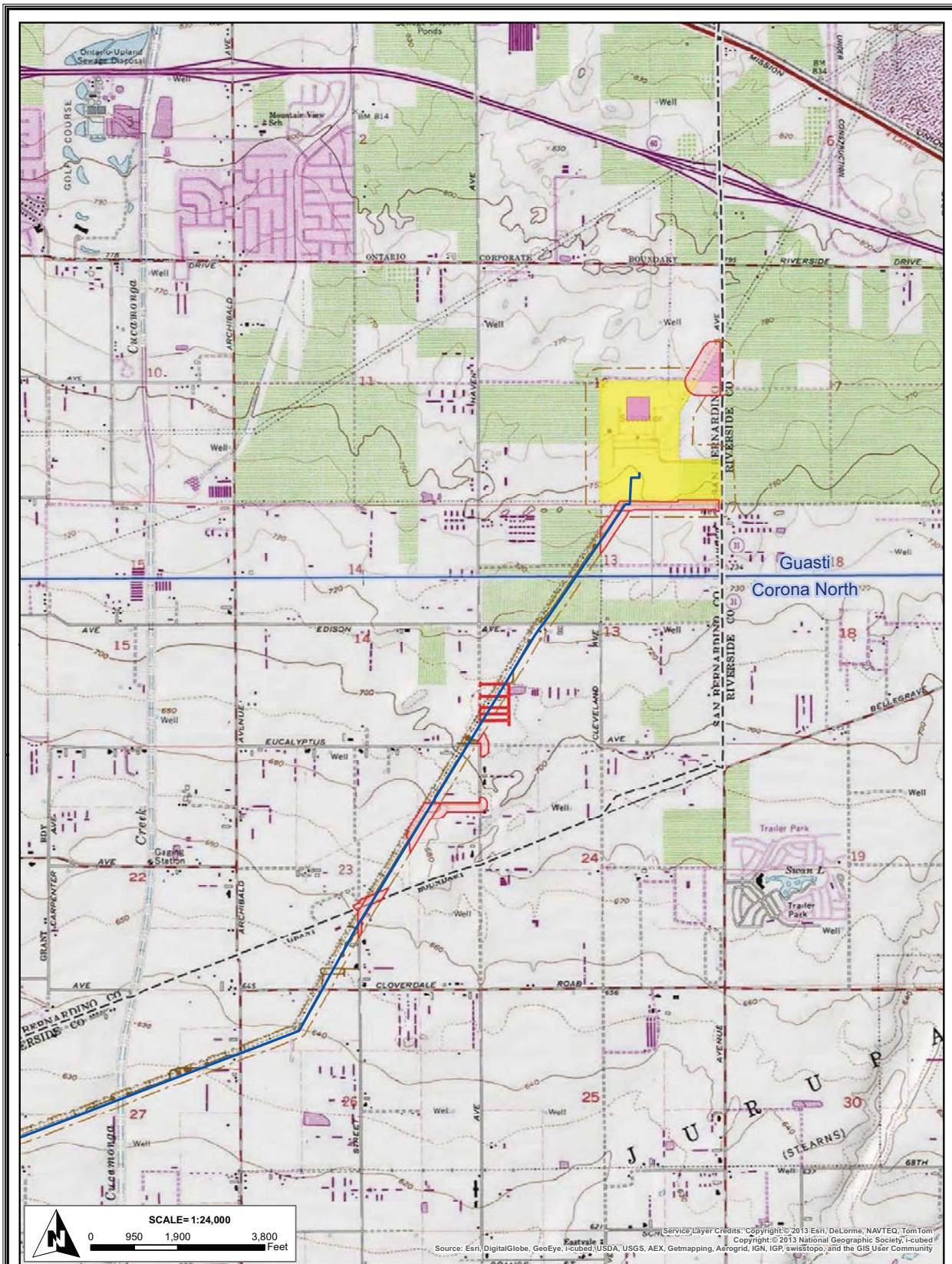
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Figure 2
 Delhi Sands Map
 Circle City Biological Studies

Version Date: 1/7/2014





- Project Area
 - Delhi Sands survey area
 - Staging Yard
 - Substation Site
 - Access Roads
 - Counties
 - 7.5-minute Quad
- Subtransmission Line**
- Mira Loma - Corona

Figure 3
Circle City Subtransmission Line Project
Overview Map

Version Date: 1/6/2014



Approximately 16 acres of potentially suitable Delhi Sands fly habitat were surveyed directly south of the Mira Loma substation. This portion of the survey area is bordered to the north by the Mira Loma substation, to the east by Hamner Avenue and industrial development, to the south by disturbed open space (abandoned dairy operations), and to the west by active agriculture (row crops). The habitat in this area is dominated by ruderal vegetation, including non-native grasses, Russian thistle, and golden crownbeard.

Approximately 6 acres of potentially suitable Delhi Sands fly habitat are located along Eucalyptus Avenue and Sumner Avenue within the preferred alignment route. This portion of the survey area is bordered to the north, west, and southwest by active dairy operations, and to the east and south by disturbed open space. Approximately 3 acres of this area that were surveyed in 2012 were not accessible during the 2013 season.

Approximately 10 acres of potentially suitable Delhi Sands fly habitat are located west of Sumner Avenue, north of Bellegrave Avenue within the preferred alignment route. This portion of the survey area is bordered to the north by active dairy operations, to the east, south, and northwest by disturbed open space, and to the southwest by active agriculture (row crops). The majority of this survey area consists of abandoned dairy operations. Vegetation is ruderal, dominated by non-native kochia, Russian thistle, and golden crownbeard. Approximately 7 acres of this area that were surveyed during the 2012 season were not accessible during the 2013 season.

Approximately 5 acres of potentially suitable Delhi Sands fly habitat are located north of Harrison Avenue and Limonite Avenue within the preferred alignment route. Active agriculture (row crops) border this area to the north and northwest, active dairy operations border it to the southwest, and residential development lies to the southeast. Vegetation is ruderal, consisting of scattered Russian thistle and other non-native herbs.

2.2 2012 FOCUSED SURVEYS

A protocol focused Delhi Sands fly presence/absence survey was conducted at the Circle City site during the previous (2012) focused survey period (Dicus Biological 2012). No Delhi Sands flies were detected.

2.3 2013 FOCUSED SURVEY

Interim survey guidelines for the Delhi Sands fly recommend that surveys be conducted by federally permitted biologists on nonconsecutive days between August 1 and September 18 between the hours of 1000 and 1400 Pacific Daylight Time (USFWS 1996). No more than 50 acres per day can be surveyed by one biologist (USFWS 1996). Two consecutive years of surveys with negative results (no flies observed) are required to conclude absence of this species from a survey site (USFWS 1996).

Since the establishment of interim protocol guidelines in 1996, adult Delhi Sands flies have been observed during the month of July. Subsequent to these observations, in a letter dated June 30, 2004, USFWS recommended that surveys begin no later than the week of July 1 and conclude on September 18 (Jim Bartel, USFWS, pers. com. 2004). Delhi Sands fly surveys at the Circle City Project were conducted according to current Delhi Sands fly survey protocol and the 2004 agency-recommended changes to the focused survey period.

The Circle City Project was surveyed two times per week between July 1 and September 18 between the hours of 1000 and 1400, by Delhi Sands fly permitted biologists John Dicus (TE-839960-6) and Melanie Dicus (TE-049175-3). The ±54-acre survey area was covered a total of 24 times during the 12-week season. Daily weather data were obtained using a digital anemometer (wind speed measurement in miles per hour) and a digital thermocouple and by visual estimation of cloud cover.

Transects were walked slowly through the survey area in an effort to detect active or resting Delhi Sands flies and discarded exuviae (pupal cases, or skins). Digital site photographs were taken to record the condition of the site during 2013 focused surveys and are appended to this report (Appendix A). A comprehensive plant, invertebrate, and wildlife inventory was not conducted as a portion of the focused survey effort; however, all wildlife and vascular plant species identified on the site incidental to conducting focused Delhi Sands fly surveys were recorded on field forms and are appended to this report (Appendices B and C). Detailed daily survey information is summarized in this report (Table 1) and can be found in copies of daily field forms appended to this report (Appendix D).

SECTION 3.0 – RESULTS

3.1 2013 SURVEY EFFORT

No Delhi Sands flies were detected during any of the (24) 2013 focused survey season site visits. Daily survey temperatures averaged 88 degrees Fahrenheit, with starting temperatures averaging 79 degrees and ending temperatures averaging 91 degrees. The minimum starting temperature was 70 degrees, and the maximum ending temperature was 102 degrees. Daily wind speeds averaged 3.21 miles per hour, with starting wind speeds averaging 1.58 mph and ending wind speeds averaging 4.83 mph. Daily cloud cover estimates averaged 17.5 percent, with starting cloud cover averaging 18.3 percent, and ending cloud cover averaging 16.7 percent. No precipitation was recorded during the surveys. A summary of survey dates, times, weather conditions, surveyor and survey results, is provided in Table 1. All plant and animal species identified on the Circle City Project during the 2013 focused survey are listed in this report (Appendices B & C).

Table 1: 2013 Survey Information

Date	Time PST	Temp °F Begin / End	Wind Speed (mph)	Cloud Cover (%)	Biologist	Results
7-04-13	1005-1335	76 / 87	2-3 / 3-7	0 / 0	JD, MD	No DSF
7-06-13	1000-1330	78 / 92	0-2 / 4-8	60 / 50	JD, MD	No DSF
7-08-13	1010-1340	82 / 98	1-6 / 0-1	0 / 0	JD, MD	No DSF
7-10-13	1000-1330	86 / 93	0-1 / 4-12	15 / 5	JD, MD	No DSF
7-18-13	1030-1400	77 / 80	0-1 / 0-3	0 / 0	JD, MD	No DSF
7-20-13	1030-1400	76 / 83	0-2 / 0-1	80 / 95	JD, MD	No DSF
7-22-13	1000-1330	79 / 90	1-3 / 8-12	0 / 5	JD, MD	No DSF
7-24-13	1000-1330	78 / 89	2-4 / 1-7	0 / 5	JD, MD	No DSF
8-01-13	1000-1330	71 / 85	1-3 / 2-5	5 / 10	JD, MD	No DSF
8-03-13	1030-1400	73 / 83	0-4 / 4-8	5 / 40	JD, MD	No DSF
8-05-13	1000-1330	74 / 87	0-3 / 2-7	0 / 0	JD, MD	No DSF
8-07-13	1000-1330	71 / 80	0-3 / 5-8	0 / 0	JD, MD	No DSF
8-15-13	1020-1350	81 / 94	0-5 / 4-12	0 / 5	JD, MD	No DSF
8-17-13	1030-1400	86 / 97	0-3 / 4-7	0 / 0	JD, MD	No DSF
8-19-13	1015-1345	76 / 85	1-4 / 5-9	10 / 30	JD, MD	No DSF
8-21-13	1000-1330	83 / 93	0-1 / 3-6	0 / 10	JD, MD	No DSF
8-29-13	1030-1400	88 / 102	0-2 / 1-4	75 / 50	JD, MD	No DSF
8-31-13	1030-1400	84 / 95	0-4 / 0-3	75 / 40	JD, MD	No DSF
9-02-13	1015-1345	82 / 95	0-2 / 1-4	0 / 25	JD, MD	No DSF
9-04-13	1000-1330	90 / 101	0-2 / 5-8	5 / 20	JD, MD	No DSF

Table 1: 2013 Survey Information

Date	Time PST	Temp °F Begin / End	Wind Speed (mph)	Cloud Cover (%)	Biologist	Results
9-12-13	1030-1400	77 / 90	0-2 / 3-7	20 / 10	JD, MD	No DSF
9-14-13	1015-1345	81 / 97	0-2 / 5-7	0 / 0	JD, MD	No DSF
9-16-13	1030-1400	76 / 94	0-1 / 3-8	0 / 0	JD, MD	No DSF
9-18-13	1020-1350	70 / 82	1-4 / 3-8	90 / 0	JD, MD	No DSF

- JD = John Dicus; MD = Melanie Dicus; DSF = Delhi Sands Fly

SECTION 4.0 – CONCLUSIONS

The Circle City Project was surveyed per the guidelines established in USFWS survey protocol (as amended by the 2004 letter) for the presence/absence of the Delhi Sands fly during the 2013 focused survey season. No Delhi Sands flies were detected.

SECTION 5.0 – DSF SURVEY SIGNATURE PAGE

**±55-acre Circle City Project
Riverside and San Bernardino Counties, California
October 6, 2013**

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



_____ **Date: October 6, 2013**

John W. Dicus, Biologist
P.O. Box 1333
Black Canyon City, Arizona 85324



_____ **Date: October 6, 2013**

Melanie R. Dicus, Biologist
P.O. Box 1333
Black Canyon City, Arizona 85324

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- 1967 *Corona North* Quadrangle 7.5-Minute Topographic Map (Photorevised 1981).

APPENDIX A – SITE PHOTOGRAPHS



APPENDIX A – SITE PHOTOGRAPHS



Photo 1. View of \pm 16-acre survey area north of SCE substation, facing southwest (above).



Photo 2. View of \pm 16-acre survey area south of Mira Loma substation, facing northeast (above).

APPENDIX A – SITE PHOTOGRAPHS



Photo 3. View of \pm 9-acre survey area northeast of Eucalyptus and Sumner Avenues, facing north (above).



Photo 4. View of \pm 9-acre survey area west of Sumner Avenue, facing west (above).

APPENDIX A – SITE PHOTOGRAPHS



Photo 5. View of ± 17-acre survey area north of Harrison Avenue, facing southwest (above).

APPENDIX B – WILDLIFE SPECIES LIST



APPENDIX B: WILDLIFE SPECIES OBSERVED

Scientific Name	Common Name
CLASS INSECTA	INSECTS
DIPTERA	TRUE FLIES
ASILIDAE	ROBBER FLIES
<i>Efferia albibarbis</i>	Robber Fly
<i>Mallophora faulx</i>	Bumblebee Robber Fly
<i>Promachus aldrichii</i>	Robber Fly
<i>Stenopogon brevisusculus</i>	Robber Fly
Unidentified	Robber Fly
BAETIDAE	MAYFLIES
Unidentified	May Fly
BOMBYLIDAE	BEE FLIES
<i>Poecilanthrax</i> sp.	Bee Fly
<i>Toxophora pellucida</i>	Bee Fly
<i>Villa atrata</i>	Black Bee Fly
Unidentified	Bee Fly
CALLIPHORIDAE	BLOW FLIES
<i>Eucalliphora lilaea</i>	Common Blow Fly
<i>Phaenicia sericata</i>	Green Blow Fly
CONOPIIDAE	THICK-HEADED FLIES
<i>Physocephala texana</i>	Thick-headed Fly
DOLICHOPIDAE	LONG-LEGGED FLIES
<i>Condylostylus</i> sp.	Long-legged Fly
MUSCIDAE	HOUSE FLIES
<i>Musca domestica</i>	House Fly
MYDIDAE	MYDAS FLIES
<i>Nemomydas pantherinus</i>	Mydas Fly
SARCOPHAGIDAE	FLESH FLIES
<i>Sarcophaga</i> sp.	Flesh Fly
Unidentified	Flesh Fly
SYRPHIDAE	HOVER FLIES
<i>Allograptia obliqua</i>	Hover Fly
<i>Eristalis tenax</i>	Drone Fly
<i>Metasyrphus americanus</i>	American Hover Fly
<i>Volucella mexicana</i>	Cactus Fly
TABANIDAE	HORSE FLIES
<i>Tabanus punctifer</i>	Horse Fly
TACHINIDAE	TACHINA FLIES

Delhi Sands Flower-Loving Fly Presence/Absence Survey
 Circle City Substation and Transmission Line Project
 Riverside and San Bernardino Counties, California

Scientific Name	Common Name
Unidentified	Tachinid Fly
TIPULIDAE	CRANE FLIES
<i>Nephrotoma</i> sp.	Crane Fly
HYMENOPTERA	ANTS, BEES, WASPS
ANDRENIDAE	NONPARASITIC BEES
<i>Perdita</i> sp.	Mining Bee
APIDAE	BEE FAMILY
<i>Apis mellifera</i>	Honey Bee
<i>Melissodes</i> sp.	Long-horned Bee
<i>Xylocopa varipuncta</i>	Carpenter Bee
CHRYSIDIDAE	CUCKOO WASPS
<i>Parnopes edwardsii</i>	Edwards' Cuckoo Wasp
CRABRONIDAE	WASPS
<i>Bembix americana</i>	Sand Wasp
<i>Bembix comata</i>	Western Sand Wasp
<i>Bicyrtes</i> sp.	Crabronid Wasp
<i>Eucerceris insignis</i>	Crabronid Wasp
<i>Hoplisoides</i> sp.	Crabronid Wasp
<i>Philanthus multimaculatus</i>	Crabronid Wasp
<i>Philanthus ventilabris</i>	Crabronid Wasp
HALICTIDAE	SWEAT BEES
<i>Agapostemon</i> sp.	Green Sweat Bee
<i>Nomia nevadensis</i>	Alkali Bee
ICHNEUMONIDAE	ICHNEUMON FLIES
Unidentified	Ichneumon Wasp
MEGACHILIDAE	MASON BEES
<i>Megachile</i> sp.	Leafcutter Bee
MUTILLIDAE	VELVET ANTS
<i>Dasymutilla californica</i>	Velvet Ant
<i>Dasymutilla coccineohirta</i>	Velvet Ant
SCOLIIDAE	SCOLIID WASPS
<i>Campsomeris tolteca</i>	Toltec Scoliid
SPHECIDAE	THREAD-WAISTED WASPS
<i>Ammophila</i> sp.	Thread-waisted Wasp
<i>Chalybion californicus</i>	Blue Mud Wasp
<i>Chlorion aerarium</i>	Blue Cricket Hunter
<i>Prionyx</i> sp.	Thread-waisted Wasp
<i>Sceliphron caementarium</i>	Black and Yellow Mud Dauber
VESPIDAE	WASPS

*Delhi Sands Flower-Loving Fly Presence/Absence Survey
Circle City Substation and Transmission Line Project
Riverside and San Bernardino Counties, California*

Scientific Name	Common Name
<i>Euodynerus annulatum</i>	Potter Wasp
<i>Polistes apachus</i>	Paper Wasp
<i>Polistes exclamans</i>	Paper Wasp
<i>Polistes fuscatus</i>	Golden Paper Wasp
<i>Vespula pennsylvanica</i>	Yellow Jacket Wasp
COLEOPTERA	BETLES
CARABIDAE	GROUND BEETLES
Unidentified	Ground Beetle
COCCONELLIDAE	SMALL BEETLES
<i>Coccinella</i> sp.	Ladybird Beetle
<i>Hippodamia convergens</i>	Convergent Ladybird
CHRYSOMELIDAE	LEAF BEETLES
<i>Diabrotica balteata</i>	Banded Cucumber Beetle
<i>Diabrotica undecimpunctata</i>	Spotted Cucumber Beetle
<i>Lema trilineata</i>	Three-lined Potato Beetle
<i>Coscinoptera aeneipennis</i>	Hunch-backed Leaf Beetle
CURCULIONIDAE	TRUE WEEVILS
Unidentified	Weevil
DERMESTIDAE	SKIN BEETLES
Unidentified	Skin Beetle
HYDRPHILIDAE	SCAVENGER BEETLES
Unidentified	Water Scavenger Beetle
SCARABAEIDAE	SCARAB BEETLES
<i>Cotinus mutabilis</i>	Green June Beetle
TENEBRIONIDAE	DARKLING BEETLES
<i>Eleodes</i> sp.	Darkling Beetle
ZOPERIDAE	IRONCLAD BEETLES
Unidentified	Iron Clad Beetle
HEMIPTERA	TRUE BUGS
LYGAEIDAE	MILKWEED BUGS
<i>Lygaeus kalmii</i>	Small Milkweed Bug
PENTATOMIDAE	STINK BUGS & SHIELD BUGS
<i>Bagrada hilaris</i>	African Harlequin Bug
<i>Chlorochroa uhleri / sayi</i>	Uhler's/Say's Stink Bug
<i>Trichopepla aurora</i>	Stink Bug
REDUVIIDAE	ASSASSIN BUGS, AMBUSH BUGS & THREAD-LEGGED BUGS
<i>Apiomeris</i> sp.	Assassin Bug
<i>Rhynocoris ventralis</i>	Assassin Bug

Delhi Sands Flower-Loving Fly Presence/Absence Survey
 Circle City Substation and Transmission Line Project
 Riverside and San Bernardino Counties, California

Scientific Name	Common Name
<i>Zelus tetracanthus</i>	Assassin Bug
HOMOPTERA	APHIDS, CICADAS, HOPPERS
APHIDIDAE	APHIDS
Unidentified	Aphid
CERCOPIIDAE	SPITTLEBUGS
Unidentified	Spittle bug
CICADIDAE	CICADAS
Unidentified	Cicada
PSYLLIDAE	JUMPING PLANT LOUSE
<i>Glycaspis brimblecombei</i>	Red Gum Lerp Psyllid
NEUROPTERA	NET-WINGED INSECTS
CHRYSOPIDAE	GREEN LACEWINGS
Unidentified	Green Lacewing
MYMELEONTIDAE	ANTLIONS
<i>Brachyneumurus</i> sp.	Antlion
<i>Myrmeleon</i> sp.	Antlion
DERMAPTERA	EARWIGS
FORFICULIDAE	EARWIGS
<i>Forficula auricularia</i>	European Earwig
ORTHOPTERA	GRASSHOPPERS, KATYDIDS, MANTIDS
ACRIDIDAE	GRASSHOPPERS
<i>Schistocerca nitens</i>	Gray Bird Grasshopper
<i>Schistocerca</i> sp.	Bird Grasshopper
<i>Trimerotropis pallidipennis</i>	Pallid-winged Grasshopper
<i>Trimerotropis</i> sp.	Short-horned Grasshopper
Unidentified	Short-horned Grasshopper
GRYLLIDAE	TRUE CRICKETS
<i>Gryllus</i> sp.	Tree Cricket
TETTIGONIIDAE	BUSH CRICKETS
Unidentified	Katydid Family
MANTIDAE	PRAYING MANTISES
<i>Iris oratoria</i>	Mediterranean Mantis
<i>Stagmomantis californica</i>	California Mantis
ODONATA	DRAGONFLIES, DAMSELFLIES
AESHNIDAE	THE HAWKERS
<i>Aeshna multicolor</i>	Blue-eyed Darner
<i>Anax junius</i>	Common Green Darner
CALOPTERYGIDAE	DAMSELFLIES
<i>Hetaerina americana</i>	American Rubyspot

Delhi Sands Flower-Loving Fly Presence/Absence Survey
 Circle City Substation and Transmission Line Project
 Riverside and San Bernardino Counties, California

Scientific Name	Common Name
COENAGRIONIDAE	NARROW-WINGED DAMSELFLIES
<i>Argia</i> sp.	Dancer
<i>Enallagma</i> sp.	Bluet
LIBELLULIDAE	SKIMMERS OR PERCHERS
<i>Libellula saturata</i>	Red Skimmer
<i>Pachydiplax longipennis</i>	Blue Dasher
<i>Pantala flavescens</i>	Wandering Glider
<i>Perithemis intensa</i>	Mexican Amberwing
<i>Sympetrum corruptum</i>	Variegated Meadowhawk
<i>Tramea lacerata</i>	Black Saddlebags
LEPIDOPTERA	BUTTERFLIES, MOTHS
ARCTIIDAE	WOOLLY BEARS
Unidentified	Tiger Moth
HESPERIIDAE	SKIPPER
<i>Atalopedes campestris</i>	Sachem
<i>Hylephila phyleus</i>	Fiery Skipper
<i>Lerodea eufala</i>	Eufala Skipper
<i>Pyrgus albescens</i>	Common Checkered-Skipper
LYCAENIDAE	GOSSAMER-WINGED BUTTERFLIES
<i>Brephidium exilis</i>	Pygmy Blue
<i>Leptotes marina</i>	Marine Blue
<i>Strymon melinus</i>	Common Hairstreak
NOCTUIDAE	OWLET MOTHS
Unidentified	Noctuid Moth
NYMPHALIDAE	BRUSH-FOOTED BUTTERFLIES
<i>Limenitis lorquini</i>	Lorquin's Admiral
<i>Nymphalis antiopa</i>	Mourning Cloak
<i>Precis coenia</i>	Common Buckeye
<i>Vanessa annabella</i>	West Coast Lady
<i>Vanessa cardui</i>	Painted Lady
PIERIDAE	WHITES, SULPHURS, YELLOWS
<i>Colias eurytheme</i>	Alfalfa Sulfur
<i>Pontia protodice</i>	Checkered White
<i>Pieris rapae</i>	Cabbage White
PAPILIONIDAE	SWALLOWTAILS
<i>Papilio cresphontes</i>	Giant Swallowtail
<i>Papilio rutulus</i>	Western Tiger Swallowtail
PYRALIDAE	SNOUT MOTHS
Unidentified	Snout Moth

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Scientific Name	Common Name
SESIIDAE	CLEARWING MOTHS
<i>Paranthrene robiniae</i>	Western Poplar Clearwing Moth
SPHINGIDAE	HAWK MOTHS, SPHINX MOTHS and HORNWORMS
Sphingidae	hawk moths, sphinx moths, and hornworms
<i>Manducta sexta</i>	Tomato Hornworm Moth
ISOPODA	WOODLICE
ARMADILLIDAE	PILLBUGS
Unidentified	Pillbug
ARACHNIDA	SPIDERS
ARANEIDAE	ORB WEAVER SPIDERS
<i>Argiope trifasciata</i>	Banded Garden Spider
DIPLURIDAE	FUNNEL-WEB TARANTULAS
Unidentified	Funnel Web Spider
OXYOPIDAE	LYNX SPIDERS
<i>Peucetia viridans</i>	Green Lynx Spider
SALTICIDAE	JUMPING SPIDERS
<i>Phidippus formosus</i>	Jumping Spider
Unidentified	Jumping Spider
THOMISIDAE	CRAB SPIDERS
Unidentified	Crab Spider
CLASS REPTILIA	REPTILES
PHRYNOSOMATIDAE	ZEBRA-TAILED, EARLESS, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, AND HORNED LIZARDS
<i>Sceloporus occidentalis</i>	western fence lizard
<i>Uta stansburiana</i>	side-blotched lizard
COLUBRIDAE	COLUBRID SNAKES
<i>Masticophis flagellum piceus</i>	red coachwhip
CLASS AVES	BIRDS
PHALACROCORACIDAE	CORMORANTS
<i>Phalacrocorax auritus</i>	double-crested cormorant
ARDEIDAE	HERONS, BITTERNS
<i>Bubulcus ibis</i>	cattle egret
<i>Ardea alba</i>	great egret
THRESKIORNITHIDAE	IBISES
<i>Plegadis chihi</i>	white-faced ibis
ANATIDAE	DUCKS, GEESE, SWANS
<i>Anas platyrhynchos</i>	Mallard

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Scientific Name	Common Name
CATHARTIDAE	NEW WORLD VULTURES
<i>Cathartes aura</i>	turkey vulture
ACCIPITRIDAE	HAWKS, KITES, EAGLES
<i>Accipiter cooperii</i>	Cooper's hawk
<i>Accipiter striatus</i>	sharp-shinned hawk
<i>Buteo jamaicensis</i>	red-tailed hawk
FALCONIDAE	FALCONS
<i>Falco sparverius</i>	American kestrel
RALLIDAE	RAILS, GALLINULES, COOTS
<i>Fulica americana</i>	American coot
<i>Gallinula galeata</i>	Common Gallinule
CHARADRIIDAE	PLOVERS
<i>Charadrius vociferus</i>	killdeer
<i>Pluvialis squatarola</i>	black-bellied plover
RECURVIROSTRIDAE	STILTS & AVOCETS
<i>Himantopus mexicanus</i>	black-necked stilt
<i>Recurvirostra americana</i>	American avocet
SCOLOPACIDAE	SANDPIPERS
<i>Actitis macularius</i>	spotted sandpiper
<i>Calidris mauri</i>	western sandpiper
<i>Limnodromus scolopaceus</i>	long-billed dowitcher
<i>Phalaropus tricolor</i>	Wilson's phalarope
COLUMBIDAE	PIGEONS & DOVES
<i>Columba livia</i>	rock pigeon*
<i>Streptopelia decaocto</i>	Eurasian Collared-Dove*
<i>Zenaida macroura</i>	mourning dove
APODIDAE	SWIFTS
<i>Aeronautes saxatalis</i>	white-throated swift
TROCHILIDAE	HUMMINGBIRDS
<i>Calypte anna</i>	Anna's hummingbird
<i>Selasphorus rufus</i>	rufous hummingbird
PICIDAE	WOODPECKERS
<i>Colaptes auratus</i>	northern flicker
<i>Picoides nuttallii</i>	Nuttall's woodpecker
TYRANNIDAE	TYRANT FLYCATCHERS
<i>Myiarchus cinerascens</i>	ash-throated flycatcher
<i>Sayornis nigricans</i>	black phoebe
<i>Sayornis saya</i>	Say's phoebe
<i>Tyrannus verticalis</i>	western kingbird

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Scientific Name	Common Name
<i>Tyrannus vociferans</i>	Cassin's kingbird
ALAUDIDAE	LARKS
<i>Eremophila alpestris</i>	horned lark
HIRUNDINIDAE	SWALLOWS
<i>Petrochelidon pyrrhonota</i>	cliff swallow
<i>Hirundo rustica</i>	barn swallow
CORVIDAE	JAYS & CROWS
<i>Corvus brachyrhynchos</i>	American crow
<i>Corvus corax</i>	common raven
AEGITHALIDAE	BUSHTITS
<i>Psaltriparus minimus</i>	bushtit
TROGLODYTIDAE	WRENS
<i>Thryomanes bewickii</i>	Bewick's wren
<i>Troglodytes aedon</i>	house wren
SYLVIIDAE	OLD WORLD WARBLERS
<i>Chamaea fasciata</i>	wrenit
MIMIDAE	MOCKINGBIRDS, THRASHERS
<i>Mimus polyglottos</i>	northern mockingbird
LANIIDAE	SHRIKES
<i>Lanius ludovicianus</i>	loggerhead shrike
STURNIDAE	STARLINGS
<i>Sturnus vulgaris</i>	European starling*
PARULIDAE	WOOD WARBLERS
<i>Setophaga petechia</i>	yellow warbler
<i>Geothlypis trichas</i>	common yellowthroat
ICTERIDAE	BLACKBIRDS
<i>Agelaius phoeniceus</i>	red-winged blackbird
<i>Euphagus cyanocephalus</i>	Brewer's blackbird
<i>Icterus cucullatus</i>	hooded oriole
<i>Icterus bullockii</i>	Bullock's oriole
<i>Molothrus ater</i>	brown-headed cowbird*
EMBERIZIDAE	EMBERIZIDS
<i>Melospiza melodia</i>	song sparrow
<i>Melospiza crissalis</i>	California towhee
<i>Pipilo maculatus</i>	spotted towhee
CARDINALIDAE	CARDINALS
<i>Pheucticus melanocephalus</i>	black-headed grosbeak
<i>Passerina caerulea</i>	blue grosbeak
FRINGILLIDAE	FINCHES

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Scientific Name	Common Name
<i>Spinus psaltria</i>	lesser goldfinch
<i>Carpodacus mexicanus</i>	house finch
PASSERIDAE	OLD WORLD SPARROWS
<i>Passer domesticus</i>	house sparrow*
PHASIANIDAE	PHEASANTS, PARTRIDGES, JUNGLEFOWL, CHICKENS
<i>Pavo cristatus</i>	Common peafowl*
PSITTACIDAE	AFRICAN PARROTS
<i>Melopsittacus undalatus</i>	Budgerigar*
CLASS MAMMALIA	MAMMALS
LEPORIDAE	HARES & RABBITS
<i>Lepus californicus</i>	black-tailed jackrabbit
<i>Sylvilagus audubonii</i>	desert cottontail
SCIURIDAE	SQUIRRELS
<i>Spermophilus beecheyi</i>	California ground squirrel
GEOMYIDAE	POCKET GOPHERS
<i>Thomomys bottae</i>	Botta's pocket gopher
CANIDAE	WOLVES & FOXES
<i>Canis familiaris</i>	domestic dog*
FELIDAE	CATS
<i>Lynx rufus</i>	bobcat

* Non-native species

APPENDIX C – VASCULAR PLANT LIST



APPENDIX C: PLANT SPECIES OBSERVED

Scientific Name	Common Name
ANGIOSPERMS (EUDICOTS)	
AMARANTHACEAE	AMARANTH FAMILY
<i>Amaranthus albus</i> *	tumbling pigweed
<i>Amaranthus palmeri</i>	Palmer's amaranth
ASTERACEAE	SUNFLOWER FAMILY
<i>Ambrosia acanthicarpa</i>	annual bur-sage
<i>Ambrosia psilostachya</i>	western ragweed
<i>Artemisia californica</i>	California sagebrush
<i>Artemisia douglasiana</i>	mugwort
<i>Baccharis pilularis</i>	coyote brush
<i>Baccharis salicifolia</i> subsp. <i>salicifolia</i>	mule fat
<i>Carduus pycnocephalus</i> subsp. <i>pycnocephalus</i> *	Italian thistle
<i>Centaurea melitensis</i> *	toocalote
<i>Cirsium vulgare</i> *	bull thistle
<i>Encelia farinosa</i>	brittlebush
<i>Erigeron bonariensis</i> *	flax-leaved horseweed
<i>Helianthus annuus</i>	common sunflower
<i>Heterotheca grandiflora</i>	telegraph weed
<i>Isocoma menziesii</i>	coast goldenbush
<i>Lactuca serriola</i> *	prickly lettuce
<i>Sonchus oleraceus</i> *	common sow thistle
<i>Verbesina encelioides</i> subsp. <i>exauriculata</i>	golden crownbeard
<i>Xanthium spinosum</i>	spiny cocklebur
<i>Xanthium strumarium</i>	cocklebur
BORAGINACEAE	BORAGE FAMILY
<i>Amsinckia intermedia</i>	Rancher's fiddleneck
<i>Heliotropium curassavicum</i> var. <i>oculatum</i>	salt heliotrope
<i>Phacelia ramosissima</i>	branching phacelia
BRASSICACEAE	MUSTARD FAMILY
<i>Brassica rapa</i> *	field mustard
<i>Hirschfeldia incana</i> *	shortpod mustard
<i>Lepidium latifolium</i> *	peppergrass
<i>Sisymbrium</i> sp.	mustard
CACTACEAE	CACTUS FAMILY
<i>Opuntia littoralis</i>	coastal prickly pear
CHENOPODIACEAE	GOOSEFOOT FAMILY

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Scientific Name	Common Name
<i>Atriplex suberecta</i> *	peregrine saltbush
<i>Chenopodium</i> sp.	goosefoot
<i>Kochia scoparia</i> *	Mexican fireweed
<i>Salsola tragus</i> *	Russian thistle
CONVOLVULACEAE	MORNING-GLORY FAMILY
<i>Cuscuta</i> sp.	Dodder
CUCURBITACEAE	GOURD FAMILY
<i>Cucurbita palmata</i>	coyote melon
EUPHORBIACEAE	SPURGE FAMILY
<i>Chamaesyce albomarginata</i>	rattlesnake weed
<i>Chamaesyce serpens</i> *	creeping spurge
<i>Croton setigerus</i>	dove weed
FABACEAE	LEGUME FAMILY
<i>Melilotus albus</i> *	white sweetclover
GERANIACEAE	GERANIUM FAMILY
<i>Erodium cicutarium</i> *	red-stemmed filaree
JUGLANDACEAE	WALNUT FAMILY
<i>Juglans californica</i>	California black walnut
LAMIACEAE	MINT FAMILY
<i>Marrubium vulgare</i> *	horehound
MALVACEAE	MALLOW FAMILY
<i>Abutilon theophrasti</i>	velvetleaf*
<i>Malva parviflora</i> *	cheeseweed
MARTYNIACEAE	UNICORN-PLANT FAMILY
<i>Proboscidea louisianica</i> ssp. <i>louisianica</i>	unicorn-plant
POLYGONACEAE	BUCKWHEAT FAMILY
<i>Polygonum aviculare</i> subsp. <i>depressum</i> *	common knotweed, doorweed
<i>Rumex crispus</i> *	curly dock
PORTULACACEAE	PURSLANE FAMILY
<i>Portulaca oleracea</i> *	common purslane
SALICACEAE	WILLOW FAMILY
<i>Salix laevigata</i>	red willow
<i>Salix lasiolepis</i>	arroyo willow
SIMAROUBACEAE	QUASSIA FAMILY
<i>Ailanthus altissima</i> *	tree of heaven
SOLANACEAE	NIGHTSHADE FAMILY
<i>Datura wrightii</i>	jimson weed
<i>Nicotiana glauca</i> *	tree tobacco
<i>Solanum americanum</i>	small-flowered nightshade

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Scientific Name	Common Name
<i>Solanum elaeagnifolium</i> *	white horse-nettle
<i>Solanum rostratum</i> *	buffalo berry
<i>Solanum triflorum</i>	cut-leaf nightshade*
URTICACEAE	NETTLE FAMILY
<i>Urtica dioica</i> subsp. <i>holosericea</i>	hoary nettle
ZYGOPHYLLACEAE	CALTROP FAMILY
<i>Tribulus terrestris</i> *	puncture vine
ANGIOSPERMS (MONOCOTS)	
ARECACEAE	PALM FAMILY
<i>Washingtonia</i> sp.	fan palm
POACEAE	GRASS FAMILY
<i>Arundo donax</i> *	giant reed
<i>Avena</i> sp.*	wild oat
<i>Bromus diandrus</i> *	ripgut grass
<i>Bromus madritensis</i> subsp. <i>madritensis</i> *	foxtail chess
<i>Cynodon dactylon</i> *	Bermuda grass
<i>Echinochloa</i> sp.	jungle rice*
<i>Hordeum</i> sp.	Mediterranean barley*
<i>Schismus barbatus</i> *	Mediterranean schismus

* Non-native species

APPENDIX D – FIELD NOTES



Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLECITY Portion of Site Surveyed: AW Acreage Surveyed: ~70 Date: 07-04-13 DSF Detected: Y N
 Temperature in °F (Start/End): 76 / 87 Cloud Cover (Start/End): 0 / 0 Biologist: JOHN DICUS Time (Start/End): 1005 / 1035
 Arthropod Species Observed: Wind Speed in mph (Start/End): 2-3 / 3-7 Biologist: MELANIE DICUS Time (Start/End): 1005 / 1035

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolasia</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Efferia albarbaris</i> <input type="checkbox"/> <i>Mollopora faitrix</i> <input type="checkbox"/> <i>Proctocanthus</i> sp. <input type="checkbox"/> <i>Saropogon brevisculus</i> <input type="checkbox"/> <i>Stenopogon</i> (May Flies) <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa</i> sp. <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythicomya</i> sp. <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax</i> sp. <input type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenax simpson</i> <input type="checkbox"/> <i>Calliphora</i> sp. <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae</i> sp. <input type="checkbox"/> <i>Physocphala texana</i> <input type="checkbox"/> <i>Culicidae</i> - mosquitoes <input type="checkbox"/> <i>Cuterebridae</i> <input checked="" type="checkbox"/> <i>Agapostemon</i> sp. <input type="checkbox"/> <i>Condylosylus</i> sp. <input type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga</i> sp. <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Tolucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon</i> sp. <input type="checkbox"/> <i>Dasyutilla coccineohirta</i> <input type="checkbox"/> <i>Dasyutilla californica</i> <input type="checkbox"/> <i>Dasyutilla sackeni</i> (fg.) <input type="checkbox"/> <i>Dasyutilla clyemnestra</i> <input type="checkbox"/> <i>Campomeris tolteca</i> <input type="checkbox"/> <i>Trielis alcione</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pepsis mildi</i> <input checked="" type="checkbox"/> <i>Pepsis</i> sp. <input type="checkbox"/> <i>Amnophila alberti</i> <input checked="" type="checkbox"/> <i>Amnophila</i> sp. <input type="checkbox"/> <i>Bembix americana</i> <input checked="" type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanapsis</i> <input type="checkbox"/> <i>Bicytes</i> sp. <input type="checkbox"/> <i>Cerceris</i> sp. <input checked="" type="checkbox"/> <i>Chalybion californicus</i> <input checked="" type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisoides diversus</i> <input type="checkbox"/> <i>Hoplisoides</i> sp. <input type="checkbox"/> <i>Isodonti elegans</i> <input checked="" type="checkbox"/> <i>Microbembix californicus</i> <input checked="" type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Philanthus ventilabris</i> <input type="checkbox"/> <i>Podalonia</i> sp. <input checked="" type="checkbox"/> <i>Prionyx foxi</i> <input checked="" type="checkbox"/> <i>Prionyx</i> sp. <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Stizoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae</i> - unidentified <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Euodynerus annulata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<p>Bees</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Anthophoridae</i> <input type="checkbox"/> <i>Anthophora urbana</i> <input type="checkbox"/> <i>Melissodes</i> sp. <input type="checkbox"/> <i>Xylocopa varipuncta</i> <input checked="" type="checkbox"/> <i>Apis mellifera</i> <input type="checkbox"/> <i>Bombus californicus</i> <input type="checkbox"/> <i>Bombus craticulatus</i> <input type="checkbox"/> <i>Bombus sonorus</i> <input type="checkbox"/> <i>Bombus vosnesenskii</i> <input type="checkbox"/> <i>Halictidae</i> <input checked="" type="checkbox"/> <i>Agapostemon</i> sp. <input type="checkbox"/> <i>Nomia nevadensis</i> <input type="checkbox"/> <i>Megachilidae</i> <input type="checkbox"/> <i>Dianthidium</i> sp. <input type="checkbox"/> <i>Megachile</i> sp. <input type="checkbox"/> <i>Perdita</i> sp. <p>Wasps</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chalcididae</i> <input type="checkbox"/> <i>Chrysididae</i> <input checked="" type="checkbox"/> <i>Euryura pacifica</i> <input type="checkbox"/> <i>Parnopes edwardsii</i> <input type="checkbox"/> <i>Ichneumonidae</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> ISAVI <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus</i> sp. <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichopepla aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Apiomeris crassipes</i> <input type="checkbox"/> <i>Rhynocoris ventralis</i> <input checked="" type="checkbox"/> <i>Zelus tetracanthus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elatridae</i> (Click Beetles) <input type="checkbox"/> <i>Chrysomelidae</i> <input type="checkbox"/> <i>Diabrotica balteata</i> <input type="checkbox"/> <i>D. undecimpunctata</i> <input type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymela laticollis</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Halplidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops</i> sp. <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosaigona flavipenne</i> <input type="checkbox"/> <i>Macrosaigona</i> sp. <input type="checkbox"/> <i>Seraphidae</i> <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracotalpa</i> sp. <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> <i>Tenebrionidae</i> <input checked="" type="checkbox"/> <i>Eleodes</i> sp. <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Lygaeidae</i> <input type="checkbox"/> <i>Lygaeus kalmii</i> <input type="checkbox"/> <i>Pyrrhocoridae</i> <input type="checkbox"/> <i>Largus cinctus</i> 	<p>Chrysopidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopa</i> sp. <p>Myrmeleontidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Brachyneururus</i> sp. <input type="checkbox"/> <i>Myrmeleon</i> sp. <p>Raphidiidae (Snakeflies)</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Atalopodes campestris</i> <input type="checkbox"/> <i>Erynnis funeralis</i> <input type="checkbox"/> <i>Helopterus erectorum</i> <input type="checkbox"/> <i>Hylephila phyllus</i> <input type="checkbox"/> <i>Lerodea eufala</i> <input type="checkbox"/> <i>Paratrytone melane</i> <input type="checkbox"/> <i>Polites sabuleti</i> <input checked="" type="checkbox"/> <i>Pteropus albescens</i> <input checked="" type="checkbox"/> <i>Papilio cresphontes</i> <input checked="" type="checkbox"/> <i>Papilio rutulus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Forficula auricularia</i> <p>Acrididae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Leprus intermedius</i> <input type="checkbox"/> <i>Melanoplus</i> sp. <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca</i> sp. 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Trimerotropis californica</i> <input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i> <input checked="" type="checkbox"/> <i>Gryllus</i> sp. <input type="checkbox"/> <i>Oecanthus fulvoni</i> <input type="checkbox"/> <i>Tettigoniidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input type="checkbox"/> <i>Scudderia mexicana</i> <input type="checkbox"/> <i>Stenopelmatus</i> sp. <input type="checkbox"/> <i>Iris oratoria</i> <input type="checkbox"/> <i>Stagmomantis californica</i> <input type="checkbox"/> <i>Parabacillus hesperis</i> <p>Odonata:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aeshna multicolor</i> <input checked="" type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Abellula croceipennis</i> <input checked="" type="checkbox"/> <i>Libellula saturata</i> <input checked="" type="checkbox"/> <i>Pantala flavescens</i> <input type="checkbox"/> <i>Perithemis intensa</i> <input type="checkbox"/> <i>Progomphus borealis</i> <input checked="" type="checkbox"/> <i>Sympetrum corruptum</i> <input type="checkbox"/> <i>Sympetrum illotum</i> <input type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea onusta</i> <input type="checkbox"/> <i>Argia</i> sp. <input type="checkbox"/> <i>Enallagma</i> sp. <input type="checkbox"/> <i>Telebasis salva</i> <p>Lepidoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Atalopodes campestris</i> <input type="checkbox"/> <i>Erynnis funeralis</i> <input type="checkbox"/> <i>Helopterus erectorum</i> <input type="checkbox"/> <i>Hylephila phyllus</i> <input type="checkbox"/> <i>Lerodea eufala</i> <input type="checkbox"/> <i>Paratrytone melane</i> <input type="checkbox"/> <i>Polites sabuleti</i> <input checked="" type="checkbox"/> <i>Pteropus albescens</i> <input checked="" type="checkbox"/> <i>Papilio cresphontes</i> <input checked="" type="checkbox"/> <i>Papilio rutulus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i>
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Bird Species Observed:

<u>NOMO</u>	<u>EUST</u>	<u>HOSP</u>	<u>IKLL</u>	<u>SOSP</u>	<u>EULO</u>	<u>MAU</u>	<u>SHOR</u>
<u>CAKI</u>	<u>GRBL</u>	<u>AMOR</u>	<u>WTSW</u>	<u>TUVU</u>	<u>MODD</u>	<u>RVBL</u>	<u>HOOR</u>
<u>HOFI</u>	<u>BASW</u>	<u>ANAV</u>	<u>LOSH</u>	<u>ROPI</u>	<u>RSHA</u>	<u>YFWA</u>	<u>ANRU</u>
<u>RTHA</u>	<u>BLPH</u>	<u>BNST</u>	<u>COAA</u>	<u>BASW</u>	<u>SAPH</u>	<u>LEGO</u>	<u>RVHU</u>

Other Wildlife Species Observed:

<u>CATS</u>	<u>COTONTAIL</u>
<u>SBLZARD</u>	
<u>LA. FENCE</u>	

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: WALLE CITY Portion of Site Surveyed: 100 Acreage Surveyed: 70 Date: 07-06-13 DSF Detected: Y N
 Temperature in °F (Start/End): 78 / 92 Cloud Cover (Start/End): 60 / 50 %Biologist: JOHN DICUS Time (Start/End): 1000 / 1330
 Arthropod Species Observed: WIND SPEED IN MPH (START/END): 0-2 / 4-8 Biologist: MELANIE DICUS Time (Start/End): 1000 / 1330

Diptera: <i>R. terminatus abdominalis</i> <i>Apiocera chrysolasta</i> <i>Apiocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input checked="" type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Efferia alabarbaris</i> <i>Malloflora faitrix</i> <i>Proctocanthus sp.</i> <i>Saropogon luteus</i> <i>Stenopogon brevisculus</i> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <i>Bombyliidae</i> <i>Exoprosopa sp.</i> <i>Ligyra gazophylax</i> <i>Mythicomyia sp.</i> <i>Poecilanthrax arethusa</i> <i>Poecilanthrax sp.</i> <i>Toxophora pellicuda</i> <i>Villa atrata</i> <i>Zenox simpson</i> <i>Calliphora sp.</i> <i>Eucalliphora lilaia</i> <i>Phaenicia cuprina</i> <i>Phaenicia sericata</i> <i>Conopidae sp.</i> <i>Physcocephala texana</i> <i>Culicidae - mosquitoes</i> <i>Cuterebridae</i> <i>Condylostylus sp.</i> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <i>Stratiomyidae</i> <i>Syrphidae</i> <i>Allograpta obliqua</i> <i>Eristalis tenax</i> <i>Metasyphus americanus</i> <i>Tolucella mexicana</i> <i>Tabanidae</i>	<i>Ichneumon sp.</i> <input checked="" type="checkbox"/> <i>Dasyutilla coccineohirta</i> <i>Dasyutilla californica</i> <i>Dasyutilla sackeni (lg.)</i> <i>Dasyutilla cythomestra</i> <i>Campomeris tolleca</i> <i>Trielis alcione</i> <i>Pompilidae</i> <i>Pepsis mildi</i> <input checked="" type="checkbox"/> <i>Sphecidae</i> <input checked="" type="checkbox"/> <i>Ammophila alberti</i> <input checked="" type="checkbox"/> <i>Ammophila sp.</i> <input checked="" type="checkbox"/> <i>Bembix americana</i> <input checked="" type="checkbox"/> <i>Bembix comata</i> <i>Bembix melanopsis</i> <i>Bicyrtis sp.</i> <input checked="" type="checkbox"/> <i>Chalybion californicus</i> <input checked="" type="checkbox"/> <i>Chlorion aerarium</i> <i>Encerteris insignis</i> <input checked="" type="checkbox"/> <i>Hoplisoidea diversus</i> <input checked="" type="checkbox"/> <i>Hoplisoidea sp.</i> <i>Isodonti aelegans</i> <input checked="" type="checkbox"/> <i>Microbembix californicus</i> <input checked="" type="checkbox"/> <i>Philanthus multimaculata</i> <i>Philanthus ventralis</i> <i>Podalonia sp.</i> <input checked="" type="checkbox"/> <i>Prionyx foxi</i> <input checked="" type="checkbox"/> <i>Prionyx sp.</i> <input checked="" type="checkbox"/> <i>Sceliphron caementarium</i> <i>Sphex ichneumonius</i> <i>Stizoides remicinctum</i> <i>Tachytes elongatus</i> <i>Tiphidae</i> <i>Vespidae - unidentified</i> <i>Eumenes bollii</i> <i>Eumenes crucifera</i> <i>Euclyptus annulata</i> <i>Polistes apachus</i> <i>Polistes dorsalis</i> <i>Polistes exclamans</i>	<i>Polistes fuscatus aurifer</i> <i>Vespa pennsylvanica</i> Colocontera: <input checked="" type="checkbox"/> <i>Duprestidae</i> <input checked="" type="checkbox"/> <i>Carabidae</i> <i>Cerambycidae</i> <i>Coccinellidae</i> <i>Chiochorus orbis</i> <i>Coccinella sp.</i> <i>Harmonia axyridis</i> <i>Hippodamia convergens</i> <i>Olla v-nigrum</i> <i>Elatridae (Click Beetles)</i> <i>Chrysomelidae</i> <i>Diabrotica balteata</i> <input checked="" type="checkbox"/> <i>D. undecimpunctata</i> <i>Lema trilineata</i> <input checked="" type="checkbox"/> <i>Tachymela laticollis</i> <i>Curculionidae</i> <i>Halipidae</i> <i>Hydrophilidae</i> <i>Meloidae</i> <i>Nemognatha lurida apicalis</i> <i>Melyridae</i> <i>Collops sp.</i> <i>Rhipiphoridae</i> <i>Macrosaiga flavipennis</i> <i>Macrosaiga sp.</i> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <i>Paracotalpa sp.</i> <i>Staphylinus maxillosus</i> <i>Tenebrionidae</i> <input checked="" type="checkbox"/> <i>Eleodes sp.</i> Hemiptera: <i>Lygaeidae</i> <input checked="" type="checkbox"/> <i>Lygaeus kalmii</i> <i>Pyrrhocoridae</i> <i>Largus cinctus</i>	Pentatomidae <input checked="" type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri/SAYI</i> <i>Murgantia histrionica</i> <input checked="" type="checkbox"/> <i>Podisus sp.</i> <i>Dyania pallidovirens</i> <input checked="" type="checkbox"/> <i>Tricheoptera aurora</i> <input checked="" type="checkbox"/> <i>Reduviidae</i> <input checked="" type="checkbox"/> <i>Apioneris crassipes</i> <input checked="" type="checkbox"/> <i>Rhynocoris ventralis</i> <i>Zelus tetracanthus</i> Homoptera: <input checked="" type="checkbox"/> <i>Aphididae</i> <input checked="" type="checkbox"/> <i>Cercopidae</i> <i>Cicadellidae</i> <i>Homaldisca sp.?</i> <i>Cicadidae</i> <i>Dactylopiidae (Coccineal)</i> <i>Dactylopius sp.</i> <i>Membracidae</i> <i>Antanthe expansa</i> <input checked="" type="checkbox"/> <i>Psyllidae</i> <i>Glycaspis brimblecombei</i> Neuroptera: <i>Chrysopidae</i> <i>Chrysopa sp.</i> <i>Myrmeleontidae</i> <i>Brachyneururus sp.</i> <i>Myrmeleon sp.</i> <i>Raphidiidae (Snakeflies)</i> Dermaptera: <i>Forficula auricularia</i> Orthoptera: <input checked="" type="checkbox"/> <i>Acrididae</i> <i>Dissosteira pictipennis</i> <i>Lepus intermedius</i> <i>Melanoplus sp.</i> <input checked="" type="checkbox"/> <i>Schistocerca nitens</i> <input checked="" type="checkbox"/> <i>Schistocerca sp.</i>	Pieris rapae <input checked="" type="checkbox"/> <i>Pontia protodice</i> <input checked="" type="checkbox"/> <i>Brephidium exilis</i> <i>Hemargus ceramius</i> <i>Icaricia acmon</i> <i>Leptotes marina</i> <i>Strymon melinus</i> <input checked="" type="checkbox"/> <i>Apodemia mormo virgulti</i> <input checked="" type="checkbox"/> <i>Agraulis vanillae</i> <input checked="" type="checkbox"/> <i>Danaus gilippus</i> <input checked="" type="checkbox"/> <i>Danaus plexippus</i> <i>Precis coenia</i> <i>Vanessa annabella</i> <i>Vanessa atalanta</i> <i>Vanessa cardui</i> <i>Vanessa virginiensis</i> <i>Arctiidae</i> <i>Noctuidae</i> <i>Autographa californica</i> <i>Schinia</i> <i>Geometridae</i> <i>Pyralidae</i> <i>Paranitrene robiniae</i> <i>Hyles lineata</i> <i>Manduca sexta</i> Arachnida: <i>Araneidae</i> <i>Peucetia viridinis</i> <input checked="" type="checkbox"/> <i>Dipluridae</i> <input checked="" type="checkbox"/> <i>Leurogrychus pacificus</i> <input checked="" type="checkbox"/> <i>Tarodectus hesperus</i> <input checked="" type="checkbox"/> <i>Salticidae</i> <input checked="" type="checkbox"/> <i>Phidippus formosus</i> <input checked="" type="checkbox"/> <i>Thomisidae</i> <input checked="" type="checkbox"/> BALDADA HILARIS <input checked="" type="checkbox"/> DEBASTIDA <input checked="" type="checkbox"/> HEPARDIANA MEXICANA
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Bird Species Observed: EUST CAIL NUWO CALT CORA SAPH COGA LOST
HOFI GUSH RVUV AMLE ROPI BNST RWBL
HOOSP MODO ANOK AMER KUL NOMO
BASW ANMV RTRA EUCO OLPH MAU SOSP

Other Wildlife Species Observed:
CALS SBLIARD
W.FENCE BUR
CORONAL

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: AW Acreage Surveyed: ~70 Date: 07-08-13 DSF Detected: Y ^(N)
 Temperature in °F (Start/End): 82 / 98 Cloud Cover (Start/End): 0 / 0 Biologist: JOHN DICUS Time (Start/End): 1010 / 1340
 Arthropod Species Observed: Wind Speed in mph (Start/End): 1-6 / 0-1 Biologist: MELANIE DICUS Time (Start/End): 1010 / 1340

DIPTERA:	Ichneumon sp.	Pentatomidae	Trimerotropis californica	Pteris rapae
<input checked="" type="checkbox"/> <i>R. terminatus abdominalis</i>	<input checked="" type="checkbox"/> <i>Dasytomutilla coccineohirta</i>	<input checked="" type="checkbox"/> <i>Chlorochroa ligata</i>	<input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i>	<input checked="" type="checkbox"/> <i>Pontia protodice</i>
<input checked="" type="checkbox"/> <i>Apiocera chrysoloma</i>	<input checked="" type="checkbox"/> <i>Dasytomutilla californica</i>	<input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> <u>SAH</u>	<input checked="" type="checkbox"/> <i>Gryllus</i> sp.	<input checked="" type="checkbox"/> <i>Brephidium exilis</i>
<input checked="" type="checkbox"/> <i>Apiocera convergens</i>	COLEOPTERA:	<i>Murgantia histrionica</i>	<i>Oecanthus fultoni</i>	<i>Hemiaricus ceramius</i>
<input checked="" type="checkbox"/> <i>Nemomydas pantherina</i>	<input checked="" type="checkbox"/> <i>Praxistidae</i>	<i>Podisus</i> sp.	<i>Tettigoniidae</i>	<i>Icaricia acmon</i>
<input checked="" type="checkbox"/> <i>Asilidae</i>	<input checked="" type="checkbox"/> <i>Carabidae</i>	<i>Thyanta pallidivirens</i>	<i>Antianthe expansa</i>	<i>Leptotes marina</i>
<input checked="" type="checkbox"/> <i>Efferia alabarbaris</i>	<i>Cerambycidae</i>	<i>Trichoptera aurora</i>	<i>Scudderia mexicana</i>	<i>Strymon melinus</i>
<input checked="" type="checkbox"/> <i>Malloflora faurix</i>	<i>Coccinellidae</i>	<i>Reduviidae</i>	<i>Stenopelmatus</i> sp.	<i>Apodemia mormo virgulti</i>
<input checked="" type="checkbox"/> <i>Proctocanthus</i> sp.	<i>Adalia bipunctata</i>	<i>Apiomeris crassipes</i>	<i>Iris oratoria</i>	<i>Agraulis vanillae</i>
<input checked="" type="checkbox"/> <i>Stenopogon brevisculis</i>	<i>Chilocorus orbus</i>	<i>Phynocoris ventralis</i>	<i>Stagmomantis californica</i>	<i>Danaus gilippus</i>
<i>Baetidae (May Flies)</i>	<i>Coccinella</i> sp.	<input checked="" type="checkbox"/> <i>Zelus tetracanthus</i>	<i>Parabacillus hesperis</i>	<i>Danaus plexippus</i>
<input checked="" type="checkbox"/> <i>Callibaetis pacificus</i>	HYMENOPTERA:			<i>Precis coenia</i>
<input checked="" type="checkbox"/> <i>Bombyliidae</i>	<input checked="" type="checkbox"/> <i>Formicidae</i>	HOMOPTERA:	ODONATA:	<i>Vanessa annabella</i>
<i>Exoprosopa</i> sp.	<i>Iridomyrmex humilis</i>	<input checked="" type="checkbox"/> <i>Hypodamia convergens</i>	<input checked="" type="checkbox"/> <i>Aeshma multicolor</i>	<i>Vanessa atalanta</i>
<i>Ligra gazophylax</i>	<i>Formica</i> sp.	<i>Olla v-nigrum</i>	<i>Anax junius</i>	<i>Vanessa cardui</i>
<i>Mythicomomyia</i> sp.	<i>Liometopon occidentale</i>	<i>Elateridae (Click Beetles)</i>	<i>Erythemis collocata</i>	<i>Vanessa virginianensis</i>
<input checked="" type="checkbox"/> <i>Poecilanthrax arethusa</i>	<input checked="" type="checkbox"/> <i>Melessor pergandei</i>	<i>Chrysomelidae</i>	<i>Libellula croceipennis</i>	<i>Aretidae</i>
<i>Poecilanthrax</i> sp.	<input checked="" type="checkbox"/> <i>Pogonomyrmex californica</i>	<input checked="" type="checkbox"/> <i>Diabrotica balteata</i>	<i>Libellula saturata</i>	<i>Noctuidae</i>
<i>Toxophora pellucida</i>	<i>Solenopsis</i> sp.	<i>D. undecimpunctata</i>	<i>Pachylaplax longipennis</i>	<i>Autographa californica</i>
<i>Villa atrata</i>	BEES	<i>Lema trilineata</i>	<i>Pantala flavescens</i>	<i>Schinia</i>
<i>Zenox simpson</i>	<i>Anthophoridae</i>	<i>Tachymela laticollis</i>	<i>Perithemis intensa</i>	<i>Geometridae</i>
<i>Calliphora</i> sp.	<input checked="" type="checkbox"/> <i>Anthophora urbana</i>	<i>Curculionidae</i>	<i>Proglyphus borealis</i>	<i>Pyralidae</i>
<i>Eucaliphora lilaea</i>	<input checked="" type="checkbox"/> <i>Melissodes</i> sp.	<i>Haliplidae</i>	<i>Sympetrum corruptum</i>	<i>Paranthrene robiniae</i>
<i>Phaenicia cuprina</i>	<input checked="" type="checkbox"/> <i>Apis mellifera</i>	<i>Hydrophilidae</i>	<i>Sympetrum illotum</i>	<i>Hyles lineata</i>
<i>Phaenicia sericata</i>	<i>Bombus crotchii</i>	<i>Meloidae</i>	<i>Tramea lacerata</i>	<i>Manduca sexta</i>
<i>Conopidae</i> sp.	<i>Bombus sonorus</i>	<i>Nemognatha lurida apicalis</i>	<i>Tramea onusta</i>	
<i>Physoclephala texana</i>	<i>Bombus vosnesenskii</i>	<i>Melyridae</i>	<i>Argia</i> sp.	ARACHNIDA:
<i>Culicidae - mosquitoes</i>	<input checked="" type="checkbox"/> <i>Malictidae</i>	<i>Collops</i> sp.	<i>Enallagma</i> sp.	<i>Araneidae</i>
<i>Cuterebridae</i>	<input checked="" type="checkbox"/> <i>Agapostemon</i> sp.	<i>Macrosaiga flavipenne</i>	<i>Telebasis salva</i>	<i>Peucetia viridinis</i>
<i>Condylosylus</i> sp.	<i>Nomia nevadensis</i>	<i>Macrosaiga</i> sp.		<input checked="" type="checkbox"/> <i>Dipluridae</i>
<i>Drosophilidae</i>	<i>Megachilidae</i>	<i>Scarabaeidae</i>		<i>Leurocybus pacificus</i>
<input checked="" type="checkbox"/> <i>Musca domestica</i>	<i>Dianthidium</i> sp.	<input checked="" type="checkbox"/> <i>Cotinus mutabilis</i>		<i>Larodectus hesperus</i>
<i>Sarcophagidae</i>	<i>Megachile</i> sp.	<i>Paracotalpa</i> sp.		<i>Salicidae</i>
<i>Sarcophaga</i> sp.	<i>Pterididae</i>	<i>Staphylinus maxillosus</i>		<input checked="" type="checkbox"/> <i>Phidippus formosus</i>
<i>Stratiomyidae</i>	<i>Vespidae - unidentified</i>	<i>Penebiontidae</i>		<i>Thomisidae</i>
<i>Syrphidae</i>	<i>Eumenes bollii</i>	<input checked="" type="checkbox"/> <i>Eleodea</i> sp.		
<i>Allograpta obliqua</i>	<i>Famenes crucifera</i>	HEMiptera:		<i>B. HILARIS</i>
<i>Eristalis tenax</i>	<input checked="" type="checkbox"/> <i>Euothenrus annulata</i>	<i>Lygaeidae</i>		<input checked="" type="checkbox"/> PLEMAGEN'S AUBUCHII
<i>Metasymphus americanus</i>	<i>Polistes apachus</i>	<i>Lygaeus kalmii</i>		
<i>Volucella mexicana</i>	<i>Polistes dorsalis</i>	<i>Pyrhocoridae</i>		
<i>Tabanidae</i>	<i>Polistes exclamans</i>	<i>Largus cinctus</i>		

Bird Species Observed:

<u>HOSE</u>	<u>CAKI</u>	<u>WEKI</u>	<u>AMAV</u>	<u>LOSH</u>	<u>ANTU</u>	<u>LEGO</u>
<u>RVU</u>	<u>HQFI</u>	<u>NOMO</u>	<u>BRWJ</u>	<u>CORA</u>	<u>MUL</u>	<u>HOOR</u>
<u>WTHA</u>	<u>RVU</u>	<u>SAPH</u>	<u>AMCF</u>	<u>EULO</u>	<u>EWBL</u>	<u>NWUO</u>
<u>SLPT</u>	<u>KILL</u>	<u>GRIT</u>	<u>MODO</u>	<u>ROPI</u>	<u>BRBL</u>	<u>RUTU</u>

Other Wildlife Species Observed:

<u>CABS</u>	<u>W. FENCE LIZARD</u>
<u>SB LIZARD</u>	
<u>COTTONTAIL</u>	

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: AU Acreage Surveyed: 70 Date: 07-10-13 DSF Detected: Y N
 Temperature in °F (Start/End): 86 / 93 Cloud Cover (Start/End): 15% / 5% Biologist: JOHN DICUS Time (Start/End): 1000 / 1330
 Arthropod Species Observed: Wind Speed in mph (Start/End): 0-1 / 4-12 Biologist: MELANIE DICUS Time (Start/End): 1000 / 1330

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolata</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> Asilidae <input checked="" type="checkbox"/> <i>Efferia alba-barbaris</i> <input checked="" type="checkbox"/> <i>Malloflora fainrix</i> <input type="checkbox"/> <i>Proctocentrus sp.</i> <input type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Pallibaetis pacificus</i> <input checked="" type="checkbox"/> Bombyliidae <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligyrta gazophylax</i> <input type="checkbox"/> <i>Mythcomomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Villa arata</i> <input type="checkbox"/> <i>Zenax simpson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input type="checkbox"/> <i>Eucaliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physoccephala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input checked="" type="checkbox"/> <i>Condylostylus sp.</i> <input checked="" type="checkbox"/> Drosophilidae <input checked="" type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> Tabanidae 	<p><input checked="" type="checkbox"/> <i>Ichneumon sp.</i></p> <p><i>Dasyutilla coccineohirta</i></p> <p><input checked="" type="checkbox"/> <i>Dasyutilla californica</i></p> <p><i>Dasyutilla sackeni (lg.)</i></p> <p><i>Dasyutilla chytmenestra</i></p> <p><i>Campomeris toleca</i></p> <p><i>Trielis atcione</i></p> <p><i>Pompilidae</i></p> <p><i>Pepsis mildei</i></p> <p><input checked="" type="checkbox"/> <i>Pepsis sp.</i></p> <p><i>Sphecidae</i></p> <p><i>Ammophila alberti</i></p> <p><input checked="" type="checkbox"/> <i>Ammophila sp.</i></p> <p><i>Bembix americana</i></p> <p><input checked="" type="checkbox"/> <i>Bembix comata</i></p> <p><i>Bembix melanopsis</i></p> <p><i>Bicyrtis sp.</i></p> <p><i>Cerceris sp.</i></p> <p><i>Phalybion californicus</i></p> <p><input checked="" type="checkbox"/> <i>Chlorion aerarium</i></p> <p><i>Eucerceris insignis</i></p> <p><i>Hoplisoides diversus</i></p> <p><i>Hoplisoides sp.</i></p> <p><i>Isodontis aelegans</i></p> <p><i>Microbembix californicus</i></p> <p><input checked="" type="checkbox"/> <i>Philanthus multimaculata</i></p> <p><i>Philanthus ventralis</i></p> <p><i>Podalonia sp.</i></p> <p><i>Prionyx foxi</i></p> <p><input checked="" type="checkbox"/> <i>Prionyx sp.</i></p> <p><i>Scepliphron caementarium</i></p> <p><i>Sphex ichneumonius</i></p> <p><i>Stizoides remicinctum</i></p> <p><i>Tachytes elongatus</i></p> <p><i>Tiphidae</i></p> <p><input checked="" type="checkbox"/> <i>Vespidae - unidentified</i></p> <p><i>Eumenes bollii</i></p> <p><i>Eumenes crucifera</i></p> <p><i>Euodynerus annulata</i></p> <p><input checked="" type="checkbox"/> <i>Polistes apachus</i></p> <p><i>Polistes dorsalis</i></p> <p><i>Polistes exclamans</i></p>	<p>Pentatomidae</p> <p><i>Chlorochroa ligata</i></p> <p><input checked="" type="checkbox"/> <i>Chlorochroa uhleri (SAM)</i></p> <p><input checked="" type="checkbox"/> <i>Murgantia histrionica</i></p> <p><i>Podisus sp.</i></p> <p><i>Thyanta pallidivirens</i></p> <p><i>Trichopepla aurora</i></p> <p><i>Reduviidae</i></p> <p><i>Adalia bipunctata</i></p> <p><i>Chilocorus orbus</i></p> <p><i>Coccinella sp.</i></p> <p><i>Harmonia axyridis</i></p> <p><i>Hippodamia convergens</i></p> <p><i>Olla v-nigrum</i></p> <p>Elatridae (Click Beetles)</p> <p><i>Chrysomelidae</i></p> <p><i>Diabrotica balteata</i></p> <p><i>D. undecimpunctata</i></p> <p><input checked="" type="checkbox"/> <i>Lema trilineata</i></p> <p><i>Tachymela laticollis</i></p> <p>Curculionidae</p> <p>Halipidae</p> <p>Hydrophilidae</p> <p><i>Meloidae</i></p> <p><i>Melognatha lurida apicalis</i></p> <p>Melyridae</p> <p><i>Collops sp.</i></p> <p>Rhipiphoridae</p> <p><i>Macrosaigon flavipenne</i></p> <p><i>Macrosaigon sp.</i></p> <p>Scarabaeidae</p> <p><input checked="" type="checkbox"/> <i>Cotinus mutibilis</i></p> <p><i>Paracotalpa sp.</i></p> <p><i>Staphylinus maxillosus</i></p> <p>Tenebrionidae</p> <p><input checked="" type="checkbox"/> <i>Eleodes sp.</i></p> <p>Hemiptera:</p> <p>Lygaeidae</p> <p><i>Lygaeus kalmii</i></p> <p>Pyrrhocoridae</p> <p><i>Largus cinctus</i></p>	<p>Chlorochroa ligata</p> <p><input checked="" type="checkbox"/> <i>Chlorochroa uhleri (SAM)</i></p> <p><input checked="" type="checkbox"/> <i>Murgantia histrionica</i></p> <p><i>Podisus sp.</i></p> <p><i>Thyanta pallidivirens</i></p> <p><i>Trichopepla aurora</i></p> <p><i>Reduviidae</i></p> <p><i>Adalia bipunctata</i></p> <p><i>Chilocorus orbus</i></p> <p><i>Coccinella sp.</i></p> <p><i>Harmonia axyridis</i></p> <p><i>Hippodamia convergens</i></p> <p><i>Olla v-nigrum</i></p> <p>Elatridae (Click Beetles)</p> <p><i>Chrysomelidae</i></p> <p><i>Diabrotica balteata</i></p> <p><i>D. undecimpunctata</i></p> <p><input checked="" type="checkbox"/> <i>Lema trilineata</i></p> <p><i>Tachymela laticollis</i></p> <p>Curculionidae</p> <p>Halipidae</p> <p>Hydrophilidae</p> <p><i>Meloidae</i></p> <p><i>Melognatha lurida apicalis</i></p> <p>Melyridae</p> <p><i>Collops sp.</i></p> <p>Rhipiphoridae</p> <p><i>Macrosaigon flavipenne</i></p> <p><i>Macrosaigon sp.</i></p> <p>Scarabaeidae</p> <p><input checked="" type="checkbox"/> <i>Cotinus mutibilis</i></p> <p><i>Paracotalpa sp.</i></p> <p><i>Staphylinus maxillosus</i></p> <p>Tenebrionidae</p> <p><input checked="" type="checkbox"/> <i>Eleodes sp.</i></p> <p>Hemiptera:</p> <p>Lygaeidae</p> <p><i>Lygaeus kalmii</i></p> <p>Pyrrhocoridae</p> <p><i>Largus cinctus</i></p>	<p>Pentatomidae</p> <p><i>Thimerotropis californica</i></p> <p><input checked="" type="checkbox"/> <i>Thimerotropis pallidipennis</i></p> <p><input checked="" type="checkbox"/> <i>Brephidium exilis</i></p> <p><i>Hemargus cercaeus</i></p> <p><i>Icaricia acorn</i></p> <p><input checked="" type="checkbox"/> <i>Leptotes marina</i></p> <p><i>Strymon melinus</i></p> <p><i>Apodemia mormo virgultii</i></p> <p><i>Agraulis vanillae</i></p> <p><i>Danaus gilippus</i></p> <p><i>Danus plexippus</i></p> <p><input checked="" type="checkbox"/> <i>Precis coenia</i></p> <p><input checked="" type="checkbox"/> <i>Vanessa annabella</i></p> <p><i>Vanessa atalanta</i></p> <p><input checked="" type="checkbox"/> <i>Vanessa cardui</i></p> <p><i>Vanessa virginiensis</i></p> <p>Arctiidae</p> <p>Noctuidae</p> <p><i>Autographa californica</i></p> <p><i>Schinia</i></p> <p>Geometridae</p> <p>Pyralidae</p> <p><i>Paranthrene robiniae</i></p> <p><i>Hyles lineata</i></p> <p><i>Manduca sexta</i></p> <p>Arachnida:</p> <p>Araneidae</p> <p><i>Peucetia viridins</i></p> <p>Dipluridae</p> <p><input checked="" type="checkbox"/> <i>Leurogrychus pacificus</i></p> <p><input checked="" type="checkbox"/> <i>Atrodoctus hesperus</i></p> <p>Salticidae</p> <p><i>Phidippus formosus</i></p> <p>Thomisidae</p> <p><input checked="" type="checkbox"/> <i>SOMBYLA</i></p> <p><input checked="" type="checkbox"/> <i>S. MILARA</i></p> <p><input checked="" type="checkbox"/> LIMONITIS</p> <p style="text-align: right;"><u>LOBQUILL</u></p>
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Other Wildlife Species Observed:

<u>CABS</u>	<u>SB LIZARD</u>
<u>W. FENCE LIZARD</u>	
<u>COTONTAIL</u>	

<u>YAWA</u>	<u>BASW</u>	<u>SOSP</u>	<u>BLPH</u>	<u>EUST</u>	<u>GNST</u>	<u>EUCO</u>	<u>SAPH</u>
<u>MDSO</u>	<u>CLSW</u>	<u>NUNO</u>	<u>AMKE</u>	<u>RTHA</u>	<u>AJHU</u>	<u>RWBL</u>	<u>LOSH</u>
<u>HOFL</u>	<u>ROPI</u>	<u>COBA</u>	<u>TUVU</u>	<u>AMOL</u>	<u>MAU</u>	<u>BARBL</u>	<u>NOMO</u>
<u>KILL</u>	<u>RJHU</u>	<u>HOSP</u>	<u>CAKI</u>	<u>COHA</u>	<u>AMAY</u>	<u>AMCO</u>	

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: ALL Acreage Surveyed: 70 Date: 7-18-13 DSF Detected: Y N
 Temperature in °F (Start/End): 77/90 Cloud Cover (Start/End): 0/0 Biologist: JOHN DUCS Time (Start/End): 1030/1400
 Arthropod Species Observed: Wind Speed in mph (Start/End): 0-1/0-3 Biologist: MELANIE DUCS Time (Start/End): 1030/1400

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolasia</i> <input checked="" type="checkbox"/> <i>Apiocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> Asilidae <input checked="" type="checkbox"/> <i>Efferia albarbaris</i> <input checked="" type="checkbox"/> <i>Malloflora faurix</i> <input type="checkbox"/> <i>Proctocanthus</i> sp. <input type="checkbox"/> <i>Saropogon luteus</i> <input type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae</i> (May Flies) <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> Bombyliidae <input type="checkbox"/> <i>Exoprosopa</i> sp. <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythicomylia</i> sp. <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax</i> sp. <input type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Calliphora</i> sp. <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input checked="" type="checkbox"/> <i>Phaenicia sericata</i> Conopidae sp. <input type="checkbox"/> <i>Physocophala texana</i> <input type="checkbox"/> <i>Culicidae</i> - mosquitoes Cuterebridae <input checked="" type="checkbox"/> <i>Condylostylus</i> sp. Drosophilidae <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga</i> sp. Stratiomyidae <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasympus americanus</i> <input checked="" type="checkbox"/> <i>Volucella mexicana</i> Tabanidae 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon</i> sp. <input type="checkbox"/> <i>Dasyneutella coccineohirta</i> <input checked="" type="checkbox"/> <i>Dasyneutella californica</i> <input type="checkbox"/> <i>Dasyneutella sackeni</i> (lg.) <input type="checkbox"/> <i>Dasyneutella chytimnestra</i> <input type="checkbox"/> <i>Camposmeris tolteca</i> <input type="checkbox"/> <i>Trielisis alcione</i> <input type="checkbox"/> <i>Pompiliidae</i> <input type="checkbox"/> <i>Pepsis mildi</i> <input checked="" type="checkbox"/> <i>Pepsis</i> sp. <input checked="" type="checkbox"/> <i>Sphex</i> sp. <input checked="" type="checkbox"/> <i>Amphipila alberti</i> <input checked="" type="checkbox"/> <i>Amphipila</i> sp. <input checked="" type="checkbox"/> <i>Bembix americana</i> <input checked="" type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanopsis</i> <input type="checkbox"/> <i>Bicytes</i> sp. <input checked="" type="checkbox"/> <i>Cerceris</i> sp. <input checked="" type="checkbox"/> <i>Glybion californicus</i> <input checked="" type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisoides diversus</i> <input type="checkbox"/> <i>Hoplisoides</i> sp. <input type="checkbox"/> <i>Isodonti aelegans</i> <input checked="" type="checkbox"/> <i>Microbembix californicus</i> <input checked="" type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Philanthus ventilabris</i> <input type="checkbox"/> <i>Podalonia</i> sp. <input checked="" type="checkbox"/> <i>Prionyx foxi</i> <input checked="" type="checkbox"/> <i>Prionyx</i> sp. <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Sitoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> Tiphidae <input type="checkbox"/> <i>Vespidae</i> - unidentified <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Euodynerus annulata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<p>Colpocleridae:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> (SAY) <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus</i> sp. <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichopepla aurora</i> Reduviidae <input type="checkbox"/> <i>Apiomeris crassipes</i> <input type="checkbox"/> <i>Rhynocoris ventralis</i> <input type="checkbox"/> <i>Zelus tetracanthus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aeshna multicolor</i> <input checked="" type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Homaladisca</i> sp. Cicadidae <input type="checkbox"/> <i>Dactylopiidae</i> (Coccinellid) <input type="checkbox"/> <i>Dactylopius</i> sp. Membracidae <input type="checkbox"/> <i>Antianthe expansa</i> Psyllidae <input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> Chrysopidae <input type="checkbox"/> <i>Chrysopa</i> sp. <input checked="" type="checkbox"/> <i>Myrmeleontidae</i> <input type="checkbox"/> <i>Prachyneurum</i> sp. <input checked="" type="checkbox"/> <i>Myrmeleon</i> sp. Raphidiidae (Snakeflies) <p>Dermatoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Lepus intermedius</i> <input type="checkbox"/> <i>Melanoplus</i> sp. <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca</i> sp. 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> (SAY) <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus</i> sp. <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichopepla aurora</i> Reduviidae <input type="checkbox"/> <i>Apiomeris crassipes</i> <input type="checkbox"/> <i>Rhynocoris ventralis</i> <input type="checkbox"/> <i>Zelus tetracanthus</i> <p>Odonata:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aeshna multicolor</i> <input checked="" type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Homaladisca</i> sp. Cicadidae <input type="checkbox"/> <i>Dactylopiidae</i> (Coccinellid) <input type="checkbox"/> <i>Dactylopius</i> sp. Membracidae <input type="checkbox"/> <i>Antianthe expansa</i> Psyllidae <input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> Chrysopidae <input type="checkbox"/> <i>Chrysopa</i> sp. <input checked="" type="checkbox"/> <i>Myrmeleontidae</i> <input type="checkbox"/> <i>Prachyneurum</i> sp. <input checked="" type="checkbox"/> <i>Myrmeleon</i> sp. Raphidiidae (Snakeflies) <p>Dermatoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Lepus intermedius</i> <input type="checkbox"/> <i>Melanoplus</i> sp. <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca</i> sp. 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Pentatomidae</i> <input type="checkbox"/> <i>Trimerotropis californica</i> <input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i> <input checked="" type="checkbox"/> <i>Gryllus</i> sp. <input type="checkbox"/> <i>Oecanthus fulvoni</i> Tettigoniidae <input type="checkbox"/> <i>Antianthe expansa</i> <input type="checkbox"/> <i>Scudderia mexicana</i> <input type="checkbox"/> <i>Stenopelmatus</i> sp. <input type="checkbox"/> <i>Iris oratoria</i> <input type="checkbox"/> <i>Stagmomantis californica</i> <input type="checkbox"/> <i>Parabacillus hesperis</i> <p>Odonata:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aeshna multicolor</i> <input checked="" type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Homaladisca</i> sp. Cicadidae <input type="checkbox"/> <i>Dactylopiidae</i> (Coccinellid) <input type="checkbox"/> <i>Dactylopius</i> sp. Membracidae <input type="checkbox"/> <i>Antianthe expansa</i> Psyllidae <input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> Chrysopidae <input type="checkbox"/> <i>Chrysopa</i> sp. <input checked="" type="checkbox"/> <i>Myrmeleontidae</i> <input type="checkbox"/> <i>Prachyneurum</i> sp. <input checked="" type="checkbox"/> <i>Myrmeleon</i> sp. Raphidiidae (Snakeflies) <p>Dermatoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Lepus intermedius</i> <input type="checkbox"/> <i>Melanoplus</i> sp. <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca</i> sp. 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Pieris rapae</i> <input checked="" type="checkbox"/> <i>Pontia protodice</i> <input checked="" type="checkbox"/> <i>Brephidium exilis</i> <input type="checkbox"/> <i>Hemiaris ceratonia</i> <input type="checkbox"/> <i>Icaricia acmon</i> <input checked="" type="checkbox"/> <i>Leptotes marina</i> <input type="checkbox"/> <i>Strymon melinus</i> <input type="checkbox"/> <i>Apodemia mormo virgulti</i> <input type="checkbox"/> <i>Agraulis vanillae</i> <input type="checkbox"/> <i>Danais gilippus</i> <input type="checkbox"/> <i>Danais plexippus</i> <input type="checkbox"/> <i>Precis coenia</i> <input checked="" type="checkbox"/> <i>Yanessa annabella</i> <input type="checkbox"/> <i>Yanessa atalanta</i> <input type="checkbox"/> <i>Yanessa cardui</i> <input type="checkbox"/> <i>Yanessa virginiensis</i> Arctiidae <input checked="" type="checkbox"/> <i>Noctuidae</i> <input checked="" type="checkbox"/> <i>Autographa californica</i> <input type="checkbox"/> <i>Schinia</i> <input type="checkbox"/> <i>Geometridae</i> <input type="checkbox"/> <i>Pyralidae</i> <input checked="" type="checkbox"/> <i>Paranthrene robiniae</i> <input type="checkbox"/> <i>Hyles lineata</i> <input type="checkbox"/> <i>Manduca sexta</i> <p>Arachnida:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Araucidae</i> <input type="checkbox"/> <i>Paucetia viridins</i> <input checked="" type="checkbox"/> <i>Dipluridae</i> <input type="checkbox"/> <i>Leurotychus pacificus</i> <input type="checkbox"/> <i>Leurodectus hesperis</i> <input checked="" type="checkbox"/> <i>Salicidae</i> <input type="checkbox"/> <i>Phidippus formosus</i> <input checked="" type="checkbox"/> <i>Thomisidae</i> <p>PELEMETIDAE</p> <p>N. AMERICANA</p> <p>B. HILARIS</p> <p>GAASS SPIDER</p>
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Bird Species Observed:

HOSP	CALI	YFWA	LEGO	BNUB	CALJ	HOSP	EUST	MAU	PEARWL	Other Wildlife Species Observed:
RUTH	HOOR	GRELA	SPTO	NVWO	BLPH	ROPI	EUCO	WESA	WIPH	COTTONTAIL
BASW	RTHA	BUSH	MOBO	SOSP	NOMO	AFFL	WEKI	FWBL	CORA	CALNS
HOFI	TUVU	BEWB	AMUR	SAPH	KILL	ANHU	BNST	BLBL	SLZALD	COACTWHIP

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: WELLS CITY Portion of Site Surveyed: 144 Acreage Surveyed: ~70 Date: 7-20-13 DSF Detected: Y N

Temperature in °F (Start/End): 76 / 83 Cloud Cover (Start/End): 80% / 95% Biologist: JOHN DICUS Time (Start/End): 1030 / 1400

Arthropod Species Observed: Wind Speed in mph (Start/End): 0-2 / 0-1 Biologist: ALLAN LEDICUS Time (Start/End): 1030 / 1400

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysalasia</i> <input checked="" type="checkbox"/> <i>Apiocera convergens</i> <input type="checkbox"/> <i>Nemomydas pantherina</i> <input checked="" type="checkbox"/> <i>Axillidae</i> <input checked="" type="checkbox"/> <i>Malloflora faurix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input type="checkbox"/> <i>Stenopogon latens</i> <input type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Gallibaetis pacificus</i> <input checked="" type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythicomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arathusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Galliphora sp.</i> <input checked="" type="checkbox"/> <i>Eucalliphora litaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input checked="" type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physocleptia texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input type="checkbox"/> <i>Condylosylus sp.</i> <input checked="" type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input checked="" type="checkbox"/> <i>Stratiomyidae</i> <input checked="" type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyphus americanus</i> <input type="checkbox"/> <i>Tolucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Janneumon sp.</i> <input checked="" type="checkbox"/> <i>Dasyomyia coccineohirta</i> <input checked="" type="checkbox"/> <i>Dasyomyia californica</i> <input type="checkbox"/> <i>Dasyomyia sackeni (lg.)</i> <input type="checkbox"/> <i>Dasyomyia clytemnestra</i> <input type="checkbox"/> <i>Campsomera tolteca</i> <input type="checkbox"/> <i>Trielis alcione</i> <input type="checkbox"/> <i>Pomphillidae</i> <input type="checkbox"/> <i>Pegomya mildi</i> <input type="checkbox"/> <i>Pegomya sp.</i> <input checked="" type="checkbox"/> <i>Sphecoidea</i> <input checked="" type="checkbox"/> <i>Ammophila alberti</i> <input type="checkbox"/> <i>Ammophila sp.</i> <input type="checkbox"/> <i>Bombix americana</i> <input checked="" type="checkbox"/> <i>Bombix comata</i> <input checked="" type="checkbox"/> <i>Bombix melanapsis</i> <input checked="" type="checkbox"/> <i>Bicyrtis sp.</i> <input type="checkbox"/> <i>Cerceris sp.</i> <input type="checkbox"/> <i>Galybion californicus</i> <input checked="" type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisoides diversus</i> <input checked="" type="checkbox"/> <i>Hoplisoides sp.</i> <input type="checkbox"/> <i>Isodonti aelegans</i> <input type="checkbox"/> <i>Microbembix californicus</i> <input checked="" type="checkbox"/> <i>Philanthus multimaculata</i> <input checked="" type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Prionyx foxi</i> <input checked="" type="checkbox"/> <i>Prionyx sp.</i> <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Sizoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Euoxyerus annulata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input type="checkbox"/> <i>Chlorochroa uhleri</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichopepla aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Arioneris crassipes</i> <input checked="" type="checkbox"/> <i>Rhinocoris ventralis</i> <input type="checkbox"/> <i>Zelus tetracanthus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elatridae (Click Beetles)</i> <input type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input checked="" type="checkbox"/> <i>V. undecimpunctata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymela laticollis</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Halplidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Rhiphoridae</i> <input type="checkbox"/> <i>Macrosaigona flavipenne</i> <input checked="" type="checkbox"/> <i>Macrosaigona sp.</i> <input type="checkbox"/> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracotalpa sp.</i> <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> <i>Tenebrionidae</i> <input checked="" type="checkbox"/> <i>Eleodes sp.</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Lygaeidae</i> <input type="checkbox"/> <i>Lygaeus kalmii</i> <input type="checkbox"/> <i>Pyrrhocoridae</i> <input type="checkbox"/> <i>Largus cinctus</i>
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Bird Species Observed:

HOFL	BLGR	NVVO	HOOR	LOPI	WELI	AMAV	EUST	LGDO
BLPH	NOFL	SOSP	TUVU	GOBERAL	KILL	FWBL	AMKE	WIFH
MODO	RUWU	WTSW	HOSSP	LOST	EUCO	GBL	WIFB	NOMD
ETHA	PAVI	LEGO	BASW	SAPH	GNST	MAU	WEST	CORA

Other Wildlife Species Observed:

COTONTAIL	SALIZARD
COYOTE	
W. FENCE LIZARD	OTJR

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CHANCE CITY Portion of Site Surveyed: ALL Acreage Surveyed: 70 Date: 07-22-13 DSF Detected: Y (N)
 Temperature in °F (Start/End): 79 / 90 Cloud Cover (Start/End): 0 / 5% Biologist: J. DICUS Time (Start/End): 1000 / 1330
 Arthropod Species Observed: Wind Speed in mph (Start/End): 1-3 / 8-12 Biologist: M. DICUS Time (Start/End): 1000 / 1330

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolasia</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Afferia albarbaris</i> <input checked="" type="checkbox"/> <i>Malloflora fuitrix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input type="checkbox"/> <i>Garopogon latens</i> <input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input checked="" type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligyra gaz-ophylax</i> <input type="checkbox"/> <i>Myocichomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input checked="" type="checkbox"/> <i>Eucalliphora tillea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Physocephala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input checked="" type="checkbox"/> <i>Nomia nevadensis</i> <input type="checkbox"/> <i>Megachilidae</i> <input type="checkbox"/> <i>Dianthidium sp.</i> <input type="checkbox"/> <i>Megachile sp.</i> <input type="checkbox"/> <i>Perdita sp.</i> <input type="checkbox"/> Wasps <input type="checkbox"/> <i>Syrphidae</i> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Erastalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Tolucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon sp.</i> <input type="checkbox"/> <i>Dasyutilla coccineohirta</i> <input checked="" type="checkbox"/> <i>Dasyutilla californica</i> <input type="checkbox"/> <i>Dasyutilla sackeni (lg.)</i> <input type="checkbox"/> <i>Dasyutilla clytemnestra</i> <input type="checkbox"/> <i>Camponeris toleca</i> <input type="checkbox"/> <i>Trielis alcione</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pepsis mildi</i> <input type="checkbox"/> <i>Pepsis sp.</i> <input checked="" type="checkbox"/> <i>Sphecidae</i> <input checked="" type="checkbox"/> <i>Ammophila alberti</i> <input type="checkbox"/> <i>Ammophila sp.</i> <input type="checkbox"/> <i>Bembix americana</i> <input checked="" type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanopsis</i> <input type="checkbox"/> <i>Bicyrtis sp.</i> <input type="checkbox"/> <i>Cerceris sp.</i> <input type="checkbox"/> <i>Phalynon californicus</i> <input checked="" type="checkbox"/> <i>Chloron aerarium</i> <input type="checkbox"/> <i>Eucereoides insignis</i> <input type="checkbox"/> <i>Hoplisoides diversus</i> <input type="checkbox"/> <i>Hoplisoides sp.</i> <input type="checkbox"/> <i>Isodonti aelegans</i> <input type="checkbox"/> <i>Microbembix californicus</i> <input checked="" type="checkbox"/> <i>Philanthus multimaculata</i> <input checked="" type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Prionyx foxi</i> <input type="checkbox"/> <i>Prionyx sp.</i> <input checked="" type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Stizoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Phaenocarpa annulata</i> <input checked="" type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri (SAV)</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichopepla aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chlorochorus orbis</i> <input type="checkbox"/> <i>Coccinella sp.</i> <input type="checkbox"/> <i>Harmonia axyridis</i> <input checked="" type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elatidae (Click Beetles)</i> <input type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input checked="" type="checkbox"/> <i>P. undecimpunctata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachyeta laticollis</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Halplidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops sp.</i> <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosaigona flavipenne</i> <input checked="" type="checkbox"/> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracotalpa sp.</i> <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> <i>Tenebrionidae</i> <input checked="" type="checkbox"/> <i>Eleodes sp.</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aphididae</i> <input checked="" type="checkbox"/> <i>Cercopidae</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homoladidae sp.</i> <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactylopiidae (Coccinellae)</i> <input type="checkbox"/> <i>Dactylopius sp.</i> <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input type="checkbox"/> <i>Psyllidae</i> <input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Myrmeleontidae</i> <input type="checkbox"/> <i>Brachynemurus sp.</i> <input checked="" type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Disosteira pictipennis</i> <input type="checkbox"/> <i>Leprus intermedium</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca sp.</i>
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Bird Species Observed:

HOSP	HOFI	LUTH	BLPH	MOBO	AMCH	CAKI	NOMO	BLBL	WIPH
MODO	ANHU	UGO	HOSP	CLSW	WELI	BNST	KUL	WFLB	ANCO
BULB	RTHA	SOSP	BASW	LOPI	WST	AMKE	WESA	LBDO	CORA
FUVU	GVSH	NWUO	SAPH	LOSH	WTSW	EUCO	WDL	MYU	AMV

Other Wildlife Species Observed:

W. FENCE LEARD	COTTONTAIL
SB LIZARD	
CATS	

B. HILARIS
N. Y. HILARIS ANTIOPA

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: ALL Acreage Surveyed: ~70 Date: 07-24-13 DSF Detected: Y N

Temperature in °F (Start/End): 78 / 89 Cloud Cover (Start/End): 0 / 5% Biologist: JOHN ALCUS Time (Start/End): 1000 / 1330

Arthropod Species Observed: WIND SPEED IN MPH (Start/End): 2-4 / 1-7 Biologist: MELANIE DICUS Time (Start/End): 1000 / 1330

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Aplocera chrysolasia</i> <input type="checkbox"/> <i>Aplocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> Asilidae <input checked="" type="checkbox"/> <i>Efferia albarbaris</i> <input type="checkbox"/> <i>Mallopora faurix</i> <input type="checkbox"/> <i>Proctocanthus</i> sp. <input type="checkbox"/> <i>Saropogon luteus</i> <input type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> Baetidae (May Flies) <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> Bombyliidae <input type="checkbox"/> <i>Exoprosopa</i> sp. <input type="checkbox"/> <i>Ligya gazophylax</i> <input type="checkbox"/> <i>Mythocomia</i> sp. <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax</i> sp. <input checked="" type="checkbox"/> <i>Oxophora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Calliphora</i> sp. <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> Conopidae sp. <input type="checkbox"/> <i>Physcephala texana</i> <input type="checkbox"/> Culicidae - mosquitoes <input type="checkbox"/> Cuterebridae <input checked="" type="checkbox"/> <i>Condylostylus</i> sp. <input type="checkbox"/> Prosophilidae <input checked="" type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> Sarcophagidae <input type="checkbox"/> <i>Sarcophaga</i> sp. <input type="checkbox"/> Stratiomyidae <input type="checkbox"/> Syrphidae <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input checked="" type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input checked="" type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> Tabanidae 	<p>Ichneumon sp.</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Dasytomilla coccineohirta</i> <input type="checkbox"/> <i>Dasytomilla californica</i> <input type="checkbox"/> <i>Dasytomilla sackeni</i> (lg.) <input type="checkbox"/> <i>Dasytomilla chytymnestra</i> <input type="checkbox"/> <i>Campsomeres tolteca</i> <input type="checkbox"/> <i>Tritelis alcione</i> <input type="checkbox"/> Pompilidae <input type="checkbox"/> <i>Pepsis mildeli</i> <input type="checkbox"/> <i>Pepsis</i> sp. <input checked="" type="checkbox"/> <i>Sphecididae</i> <input checked="" type="checkbox"/> <i>Humophila alberti</i> <input type="checkbox"/> <i>Ammophila</i> sp. <input checked="" type="checkbox"/> <i>Bembix americana</i> <input checked="" type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanopsis</i> <input type="checkbox"/> <i>Bicyrtis</i> sp. <input type="checkbox"/> <i>Cerceris</i> sp. <input type="checkbox"/> <i>Chalybion californicus</i> <input type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisoidea diversus</i> <input type="checkbox"/> <i>Hoplisoidea</i> sp. <input type="checkbox"/> <i>Isodonti oelegens</i> <input checked="" type="checkbox"/> <i>Microbembix californicus</i> <input type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Philanthus ventrilabris</i> <input type="checkbox"/> <i>Podalonia</i> sp. <input type="checkbox"/> <i>Prionyx foxi</i> <input type="checkbox"/> <i>Prionyx</i> sp. <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphecx ichneumonius</i> <input type="checkbox"/> <i>Stizoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> Tiphidae <input type="checkbox"/> <i>Vespidae</i> - unidentified <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Eudomyrus annulata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> / SAYI <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> Podisus sp. <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input checked="" type="checkbox"/> <i>Trichopepla aurora</i> <input type="checkbox"/> Reduviidae <input checked="" type="checkbox"/> <i>Triomeris crassipes</i> <input checked="" type="checkbox"/> <i>Rhyacionia ventralis</i> <input type="checkbox"/> <i>Zelus tetracanthus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Aphididae <input checked="" type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> Elatereidae (Click Beetles) <input type="checkbox"/> Chrysomelidae <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input checked="" type="checkbox"/> <i>R. undecimpunctata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymela laticollis</i> <input type="checkbox"/> Curculionidae <input type="checkbox"/> Haliplidae <input type="checkbox"/> Hydrophilidae <input type="checkbox"/> Meloidae <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> Melyridae <input type="checkbox"/> <i>Collops</i> sp. <input type="checkbox"/> Rhipiphoridae <input type="checkbox"/> <i>Macrosaigon flavipenne</i> <input type="checkbox"/> <i>Macrosaigon</i> sp. <input checked="" type="checkbox"/> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracotalpa</i> sp. <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> Venebrionidae <input checked="" type="checkbox"/> <i>Eleodes</i> sp. <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Lygaeidae <input type="checkbox"/> <i>Lygaeus kalmii</i> <input type="checkbox"/> Pyrrhocoridae <input type="checkbox"/> <i>Largus cinctus</i>
<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> <input type="checkbox"/> <i>Vespa pennsylvanica</i> <p>Chalcididae</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Chlorochroa ligata</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input checked="" type="checkbox"/> <i>Trichopepla aurora</i> <input type="checkbox"/> <i>Triomeris crassipes</i> <input checked="" type="checkbox"/> <i>Rhyacionia ventralis</i> <input type="checkbox"/> <i>Zelus tetracanthus</i> <p>Phoridae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Phorida</i> sp. <p>Phoridae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Phorida</i> sp. <p>Phoridae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Phorida</i> sp. 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> / SAYI <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> Podisus sp. <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input checked="" type="checkbox"/> <i>Trichopepla aurora</i> <input type="checkbox"/> Reduviidae <input checked="" type="checkbox"/> <i>Triomeris crassipes</i> <input checked="" type="checkbox"/> <i>Rhyacionia ventralis</i> <input type="checkbox"/> <i>Zelus tetracanthus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Aphididae <input checked="" type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> Elatereidae (Click Beetles) <input type="checkbox"/> Chrysomelidae <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input checked="" type="checkbox"/> <i>R. undecimpunctata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymela laticollis</i> <input type="checkbox"/> Curculionidae <input type="checkbox"/> Haliplidae <input type="checkbox"/> Hydrophilidae <input type="checkbox"/> Meloidae <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> Melyridae <input type="checkbox"/> <i>Collops</i> sp. <input type="checkbox"/> Rhipiphoridae <input type="checkbox"/> <i>Macrosaigon flavipenne</i> <input type="checkbox"/> <i>Macrosaigon</i> sp. <input checked="" type="checkbox"/> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracotalpa</i> sp. <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> Venebrionidae <input checked="" type="checkbox"/> <i>Eleodes</i> sp. <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Lygaeidae <input type="checkbox"/> <i>Lygaeus kalmii</i> <input type="checkbox"/> Pyrrhocoridae <input type="checkbox"/> <i>Largus cinctus</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> / SAYI <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> Podisus sp. <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input checked="" type="checkbox"/> <i>Trichopepla aurora</i> <input type="checkbox"/> Reduviidae <input checked="" type="checkbox"/> <i>Triomeris crassipes</i> <input checked="" type="checkbox"/> <i>Rhyacionia ventralis</i> <input type="checkbox"/> <i>Zelus tetracanthus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Aphididae <input checked="" type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> Elatereidae (Click Beetles) <input type="checkbox"/> Chrysomelidae <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input checked="" type="checkbox"/> <i>R. undecimpunctata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymela laticollis</i> <input type="checkbox"/> Curculionidae <input type="checkbox"/> Haliplidae <input type="checkbox"/> Hydrophilidae <input type="checkbox"/> Meloidae <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> Melyridae <input type="checkbox"/> <i>Collops</i> sp. <input type="checkbox"/> Rhipiphoridae <input type="checkbox"/> <i>Macrosaigon flavipenne</i> <input type="checkbox"/> <i>Macrosaigon</i> sp. <input checked="" type="checkbox"/> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracotalpa</i> sp. <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> Venebrionidae <input checked="" type="checkbox"/> <i>Eleodes</i> sp. <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Lygaeidae <input type="checkbox"/> <i>Lygaeus kalmii</i> <input type="checkbox"/> Pyrrhocoridae <input type="checkbox"/> <i>Largus cinctus</i>

Bird Species Observed:

Basw	NOMD	KUL	ANHV	CORA	RWBAL	EUST
HoSP	HOFL	BLPH	MODO	LOSH	WESA	COPEAF
BNST	EULP	CAKI	ATHA	WFIB	WIPH	LEGO
ROPI	AMOR	STPH	TUVU	BRAL	MAIL	RUTH

Other Wildlife Species Observed:
V. FENCE LIZARD CAGS
SB LIZARD
COITONTAIL

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CARLE CITY Portion of Site Surveyed: AW Acreage Surveyed: ~70 Date: 08-01-13 DSSF Detected: Y N
 Temperature in °F (Start/End): 71 / 85 Cloud Cover (Start/End): 5% / 10% Biologist: JOHN DICUS Time (Start/End): 1000 / 1330
 Arthropod Species Observed: Wind Speed in mph (Start/End): 1-3 / 2-5 Biologist: MELANIE DICUS Time (Start/End): 1000 / 1330

<p>DIPTERA:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolasia</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Afferia alabarbaris</i> <input checked="" type="checkbox"/> <i>Malloflora faitrix</i> <input type="checkbox"/> <i>Proctocanthus</i> sp. <input type="checkbox"/> <i>Saropogon luteus</i> <input type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae</i> (May Flies) <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa</i> sp. <input type="checkbox"/> <i>Ligra gazophylax</i> <input type="checkbox"/> <i>Mythicomyia</i> sp. <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax</i> sp. <input checked="" type="checkbox"/> <i>Xoxophora pellicuda</i> <input type="checkbox"/> <i>Villa arata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Calliphora</i> sp. <input checked="" type="checkbox"/> <i>Eucalliphora liliaca</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae</i> sp. <input type="checkbox"/> <i>Physoccephala texana</i> <input type="checkbox"/> <i>Culicidae</i> - mosquitoes <input type="checkbox"/> <i>Cuterebridae</i> <input type="checkbox"/> <i>Condylopylus</i> sp. <input type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga</i> sp. <input type="checkbox"/> <i>Syrphomyiidae</i> <input checked="" type="checkbox"/> <i>Syrphidae</i> <input checked="" type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyphus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon</i> sp. <input type="checkbox"/> <i>Dasyutilla coccineohirta</i> <input type="checkbox"/> <i>Dasyutilla californica</i> <input type="checkbox"/> <i>Dasyutilla sackeni</i> (lg.) <input type="checkbox"/> <i>Dasyutilla chytanestra</i> <input type="checkbox"/> <i>Campomeris tolleca</i> <input type="checkbox"/> <i>Trielis atcione</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pespesis mildeli</i> <input type="checkbox"/> <i>Pepsis</i> sp. <input checked="" type="checkbox"/> <i>Sphecidae</i> <input checked="" type="checkbox"/> <i>Ammophila alberti</i> <input type="checkbox"/> <i>Ammophila</i> sp. <input checked="" type="checkbox"/> <i>Bembix americana</i> <input checked="" type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanopsis</i> <input type="checkbox"/> <i>Bicyrtis</i> sp. <input type="checkbox"/> <i>Cerceris</i> sp. <input type="checkbox"/> <i>Chalybion californicus</i> <input type="checkbox"/> <i>Chalybion aerarium</i> <input checked="" type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisoides diversus</i> <input type="checkbox"/> <i>Hoplisoides</i> sp. <input type="checkbox"/> <i>Isodontia aelegans</i> <input checked="" type="checkbox"/> <i>Microbembix californicus</i> <input checked="" type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Philanthus ventilabris</i> <input type="checkbox"/> <i>Podalonia</i> sp. <input type="checkbox"/> <i>Prionyx foxi</i> <input checked="" type="checkbox"/> <i>Prionyx</i> sp. <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Spilix ichneumonius</i> <input type="checkbox"/> <i>Stizoides remicinctum</i> <input type="checkbox"/> <i>Tachyites elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae</i> - unidentified <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Euodynerus annulata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> <input type="checkbox"/> <i>Vespa pennsylvanica</i> <p>COLEOPTERA:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Ruprestidae</i> <input checked="" type="checkbox"/> <i>Carabidae</i> <input checked="" type="checkbox"/> <i>Cerambycidae</i> <input checked="" type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilocorus orbis</i> <input type="checkbox"/> <i>Coccinella</i> sp. <input checked="" type="checkbox"/> <i>Harmonia axyridis</i> <input checked="" type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elatridae</i> (Click Beetles) <input type="checkbox"/> <i>Chrysomelidae</i> <input type="checkbox"/> <i>Diabrotica balteata</i> <input type="checkbox"/> <i>D. undecimpunctata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymela laticollis</i> <input type="checkbox"/> <i>Cureulionidae</i> <input type="checkbox"/> <i>Haliplidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops</i> sp. <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosaigona flavipennis</i> <input type="checkbox"/> <i>Macrosaigona</i> sp. <input checked="" type="checkbox"/> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracotalpa</i> sp. <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> <i>Tenebrionidae</i> <input checked="" type="checkbox"/> <i>Eleodes</i> sp. <p>HEMiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Lygaeidae</i> <input type="checkbox"/> <i>Lygaeus kalmii</i> <input type="checkbox"/> <i>Pyrrhocoridae</i> <input type="checkbox"/> <i>Largus cinctus</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Polistes pennsylvanicus</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> SAYI <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus</i> sp. <input type="checkbox"/> <i>Dysanota pallidovirens</i> <input checked="" type="checkbox"/> <i>Trichoptera aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Stenomacrus crassipes</i> <input checked="" type="checkbox"/> <i>Rhynocoris ventralis</i> <input checked="" type="checkbox"/> <i>Zelus tetracanthus</i> <p>HOMOPTERA:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Aeshna multicolor</i> <input type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula saturata</i> <input checked="" type="checkbox"/> <i>Pachydiplax longipennis</i> <input type="checkbox"/> <i>Pantala flavescens</i> <input checked="" type="checkbox"/> <i>Perithemis intensa</i> <input type="checkbox"/> <i>Progomphus borealis</i> <input type="checkbox"/> <i>Sympetrum corruptum</i> <input checked="" type="checkbox"/> <i>Sympetrum lillotum</i> <input type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea onusta</i> <input type="checkbox"/> <i>Argia</i> sp. <input type="checkbox"/> <i>Enallagma</i> sp. <input type="checkbox"/> <i>Telebasis salva</i> <p>LEPIDOPTERA:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Atalopedes campestris</i> <input type="checkbox"/> <i>Erynnis faneralis</i> <input type="checkbox"/> <i>Helioptis ericetorum</i> <input type="checkbox"/> <i>Hylephila phyleus</i> <input type="checkbox"/> <i>Lerodea eufala</i> <input type="checkbox"/> <i>Paratrytone melane</i> <input checked="" type="checkbox"/> <i>Pyrgus sabuleti</i> <input type="checkbox"/> <i>Pyrgus albescens</i> <input type="checkbox"/> <i>Papilio cresphontes</i> <input type="checkbox"/> <i>Papilio rutulus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Trimerotropis californica</i> <input type="checkbox"/> <i>Trimerotropis pallidipennis</i> <input checked="" type="checkbox"/> <i>Gryllus</i> sp. <input type="checkbox"/> <i>Hemitarus ceramius</i> <input type="checkbox"/> <i>Psarocera acmon</i> <input checked="" type="checkbox"/> <i>Leptotes marina</i> <input checked="" type="checkbox"/> <i>Strymon melinus</i> <input type="checkbox"/> <i>Apodemia morio virgulti</i> <input type="checkbox"/> <i>Agraulis vanillae</i> <input type="checkbox"/> <i>Danaus gilippus</i> <input checked="" type="checkbox"/> <i>Danaus plexippus</i> <input checked="" type="checkbox"/> <i>Precis coenia</i> <input type="checkbox"/> <i>Vanessa annabella</i> <input type="checkbox"/> <i>Vanessa atalanta</i> <input type="checkbox"/> <i>Vanessa cardui</i> <input type="checkbox"/> <i>Vanessa virginiensis</i> <input type="checkbox"/> <i>Acyridae</i> <input checked="" type="checkbox"/> <i>Noctuidae</i> <input type="checkbox"/> <i>Autographa californica</i> <input type="checkbox"/> <i>Schinia</i> <input type="checkbox"/> <i>Geometridae</i> <input checked="" type="checkbox"/> <i>Pyralidae</i> <input type="checkbox"/> <i>Paranthrene robiniae</i> <input type="checkbox"/> <i>Hyles lineata</i> <input type="checkbox"/> <i>Manduca sexta</i> <p>AFRCHIDA:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Araneidae</i> <input type="checkbox"/> <i>Peucetia viridins</i> <input checked="" type="checkbox"/> <i>Dipluridae</i> <input type="checkbox"/> <i>Leurodychus pacificus</i> <input type="checkbox"/> <i>Latreolactes hesperus</i> <input type="checkbox"/> <i>Salticidae</i> <input checked="" type="checkbox"/> <i>Thomisidae</i> <p>NEPTERA:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>N. ANTIOPA</i> <input checked="" type="checkbox"/> <i>B. MILARIS</i>
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Bird Species Observed:

<u>NONO</u>	<u>CARL</u>	<u>SAPH</u>	<u>BNST</u>	<u>POPI</u>	<u>HOLA</u>	<u>RU3L</u>
<u>HOSP</u>	<u>BLPH</u>	<u>TUVU</u>	<u>WREG</u>	<u>BRBL</u>	<u>AMKE</u>	<u>WF10</u>
<u>EUST</u>	<u>AMCK</u>	<u>BA3W</u>	<u>MODO</u>	<u>EUCO</u>	<u>RUHU</u>	<u>MAU</u>
<u>RTHA</u>	<u>HOF1</u>	<u>KILL</u>	<u>COBA</u>	<u>LOSH</u>	<u>WCCA</u>	

Other Wildlife Species Observed:
COTONTAIL
W. FENCE LIZARD
UTA
CAGS

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CANY Portion of Site Surveyed: ALL Acreage Surveyed: ~70 Date: 08-03-13 DSDSF Detected: Y
 Temperature in °F (Start/End): 73 / 83 Cloud Cover (Start/End): 50% / 40% Biologist: JMD/LS Time (Start/End): 1030 / 1400
 Arthropod Species Observed: Wind Speed in mph (Start/End): 0-4 / 4-8 Biologist: ML/LS Time (Start/End): 1030 / 1400

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Aplocera chrysolata</i> <input type="checkbox"/> <i>Aplocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> Asilidae <input checked="" type="checkbox"/> <i>Efferia albahabaris</i> <input checked="" type="checkbox"/> <i>Malloflora fautrix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input type="checkbox"/> <i>Saropogon luteus</i> <input type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> Bombyliidae <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythicismyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input checked="" type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input checked="" type="checkbox"/> <i>Palliphora sp.</i> <input checked="" type="checkbox"/> <i>Eucalliphora litsea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physocentralia texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Caterebridae</i> <input checked="" type="checkbox"/> <i>Condylostylus sp.</i> <input type="checkbox"/> <i>Prosophiidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input checked="" type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasympus americanus</i> <input type="checkbox"/> <i>Tolucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichneumon sp.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Dasyutilla coccoehirta</i> <input type="checkbox"/> <i>Dasyutilla californica</i> Colcontera: <input type="checkbox"/> <i>Buprestidae</i> <input type="checkbox"/> <i>Carabidae</i> <input type="checkbox"/> <i>Cerambycidae</i> <input checked="" type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilocorus orbis</i> <input type="checkbox"/> <i>Pocinella sp.</i> <input checked="" type="checkbox"/> <i>Harmonia axyridis</i> <input checked="" type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elatridae (Click Beetles)</i> <input type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Blattellidae</i> <input checked="" type="checkbox"/> <i>Leptocryptus baileata</i> <input checked="" type="checkbox"/> <i>Leptocryptus sp.</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymela laticollis</i> <input checked="" type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Haliplidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops sp.</i> <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosoma flavipennis</i> <input type="checkbox"/> <i>Macrosoma sp.</i> <input checked="" type="checkbox"/> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracatapa sp.</i> <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> <i>Tenebrionidae</i> <input type="checkbox"/> <i>Eleodes sp.</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Eumenes bolivi</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Euoxymerus annulata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input type="checkbox"/> <i>Chlorochroa uhleri</i> <input type="checkbox"/> <i>Mirgania histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Thyanta pallidovirens</i> <input checked="" type="checkbox"/> <i>Trichoptera aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input checked="" type="checkbox"/> <i>Phymocoris crassipes</i> <input checked="" type="checkbox"/> <i>Phymocoris ventralis</i> <input checked="" type="checkbox"/> <i>Zelus tetracanthus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Aphis multicolor</i> <input checked="" type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Libellula saturata</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input type="checkbox"/> <i>Pantala flavescens</i> <input type="checkbox"/> <i>Perithemis intensa</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input type="checkbox"/> <i>Psyllidae</i> <input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input checked="" type="checkbox"/> <i>Myrmeleontidae</i> <input checked="" type="checkbox"/> <i>Brachyneururus sp.</i> <input type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Lepus intermedium</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input checked="" type="checkbox"/> <i>Schistocerca nitens</i> <input checked="" type="checkbox"/> <i>Schistocerca sp.</i>
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Bird Species Observed:

<u>NWVO</u>	<u>BUSH</u>	<u>LVHV</u>	<u>BHWR</u>	<u>SAPH</u>	<u>EVST</u>	<u>BAST</u>	<u>EUO</u>	<u>NONO</u>
<u>CAKI</u>	<u>HOOR</u>	<u>LVTA</u>	<u>SASW</u>	<u>COHA</u>	<u>KULL</u>	<u>COBA</u>	<u>COPE</u>	<u>BLPH</u>
<u>ARHV</u>	<u>TUVV</u>	<u>UGO</u>	<u>LOPI</u>	<u>HOSP</u>	<u>BRBL</u>	<u>WESA</u>	<u>LOSH</u>	
<u>HOPI</u>	<u>MODO</u>	<u>BLGR</u>	<u>AMOR</u>	<u>ATFL</u>	<u>RWB</u>	<u>LBDO</u>	<u>ARKE</u>	

Other Wildlife Species Observed:

CAWS WFENCE LIZARD
COTTONTAIL
UTA

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CACULE CITY Portion of Site Surveyed: ALL Acreage Surveyed: ~70 Date: 08-05-13 DSF Detected: Y 

Temperature in °F (Start/End): 74 / 87 Cloud Cover (Start/End): 0 / 0 Biologist: JOHN DICUS Time (Start/End): 1000 / 1330

Arthropod Species Observed: Wind Speed in mph (Start/End): 0-3 / 2-7 Biologist: MELANIE DICUS Time (Start/End): 1000 / 1330

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolasia</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Esferia albaharbaris</i> <input type="checkbox"/> <i>Malloflora foveatrix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input checked="" type="checkbox"/> <i>Saropogon latens</i> <input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Calibaetis pacificus</i> <input type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input checked="" type="checkbox"/> <i>Poecilanthrax pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenax simpson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input type="checkbox"/> <i>Eucalliphora tilaea</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physoccephala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input type="checkbox"/> <i>Condylostylus sp.</i> <input checked="" type="checkbox"/> <i>Drosophilidae</i> <input type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input checked="" type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon sp.</i> <input checked="" type="checkbox"/> <i>Dasytomilla coccineohirta</i> <input checked="" type="checkbox"/> <i>Dasytomilla californica</i> <input type="checkbox"/> <i>Dasytomilla sackeni (lg.)</i> <input type="checkbox"/> <i>Dasytomilla clytemnestra</i> <input type="checkbox"/> <i>Campoplex tolteca</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pesopsis mildel</i> <input checked="" type="checkbox"/> <i>Pepsis sp.</i> <input checked="" type="checkbox"/> <i>Sphexidae</i> <input checked="" type="checkbox"/> <i>Amphiphila alberti</i> <input checked="" type="checkbox"/> <i>Amphiphila sp.</i> <input type="checkbox"/> <i>Bembix americana</i> <input checked="" type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanopsis</i> <input type="checkbox"/> <i>Bicyrtes sp.</i> <input type="checkbox"/> <i>Chalybion californicus</i> <input type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucereceris insignis</i> <input type="checkbox"/> <i>Hoplisisoides diversus</i> <input type="checkbox"/> <i>Hoplisisoides sp.</i> <input type="checkbox"/> <i>Isodonti aelegans</i> <input type="checkbox"/> <i>Microbembix californicus</i> <input checked="" type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Prionyx foxi</i> <input type="checkbox"/> <i>Prionyx sp.</i> <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Stizoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Euclypterus annulata</i> <input checked="" type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Pentatomidae</i> <input checked="" type="checkbox"/> <i>Chlorochroa ligata</i> <input type="checkbox"/> <i>Chlorochroa uhleri / SANY</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input checked="" type="checkbox"/> <i>Thysania pallidovirens</i> <input type="checkbox"/> <i>Trichopepla aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input checked="" type="checkbox"/> <i>Aromeris crassipes</i> <input checked="" type="checkbox"/> <i>Myiocoris ventralis</i> <input checked="" type="checkbox"/> <i>Zelus tetracanthus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Aphididae</i> <input checked="" type="checkbox"/> <i>Cercopidae</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homaldisca sp.</i> <input checked="" type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactylopiidae (Coccinellae)</i> <input type="checkbox"/> <i>Dactylopius sp.</i> <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input type="checkbox"/> <i>Psyllidae</i> <input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Myrmeleontidae</i> <input type="checkbox"/> <i>Prachynemurus sp.</i> <input checked="" type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphididae (Snakeflies)</i> <p>Dermaptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Disosteira pictipennis</i> <input type="checkbox"/> <i>Leprus intermedium</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Papilio rutulus</i> <input checked="" type="checkbox"/> <i>Schistocerca nitens</i> <input checked="" type="checkbox"/> <i>Schistocerca sp.</i> 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Primerotropis californica</i> <input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i> <input checked="" type="checkbox"/> <i>Gryllus sp.</i> <input type="checkbox"/> <i>Oecanthus fultoni</i> <input type="checkbox"/> <i>Tettigoniidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input type="checkbox"/> <i>Scudderella mexicana</i> <input type="checkbox"/> <i>Stenopelmatus sp.</i> <input checked="" type="checkbox"/> <i>Iris oratoria</i> <input checked="" type="checkbox"/> <i>Stagmomantis californica</i> <input type="checkbox"/> <i>Parabacillus hesperis</i> <p>Odonata:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Aeshna multicolor</i> <input checked="" type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input checked="" type="checkbox"/> <i>Libellula saturata</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input type="checkbox"/> <i>Pantala flavescens</i> <input type="checkbox"/> <i>Perithemis intensa</i> <input type="checkbox"/> <i>Progomphus borealis</i> <input type="checkbox"/> <i>Sympetrum corruptum</i> <input type="checkbox"/> <i>Sympetrum illotum</i> <input checked="" type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea onusta</i> <input checked="" type="checkbox"/> <i>Argia sp.</i> <input type="checkbox"/> <i>Enallagma sp.</i> <input type="checkbox"/> <i>Telebasis salva</i> <p>Lepidoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Atalopedes campestris</i> <input type="checkbox"/> <i>Erynnis funeralis</i> <input checked="" type="checkbox"/> <i>Hylephila phyleus</i> <input type="checkbox"/> <i>Lerodea eufala</i> <input type="checkbox"/> <i>Paratrytone melane</i> <input type="checkbox"/> <i>Polites sabuleti</i> <input checked="" type="checkbox"/> <i>Pyrgus albescens</i> <input type="checkbox"/> <i>Papilio cressphontes</i> <input checked="" type="checkbox"/> <i>Papilio rutulus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i>
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Bird Species Observed:

<u>HOFL</u>	<u>HOOB</u>	<u>NUWB</u>	<u>MODO</u>	<u>EUST</u>	<u>SAPH</u>	<u>CARK</u>	<u>MAIL</u>
<u>WEKI</u>	<u>SOSP</u>	<u>LENO</u>	<u>ANWE</u>	<u>BRBL</u>	<u>LOSH</u>	<u>BN SA</u>	<u>SSHA</u>
<u>HO SP</u>	<u>BLAR</u>	<u>BLTU</u>	<u>BLPH</u>	<u>LOPI</u>	<u>WESA</u>	<u>KUL</u>	<u>NOMO</u>
<u>BTHA</u>	<u>YEWA</u>	<u>COCA</u>	<u>TWU</u>	<u>AMCR</u>	<u>LBDO</u>	<u>WFIB</u>	

Other Wildlife Species Observed:
CAGS COTONTAIL
VTA BTJR
W. FENCE UZARD

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: AL Acreage Surveyed: ~70 Date: 08-07-13 DSF Detected: Y N
 Temperature in °F (Start/End): 71/80 Cloud Cover (Start/End): 0/15 Biologist: M. D. C. S. Time (Start/End): 1000/1330
 Arthropod Species Observed: Wind Speed in mph (Start/End): 0-3/5-8 Biologist: J. D. C. S. Time (Start/End): 1000/1330

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolasia</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> Asilidae <input checked="" type="checkbox"/> <i>Efferia alabarbaris</i> <input checked="" type="checkbox"/> <i>Mallopora faurix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input type="checkbox"/> <i>Saropogon luteus</i> <input type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> Baetidae (May Flies) <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> Bombyliidae <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythicomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input checked="" type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Vilva atrata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Palliphora sp.</i> <input checked="" type="checkbox"/> <i>Eucalliphora lilaea</i> <input checked="" type="checkbox"/> <i>Phaenicia cuprina</i> <input checked="" type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> Conopidae sp. <input type="checkbox"/> <i>Physoccephala texana</i> <input type="checkbox"/> Culicidae - mosquitoes <input type="checkbox"/> Cuterebridae <input checked="" type="checkbox"/> <i>Agapostemon sp.</i> <input type="checkbox"/> <i>Nomia nevadensis</i> <input type="checkbox"/> Megachilidae <input type="checkbox"/> <i>Dianthidium sp.</i> <input type="checkbox"/> <i>Megachile sp.</i> <input type="checkbox"/> <i>Perdita sp.</i> <input type="checkbox"/> Wasps <input checked="" type="checkbox"/> <i>Syrphidae</i> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasphyra americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> Tabanidae 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon sp.</i> <input type="checkbox"/> <i>Dasyuutilla coccineohirta</i> <input checked="" type="checkbox"/> <i>Dasyuutilla californica</i> <input type="checkbox"/> <i>Dasyuutilla sackeni</i> (lg.) <input type="checkbox"/> <i>Dasyuutilla clytemnestra</i> <input type="checkbox"/> <i>Campomeris tolteca</i> <input type="checkbox"/> <i>Trielis alcione</i> <input type="checkbox"/> Pompilidae <input type="checkbox"/> <i>Pespis mildi</i> <input checked="" type="checkbox"/> <i>Pespis sp.</i> <input checked="" type="checkbox"/> Sphécidae <input type="checkbox"/> <i>Amnophila alberti</i> <input checked="" type="checkbox"/> <i>Amnophila sp.</i> <input type="checkbox"/> <i>Bombix americana</i> <input checked="" type="checkbox"/> <i>Bombix comata</i> <input type="checkbox"/> <i>Bombix melanapsis</i> <input type="checkbox"/> <i>Bicyrtis sp.</i> <input checked="" type="checkbox"/> <i>Chaetobion californicus</i> <input type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisisides diversus</i> <input type="checkbox"/> <i>Hoplisisides sp.</i> <input type="checkbox"/> <i>Isodontia aelegans</i> <input checked="" type="checkbox"/> <i>Microbambus californicus</i> <input checked="" type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Pritonyx foxi</i> <input type="checkbox"/> <i>Prionyx sp.</i> <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Stizoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> Tiphidae <input type="checkbox"/> Vespidae - unidentified <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Euodynerus annulata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> Pentatomidae <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa ubleri</i> / SANI <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input checked="" type="checkbox"/> <i>Thyanta pallidivirens</i> <input checked="" type="checkbox"/> <i>Tricheopla aurora</i> <input type="checkbox"/> Reduviidae <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilocorus orbus</i> <input checked="" type="checkbox"/> <i>Coccinella sp.</i> <input type="checkbox"/> <i>Harmonia axyridis</i> <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> Elateridae (Click Beetles) <input type="checkbox"/> Chrysomelidae <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input checked="" type="checkbox"/> <i>D. undecimpunctata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymela laticolis</i> <input type="checkbox"/> Curculionidae <input type="checkbox"/> Halipidae <input type="checkbox"/> Hydrophilidae <input type="checkbox"/> Meloidae <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> Melyridae <input type="checkbox"/> <i>Collops sp.</i> <input type="checkbox"/> Rhipiphoridae <input checked="" type="checkbox"/> <i>Myrmelconitidae</i> <input checked="" type="checkbox"/> <i>Brachyneururus sp.</i> <input type="checkbox"/> <i>Myrmelcon sp.</i> <input type="checkbox"/> Raphidiidae (Snakeflies) <input type="checkbox"/> Dermaptera: <input type="checkbox"/> <i>Forficula auricularia</i> <input type="checkbox"/> Orthoptera: <input checked="" type="checkbox"/> Acrididae <input type="checkbox"/> <i>Dissoptera pictipennis</i> <input type="checkbox"/> <i>Leprus intermedium</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Schistocerca nitens</i> <input checked="" type="checkbox"/> <i>Schistocerca sp.</i>
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Bird Species Observed:

HO SP	BNST	AMBL	ANAV	CLSW	MODO	BARBL	RVHTV
BSW	RTHA	LEGO	COHA	COBA	AMKE	WESA	
NOMO	KILL	SAPH	EUCO	COVE	ROPE	WFIB	
HOFL	CAKI	BLPH	MAU	TUVU	RWBL	LODO	

Other Wildlife Species Observed:

UTA	GTJA
COTTONTAIL	W.FENCE
CAGS	

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: ALL Acreage Surveyed: ~70 Date: 08-15-13 DSSF Detected: Y N
 Temperature in °F (Start/End): 81 / 94 Cloud Cover (Start/End): 0 / 5% Biologist: JOHN DICUS Time (Start/End): 1020 / 1350
 Arthropod Species Observed: Wind Speed in mph (Start/End): 0-5 / 4-12 Biologist: MELANIE DICUS Time (Start/End): 1020 / 1350

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apoicera chrysolasia</i> <input type="checkbox"/> <i>Apocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> Asilidae <input checked="" type="checkbox"/> <i>Efferia alabarbaris</i> <input type="checkbox"/> <i>Mallojora faurix</i> <input type="checkbox"/> <i>Proctocanthus</i> sp. <input type="checkbox"/> <i>Saropogon luteus</i> <input type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae</i> (May Flies) <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bombylidae</i> <input type="checkbox"/> <i>Exoprosopa</i> sp. <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythicomyia</i> sp. <input checked="" type="checkbox"/> <i>Poecilanthrax arethusa</i> <input checked="" type="checkbox"/> <i>Poecilanthrax</i> sp. <input checked="" type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Villa atraia</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Calliphora</i> sp. <input checked="" type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae</i> sp. <input type="checkbox"/> <i>Physoccephala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input type="checkbox"/> <i>Agapostemon</i> sp. <input type="checkbox"/> <i>Condylostylus</i> sp. <input type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga</i> sp. <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input checked="" type="checkbox"/> <i>Erastalis tenax</i> <input type="checkbox"/> <i>Metasyllphus americanus</i> <input type="checkbox"/> <i>Yobucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon</i> sp. <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> <input type="checkbox"/> <i>Vespa pennsylvanica</i> Collembola: <input type="checkbox"/> <i>Buprestidae</i> <input type="checkbox"/> <i>Carabidae</i> <input type="checkbox"/> <i>Perambrycidae</i> <input checked="" type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilocorus orbus</i> <input type="checkbox"/> <i>Coccinella</i> sp. <input checked="" type="checkbox"/> <i>Harmonia axyridis</i> <input checked="" type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elateridae</i> (Click Beetles) <input type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input checked="" type="checkbox"/> <i>Lea undecimpunctata</i> <input checked="" type="checkbox"/> <i>Dema trilineata</i> <input type="checkbox"/> <i>Tachyella laticollis</i> <input checked="" type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Haliplidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops</i> sp. <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosaiga flavipenne</i> <input type="checkbox"/> <i>Macrosaiga</i> sp. <input type="checkbox"/> <i>Scarabaeidae</i> <input type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracotalpa</i> sp. <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> <i>Tenebrionidae</i> <input type="checkbox"/> <i>Eleodes</i> sp. Hemiptera: <input type="checkbox"/> <i>Lygaeidae</i> <input type="checkbox"/> <i>Lygaeus kalmii</i> <input type="checkbox"/> <i>Pyrrhocoridae</i> <input type="checkbox"/> <i>Largus cinctus</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Pentatomidae</i> <input checked="" type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> (SAI) <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus</i> sp. <input type="checkbox"/> <i>Zyanta pallidivirens</i> <input checked="" type="checkbox"/> <i>Trichoptera aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input checked="" type="checkbox"/> <i>Phaneris crassipes</i> <input checked="" type="checkbox"/> <i>Phynocoris ventralis</i> <input checked="" type="checkbox"/> <i>Zelus tetracanthus</i> Homoptera: <input type="checkbox"/> <i>Aphididae</i> <input checked="" type="checkbox"/> <i>Cercopidae</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homaldisca</i> sp. <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactylopiidae</i> (Coccinellae) <input type="checkbox"/> <i>Dactylopius</i> sp. <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Antanthe expansa</i> <input type="checkbox"/> <i>Psyllidae</i> <input checked="" type="checkbox"/> <i>Glyptotendipes brimblecombei</i> Neuroptera: <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Grylloptera</i> sp. <input checked="" type="checkbox"/> <i>Myrmeleontidae</i> <input checked="" type="checkbox"/> <i>Prachytumurus</i> sp. <input checked="" type="checkbox"/> <i>Myrmeleon</i> sp. <input type="checkbox"/> <i>Raphidiidae</i> (Snakeflies) Dermaptera: <input type="checkbox"/> <i>Forficula auricularia</i> Dytiscidae: <input checked="" type="checkbox"/> <i>Dytiscidae</i> <input type="checkbox"/> <i>Dissocheira pictipennis</i> <input type="checkbox"/> <i>Leptus intermedius</i> <input type="checkbox"/> <i>Melanopterus</i> sp. <input checked="" type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca</i> sp.
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Bird Species Observed:

CAKI	SAPH	WEKI	BNST	KUL	RUTU	WESA	RUBL
HOE1	CORA	ANOR	NOMO	CLSW	LOPI	MAL	BRBL
DCCO	HO5P	MODO	ANHU	RTHA	AMKE	LODO	ATFL
BASW	GRPH	EVCO	EUSI	TUVU	HOLA	WFI8	

Other Wildlife Species Observed:
W. FENCE LIZARD, CAGS, COTONTAIL,
53 LIZARD

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: ALL Acreage Surveyed: ~70 Date: 08-17-13 DSF Detected: Y (N)
 Temperature in °F (Start/End): 86 / 97 Cloud Cover (Start/End): 0 / 0 Biologist: JOHN DUCUS Time (Start/End): 1030 / 1400
 Arthropod Species Observed: Wind Speed in mph (Start/End): 0-3 / 4-7 Biologist: MELANIE DUCUS Time (Start/End): 1030 / 1400

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolasia</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Efferia alabarbaris</i> <input type="checkbox"/> <i>Malloflora faurix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input type="checkbox"/> <i>Saropogon latens</i> <input type="checkbox"/> <i>Stenopogon breviscutis</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythicismomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenax simpson</i> <input checked="" type="checkbox"/> <i>Calliphora sp.</i> <input checked="" type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Physocephala texana</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Bombus sonor</i> <input type="checkbox"/> <i>Bombus vosnesenskii</i> <input type="checkbox"/> <i>Halictidae</i> <input type="checkbox"/> <i>Agapostemon sp.</i> <input type="checkbox"/> <i>Nomia nevadensis</i> <input type="checkbox"/> <i>Megachilidae</i> <input type="checkbox"/> <i>Dianthidium sp.</i> <input type="checkbox"/> <i>Megachile sp.</i> <input type="checkbox"/> <i>Ferdia sp.</i> Wasps <input type="checkbox"/> <i>Chalcididae</i> <input type="checkbox"/> <i>Chrysididae</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Volecella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Ichneumon sp.</i> <input type="checkbox"/> <i>Dasytomilla coccineohirta</i> <input type="checkbox"/> <i>Dasytomilla californica</i> <input type="checkbox"/> <i>Dasytomilla sackeni (lg.)</i> <input type="checkbox"/> <i>Dasytomilla clytemnestra</i> <input type="checkbox"/> <i>Campomeris tolteca</i> <input type="checkbox"/> <i>Trieis alcione</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pezopsis mildel</i> <input type="checkbox"/> <i>Pepsis sp.</i> <input checked="" type="checkbox"/> <i>Sphecidae</i> <input type="checkbox"/> <i>Ammophila alberti</i> <input type="checkbox"/> <i>Ammophila sp.</i> <input checked="" type="checkbox"/> <i>Bembix americana</i> <input type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanopsis</i> <input type="checkbox"/> <i>Bicyrtes sp.</i> <input type="checkbox"/> <i>Elatyion californicus</i> <input checked="" type="checkbox"/> <i>Chloron aerarium</i> <input type="checkbox"/> <i>Eucerecis insignis</i> <input type="checkbox"/> <i>Hoplisoides diversus</i> <input checked="" type="checkbox"/> <i>Hoplisoides sp.</i> <input type="checkbox"/> <i>Isodontia aelegans</i> <input checked="" type="checkbox"/> <i>Microbembix californicus</i> <input type="checkbox"/> <i>Phileanthus multimaculata</i> <input type="checkbox"/> <i>Phileanthus ventralis</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input checked="" type="checkbox"/> <i>Prionyx foxi</i> <input type="checkbox"/> <i>Prionyx sp.</i> <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphecx ichneumonius</i> <input type="checkbox"/> <i>Stizoides remicinctum</i> <input type="checkbox"/> <i>Tachyodes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Euclypterus annulata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri (SAY)</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Antiantia expansa</i> <input checked="" type="checkbox"/> <i>Scudderita mexicana</i> <input type="checkbox"/> <i>Xenopeltatus sp.</i> <input checked="" type="checkbox"/> <i>Iris oratoria</i> <input type="checkbox"/> <i>Stagmomantis californica</i> <input type="checkbox"/> <i>Parabacillus hesperis</i> <p>Odonata:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aeshna multicolor</i> <input checked="" type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula saturata</i> <input checked="" type="checkbox"/> <i>Libellula saturata</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input type="checkbox"/> <i>Pantala flavescens</i> <input type="checkbox"/> <i>Perithemis intensa</i> <input type="checkbox"/> <i>Progomphus borealis</i> <input checked="" type="checkbox"/> <i>Sympetrum corruptum</i> <input type="checkbox"/> <i>Sympetrum illotum</i> <input type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea onusta</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Arysoptera sp.</i> <input checked="" type="checkbox"/> <i>Myrmeleontidae</i> <input checked="" type="checkbox"/> <i>Brachyneururus sp.</i> <input type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Leprus intermedium</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input checked="" type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca sp.</i>
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Bird Species Observed:

BASW	WESC	NUNO	ROPI	COLA	BLWB	WFIB	NOMO
HOFI	RWHU	AMBR	RTHA	GRBL	WESA	MAU	LOSH
ANJU	SOSP	TUVU	HOSP	ONST	GUO	SAPH	BBPL
CAKI	HUOR	BLPH	EUST	IUU	AMEE	MODO	

Other Wildlife Species Observed:

CATS
 W. FENCE LIZARD
 SALIZARD
 COTTONTAIL

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: AL Acreage Surveyed: 70 Date: 08-19-13 DSF Detected: Y N
 Temperature in °F (Start/End): 76 / 85 Cloud Cover (Start/End): 10% / 30% Biologist: JOHN DICUS Time (Start/End): 1015 / 1345
 Arthropod Species Observed: WIND SPEED IN MPH (Start/End): 1-4 / 5-9 Biologist: MELANIE DICUS Time (Start/End): 1015 / 1345

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolasta</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> Asilidae <input checked="" type="checkbox"/> <i>Efferia alabarbaris</i> <input type="checkbox"/> <i>Malloflora faitrix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input type="checkbox"/> <i>Saropogon luteus</i> <input type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> Baetidae (May Flies) <input checked="" type="checkbox"/> <i>Zalibaetis pacificus</i> <input type="checkbox"/> Bombyliidae <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythicomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input checked="" type="checkbox"/> <i>Toxophora pellucida</i> <input checked="" type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input checked="" type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> Conopidae sp. <input type="checkbox"/> <i>Physoccephala texana</i> <input type="checkbox"/> Culicidae - mosquitoes <input type="checkbox"/> Cuterebridae <input type="checkbox"/> <i>Condylostylus sp.</i> <input type="checkbox"/> Drosophilidae <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> Stratiomyidae <input checked="" type="checkbox"/> Syrphidae <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input checked="" type="checkbox"/> <i>Eristalis tenax</i> <input checked="" type="checkbox"/> <i>Metasyphus americanus</i> <input checked="" type="checkbox"/> <i>Yobucella mexicana</i> <input type="checkbox"/> Tabanidae 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon sp.</i> <input type="checkbox"/> <i>Dasyutilla coccineohirta</i> <input type="checkbox"/> <i>Dasyutilla californica</i> <input type="checkbox"/> <i>Dasyutilla sackeni</i> (lg.) <input type="checkbox"/> <i>Dasyutilla chycimnestra</i> <input type="checkbox"/> <i>Cremastus tolteca</i> <input type="checkbox"/> <i>Trielis atcione</i> <input type="checkbox"/> Pompilidae <input type="checkbox"/> <i>Pezopsis mildi</i> <input checked="" type="checkbox"/> <i>Pezopsis sp.</i> <input type="checkbox"/> Sphacidae <input checked="" type="checkbox"/> <i>Ammophila alberti</i> <input checked="" type="checkbox"/> <i>Ammophila sp.</i> <input checked="" type="checkbox"/> <i>Bembix americana</i> <input checked="" type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanapsis</i> <input type="checkbox"/> <i>Bicyrtis sp.</i> <input checked="" type="checkbox"/> <i>Cerceris sp.</i> <input type="checkbox"/> <i>Chalybion californicus</i> <input type="checkbox"/> <i>Chalybion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisoidea diversus</i> <input type="checkbox"/> <i>Hoplisoidea sp.</i> <input type="checkbox"/> <i>Isodontis ategans</i> <input type="checkbox"/> <i>Macrobombus californicus</i> <input checked="" type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Prionyx foxi</i> <input checked="" type="checkbox"/> <i>Prionyx sp.</i> <input checked="" type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Stizoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> Tiphidae <input type="checkbox"/> Vespidae - unidentified <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Pachymerus annulata</i> <input checked="" type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input checked="" type="checkbox"/> <i>Polistes exclamans</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> <input type="checkbox"/> <i>Vespa pennsylvanica</i> <input type="checkbox"/> Coloentera: <input type="checkbox"/> Buprestidae <input type="checkbox"/> Carabidae <input type="checkbox"/> Cerambycidae <input type="checkbox"/> Coccinellidae <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilocorus orbis</i> <input type="checkbox"/> <i>Coccinella sp.</i> <input type="checkbox"/> Harmonia axyridis <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> Elateridae (Click Beetles) <input type="checkbox"/> Chrysomelidae <input checked="" type="checkbox"/> <i>Diabrotica balcata</i> <input checked="" type="checkbox"/> <i>Beta undecimpunctata</i> <input checked="" type="checkbox"/> <i>Pachymela laticollis</i> <input checked="" type="checkbox"/> Curculionidae <input type="checkbox"/> Haliplidae <input type="checkbox"/> Hydrophilidae <input type="checkbox"/> Meloidae <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> Melyridae <input type="checkbox"/> Colpoa sp. <input type="checkbox"/> Rhipiphoridae <input type="checkbox"/> <i>Macrosaigon flavipenne</i> <input type="checkbox"/> <i>Macrosaigon sp.</i> <input type="checkbox"/> Scarabaeidae <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracotalpa sp.</i> <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> Tenebrionidae <input type="checkbox"/> <i>Eleodes sp.</i> <input type="checkbox"/> Hemiptera: <input type="checkbox"/> Lygaeidae <input type="checkbox"/> <i>Lygaeus kalmii</i> <input type="checkbox"/> Pyrrhocoridae <input type="checkbox"/> <i>Largus cinctus</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> Pentatomidae <input type="checkbox"/> <i>Chlorochroa ligata</i> <input type="checkbox"/> <i>Chlorochroa uhleri</i> <input type="checkbox"/> <i>Oecanthus fulvoni</i> <input type="checkbox"/> Tettigoniidae <input type="checkbox"/> <i>Antianthe expansa</i> <input type="checkbox"/> <i>Scudderia mexicana</i> <input type="checkbox"/> <i>Stenopelmatus sp.</i> <input type="checkbox"/> <i>Iris oratoria</i> <input type="checkbox"/> <i>Stagmomantis californica</i> <input type="checkbox"/> <i>Parabacillus hesperis</i> <input type="checkbox"/> Odonata: <input type="checkbox"/> <i>Aeshna multicolor</i> <input checked="" type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input checked="" type="checkbox"/> <i>Libellula saturata</i> <input type="checkbox"/> <i>Pachyplax longipennis</i> <input type="checkbox"/> <i>Pantala flavescens</i> <input type="checkbox"/> <i>Perithemis intensa</i> <input type="checkbox"/> <i>Pseudagrion borealis</i> <input checked="" type="checkbox"/> <i>Sympetrum corruptum</i> <input type="checkbox"/> <i>Sympetrum illotum</i> <input type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea onusta</i> <input checked="" type="checkbox"/> <i>Argia sp.</i> <input type="checkbox"/> <i>Enallagma sp.</i> <input type="checkbox"/> <i>Telebasis salva</i> <input type="checkbox"/> Lepidoptera: <input type="checkbox"/> <i>Atalopedes campestris</i> <input type="checkbox"/> <i>Erynnis funeralis</i> <input type="checkbox"/> <i>Heliopterus erictorium</i> <input type="checkbox"/> <i>Hyalephila phyleus</i> <input type="checkbox"/> <i>Lerodea eufala</i> <input type="checkbox"/> <i>Paratrytone melane</i> <input type="checkbox"/> <i>Polites sabuleti</i> <input checked="" type="checkbox"/> <i>Pyrurgus albescens</i> <input checked="" type="checkbox"/> <i>Papilio cresphontes</i> <input checked="" type="checkbox"/> <i>Papilio rutulus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i> <input type="checkbox"/> Neuroptera: <input type="checkbox"/> Chrysopidae <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> Myrmeleontidae <input type="checkbox"/> <i>Arachnomyrmex sp.</i> <input checked="" type="checkbox"/> <i>Myrmeleon sp.</i> <input checked="" type="checkbox"/> Raphidiidae (Snakeflies) <input type="checkbox"/> Dermaptera: <input type="checkbox"/> <i>Forficula auricularia</i> <input type="checkbox"/> Orthoptera: <input checked="" type="checkbox"/> Acrididae <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Leprus intermedius</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input checked="" type="checkbox"/> <i>Schistocerca nitens</i> <input checked="" type="checkbox"/> <i>Schistocerca sp.</i>
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Bird Species Observed: HOFL ANHU TUVV EUST KUL MALL RTHA NOMO
AMKE SOSP ROLI BHPR BASW WFLB COLA LOSH
CANU NODO BLPH WESA BRBL SAPH HOSP OCCO
RWIN LEGO EUGO RWBL BNST COHA WEKI

Other Wildlife Species Observed:
CALDS, W. FENCE LIZARD, COTONTAIL
SO LIZARD

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: ALL Acreage Surveyed: 770 Date: 08-21-13 DSF Detected: Y N
 Temperature in °F (Start/End): 83 / 93 Cloud Cover (Start/End): 0 / 10% Biologist: JW Dicus Time (Start/End): 1000 / 1830
 Arthropod Species Observed: Wind Speed in mph (Start/End): 0-1 / 3-6 Biologist: MCDICUS Time (Start/End): 1000 / 1330

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysalasia</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Esferia albarbaris</i> <input type="checkbox"/> <i>Mollogora furtiva</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythicomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input checked="" type="checkbox"/> <i>Tachophora pellucida</i> <input checked="" type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenox simpsoni</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input checked="" type="checkbox"/> <i>Eucalliphora lilacea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Gonopidae sp.</i> <input checked="" type="checkbox"/> <i>Physocyphala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input type="checkbox"/> <i>Aganostemon sp.</i> <input type="checkbox"/> <i>Nomia nevadensis</i> <input type="checkbox"/> <i>Megachilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input checked="" type="checkbox"/> <i>Stratiomyidae</i> <input checked="" type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Yolucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichneumon sp.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Dasyneura coccineohirta</i> <input type="checkbox"/> <i>Dasyneura californica</i> <p>Coleoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Buprestidae</i> <input type="checkbox"/> <i>Carabidae</i> <input checked="" type="checkbox"/> <i>Cerambycidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chiochorus orbis</i> <input type="checkbox"/> <i>Coccinella sp.</i> <input type="checkbox"/> <i>Harmonia axyridis</i> <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elaterridae (Click Beetles)</i> <input type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input type="checkbox"/> <i>D. undecimpunctata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymela laticollis</i> <input checked="" type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Halplidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops sp.</i> <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosaigona flavipennis</i> <input type="checkbox"/> <i>Macrosaigona sp.</i> <input type="checkbox"/> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracotaipa sp.</i> <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> <i>Tenebrionidae</i> <input checked="" type="checkbox"/> <i>Eleodes sp.</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Lygaeidae</i> <input type="checkbox"/> <i>Lygaeus kalmii</i> <input type="checkbox"/> <i>Pyrrhocoridae</i> <input type="checkbox"/> <i>Largus cinctus</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> <u>SAH</u> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Phyllotreta pallidivirens</i> <input checked="" type="checkbox"/> <i>Tricholepta aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Apiomeris crassipes</i> <input checked="" type="checkbox"/> <i>Phymocoris ventralis</i> <input checked="" type="checkbox"/> <i>Zelus tetracanthus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Aeshna multicolor</i> <input checked="" type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula saturata</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input type="checkbox"/> <i>Pantala flavescens</i> <input type="checkbox"/> <i>Perithemis intensa</i> <input type="checkbox"/> <i>Pygomythos borealis</i> <input checked="" type="checkbox"/> <i>Sympetrum corruptum</i> <input type="checkbox"/> <i>Sympetrum illotum</i> <input type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea onusta</i> <input checked="" type="checkbox"/> <i>Argia sp.</i> <input type="checkbox"/> <i>Enallagma sp.</i> <input type="checkbox"/> <i>Telebasis salva</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input checked="" type="checkbox"/> <i>Myrmeleontidae</i> <input checked="" type="checkbox"/> <i>Brachynemurus sp.</i> <input type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Atalopedes campestris</i> <input type="checkbox"/> <i>Erynnis funeralis</i> <input checked="" type="checkbox"/> <i>Heliopterus ericetorum</i> <input checked="" type="checkbox"/> <i>Hylephila phyllaeus</i> <input type="checkbox"/> <i>Lerodea eufala</i> <input type="checkbox"/> <i>Paratrytone melane</i> <input type="checkbox"/> <i>Poletes sabuleti</i> <input checked="" type="checkbox"/> <i>Pyrgus albescens</i> <input type="checkbox"/> <i>Papilio cresphontes</i> <input checked="" type="checkbox"/> <i>Papilio rutulus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i>
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Bird Species Observed:

<u>MD0</u>	<u>TUVU</u>	<u>EUST</u>	<u>RUBL</u>	<u>WFIB</u>	<u>COLA</u>	<u>WEL1</u>
<u>RUHU</u>	<u>CON6</u>	<u>MOFP</u>	<u>BNSF</u>	<u>AMCE</u>	<u>SAPK</u>	<u>BSW</u>
<u>CAKI</u>	<u>SPT0</u>	<u>HOF1</u>	<u>WESA</u>	<u>EUCO</u>	<u>NANO</u>	<u>AMKE</u>
<u>UTHA</u>	<u>ROPI</u>	<u>BABL</u>	<u>MAU</u>	<u>BLH</u>	<u>LOSH</u>	<u>KIL</u>

Other Wildlife Species Observed:
CATS, W. FENCE WARD, VTA STAN SB

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: ALL Acreage Surveyed: ~70 Date: 08-29-13 DSF Detected: Y
 Temperature in °F (Start/End): 88 / 102 Cloud Cover (Start/End): 75% / 50% Biologist: J. DUCUS Time (Start/End): 1030 / 1400
 Arthropod Species Observed: Wind Speed in mph (Start/End): 0-2 / 1-4 Biologist: M. DUCUS Time (Start/End): 1030 / 1400

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolasia</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Efferia alabarbaris</i> <input type="checkbox"/> <i>Mallojora faurix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input type="checkbox"/> <i>Xaropogon luteus</i> <input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input checked="" type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythicomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input checked="" type="checkbox"/> <i>Toxophora pellicuda</i> <input checked="" type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input type="checkbox"/> <i>Eucalliphora illeca</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physocephala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Suterebridae</i> <input checked="" type="checkbox"/> <i>Condylosylus sp.</i> <input type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input checked="" type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyphus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon sp.</i> <input type="checkbox"/> <i>Dasytomilla coccineohirta</i> <input checked="" type="checkbox"/> <i>Dasytomilla californica</i> <input type="checkbox"/> <i>Dasytomilla sackeni (lg.)</i> <input type="checkbox"/> <i>Dasytomilla cyenemestra</i> <input type="checkbox"/> <i>Campsomersis tolteca</i> <input type="checkbox"/> <i>Trietis alcone</i> <input type="checkbox"/> <i>Pomphillidae</i> <input type="checkbox"/> <i>Pesopsis mildei</i> <input type="checkbox"/> <i>Pepsis sp.</i> <input type="checkbox"/> <i>Sphecidae</i> <input type="checkbox"/> <i>Amorphilla alberti</i> <input checked="" type="checkbox"/> <i>Amorphilla sp.</i> <input type="checkbox"/> <i>Bembix americana</i> <input checked="" type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanopsis</i> <input type="checkbox"/> <i>Bicyrtis sp.</i> <input type="checkbox"/> <i>Cerceris sp.</i> <input type="checkbox"/> <i>Chalybion californicus</i> <input type="checkbox"/> <i>Chlorion acerarium</i> <input type="checkbox"/> <i>Eucereeris insignis</i> <input type="checkbox"/> <i>Hoplitoides diversus</i> <input type="checkbox"/> <i>Hoplitoides sp.</i> <input type="checkbox"/> <i>Isodonti aelegans</i> <input checked="" type="checkbox"/> <i>Microbembix californicus</i> <input checked="" type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Prionyx foxi</i> <input type="checkbox"/> <i>Prionyx sp.</i> <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Stizoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input checked="" type="checkbox"/> <i>Eumenes cricifera</i> <input type="checkbox"/> <i>Euodynerus annulata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<p>Polistes fuscatus aurifer</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input type="checkbox"/> <i>Chlorochroa uhleri</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Thyanta pallidovirens</i> <input checked="" type="checkbox"/> <i>Thyanta mexicana</i> <input type="checkbox"/> <i>Scudderella aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Apiomeris crassipes</i> <input type="checkbox"/> <i>Stenomantius californica</i> <input checked="" type="checkbox"/> <i>Zelus tetracanthus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Aeshna multicolor</i> <input type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula saturata</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input type="checkbox"/> <i>Pantala flavescens</i> <input checked="" type="checkbox"/> <i>Perithemis intensa</i> <input type="checkbox"/> <i>Progomphus borealis</i> <input checked="" type="checkbox"/> <i>Sympetrum corruptum</i> <input type="checkbox"/> <i>Sympetrum litotum</i> <input type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea onusta</i> <input checked="" type="checkbox"/> <i>Argia sp.</i> <input type="checkbox"/> <i>Enallagma sp.</i> <input type="checkbox"/> <i>Telebasis salva</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Myrmeleonidae</i> <input type="checkbox"/> <i>Prachyneururus sp.</i> <input checked="" type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissoptera pictipennis</i> <input type="checkbox"/> <i>Leprus intermedium</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input checked="" type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca sp.</i>
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Bird Species Observed:

HOFI	KILL	EUST	AMKE	ATFL	BAST	COGA	ROPI
RUTH	CAKI	ANOR	GLPH	WELI	WESA	ANCO	EUCO
SOSP	GRBL	TUVU	BASW	NOPO	MAIL	CRLEB	SPSA
MOOO	BLWB	COLA	RTHA	LUPO	WFIB	HOSP	

Other Wildlife Species Observed:
CATS, W.FENCE, SB LIZARD, OTJR,
CATONAIL

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CARLE CITY Portion of Site Surveyed: ALL Acreage Surveyed: 70 Date: 08-31-13 DSF Detected: Y (N)
 Temperature in °F (Start/End): 84 / 95 Cloud Cover (Start/End): 75% / 40% Biologist: J.W. Dicus Time (Start/End): 1030 / 1400
 Arthropod Species Observed: Wind Speed in mph (Start/End): 0-4 / 0-3 Biologist: M.A. Dicus Time (Start/End): 1030 / 1400

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolasia</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Efferia albarbaris</i> <input type="checkbox"/> <i>Mallopora faturix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input checked="" type="checkbox"/> <i>Saropogon luteus</i> <input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bombyliidae</i> <input checked="" type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligyra gaz-ophylax</i> <input type="checkbox"/> <i>Mythicomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input checked="" type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenax simpson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input checked="" type="checkbox"/> <i>Physocephala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input type="checkbox"/> <i>Condylostylus sp.</i> <input type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input checked="" type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyphus americanus</i> <input type="checkbox"/> <i>Polucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon sp.</i> <input type="checkbox"/> <i>Dasyutilla coccineohirta</i> <input checked="" type="checkbox"/> <i>Dasyutilla californica</i> <input type="checkbox"/> <i>Dasyutilla sackeni</i> (lg.) <input type="checkbox"/> <i>Dasyutilla clytemnestra</i> <input type="checkbox"/> <i>Campomeris tolteca</i> <input type="checkbox"/> <i>Trielis atcione</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pepsis mildei</i> <input type="checkbox"/> <i>Pepsis sp.</i> <input checked="" type="checkbox"/> <i>Sphécidae</i> <input type="checkbox"/> <i>Mimophila alberti</i> <input checked="" type="checkbox"/> <i>Ammophila sp.</i> <input type="checkbox"/> <i>Bembix americana</i> <input checked="" type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanopsis</i> <input type="checkbox"/> <i>Bicyrtis sp.</i> <input type="checkbox"/> <i>Chalybion californicus</i> <input type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisoides diversus</i> <input type="checkbox"/> <i>Hoplisoides sp.</i> <input type="checkbox"/> <i>Isodonti elegans</i> <input type="checkbox"/> <i>Microbembix californicus</i> <input type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Ptionyx foxi</i> <input type="checkbox"/> <i>Ptionyx sp.</i> <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Stizoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Faenenes crucifera</i> <input checked="" type="checkbox"/> <i>Pachyneur annulata</i> <input checked="" type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> / <u>SAVI</u> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Thyanta pallidovirens</i> <input checked="" type="checkbox"/> <i>Trichopepla aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Stenomatus sp.</i> <input checked="" type="checkbox"/> <i>Iris oratoria</i> <input type="checkbox"/> <i>Stagmomantis californica</i> <input type="checkbox"/> <i>Parabacillus hesperis</i> <p>Odonata:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aeshna multicolor</i> <input checked="" type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula saturata</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input type="checkbox"/> <i>Pantala flavescens</i> <input type="checkbox"/> <i>Perithemis intensa</i> <input type="checkbox"/> <i>Progomphus borealis</i> <input checked="" type="checkbox"/> <i>Sympetrum corruptum</i> <input type="checkbox"/> <i>Sympetrum illotum</i> <input checked="" type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea onusta</i> <input checked="" type="checkbox"/> <i>Argia sp.</i> <input type="checkbox"/> <i>Enallagma sp.</i> <input type="checkbox"/> <i>Telebasis salva</i> <p>Lepidoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Atalopedes campestris</i> <input type="checkbox"/> <i>Erynnis funeralis</i> <input type="checkbox"/> <i>Heliopterus ericetorum</i> <input checked="" type="checkbox"/> <i>Polyphila phyleus</i> <input checked="" type="checkbox"/> <i>Lerodea eufala</i> <input type="checkbox"/> <i>Paratrytone melane</i> <input type="checkbox"/> <i>Polites sabuleti</i> <input checked="" type="checkbox"/> <i>Pyrgus albescens</i> <input type="checkbox"/> <i>Papilio cressphontes</i> <input checked="" type="checkbox"/> <i>Papilio rutulus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Myrmeleon sp.</i> <input checked="" type="checkbox"/> <i>Brachyneururus sp.</i> <input checked="" type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Foerficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Leprus intermedius</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca sp.</i>
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Bird Species Observed:

<u>MOJO</u>	<u>NOMO</u>	<u>HOSE</u>	<u>HOPI</u>	<u>COLA</u>	<u>SPSA</u>
<u>AMAV</u>	<u>EUCO</u>	<u>TUVU</u>	<u>ANJU</u>	<u>RAWL</u>	<u>AMEK</u>
<u>COCA</u>	<u>CAKI</u>	<u>RTTA</u>	<u>WTSW</u>	<u>GRBL</u>	<u>RUTU</u>
<u>AMYL</u>	<u>BLPH</u>	<u>BRLO</u>	<u>BSBN</u>	<u>AMCO</u>	<u>WFLB</u>

Other Wildlife Species Observed:

SB WEARD COTONTAIL
W. FENCE
CAGS

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: ALL Acreage Surveyed: ~70 Date: 09-02-13 DSF Detected: Y (N)
 Temperature in °F (Start/End): 82 / 95 Cloud Cover (Start/End): 0 / 25% Biologist: JOHN DAVIS Time (Start/End): 1015 / 1345
 Arthropod Species Observed: Wind Speed in mph (Start/End): 0-2 / 5-10 Biologist: MELANIE DAVIS Time (Start/End): 1015 / 1345

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolasia</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Efferia albarbarbaris</i> <input type="checkbox"/> <i>Malloflora fawcettii</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input checked="" type="checkbox"/> <i>Saropogon latens</i> <input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i> <input checked="" type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input checked="" type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythicomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input checked="" type="checkbox"/> <i>Xanthophora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenax simpsoni</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input type="checkbox"/> <i>Xylocopa varipuncta</i> <input checked="" type="checkbox"/> <i>Apis mellifera</i> <input type="checkbox"/> <i>Bombus californicus</i> <input type="checkbox"/> <i>Bombus cratichii</i> <input type="checkbox"/> <i>Bombus sonorus</i> <input type="checkbox"/> <i>Bombus vosnesenskii</i> <input type="checkbox"/> <i>Halictidae</i> <input checked="" type="checkbox"/> <i>Agapostemon sp.</i> <input type="checkbox"/> <i>Nomia nevadensis</i> <input type="checkbox"/> <i>Megachilidae</i> <input type="checkbox"/> <i>Dianthidulum sp.</i> <input type="checkbox"/> <i>Megachile sp.</i> <input type="checkbox"/> <i>Perdita sp.</i> Wasps <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input checked="" type="checkbox"/> <i>Metasphyphus americanus</i> <input checked="" type="checkbox"/> <i>Ybocella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon sp.</i> <input checked="" type="checkbox"/> <i>Polistes fuscatus aurifer</i> <input checked="" type="checkbox"/> <i>Vespa pennsylvanica</i> Colletes: <input type="checkbox"/> <i>Buprestidae</i> <input type="checkbox"/> <i>Carabidae</i> <input type="checkbox"/> <i>Cerambycidae</i> <input type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilocorus orbus</i> <input checked="" type="checkbox"/> <i>Coccinella sp.</i> <input type="checkbox"/> <i>Harmonia axyridis</i> <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elatridae (Click Beetles)</i> <input type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input checked="" type="checkbox"/> <i>Uedeimpunctata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Pachymela laticollis</i> <input type="checkbox"/> <i>Cureculionidae</i> <input type="checkbox"/> <i>Halipidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops sp.</i> <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosaigona flavipenne</i> <input type="checkbox"/> <i>Macrosaigona sp.</i> <input type="checkbox"/> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracotalpa sp.</i> <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> <i>Tenebrionidae</i> <input checked="" type="checkbox"/> <i>Eleodes sp.</i> Hemiptera: <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Stenopneuste annulata</i> <input checked="" type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Pentatomidae</i> <input checked="" type="checkbox"/> <i>Armerotropis californica</i> <input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i> <input type="checkbox"/> <i>Gryllus sp.</i> <input type="checkbox"/> <i>Oecanthus fulvoni</i> <input type="checkbox"/> <i>Tettigoniidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input type="checkbox"/> <i>Scudderella mexicana</i> <input type="checkbox"/> <i>Stenopelmatus sp.</i> <input checked="" type="checkbox"/> <i>Iris oratoria</i> <input type="checkbox"/> <i>Stagmomantis californica</i> <input type="checkbox"/> <i>Parabacillus hesperis</i> Odonata: <input type="checkbox"/> <i>Aeshna multicolor</i> <input type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input checked="" type="checkbox"/> <i>Libellula saturata</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input type="checkbox"/> <i>Pantala flavescens</i> <input type="checkbox"/> <i>Perithemis intensa</i> <input type="checkbox"/> <i>Progomphus borealis</i> <input checked="" type="checkbox"/> <i>Sympetrum corruptum</i> <input type="checkbox"/> <i>Sympetrum illotum</i> <input checked="" type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea onusta</i> <input type="checkbox"/> <i>Argia sp.</i> <input type="checkbox"/> <i>Enallagma sp.</i> <input type="checkbox"/> <i>Telebasis salva</i> Lepidoptera: <input checked="" type="checkbox"/> <i>Atalopedes campestris</i> <input type="checkbox"/> <i>Erynnis funeralis</i> <input type="checkbox"/> <i>Heilopetes ericetorum</i> <input checked="" type="checkbox"/> <i>Aylephila phyleus</i> <input checked="" type="checkbox"/> <i>Lerodea eufala</i> <input type="checkbox"/> <i>Paratrytone melane</i> <input type="checkbox"/> <i>Pollia sabuleti</i> <input checked="" type="checkbox"/> <i>Pyrgus albescens</i> <input checked="" type="checkbox"/> <i>Papilio cressphontes</i> <input checked="" type="checkbox"/> <i>Papilio rutulus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i>
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Bird Species Observed:

MOFO	TUVU	CAKI	LOPI	AMBL	NOMO	WAFB	AMCO	HOFI
NVWO	SPTO	KILL	EVST	CORA	SAPH	EWBL	GOAT	
AVTU	WREN	BASW	RTHA	GRBL	GNST	SPSA	HOSP	
NOFL	GOSP	BLPH	LOSH	AMKE	WESA	MAUL	WEKI	

Other Wildlife Species Observed:
CAGS, BOBCAT, SOBIZARD, WIFENDE LIZARD

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: AL Acreage Surveyed: 70 Date: 090413 DSF Detected: Y N

Temperature in °F (Start/End): 90/101 Cloud Cover (Start/End): 5%/20% Biologist: J.V. DICUS Time (Start/End): 1000/1330

Arthropod Species Observed: _____ Wind Speed in mph (Start/End): 0-2/5-8 Biologist: M.R. DICUS Time (Start/End): 1000/1330

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolasia</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Efferia albarbaris</i> <input type="checkbox"/> <i>Melolagora fautrix</i> <input type="checkbox"/> <i>Proctocaninus sp.</i> <input type="checkbox"/> <i>Saropogon luteus</i> <input type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input type="checkbox"/> <i>Callibaetis pacificus</i> <input checked="" type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligyra gazophylax</i> <input type="checkbox"/> <i>Mythicomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input checked="" type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenopsis simpson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input checked="" type="checkbox"/> <i>Eucalliphora lilaca</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input checked="" type="checkbox"/> <i>Conopidae sp.</i> <input checked="" type="checkbox"/> <i>Physocephala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input type="checkbox"/> <i>Condylostylus sp.</i> <input checked="" type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input checked="" type="checkbox"/> <i>Symphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyphus americanus</i> <input checked="" type="checkbox"/> <i>Tolucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon sp.</i> <input type="checkbox"/> <i>Dasytomilla coccineohirta</i> <input type="checkbox"/> <i>Dasytomilla californica</i> <input type="checkbox"/> <i>Dasytomilla sackeni</i> (lg.) <input type="checkbox"/> <i>Dasytomilla clytemnestra</i> <input type="checkbox"/> <i>Campsomermis tolteca</i> <input type="checkbox"/> <i>Trielis alcione</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pepsis mildi</i> <input type="checkbox"/> <i>Pepsis sp.</i> <input checked="" type="checkbox"/> <i>Sphecidae</i> <input type="checkbox"/> <i>Ammophila alberti</i> <input checked="" type="checkbox"/> <i>Ammophila sp.</i> <input type="checkbox"/> <i>Bembix americana</i> <input checked="" type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanopsis</i> <input type="checkbox"/> <i>Bicyrtis sp.</i> <input type="checkbox"/> <i>Chalybion californicus</i> <input type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucereus insignis</i> <input type="checkbox"/> <i>Hoplisoides diversus</i> <input type="checkbox"/> <i>Hoplisoides sp.</i> <input type="checkbox"/> <i>Isodonti aelegans</i> <input type="checkbox"/> <i>Microbembix californicus</i> <input checked="" type="checkbox"/> <i>Phylanthus multimaculata</i> <input type="checkbox"/> <i>Phylanthus ventralis</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Prionyx foxi</i> <input checked="" type="checkbox"/> <i>Prionyx sp.</i> <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Stizoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Erobodermus annulata</i> <input checked="" type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elatridae (Click Beetles)</i> <input type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input checked="" type="checkbox"/> <i>D. undecimpunctata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymela laticollis</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Halplidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops sp.</i> <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosaigona flavipenne</i> <input type="checkbox"/> <i>Macrosaigona sp.</i> <input type="checkbox"/> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracotalpa sp.</i> <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> <i>Tenebrionidae</i> <input checked="" type="checkbox"/> <i>Eleodes sp.</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Lygaeidae</i> <input checked="" type="checkbox"/> <i>Lygaeus kalmii</i> <input type="checkbox"/> <i>Pyrrhocoridae</i> <input type="checkbox"/> <i>Largus cinctus</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> (S.M.) <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input checked="" type="checkbox"/> <i>Trichopepla aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chlorochorus orbis</i> <input checked="" type="checkbox"/> <i>Coccinella sp.</i> <input checked="" type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elatridae (Click Beetles)</i> <input type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input checked="" type="checkbox"/> <i>D. undecimpunctata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymela laticollis</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Halplidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops sp.</i> <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosaigona flavipenne</i> <input type="checkbox"/> <i>Macrosaigona sp.</i> <input type="checkbox"/> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracotalpa sp.</i> <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> <i>Tenebrionidae</i> <input checked="" type="checkbox"/> <i>Eleodes sp.</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Lygaeidae</i> <input checked="" type="checkbox"/> <i>Lygaeus kalmii</i> <input type="checkbox"/> <i>Pyrrhocoridae</i> <input type="checkbox"/> <i>Largus cinctus</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Therotropis californica</i> <input checked="" type="checkbox"/> <i>Therotropis pallidipennis</i> <input type="checkbox"/> <i>Gryllus sp.</i> <input type="checkbox"/> <i>Oecanthus fulvoni</i> <input type="checkbox"/> <i>Tettigoniidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input checked="" type="checkbox"/> <i>Scudderella mexicana</i> <input type="checkbox"/> <i>Stenopelmatus sp.</i> <input checked="" type="checkbox"/> <i>Aris oratoria</i> <input type="checkbox"/> <i>Stagmomantis californica</i> <input type="checkbox"/> <i>Parabacillus hesperis</i> <p>Odonata:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aeshna multicolor</i> <input checked="" type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula saturata</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input type="checkbox"/> <i>Pantala flavescens</i> <input type="checkbox"/> <i>Perithemis intensa</i> <input type="checkbox"/> <i>Progomphus borealis</i> <input checked="" type="checkbox"/> <i>Sympetrum corruptum</i> <input type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea ornata</i> <input checked="" type="checkbox"/> <i>Argia sp.</i> <input type="checkbox"/> <i>Enallagma sp.</i> <input type="checkbox"/> <i>Telebasis salva</i> <p>Lepidoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Atalopedes campestris</i> <input type="checkbox"/> <i>Erynnis funerals</i> <input type="checkbox"/> <i>Heliopterus erictorum</i> <input checked="" type="checkbox"/> <i>Mylephila phyleus</i> <input type="checkbox"/> <i>Paratyone eufala</i> <input type="checkbox"/> <i>Paratyone melane</i> <input type="checkbox"/> <i>Polites sabuleti</i> <input type="checkbox"/> <i>Pyrgus albescens</i> <input type="checkbox"/> <i>Papilio cressphontes</i> <input checked="" type="checkbox"/> <i>Papilio rufus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Pieris rapae</i> <input checked="" type="checkbox"/> <i>Agrotia protodice</i> <input checked="" type="checkbox"/> <i>Brephidium exilis</i> <input type="checkbox"/> <i>Hemiarctus ceramuis</i> <input type="checkbox"/> <i>Icaricia acmon</i> <input checked="" type="checkbox"/> <i>Lepidotes marina</i> <input checked="" type="checkbox"/> <i>Strymon melinus</i> <input type="checkbox"/> <i>Apodemia normo virgulti</i> <input type="checkbox"/> <i>Agraulis vanillae</i> <input type="checkbox"/> <i>Danaus gilippus</i> <input type="checkbox"/> <i>Danaus plexippus</i> <input type="checkbox"/> <i>Precis coenia</i> <input type="checkbox"/> <i>Vanessa atalanta</i> <input type="checkbox"/> <i>Vanessa cardui</i> <input type="checkbox"/> <i>Vanessa virginiensis</i> <input type="checkbox"/> <i>Arctidae</i> <input type="checkbox"/> <i>Noctuidae</i> <input type="checkbox"/> <i>Autographa californica</i> <input type="checkbox"/> <i>Schinia</i> <input type="checkbox"/> <i>Geometridae</i> <input checked="" type="checkbox"/> <i>Pyralidae</i> <input type="checkbox"/> <i>Paranthrene robiniae</i> <input type="checkbox"/> <i>Hyles lineata</i> <input type="checkbox"/> <i>Manduca sexta</i> <p>Arachnida:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Araneidae</i> <input type="checkbox"/> <i>Peucetia viridina</i> <input checked="" type="checkbox"/> <i>Dipluridae</i> <input type="checkbox"/> <i>Leurognathus pacificus</i> <input type="checkbox"/> <i>Latreolates hesperis</i> <input type="checkbox"/> <i>Salicidae</i> <input type="checkbox"/> <i>Phidippus formosus</i> <input type="checkbox"/> <i>Thomisidae</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>HEMIPTERA</i> <input checked="" type="checkbox"/> <i>B. HILLIARS</i>
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Bird Species Observed: _____ Other Wildlife Species Observed: CAGS, COTTONTAIL

NDFI	ANITD	AMKE	BLBL	WESA	HOSP		
TUVJ	CAKI	RTA	HOSP	NOMO	ATL		
SO SP	BLEH	MAIL	ROFI	WIKI	KU		
LWTV	EUST	WUBL	SNST	LOSH			

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: ALL Acreage Surveyed: 70 Date: 09-12-13 DSF Detected: Y (N)

Temperature in °F (Start/End): 77 / 90 Cloud Cover (Start/End): 20 / 10 Biologist: J.W. Dicus Time (Start/End): 1030 / 1400

Arthropod Species Observed: Wind Speed in mph (Start/End): 0-2 / 3-7 Biologist: M.A. Dicus Time (Start/End): 1030 / 1400

<p>DIPTERA:</p> <p><i>R. terminatus abdominalis</i></p> <p><i>Apiocera chrysolasia</i></p> <p><i>Apiocera convergens</i></p> <p><i>Nemomydas pantherina</i></p> <p><i>Asilidae</i></p> <p><i>Efferia alabarbaris</i></p> <p><i>Mallopora fourix</i></p> <p><i>Proctocanthus sp.</i></p> <p><i>Saropogon latus</i></p> <p><i>Stenopogon brevisculus</i></p> <p>Baetidae (May Flies)</p> <p><i>Callibaetis pacificus</i></p> <p>Bombyliidae</p> <p><i>Exoprosopa sp.</i></p> <p><i>Ligra gazophylax</i></p> <p><i>Mythicomyia sp.</i></p> <p><i>Poecilanthrax arethusa</i></p> <p><i>Poecilanthrax sp.</i></p> <p><i>Toxophora pellucida</i></p> <p><i>Villa atrata</i></p> <p><i>Zenox simpson</i></p> <p><i>Calliphora sp.</i></p> <p><i>Eucalliphora illece</i></p> <p><i>Phaenicia cuprina</i></p> <p><i>Phaenicia sericata</i></p> <p>Conopidae sp.</p> <p><i>Physocephala texana</i></p> <p>Culicidae - mosquitoes</p> <p>Cuterebridae</p> <p><i>Condylostylus sp.</i></p> <p>Prosophilidae</p> <p><i>Musca domestica</i></p> <p><i>Sarcophagidae</i></p> <p><i>Sarcophaga sp.</i></p> <p>Stratiomyidae</p> <p>Syrphidae</p> <p><i>Allograpta obliqua</i></p> <p><i>Eristalis tenax</i></p> <p><i>Metasyrphus americanus</i></p> <p><i>Tobocella mexicana</i></p> <p>Tabanidae</p>	<p><i>Ichneumon sp.</i></p> <p><i>Dasymytila coccineohirta</i></p> <p><i>Dasymytila californica</i></p> <p><i>Dasymytila sackeni</i> (lg.)</p> <p><i>Dasymytila clytemnestra</i></p> <p><i>Campomeris tolteca</i></p> <p><i>Trielis alcione</i></p> <p>Pompilidae</p> <p><i>Pepsis mildeli</i></p> <p><i>Pepsis sp.</i></p> <p><i>Sphleccidae</i></p> <p><i>Ammophila alberti</i></p> <p><i>Ammophila sp.</i></p> <p><i>Bembix americana</i></p> <p><i>Bembix comata</i></p> <p><i>Bembix melanopsis</i></p> <p><i>Bicyrtes sp.</i></p> <p><i>Cerceris sp.</i></p> <p><i>Chalybion californicus</i></p> <p><i>Chlorion aerarium</i></p> <p><i>Eucerceris insignis</i></p> <p><i>Hoplisoides diversus</i></p> <p><i>Hoplisoides sp.</i></p> <p><i>Isodontia elegans</i></p> <p><i>Microbembix californicus</i></p> <p><i>Atlantanthus multimaculata</i></p> <p><i>Philanthus ventralis</i></p> <p><i>Podalonia sp.</i></p> <p><i>Prionyx foxi</i></p> <p><i>Prionyx sp.</i></p> <p><i>Sceliphron caementarium</i></p> <p><i>Sphex ichneumonius</i></p> <p><i>Stizoides remicinctum</i></p> <p><i>Tachytes elongatus</i></p> <p>Tiphidae</p> <p>Vespidae - unidentified</p> <p><i>Eumenes bollii</i></p> <p><i>Eumenes crucifera</i></p> <p><i>Euclypterus annulata</i></p> <p><i>Polistes apachus</i></p> <p><i>Polistes dorsalis</i></p> <p><i>Polistes exclamans</i></p>	<p><i>Polistes fuscatus aurifer</i></p> <p><i>Vespa pennsylvanica</i></p> <p>COLEOPTERA:</p> <p>Buprestidae</p> <p>Carabidae</p> <p><i>Quarabicyclidae</i></p> <p>Coccinellidae</p> <p><i>Adalia bipunctata</i></p> <p><i>Chilocorus orbus</i></p> <p><i>Coccinella sp.</i></p> <p><i>Harmonia axyridis</i></p> <p><i>Hippodamia convergens</i></p> <p><i>Olla v-nigrum</i></p> <p>Elatridae (Click Beetles)</p> <p><i>Clysmellidae</i></p> <p><i>Diabrotica balteata</i></p> <p><i>P. undecimpunctata</i></p> <p><i>Lema trilineata</i></p> <p><i>Tachymela laticollis</i></p> <p>Cureulionidae</p> <p>Haliplidae</p> <p>Hydrophilidae</p> <p>Meloidae</p> <p><i>Nemognatha lurida apicalis</i></p> <p>Melyridae</p> <p><i>Collops sp.</i></p> <p>Rhipiphoridae</p> <p><i>Macrosaigona flavipennis</i></p> <p><i>Macrosaigona sp.</i></p> <p>Sarabacidae</p> <p><i>Cotinus mutibilis</i></p> <p><i>Paracotalpa sp.</i></p> <p><i>Staphylinus maxillosus</i></p> <p>Venebrionidae</p> <p><i>Eleodes sp.</i></p> <p>Hemiptera:</p> <p><i>Lygaea</i></p> <p><i>Lygaeus kalmii</i></p> <p>Pyrrhocoridae</p> <p><i>Largus cinctus</i></p>	<p>Pentatomidae</p> <p><i>Armerotropis californica</i></p> <p><i>Trimerotropis pallidipennis</i></p> <p><i>Gryllus sp.</i></p> <p><i>Oecantia fulvoni</i></p> <p>Tettigoniidae</p> <p><i>Antianthe expansa</i></p> <p><i>Scudderia mexicana</i></p> <p><i>Stenopelmatus sp.</i></p> <p><i>Iris oratoria</i></p> <p><i>Stagmomantis californica</i></p> <p><i>Parabacillus hesperis</i></p> <p>ODONATA:</p> <p><i>Aeshna multicolor</i></p> <p><i>Anax junius</i></p> <p><i>Erythemis collocata</i></p> <p><i>Libellula croceipennis</i></p> <p><i>Libellula saturata</i></p> <p><i>Pachydiplax longipennis</i></p> <p><i>Pantala flavescens</i></p> <p><i>Perithemis intensa</i></p> <p><i>Progomphus borealis</i></p> <p><i>Sympetrum corruptum</i></p> <p><i>Sympetrum illotum</i></p> <p><i>Tramea lacerata</i></p> <p><i>Tramea onusta</i></p> <p>Chrysopidae</p> <p><i>Chrysopa sp.</i></p> <p><i>Encallagma sp.</i></p> <p><i>Telebasis salva</i></p> <p>LEPIDOPTERA:</p> <p><i>Halopodes campestris</i></p> <p><i>Erynnis funeralis</i></p> <p><i>Heliopeus ericetorum</i></p> <p><i>Hyalephila phyleus</i></p> <p><i>Lerodea eufala</i></p> <p><i>Pararytone melane</i></p> <p><i>Polites sabuleti</i></p> <p><i>Pyrgus albescens</i></p> <p><i>Papilio cresphontes</i></p> <p><i>Papilio rutulus</i></p> <p><i>Colias eurytheme</i></p>
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Bird Species Observed:

<i>BWSH</i>	<i>TUVU</i>	<i>RODO</i>	<i>BLPH</i>	<i>GNST</i>	<i>LOSH</i>
<i>HOF1</i>	<i>SOSP</i>	<i>RTHA</i>	<i>EUCO</i>	<i>WESA</i>	<i>COBA</i>
<i>HOSP</i>	<i>AVHV</i>	<i>SEBL</i>	<i>SAPH</i>	<i>RWBL</i>	<i>BASW</i>
<i>ILL</i>	<i>ANHV</i>	<i>RAPI</i>	<i>MALL</i>	<i>AMKE</i>	<i>CAKI</i>

Other Wildlife Species Observed:
CMS COTTONTAIL, SOLIZARD,
W. FENCE LIZARD, BTR

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIVIL CITY Portion of Site Surveyed: 14 Acreage Surveyed: 70 Date: 09-14-13 DSF Detected: Y N
 Temperature in °F (Start/End): 81 / 87 Cloud Cover (Start/End): 0 / 0 Biologist: J.W. DICUS Time (Start/End): 1015 / 1345
 Arthropod Species Observed: 0-2 / 5-7 Wind Speed in mph (Start/End): 0-2 / 5-7 Biologist: M.L. DICUS Time (Start/End): 1015 / 1345

<p>DIPTERA:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolasia</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input type="checkbox"/> <i>Nemomydas pantherina</i> <input checked="" type="checkbox"/> <i>Efferia alabarbaris</i> <input type="checkbox"/> <i>Malloflora fautrix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input checked="" type="checkbox"/> <i>Saropogon luteus</i> <input type="checkbox"/> <i>Stenopogon breviscutulus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bombilyidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligra gaz-o-phylax</i> <input type="checkbox"/> <i>Mythicomya sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenax simpsoni</i> <input checked="" type="checkbox"/> <i>Calliphora sp.</i> <input checked="" type="checkbox"/> <i>Eucalliphora illaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physoccephala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input checked="" type="checkbox"/> <i>Condylostylus sp.</i> <input type="checkbox"/> <i>Prosophiidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input checked="" type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input checked="" type="checkbox"/> <i>Eristalis tenax</i> <input checked="" type="checkbox"/> <i>Metasyphus americanus</i> <input type="checkbox"/> <i>Tolucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon sp.</i> <input type="checkbox"/> <i>Dasytomilla coccineohirta</i> <input type="checkbox"/> <i>Dasytomilla californica</i> <input type="checkbox"/> <i>Dasytomilla sackeni (lg.)</i> <input type="checkbox"/> <i>Dasytomilla clytemnestra</i> <input type="checkbox"/> <i>Campomeris tolleca</i> <input type="checkbox"/> <i>Triedis alcione</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pepsis mildoi</i> <input type="checkbox"/> <i>Pepsis sp.</i> <input checked="" type="checkbox"/> <i>Sphecidae</i> <input checked="" type="checkbox"/> <i>Ammophila alberti</i> <input checked="" type="checkbox"/> <i>Ammophila sp.</i> <input checked="" type="checkbox"/> <i>Bembix americana</i> <input checked="" type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanopsis</i> <input type="checkbox"/> <i>Bicyrtis sp.</i> <input type="checkbox"/> <i>Chalybion californicus</i> <input type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisisides diversus</i> <input type="checkbox"/> <i>Hoplisisides sp.</i> <input type="checkbox"/> <i>Isodonti aelegans</i> <input checked="" type="checkbox"/> <i>Microbembix californicus</i> <input type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Priopnx foxi</i> <input type="checkbox"/> <i>Priopnx sp.</i> <input checked="" type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Sizoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Pachyneurys annulata</i> <input checked="" type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> <input type="checkbox"/> <i>Vespa pennsylvanica</i> <p>COLEOPTERA:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Buprestidae</i> <input type="checkbox"/> <i>Carabidae</i> <input type="checkbox"/> <i>Cerambycidae</i> <input checked="" type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilochoerus orbis</i> <input type="checkbox"/> <i>Coccinella sp.</i> <input type="checkbox"/> <i>Harmonia axyridis</i> <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elaterridae (Click Beetles)</i> <input type="checkbox"/> <i>Chrysomelidae</i> <input type="checkbox"/> <i>Diabrotica balteata</i> <input checked="" type="checkbox"/> <i>D. undecimpunctata</i> <input type="checkbox"/> <i>Lema trilineata</i> <input checked="" type="checkbox"/> <i>Tachymela laticolus</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Halplidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops sp.</i> <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosaigon flavipenne</i> <input checked="" type="checkbox"/> <i>Macrosaigon sp.</i> <input type="checkbox"/> <i>Scarabaeidae</i> <input type="checkbox"/> <i>Cotinus mutillus</i> <input type="checkbox"/> <i>Paracotaipa sp.</i> <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> <i>Tenebrionidae</i> <input checked="" type="checkbox"/> <i>Eleodes sp.</i> <p>HEMIPTERA:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Lygaeidae</i> <input type="checkbox"/> <i>Lygaeus kalmii</i> <input type="checkbox"/> <i>Pyrrhocoridae</i> <input type="checkbox"/> <i>Largus cinctus</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Polistes californica</i> <input type="checkbox"/> <i>Trimerotropis pallidipennis</i> <input type="checkbox"/> <i>Gryllus sp.</i> <input type="checkbox"/> <i>Oecanthus fulvoni</i> <input type="checkbox"/> <i>Tettigoniidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input type="checkbox"/> <i>Scudderia mexicana</i> <input checked="" type="checkbox"/> <i>Stenopelmatus sp.</i> <input type="checkbox"/> <i>Apodemia morio virgulti</i> <input type="checkbox"/> <i>Agraulis vanillae</i> <input type="checkbox"/> <i>Danaus gilippus</i> <input type="checkbox"/> <i>Danus plexippus</i> <input type="checkbox"/> <i>Precis coenia</i> <input checked="" type="checkbox"/> <i>Vanessa atalanta</i> <input checked="" type="checkbox"/> <i>Vanessa cardui</i> <input type="checkbox"/> <i>Vanessa virginiensis</i> <input type="checkbox"/> <i>Arctidae</i> <input type="checkbox"/> <i>Noctuidae</i> <input type="checkbox"/> <i>Autographa californica</i> <input type="checkbox"/> <i>Schima</i> <input type="checkbox"/> <i>Geometridae</i> <input checked="" type="checkbox"/> <i>Pyralidae</i> <input type="checkbox"/> <i>Paranthrene robiniae</i> <input checked="" type="checkbox"/> <i>Hyles lineata</i> <input checked="" type="checkbox"/> <i>Manduca sexta</i> <p>ARACHNIDA:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Araneidae</i> <input type="checkbox"/> <i>Peucetia viridinis</i> <input checked="" type="checkbox"/> <i>Dipluridae</i> <input type="checkbox"/> <i>Zeurocyclus pacificus</i> <input checked="" type="checkbox"/> <i>Lairroductus hesperus</i> <input type="checkbox"/> <i>Salticidae</i> <input checked="" type="checkbox"/> <i>Phidippus formosus</i> <input type="checkbox"/> <i>Thomisidae</i> 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Aeshma multicolor</i> <input checked="" type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula saturata</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input type="checkbox"/> <i>Pantala flavescens</i> <input checked="" type="checkbox"/> <i>Perithemis intensa</i> <input checked="" type="checkbox"/> <i>Sympetrum corruptum</i> <input checked="" type="checkbox"/> <i>Sympetrum illotum</i> <input checked="" type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea onusta</i> <input checked="" type="checkbox"/> <i>Argia sp.</i> <input type="checkbox"/> <i>Enallagma sp.</i> <input type="checkbox"/> <i>Telebasis salva</i> <p>LEPIDOPTERA:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Atalopedes campestris</i> <input type="checkbox"/> <i>Erynnis funerals</i> <input type="checkbox"/> <i>Heliopterus ericeorum</i> <input checked="" type="checkbox"/> <i>Hylophila phyleus</i> <input type="checkbox"/> <i>Lerodea eufala</i> <input type="checkbox"/> <i>Paratyton melane</i> <input checked="" type="checkbox"/> <i>Polites sabuleti</i> <input type="checkbox"/> <i>Pyrgus albescens</i> <input type="checkbox"/> <i>Papilio cressphonies</i> <input type="checkbox"/> <i>Papilio rutulus</i> <input type="checkbox"/> <i>Colias eurytheme</i> 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri (S&P)</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Tjanyta pallidovirens</i> <input checked="" type="checkbox"/> <i>Trichoptera aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Apiomeris crassipes</i> <input type="checkbox"/> <i>Rhynocoris ventralis</i> <input type="checkbox"/> <i>Stagmomantis californica</i> <input type="checkbox"/> <i>Parabacillus hesperis</i> <p>ODONATA:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aeshma multicolor</i> <input checked="" type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula saturata</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input type="checkbox"/> <i>Pantala flavescens</i> <input checked="" type="checkbox"/> <i>Perithemis intensa</i> <input checked="" type="checkbox"/> <i>Sympetrum corruptum</i> <input checked="" type="checkbox"/> <i>Sympetrum illotum</i> <input checked="" type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea onusta</i> <input checked="" type="checkbox"/> <i>Argia sp.</i> <input type="checkbox"/> <i>Enallagma sp.</i> <input type="checkbox"/> <i>Telebasis salva</i> <p>NEUROPTERA:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Myrmeleontidae</i> <input checked="" type="checkbox"/> <i>Brachyneururus sp.</i> <input checked="" type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>DERMAPTERA:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>ORTHOPTERA:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Disosteira pictipennis</i> <input type="checkbox"/> <i>Leprus intermedius</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input checked="" type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca sp.</i> 	<p>BIRD SPECIES OBSERVED:</p> <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td><u>NORMO</u></td> <td><u>BNST</u></td> <td><u>QASW</u></td> <td><u>SAPH</u></td> <td><u>EUCO</u></td> <td><u>EUST</u></td> <td><u>RWBL</u></td> </tr> <tr> <td><u>AMOL</u></td> <td><u>CAKI</u></td> <td><u>TUVU</u></td> <td><u>BUSH</u></td> <td><u>WESA</u></td> <td><u>ROPI</u></td> <td><u>RUTH</u></td> </tr> <tr> <td><u>HOPI</u></td> <td><u>CAKI</u></td> <td><u>GRAB</u></td> <td><u>COHA</u></td> <td><u>COVE</u></td> <td><u>DRBL</u></td> <td><u>LEBO</u></td> </tr> <tr> <td><u>MAU</u></td> <td><u>MODO</u></td> <td><u>KLIT</u></td> <td><u>AMCO</u></td> <td><u>CORA</u></td> <td><u>ADKE</u></td> <td></td> </tr> </table>	<u>NORMO</u>	<u>BNST</u>	<u>QASW</u>	<u>SAPH</u>	<u>EUCO</u>	<u>EUST</u>	<u>RWBL</u>	<u>AMOL</u>	<u>CAKI</u>	<u>TUVU</u>	<u>BUSH</u>	<u>WESA</u>	<u>ROPI</u>	<u>RUTH</u>	<u>HOPI</u>	<u>CAKI</u>	<u>GRAB</u>	<u>COHA</u>	<u>COVE</u>	<u>DRBL</u>	<u>LEBO</u>	<u>MAU</u>	<u>MODO</u>	<u>KLIT</u>	<u>AMCO</u>	<u>CORA</u>	<u>ADKE</u>	
<u>NORMO</u>	<u>BNST</u>	<u>QASW</u>	<u>SAPH</u>	<u>EUCO</u>	<u>EUST</u>	<u>RWBL</u>																												
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<u>MAU</u>	<u>MODO</u>	<u>KLIT</u>	<u>AMCO</u>	<u>CORA</u>	<u>ADKE</u>																													

Other Wildlife Species Observed:
SB LIZARD, W. FENCE LIZARD, CATS
OTJR

20090913 RAHEENI ABU
B. MALARIS

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: AW Acreage Surveyed: ~70 Date: 09-16-13 D/SF Detected: Y (N)
 Temperature in °F (Start/End): 76 / 94 Cloud Cover (Start/End): 0 / 0 Biologist: J. DICUS Time (Start/End): 1030 / 1400
 Arthropod Species Observed: Wind Speed in mph (Start/End): 0-1 / 3-8 Biologist: M. DICUS Time (Start/End): 1030 / 1400

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolasia</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input type="checkbox"/> <i>Nymomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Efferia alabarbaris</i> <input type="checkbox"/> <i>Malloflora fairix</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input type="checkbox"/> <i>Saropogon luteus</i> <input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligra gazophylax</i> <input type="checkbox"/> <i>Mythicomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input checked="" type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Villa arata</i> <input type="checkbox"/> <i>Zenax simpson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input type="checkbox"/> <i>Eucalliphora illaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physoccephala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Euterebridae</i> <input checked="" type="checkbox"/> <i>Condylostylus sp.</i> <input type="checkbox"/> <i>Prosophiidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input checked="" type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Strphidae</i> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyphus americanus</i> <input checked="" type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichneumon sp.</i></p> <p><i>Dasyutilla coccineohirta</i></p> <p><i>Dasyutilla californica</i></p> <p><i>Dasyutilla sackeni (lg.)</i></p> <p><i>Dasyutilla clytemnestra</i></p> <p><i>Campomeris tolteca</i></p> <p><i>Trielis alcione</i></p> <p><i>Pompilidae</i></p> <p><i>Pezopsis mildoi</i></p> <p><i>Pezopsis sp.</i></p> <p><input checked="" type="checkbox"/> <i>Sphecidae</i></p> <p><i>Amphophila alberti</i></p> <p><input checked="" type="checkbox"/> <i>Amphophila sp.</i></p> <p><i>Bembix americana</i></p> <p><input checked="" type="checkbox"/> <i>Bembix comata</i></p> <p><i>Bembix melanops</i></p> <p><i>Bicyrtes sp.</i></p> <p><i>Cerceris sp.</i></p> <p><i>Chalybion californicus</i></p> <p><i>Chalybion aerarium</i></p> <p><i>Eucerceris insignis</i></p> <p><input checked="" type="checkbox"/> <i>Hoplisisoides diversus</i></p> <p><i>Hoplisisoides sp.</i></p> <p><i>Isodontis elegans</i></p> <p><input checked="" type="checkbox"/> <i>Microbembix californicus</i></p> <p><input checked="" type="checkbox"/> <i>Philanthus multimaculata</i></p> <p><i>Philanthus ventralis</i></p> <p><i>Podalonia sp.</i></p> <p><i>Phonox foxi</i></p> <p><input checked="" type="checkbox"/> <i>Prionyx sp.</i></p> <p><i>Sceliphron caementarium</i></p> <p><i>Sphex ichneumonius</i></p> <p><i>Stizoides remicinctum</i></p> <p><i>Tachytes elongatus</i></p> <p><i>Tiphidae</i></p> <p><i>Vespidae - unidentified</i></p> <p><i>Eumenes bollii</i></p> <p><i>Eumenes crucifera</i></p> <p><i>Eudomyrus annulata</i></p> <p><input checked="" type="checkbox"/> <i>Polistes apachus</i></p> <p><i>Polistes dorsalis</i></p> <p><i>Polistes exclamans</i></p>	<p><i>Polistes fuscatus aurifer</i></p> <p><i>Vespa pennsylvanica</i></p> <p>COLEOPTERA:</p> <p><i>Buprestidae</i></p> <p><i>Carabidae</i></p> <p><input checked="" type="checkbox"/> <i>Cerambycidae</i></p> <p><i>Coccinellidae</i></p> <p><i>Adalia bipunctata</i></p> <p><i>Chiochorus orbis</i></p> <p><i>Coccinella sp.</i></p> <p><i>Harmonia axyridis</i></p> <p><i>Hippodamia convergens</i></p> <p><i>Olla v-nigrum</i></p> <p><i>Elateridae (Click Beetles)</i></p> <p><i>Chrysomelidae</i></p> <p><i>Diabrotica balteata</i></p> <p><input checked="" type="checkbox"/> <i>A. undecimpunctata</i></p> <p><input checked="" type="checkbox"/> <i>Lema trilineata</i></p> <p><i>Tachymela laticollis</i></p> <p><i>Curculionidae</i></p> <p><i>Halpidae</i></p> <p><i>Hydrophilidae</i></p> <p><i>Meloidae</i></p> <p><i>Nemognatha lurida apicalis</i></p> <p><i>Melyridae</i></p> <p><i>Collops sp.</i></p> <p><i>Rhipuridae</i></p> <p><i>Macrosaigona flavipenne</i></p> <p><i>Macrosaigona sp.</i></p> <p><i>Scarabaeidae</i></p> <p><input checked="" type="checkbox"/> <i>Cotinus mutabilis</i></p> <p><i>Paracotalpa sp.</i></p> <p><i>Staphylinus maxillosus</i></p> <p><i>Tenebrionidae</i></p> <p><input checked="" type="checkbox"/> <i>Eleodes sp.</i></p> <p>Hemiptera:</p> <p><i>Lygaeidae</i></p> <p><i>Lygaeus kalmii</i></p> <p><i>Pyrrhocoridae</i></p> <p><i>Largus cinctus</i></p>	<p>Pentatomidae</p> <p><input checked="" type="checkbox"/> <i>Chlorochroa ligata</i></p> <p><input checked="" type="checkbox"/> <i>Chlorochroa uhleri (SAVI)</i></p> <p><i>Murgantia histrionica</i></p> <p><i>Podisus sp.</i></p> <p><i>Thyanta pallidivirens</i></p> <p><input checked="" type="checkbox"/> <i>Trichoptera aurora</i></p> <p><i>Reduviidae</i></p> <p><i>Apiomeris crassipes</i></p> <p><i>Myiocoris ventralis</i></p> <p><input checked="" type="checkbox"/> <i>Zelus tetracanthus</i></p> <p>Homoptera:</p> <p><i>Aeshna multicolor</i></p> <p><input checked="" type="checkbox"/> <i>Anax junius</i></p> <p><i>Erythemis collocata</i></p> <p><i>Libellula croceipennis</i></p> <p><i>Libellula saturata</i></p> <p><i>Pantala flavescens</i></p> <p><i>Perithemis intensa</i></p> <p><i>Progomphus borealis</i></p> <p><input checked="" type="checkbox"/> <i>Sympetrum corruptum</i></p> <p><i>Sympetrum illotum</i></p> <p><i>Tramea lacerata</i></p> <p><i>Tramea ornata</i></p> <p><input checked="" type="checkbox"/> <i>Argia sp.</i></p> <p><i>Enallagma sp.</i></p> <p><i>Telebasis salva</i></p> <p>Lepidoptera:</p> <p><i>Atalopodes campestris</i></p> <p><i>Erynnis funeralis</i></p> <p><i>Heliopterus erictorum</i></p> <p><input checked="" type="checkbox"/> <i>Hylephila phyleus</i></p> <p><i>Lerodea eufala</i></p> <p><i>Paratrytone melane</i></p> <p><i>Polites sabuleti</i></p> <p><input checked="" type="checkbox"/> <i>Pyrgus albescens</i></p> <p><i>Papilio cressphontes</i></p> <p><input checked="" type="checkbox"/> <i>Papilio rutulus</i></p> <p><input checked="" type="checkbox"/> <i>Colias eurytheme</i></p>	<p>Pieris rapae</p> <p><input checked="" type="checkbox"/> <i>Pieris protodice</i></p> <p><i>Brephidium exilis</i></p> <p><i>Hemiaris ceraunus</i></p> <p><i>Jacaritia acmon</i></p> <p><input checked="" type="checkbox"/> <i>Strymon marina</i></p> <p><i>Strymon melinus</i></p> <p><i>Apodemia normo virgulti</i></p> <p><i>Agraulis vanillae</i></p> <p><i>Danaus gilippus</i></p> <p><i>Danus plexippus</i></p> <p><input checked="" type="checkbox"/> <i>Precis coenia</i></p> <p><i>Vanessa annabella</i></p> <p><i>Vanessa atalanta</i></p> <p><input checked="" type="checkbox"/> <i>Vanessa cardui</i></p> <p><i>Vanessa virginiensis</i></p> <p><input checked="" type="checkbox"/> <i>Arctidae</i></p> <p><input checked="" type="checkbox"/> <i>Noctuidae</i></p> <p><i>Autographa californica</i></p> <p><i>Schinia</i></p> <p><i>Geometridae</i></p> <p><input checked="" type="checkbox"/> <i>Pyralidae</i></p> <p><i>Paranthrene robiniae</i></p> <p><i>Hyles lineata</i></p> <p><i>Manduca sexta</i></p> <p>Arachnida:</p> <p><i>Aranidae</i></p> <p><i>Peucetia viridins</i></p> <p><input checked="" type="checkbox"/> <i>Dipluridae</i></p> <p><input checked="" type="checkbox"/> <i>Leurotychus pacificus</i></p> <p><input checked="" type="checkbox"/> <i>Lairdecticus hesperus</i></p> <p><i>Salticidae</i></p> <p><i>Phidippus formosus</i></p> <p><input checked="" type="checkbox"/> <i>Thomisidae</i></p>
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Bird Species Observed:

BLFH	JUVU	SAPH	MAUW	LOSH	BEWR	BLBL	HO SP	SO SP
AMOR	NOMO	MODO	BNST	CORA	BLBL	WFIB	HFI	
CAKI	AMKE	EUCO	LBDO	POPI	BNST	SPSA	LUWU	
KUL	ATHA	BASW	CAELA	EVS1	WESA	AMCO	ANTU	

Other Wildlife Species Observed:
SO LIZARD, W.F. LIZARD, LABS,
GTJR, COYOTE TAIL

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: AL Acreage Surveyed: ~70 Date: 09-18-13 DSSF Detected: Y N

Temperature in °F (Start/End): 70 / 82 Cloud Cover (Start/End): 0% / 0% Biologist: J. BILCUS Time (Start/End): 1020 / 1350

Arthropod Species Observed: _____ Wind Speed in mph (Start/End): 1-4 / 3-8 Biologist: M. DICUS Time (Start/End): 1020 / 1350

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolasia</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Efferia alabarbaris</i> <input type="checkbox"/> <i>Malloflora faurix</i> <input type="checkbox"/> <i>Proctocaninus sp.</i> <input type="checkbox"/> <i>Seropogon luteus</i> <input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligya gazophylax</i> <input type="checkbox"/> <i>Mythomomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input type="checkbox"/> <i>Toxophora pellicida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenon simpson</i> <input checked="" type="checkbox"/> <i>Calliphora sp.</i> <input checked="" type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physoccephala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Caterebridae</i> <input checked="" type="checkbox"/> <i>Condylostylus sp.</i> <input type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Erastalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input checked="" type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon sp.</i> <input type="checkbox"/> <i>Dasymytila coccineohirta</i> <input checked="" type="checkbox"/> <i>Dasymytila californica</i> <input type="checkbox"/> <i>Dasymytila sackeni (fg.)</i> <input type="checkbox"/> <i>Dasymytila clytemnestra</i> <input type="checkbox"/> <i>Campomeris tolteca</i> <input type="checkbox"/> <i>Trielis calcione</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pezopsis mildei</i> <input type="checkbox"/> <i>Pezopsis sp.</i> <input checked="" type="checkbox"/> <i>Sphécidae</i> <input checked="" type="checkbox"/> <i>Ammophila alberti</i> <input type="checkbox"/> <i>Ammophila sp.</i> <input checked="" type="checkbox"/> <i>Bembix americana</i> <input checked="" type="checkbox"/> <i>Bembix comata</i> <input type="checkbox"/> <i>Bembix melanopsis</i> <input type="checkbox"/> <i>Bicyrtis sp.</i> <input type="checkbox"/> <i>Chalybion californicus</i> <input type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisoides diversus</i> <input checked="" type="checkbox"/> <i>Hoplisoides sp.</i> <input type="checkbox"/> <i>Isodonti aelegans</i> <input type="checkbox"/> <i>Microbembix californicus</i> <input checked="" type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Prionyx foxi</i> <input checked="" type="checkbox"/> <i>Prionyx sp.</i> <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Sitoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Polodynerus annulata</i> <input checked="" type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri (SAV)</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input checked="" type="checkbox"/> <i>Physanta pallidivirens</i> <input checked="" type="checkbox"/> <i>Tric-hoepia aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Apiomeris crassipes</i> <input type="checkbox"/> <i>Rhynocoris ventralis</i> <input checked="" type="checkbox"/> <i>Zelus tetracanthus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Ashina multicolor</i> <input checked="" type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input checked="" type="checkbox"/> <i>Libellula saturata</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input type="checkbox"/> <i>Pantala flavescens</i> <input checked="" type="checkbox"/> <i>Perithemis intensa</i> <input type="checkbox"/> <i>Progomphus borealis</i> <input type="checkbox"/> <i>Sympetrum corruptum</i> <input type="checkbox"/> <i>Sympetrum illotum</i> <input checked="" type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea onusta</i> <input checked="" type="checkbox"/> <i>Argia sp.</i> <input type="checkbox"/> <i>Enallagma sp.</i> <input type="checkbox"/> <i>Telebasis salva</i> <p>Lepidoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Atalopetes campestris</i> <input type="checkbox"/> <i>Erymnis funerals</i> <input checked="" type="checkbox"/> <i>Heliopeles ericetorum</i> <input type="checkbox"/> <i>Hylephila phyleus</i> <input type="checkbox"/> <i>Lerodea eufala</i> <input type="checkbox"/> <i>Pararytone melane</i> <input type="checkbox"/> <i>Polites sabuleti</i> <input checked="" type="checkbox"/> <i>Pyrgus albescens</i> <input type="checkbox"/> <i>Papilio cresphontes</i> <input checked="" type="checkbox"/> <i>Papilio rutulus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Leprus intermedius</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca sp.</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Myrmeleontidae</i> <input type="checkbox"/> <i>Prachyneururus sp.</i> <input checked="" type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Foeficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Leprus intermedius</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca sp.</i>
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Other Wildlife Species Observed:

BLPH	AMOL	MAU	EUCO	HOLA	RWBL
WEKI	AMEK	WESA	TUVU	NOMO	ROPI
CAIK	RTHA	KILL	DCCO	LOSH	EUST
HOFI	SNST	GREG	COMA	GRBL	LBDO

APPENDIX E – CNDDDB FORM



Mail to:
California Natural Diversity Database
California Dept. of Fish & Wildlife
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDDB@wildlife.ca.gov

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 09/18/2013

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Rhaphiomidas terminatus abdominalis*

Common Name: Delhi Sands Flower-Loving Fly

Species Found? Yes No _____
If not, why? _____
Total No. Individuals _____ Subsequent Visit? yes no
Is this an existing NDDB occurrence? _____ no unk.
Yes, Occ. # _____
Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: John and Melanie Dicus
Address: PO Box 1333
Black Canyon City, Arizona, 85324
E-mail Address: JWDicus@aol.com
Phone: 623-203-3096

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

adults # juveniles # larvae # egg masses # unknown
 wintering breeding nesting rookery burrow site other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

The survey areas consists of approximately 55 acres generally located south of Interstate 60, west of Hamner/Milliken Avenue, north of Santa Ana River corridor, and east of Archibald Avenue.

County: Riverside and San Bernardino Landowner / Mgr.: Southern California Edison transmission line easement
Quad Name: Guasti, Corona North Elevation: 500-800 feet
T _____ R _____ Sec _____, _____ ¼ of _____ ¼, Meridian: H M S Source of Coordinates (GPS, topo. map & type): _____
T _____ R _____ Sec _____, _____ ¼ of _____ ¼, Meridian: H M S GPS Make & Model _____
DATUM: NAD27 NAD83 WGS84 Horizontal Accuracy _____ meters/feet
Coordinate System: UTM Zone 10 UTM Zone 11 OR Geographic (Latitude & Longitude)
Coordinates: Survey Areas: Township 2S and 3S, Range 7W, Sections 12 and 13 of the USGS Guasti and Sections 13, 23, 24, and 2 of Guasti and Corona North Quadrangle Maps

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

Habitat: Disturbed, ruderal vegetation dominated by non-native grasses (*Bromus diandrus*), Russian thistle (*Salsola tragus*), common kochia (*Kochia scoparia*), pigweed (*Chenopodium* sp.), and golden crownbeard (*Verbesina encelioides*). Vegetative cover ranges from 0% to 100%, averaging 40% over the 55-acre survey area. Former land uses include fallow agriculture, abandoned dairy operations, dirt roads, and disked open space. Soils within the survey area are Delhi series, and topography is relatively flat, gently sloping to the south and southwest.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): Excellent Good Fair Poor
Immediate AND surrounding land use: Residential/commercial/industrial development; active/fallow dairy operations, disturbed open space
Visible disturbances: Disking; non-native vegetation; ORV, pedestrian, and equestrian traffic; illegal dumping
Threats: Dairy operations, disking, dumping, ORV traffic

Comments: This site was surveyed by federally permitted biologists twice per week, according to DSF protocol, between July 1, 2013 and September 18, 2013. No Delhi flies were observed.

Determination: (check one or more, and fill in blanks)

Keyed (cite reference): _____
 Compared with specimen housed at: _____
 Compared with photo / drawing in: _____
 By another person (name): _____
 Other: _____

Photographs: (check one or more)

Slide Print Digital
Plant / animal
Habitat
Diagnostic feature

May we obtain duplicates at our expense? yes no

Delhi Sands Flower-Loving Fly (*Rhaphiomidas terminates abdominalis*)
Focused Survey and Technical Report for the
Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project



Prepared by:

**John and Melanie Dicus
Black Canyon City, Arizona**

October 2014

Delhi Sands Flower-Loving Fly
(Rhaphiomidas terminatus abdominalis)

**Circle City Substation and Mira Loma-Jefferson Subtransmission Line
Project
Riverside and San Bernardino Counties
California**

2014 Presence/Absence Survey

Prepared for:

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5 Hutton Center Drive, Suite 750
Santa Ana, CA 92707
Tel: 949.261.5414

Insignia Environmental
258 High Street
Palo Alto, CA 94301
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and

Southern California Edison
265A
1218 S. Fifth Avenue
Monrovia, CA 91016

Prepared by:

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P.O. Box 1333
Black Canyon City, AZ 85324
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October 2014

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- 1: Survey Information (Dates, Times, Weather Conditions, Biologist, Survey Results)

Cover Photo: Delhi Sands Flower-loving Fly (*Rhaphiomidas terminatus abdominalis*) Vicinity of Ontario, California, August, 2001 - John W. Dicus, photographer.

Information Summary

Focused presence/absence surveys for the Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) were completed for Southern California Edison (SCE), on September 18, 2014. Surveys were conducted by biologists John Dicus (TE-839960-6) and Melanie Dicus (TE-049175-3). The Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (Circle City Project) preferred route contains approximately 82 acres of Delhi Sands flower-loving fly suitable habitat located in Township 2S and 3S, Range 7W, Sections 12 and 13 of the United States Geological Survey (USGS) Guasti and Sections 13, 23, 24, and 2 of Corona North 7.5-minute series quadrangle maps. The survey areas lie within the incorporated cities of Eastvale in Riverside County and Ontario in San Bernardino County, California. No Delhi sands flower-loving flies were observed during the 2014 focused survey season. This technical report, submitted on October 10, 2014, details the findings of the 2014 focused survey effort.

Introduction

Focused presence/absence surveys for the Delhi sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) (Delhi Sands fly) were conducted in survey areas designated by the Circle City Project. The site was surveyed in its entirety twice per week between July 4 and September 18, 2014.

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (KV) distribution substation (Circle City Substation) covering approximately 4.0 acres of an 11.15-acre parcel located in the City of Corona. The Circle City Substation would be an unstaffed, automated 56-megavolt-ampere (MVA), low-profile substation with a potential capacity of 112 MVA at final build out. New fiber optic cable and communication equipment would be included to connect the Circle City Substation to SCE's existing telecommunication system.

In addition, SCE proposes to construct four new 66 kV source line segments. Two source line segments, in a double-circuit configuration, would be a combination of overhead and underground construction. Each line would be approximately 1.2 miles in length and would be created by connecting to the existing Chase-Corona-Databank 66 kV subtransmission line to form the new Circle City-Corona No. 2 66 kV subtransmission line and the new Chase-Circle City-Databank 66 kV subtransmission lines. Two new source line segments, in a double-circuit configuration, would be a combination of overhead and underground construction. Each would be approximately 3.5 miles in length and would be created by connecting to the existing Mira Loma-Corona-Pedley 66 kV subtransmission line to form the new Mira Loma-Circle City-Pedley and Circle City-Corona No. 1 66 kV subtransmission lines.

The project would also include construction of approximately six new 12 kV distribution circuit getaways and the construction of a new 66 kV subtransmission line. This line, which would be a combination of both overhead and underground construction, would be approximately 10.7 miles in length and would be constructed from the existing Mira Loma Substation to a location adjacent to the existing Corona Substation. Upgrades to the existing Mira Loma Substation would be provided to accommodate the new Mira Loma-Jefferson 66 kV subtransmission line.

The Circle City Project is located in Township 2S and 3S, Range 7W, Sections 12 and 13 of the USGS Guasti and Sections 13 and 23 of the Corona North 7.5-minute series quadrangle maps (APN 021817119, 021817110, 021817118, 021821127, 021821117, 021821124, 021825106, 021833129, 021833130, 021833118, 021833112, 021832117, 021803304, 021803313, 021832130, 021805201, 021805211, 021832125). The project site contains approximately 82 acres of potentially suitable habitat for the Delhi Sands fly. The project area is generally located south of Interstate 10, west of Milliken/Hamner Avenue, east of Archibald Avenue, and north of Limonite Avenue in the cities of Eastvale in Riverside County and Ontario in San Bernardino County, California (Figure 1). The Circle City Project is located within the historic range of the Delhi Sands fly and lies within the Ontario Recovery Unit as established in the Final Recovery Plan For The Delhi Sands Flower-Loving Fly (USFWS 1997).

Focused surveys and this technical report have been conducted and formatted in accordance with current U.S. Fish and Wildlife Service (USFWS) guidelines for protocol focused presence/absence surveys for the Delhi Sands fly (USFWS 1996). USFWS reserves the right to reject Delhi Sands fly surveys conducted under the guidelines listed in protocol should USFWS determine a survey is inadequate (USFWS 1996, Section II. B.).

Delhi Sands Flower-loving Fly

USFWS listed the Delhi Sands fly as an endangered species on September 23, 1993, under the Endangered Species Act (Act) of 1973, as amended. The Act prohibits “take” of a listed species. “Take” includes but is not limited to harming, harassing, or killing individuals of a listed species as well as destroying habitat occupied by a listed species.

The Delhi Sands fly is in the Dipteran insect family Mydidae and is approximately 1 inch long and orange-brown in color with dark brown markings on the dorsal surface of the abdomen. This insect species spends most of its life below ground and requires fine-grained sandy soils. As an adult, the Delhi Sands fly is a rapid flyer, visible above ground for several weeks between the months of July and September.

The historic range of the Delhi Sands fly is estimated to have included approximately 40 square miles in northwestern Riverside and southwestern San Bernardino counties. Habitat loss has limited the Delhi Sands fly’s current distribution to an estimated 2 percent of its former range or less (USFWS 1997).

Delhi Sands fly habitat is limited to areas that contain Delhi fine sand, an aeolian (wind-deposited) soil type. USFWS has identified the presence of Delhi Sands as the baseline criterion for the determination of suitable or potentially suitable habitat for this species. Fine, unconsolidated soil is required for oviposition (egg-laying), as females must insert their abdomens into the sand during this process (Rogers and Mattoni 1993). Little is known about the larval stages and requirements of the Delhi Sands fly. Development of this species from egg to adult is presumed to take either one or two years.

Appropriate vegetation and percent vegetative ground cover for the species is also largely unknown. Areas currently occupied by Delhi Sands flies tend to contain a mixture of sparsely vegetated to completely open sandy areas among areas of denser native and/or non-native vegetation.

In addition to Delhi series soils, the presence of several “indicator” plant species (those found to be present at many but not all sites occupied by Delhi Sands flies) is generally accepted as evidence suggestive of habitat suitable or potentially suitable for use by the species. Such indicator plant species include California buckwheat (*Eriogonum fasciculatum*), California croton (*Croton californicus*), telegraph weed (*Heterotheca grandiflora*), annual bur-sage (*Ambrosia acanthicarpa*) and other grass and forb species (USFWS 1997). The Delhi Sands fly has been documented utilizing California buckwheat as an adult nectar source (Kingsley 1996).

Methods

Site Description

The preferred transmission line route for the Circle City Project was evaluated for habitat potentially suitable to support the Delhi Sands fly. Areas that do not contain Delhi series soil were excluded from the surveys, as were some actively farmed agricultural lands (row crops), active dairies, paved surfaces, residential and commercial development, and areas that were inaccessible.

Soils on the surveyed portions of the Circle City Project are mapped Delhi Series Soil (Figure 2). Two Delhi Sands fly associated “indicator” plant species, annual bur-sage and California croton are present in small numbers. The majority of the survey areas are disturbed, dominated by ruderal vegetation, including Russian thistle (*Salsola tragus*), common kochia (*Kochia scoparia*), golden crownbeard (*Verbesina encelioides*), and pigweed (*Chenopodium album*). Vegetative cover within the survey areas varies between 10 percent and 100 percent, averaging approximately 30 percent in general. Topography is relatively flat, draining to the south and southwest. Elevation ranges from approximately 650 feet to 800 feet above mean sea level. Recent disturbances to the survey areas include disking, mowing, cattle and pedestrian traffic, dirt roads, off-road vehicle use, and illegal dumping.

Approximately 82 acres of habitat potentially suitable for Delhi Sands Fly were surveyed during the 2014 season. The survey areas, measuring between 0.7 acre and 59.32 acres, support a mixture of land uses, including disked and disturbed open space, fallow agricultural lands, active dairy operations, and dirt roads. At the request of the project proponent, survey areas included a 300-foot right-of-way around staging areas, transmission lines, and access roads. The survey parcels are located in the north portion of the preferred transmission line route in Eastvale, Riverside County and Ontario, San Bernardino County, California (Figure 3).

The northernmost survey area contains approximately 59 acres of potentially suitable Delhi Sands fly habitat. Surrounding the Mira Loma substation to the north, west, and south, this portion of the survey area is bordered by Hamner Avenue and industrial development to the east, active agriculture and disturbed open space to the south and west, and by commercial and residential development to the north. Habitat on-site consists of mowed, ruderal vegetation dominated by Russian thistle, common kochia, pigweed, and golden crownbeard.

Approximately 10 acres of potentially suitable Delhi Sands fly habitat are located northeast of Eucalyptus Avenue and Sumner Avenue within the preferred alignment route. This portion of the survey area is bordered to the north, west, and southwest by active dairy operations, and to the east and south by disturbed open space.

Approximately 12 acres of potentially suitable Delhi Sands fly habitat are located west of Sumner Avenue, north of Bellegrave Avenue within the preferred alignment route. This portion

of the survey area is bordered to the north by active dairy operations, to the east, south, and northwest by disturbed open space, and to the southwest by active agriculture (row crops). The majority of this survey area consists of abandoned dairy operations. Vegetation is ruderal, dominated by non-native common kochia, Russian thistle, and golden crownbeard.

Less than 1-acre of potentially suitable Delhi Sands fly habitat is located north of Harrison Avenue and Limonite Avenue within the preferred alignment route. Active agriculture (row crops) border this area to the north, and residential development border it to the west and northwest, and east. Vegetation is ruderal, consisting of scattered Russian thistle and other non-native herbs.

2012 and 2013 Focused Surveys

Protocol focused Delhi Sands Fly Presence/Absence Surveys were conducted along the Circle City Project route during the 2012 and 2013 focused survey periods. No Delhi Sands Flies were detected.

2014 Focused Survey

Interim survey guidelines for the Delhi Sands fly recommend that surveys be conducted by federally permitted biologists on nonconsecutive days between August 1 and September 20 between the hours of 1000 and 1400 Pacific Daylight Time (USFWS 1996). No more than 50 acres per day can be surveyed by one biologist (USFWS 1996). Two consecutive years of surveys with negative results (no flies observed) are required to conclude absence of this species from a survey site (USFWS 1996).

Since the establishment of interim protocol guidelines in 1996, adult Delhi Sands flies have been observed during the month of July. Subsequent to these observations, in a letter dated June 30, 2004, USFWS recommended that surveys begin no later than the week of July 1 and conclude on September 20 (Jim Bartel, USFWS, pers. com. 2004). Delhi Sands fly surveys at the Circle City Project were conducted according to current Delhi Sands fly survey protocol and the 2004 agency-recommended changes to the focused survey period.

The Circle City Project was surveyed two times per week between July 4 and September 18, between the hours of 1000 and 1400 by Delhi Sands fly permitted biologists John Dicus (TE-839960-6) and Melanie Dicus (TE-049175-3). The approximately 82-acre survey area was covered a total of 24 times during the 12-week season. Daily weather data were obtained using a digital anemometer (wind speed measurement in miles per hour), digital thermocouple, and by visual estimation of cloud cover.

Transects were walked slowly through the survey area in an effort to detect active or resting Delhi Sands flies and discarded exuviae (pupal cases, or skins). Digital site photographs were taken to record the condition of the site during 2014 focused surveys and are appended to this report (Appendix A). A comprehensive plant, invertebrate, and wildlife inventory was not conducted as a portion of the focused survey effort; however, all wildlife and vascular plant species identified on the site incidental to conducting focused Delhi Sands fly surveys were

recorded on field forms and are appended to this report (Appendices B and C). Detailed daily survey information is summarized in this report (Table 1) and can be found in copies of daily field forms appended to this report (Appendix D).

Results

2014 Survey Effort

No Delhi Sands flies were detected during any of the 2014 focused survey season site visits. Daily survey temperatures averaged 88 degrees Fahrenheit, with starting temperatures averaging 83 degrees and ending temperatures averaging 94 degrees. The minimum starting temperature was 71 degrees, and the maximum ending temperature was 107 degrees. Daily wind speeds averaged 3.5 miles per hour, with starting wind speeds averaging 2 mph and ending wind speeds averaging 5 mph. Daily cloud cover estimates averaged 19.5 percent, with starting cloud cover averaging 20 percent, and ending cloud cover averaging 19 percent. No precipitation was recorded during the surveys. A summary of survey dates, times, weather conditions, surveyor and survey results, is provided in Table 1. All plant and animal species identified on the Circle City Project while conducting the 2014 focused survey are listed in this report (Appendices B & C).

Table 1.
2014 Survey Information

Date	Survey Area	Time PST	Temp °F Begin / End	Wind Speed (mph)	Cloud Cover (%)	Biologist	Results
7-04-14	N	1105-1430	95 / 101	0-5 / 4-10	5 / 10	MD	No DSF
7-05-14	S	0945-1415	85 / 96	0 / 4-9	10 / 15	MD	No DSF
7-06-14	N	1105-1430	94 / 99	0-3 / 1-6	20 / 0	MD	No DSF
7-07-14	S	0945-1415	89 / 96	0 / 0-3	0 / 0	MD	No DSF
7-11-14	N	0930-1300	78 / 91	0-2 / 2-5	0 / 0	MD	No DSF
7-12-14	S	0945-1415	81 / 94	0-1 / 3-6	50 / 50	MD	No DSF
7-14-14	N, S	1000-1400	84 / 94	0 / 3-7	25 / 15	JD, MD	No DSF
7-18-14	N	1000-1300	76 / 82	0-1 / 0-5	50 / 65	MD	No DSF
7-19-14	S	1000-1400	71 / 81	1-4 / 4-9	100 / 75	MD	No DSF
7-20-14	N	1105-1400	78 / 86	3-7 / 2-7	15 / 0	MD	No DSF
7-21-14	S	1000-1400	73 / 91	3-9 / 2-7	20 / 10	MD	No DSF
7-25-14	N	1100-1400	89 / 98	0-3 / 1-7	50 / 60	MD	No DSF
7-26-14	S	1000-1400	86 / 95	1-4 / 3-9	15 / 10	MD	No DSF
7-27-14	N	1105-1400	90 / 93	2-5 / 3-10	40 / 50	MD	No DSF
7-28-14	S	1000-1400	81 / 96	1-4 / 4-9	99 / 60	MD	No DSF
8-01-14	N	0945-1250	83 / 96	0-3 / 0-7	0 / 1	MD	No DSF
8-02-14	S	1000-1400	80 / 88	0-3 / 9-12	100 / 100	MD	No DSF
8-03-14	N	1105-1400	82 / 92	0-1 / 0-5	65 / 85	MD	No DSF
8-04-14	S	1000-1400	79 / 90	0-3 / 4-8	15 / 5	MD	No DSF
8-08-14	N	1105 / 1400	78 / 88	2-5 / 2-6	0 / 0	MD	No DSF

8-09-14	S	0950-1400	78 / 91	0-2 / 2-6	0 / 0	MD	No DSF
8-10-14	N	1105-1400	83 / 95	4-8 / 4-10	5 / 20	MD	No DSF
8-11-14	S	1000-1400	79 / 95	0-2 / 5-10	5 / 30	MD	No DSF
8-15-14	S	1000-1400	86 / 96	0-1 / 6-8	0 / 0	MD	No DSF
8-16-14	N	0945-1250	88 / 98	0-2 / 3-4	0 / 0	MD	No DSF
8-17-14	S	1000-1400	83 / 99	0-3 / 2-6	0 / 0	MD	No DSF
8-18-14	N	1100-1400	91 / 101	0-3 / 2-8	0 / 1	MD	No DSF
8-19-14	S	1000-1400	75 / 86	2-5 / 4-10	20 / 25	MD	No DSF
8-20-14	N	1105-1405	80 / 89	1-3 / 0-5	20 / 70	MD	No DSF
8-21-14	S	0950-1400	79 / 88	0-2 / 1-7	0 / 10	MD	No DSF
8-22-14	N	1000-1255	79 / 90	2-4 / 4-8	0 / 0	MD	No DSF
8-29-14	S	1000-1400	86 / 101	0-1 / 3-7	1 / 1	MD	No DSF
8-30-14	N	0950-1255	85 / 99	0-2 / 0-2	0 / 0	MD	No DSF
8-31-14	S	1000-1400	81 / 96	2-4 / 3-6	10 / 5	MD	No DSF
9-01-14	N	1105-1405	88 / 98	0-6 / 2-8	0 / 0	MD	No DSF
9-02-14	S	1000-1405	78 / 95	0-3 / 2-5	0 / 0	MD	No DSF
9-03-14	N	1105-1405	79 / 88	0-4 / 6-10	0 / 0	MD	No DSF
9-04-14	S	1000-1400	71 / 86	0-2 / 3-5	100 / 0	MD	No DSF
9-06-14	N	0950-1250	83 / 94	0-1 / 4-6	0 / 5	MD	No DSF
09-12-14	N, S	1000-1320	85 / 99	0-2 / 2-5	0 / 0	JD, MD	No DSF
09-14-14	N, S	1040-1400	98 / 106	1-2 / 1-5	5 / 20	JD, MD	No DSF
09-16-14	N, S	1040-1400	95 / 107	0-3 / 6-10	10 / 20	JD, MD	No DSF
09-18-14	N, S	1040-1400	79 / 90	1-3 / 5-9	0 / 10	JD, MD	No DSF

- JD = John Dicus; MD = Melanie; DSF = Delhi Sands Fly

Conclusions

The Circle City Project was surveyed per the guidelines established in USFWS survey protocol (as amended by the 2004 letter) for the presence/absence of the Delhi Sands fly during the 2014 focused survey season. **No Delhi Sands flies were detected.**

DSF Survey Signature Page

± 82-acre Circle City Project
Riverside and San Bernardino Counties, California

October 10, 2014

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



_____ Date: October 10, 2014

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_____ Date: October 10, 2014

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Appendix A

Circle City Project—Site Photos and Figures



Photo 1. Representative view of survey habitat surrounding the Mira Loma substation, facing northwest (above).



Photo 2. Representative view of survey habitat south of the Mira Loma substation, facing south (above).

Dicus Biological



Photo 3. View west of survey area south of the Mira Loma substation, west of Milliken Avenue (above).



Photo 4. View west of survey area north of the Mira Loma substation, prior to disking (above).

Dicus Biological

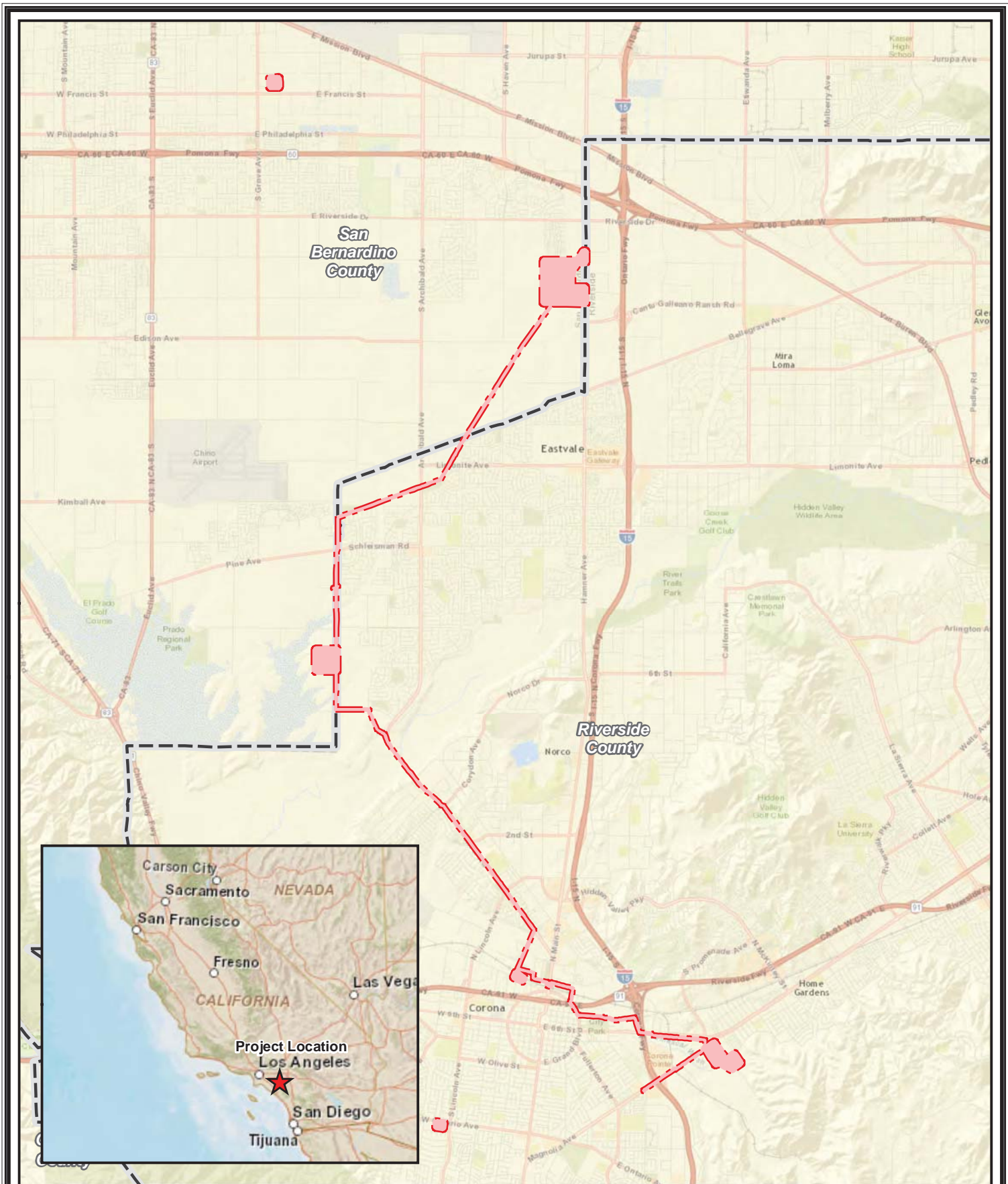


Photo 5. View north survey area west of the Mira Loma substation (above).



Photo 6. View north of survey area northeast of intersection between Eucalyptus and Sumner Avenues (above).

Dicus Biological



Legend

- Project Area
- County Boundary

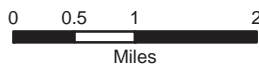
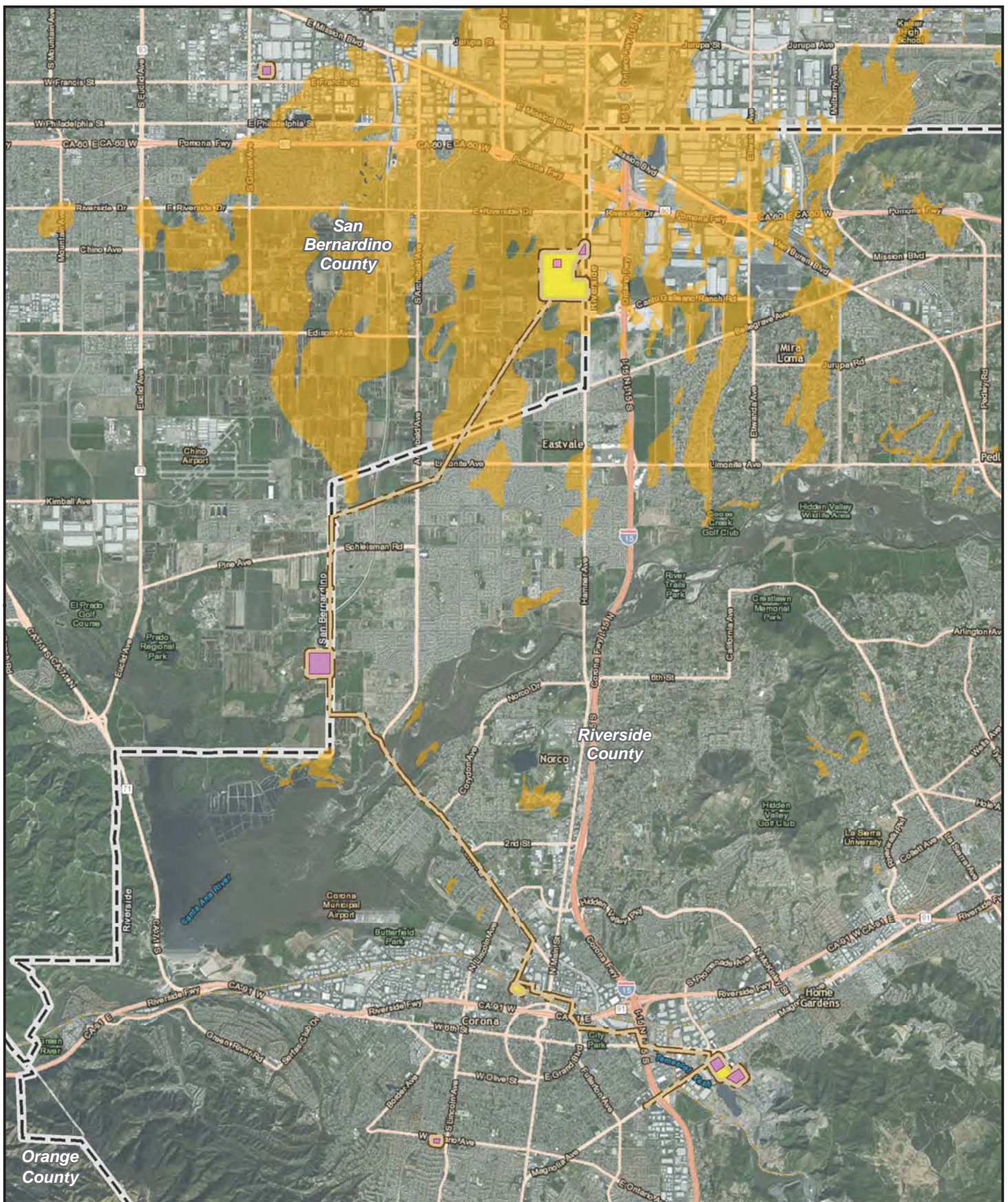


Figure 1
Project Vicinity Map



Legend

- Project Area
- County Boundary
- Staging Yard
- Substation Site
- Delhi Series Soil

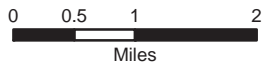
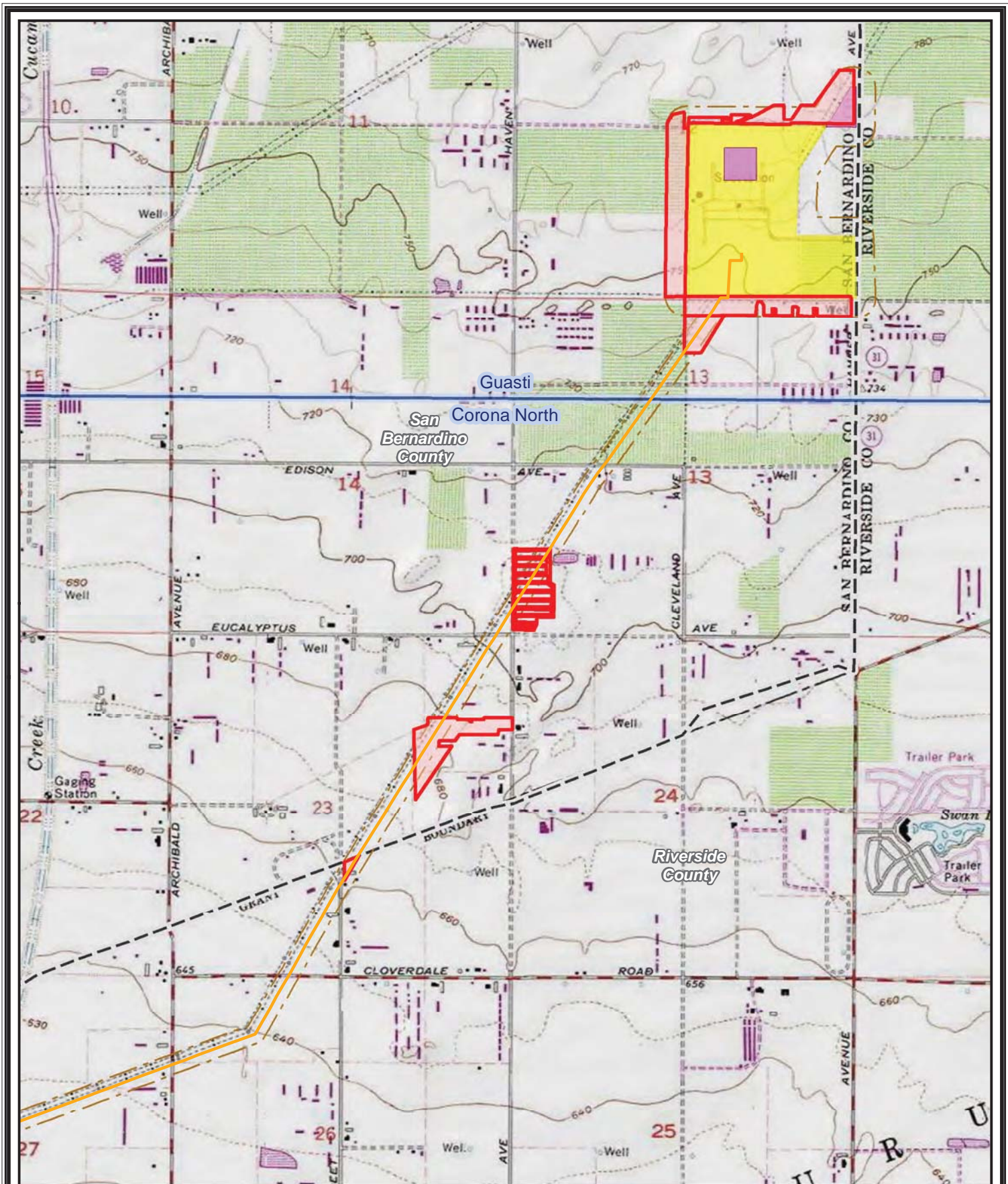


Figure 2
USDA Soils Map



Legend

- Delhi Sands Survey Area
- Project Area
- Staging Yard
- Substation Site
- County Boundary
- 7.5-minute Quad
- Transmission Centerline

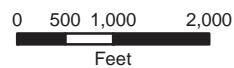


Figure 3
Topographic Site Map

Appendix B

Circle City Project—List of Wildlife Observed

Appendix B. Wildlife Observed or Detected on the Circle City Project During DSF Presence/Absence Surveys, July-September 2014

Order / Family	Latin Name	Common Name
Invertebrates		
Diptera		
Asilidae	<i>Efferia albibarbis</i>	Robber Fly
Asilidae	<i>Mallophora fauatrix</i>	Bumblebee Robber Fly
Asilidae	<i>Stenopogon brevisusculus</i>	Robber Fly
Asilidae	Unidentified	Robber Fly
Bombyliidae	<i>Toxophora pellucida</i>	Bee Fly
Bombyliidae	<i>Villa atrata</i>	Black Bee Fly
Bombyliidae	Unidentified	Bee Fly
Calliphoridae	<i>Calliphora</i> sp.	Bottle Fly
Calliphoridae	<i>Eucalliphora lilaea</i>	Common Blow Fly
Calliphoridae	<i>Phaenicia sericata</i>	Green Blow Fly
Dolichopodidae	<i>Condylostylus</i> species	Long-legged Fly
Muscidae	<i>Musca domestica</i>	House Fly
Mydidae	<i>Nemomydas pantherinus</i>	Mydas Fly
Sarcophagidae	<i>Sarcophaga</i> species	Flesh Fly
Sarcophagidae	Unidentified	Flesh Fly
Syrphidae	<i>Allograpta obliqua</i>	Hover Fly
Syrphidae	<i>Eristalis tenax</i>	Drone Fly
Syrphidae	<i>Metasyrphus americanus</i>	American Hover Fly
Syrphidae	<i>Volucella mexicana</i>	Cactus Fly
Tabanidae	<i>Tabanus punctifer</i>	Horse Fly
Tachinidae	<i>Gymnosoma fuliginosum</i>	Tachinid Fly
Tachinidae	Unidentified	Tachinid Fly
Tipulidae	<i>Nephrotoma</i> species	Crane Fly
Hymenoptera		
Andrenidae	<i>Perdita</i> species	Mining Bee
Apidae	<i>Apis mellifera</i>	Honey Bee
Apidae	<i>Melissodes</i> species	Long-horned Bee
Apidae	<i>Xylocopa varipuncta</i>	Carpenter Bee
Chrysididae	<i>Parnopes edwardsii</i>	Edwards' Cuckoo Wasp
Crabronidae	<i>Bembix americana comata</i>	Sand Wasp
Crabronidae	<i>Bicyrtes</i> species	Crabronid Wasp
Crabronidae	<i>Cerceris</i> species	Crabronid Wasp
Crabronidae	<i>Hoplisoides</i> species	Crabronid Wasp
Crabronidae	<i>Philanthus multimaculatus</i>	Crabronid Wasp
Crabronidae	<i>Philanthus</i> species	Crabronid Wasp
Crabronidae	Unidentified	Crabronid Wasp
Halictidae	<i>Agapostemon</i> species	Green Sweat Bee
Halictidae	<i>Nomia nevadensis</i>	Alkali Bee
Ichneumonidae	Unidentified	Ichneumon Wasp
Megachilidae	<i>Megachile</i> species	Leafcutter Bee
Mutillidae	<i>Dasymutilla californica</i>	Velvet Ant
Ants, Bees, Wasps		
Dicus Biological		

Appendix B. Wildlife Observed or Detected on the Circle City Project During DSF Presence/Absence Surveys, July-September 2014 (Continued)

Order / Family	Latin Name	Common Name
Hymenoptera		
Mutillidae	<i>Dasymutilla coccineohirta</i>	Ants, Bees, Wasps Velvet Ant
Scoliidae	<i>Trielis alcione</i>	Scoliid Wasp
Sphecidae	<i>Ammophila</i> species	Thread-waisted Wasp
Sphecidae	<i>Chlorion aerarium</i>	Blue Cricket Hunter
Sphecidae	<i>Prionyx</i> species	Thread-waisted Wasp
Sphecidae	<i>Sceliphron caementarium</i>	Black and Yellow Mud Dauber
Vespidae	<i>Eumenes bollii</i>	Potter Wasp
Vespidae	<i>Euodynerus annulatum</i>	Potter Wasp
Vespidae	<i>Polistes apachus</i>	Paper Wasp
Vespidae	Unidentified	Vespid Wasp
Vespidae	<i>Vespula pennsylvanica</i>	Yellow Jacket Wasp
Coleoptera		
Carabidae	Unidentified	Beetles Ground Beetle
Coccinellidae	<i>Coccinella</i> species	Ladybird Beetle
Coccinellidae	<i>Hippodamia convergens</i>	Convergent Ladybird
Chrysomelidae	<i>Diabrotica balteata</i>	Banded Cucumber Beetle
Chrysomelidae	<i>Diabrotica undecimpunctata</i>	Spotted Cucumber Beetle
Chrysomelidae	<i>Lema trilineata</i>	Three-lined Potato Beetle
Curculionidae	Unidentified	Weevil
Meloidae	Unidentified	Blister Beetle
Scarabaeidae	<i>Cotinus mutabilis</i>	Green June Beetle
Scarabaeidae	Unidentified	Scarab Beetle
Tenebrionidae	<i>Eleodes</i> species	Darkling Beetle
Tenebrionidae	Unidentified	Darkling Beetle
Hemiptera		
Largidae	<i>Largus cinctus</i>	True Bugs Bordered Plant Bug
Lygaeidae	<i>Lygaeus kalmii</i>	Small Milkweed Bug
Lygaeidae	Unidentified	Plant Bug
Pentatomidae	<i>Bagrada hilaris</i>	African Harlequin Bug
Pentatomidae	<i>Chlorochroa uhleri / sayi</i>	Uhler's/Say's Stink Bug
Pentatomidae	<i>Trichopepla aurora</i>	Stink Bug
Pentatomidae	Unidentified	Stink Bug
Reduviidae	<i>Apiomeris</i> species	Assassin Bug
Reduviidae	<i>Rhynocoris ventralis</i>	Assassin Bug
Reduviidae	<i>Zelus tetracanthus</i>	Assassin Bug
Homoptera		
Aphididae	Unidentified	Aphids, Cicadas, Hoppers Aphid Family
Cercopidae	Unidentified	Spittle Bug
Cicadellidae	Unidentified	Tree Hopper
Psyllidae	<i>Glycaspis brimblecombei</i>	Red Gum Lerp Psyllid

Dicus Biological

Appendix B. Wildlife Observed or Detected on the Circle City Project During DSF Presence/Absence Surveys, July-September 2014 (Continued)

Order / Family	Latin Name	Common Name
Neuroptera		Net-winged Insects
Chrysopidae	Unidentified	Green Lacewing
Myrmeleontidae	<i>Brachyneumurus</i> species	Antlion
Myrmeleontidae	<i>Myrmeleon</i> species	Antlion
Raphididae	Unidentified	Snakefly
Dermoptera		Earwigs
Forficulidae	<i>Forficula auricularia</i>	European Earwig
Orthoptera		Grasshoppers, Katydid, Mantids
Acrididae	<i>Schistocerca nitens</i>	Gray Bird Grasshopper
Acrididae	<i>Schistocerca</i> species	Bird Grasshopper
Acrididae	<i>Trimerotropis pallidipennis</i>	Pallid-winged Grasshopper
Acrididae	Unidentified	Short-horned Grasshopper
Gryllidae	<i>Gryllus</i> species	Tree Cricket
Tettigoniidae	Unidentified	Katydid Family
Mantidae	<i>Iris oratoria</i>	Mediterranean Mantis
Odonata		Dragonflies, Damselflies
Aeshnidae	<i>Aeshna multicolor</i>	Blue-eyed Darner
Aeshnidae	<i>Anax junius</i>	Common Green Darner
Coenagrionidae	<i>Argia</i> species	Dancer
Coenagrionidae	<i>Enallagma</i> species	Bluet
Libellulidae	<i>Libellula saturata</i>	Red Skimmer
Libellulidae	<i>Pantala flavescens</i>	Wandering Glider
Libellulidae	<i>Perithemis intensa</i>	Mexican Amberwing
Libellulidae	<i>Sympetrum corruptum</i>	Variiegated Meadowhawk
Libellulidae	<i>Tramea lacerata</i>	Black Saddlebags
Libellulidae	<i>Tramea onusta</i>	Brown Saddlebags
Lepidoptera		Butterflies, Moths
Arctiidae	Unidentified	Tiger Moth
Geometridae	Unidentified	Geometer Moth
Hesperiidae	<i>Hylephila phyleus</i>	Fiery Skipper
Hesperiidae	<i>Lerodea eufala</i>	Eufala Skipper
Hesperiidae	<i>Pyrgus albescens</i>	Common Checkered-Skipper
Lycaenidae	<i>Brephidium exilis</i>	Pygmy Blue
Lycaenidae	<i>Hemiargus ceraunus</i>	Ceraunus Blue
Lycaenidae	<i>Leptotes marina</i>	Marine Blue
Lycaenidae	<i>Strymon melinus</i>	Common Hairstreak
Noctuidae	Unidentified	Noctuid Moth
Lepidoptera		Butterflies, Moths
Nymphalidae	<i>Agraulis vanilla</i>	Gulf Fritillary
Nymphalidae	<i>Precis coenia</i>	Common Buckeye

Dicus Biological

Appendix B. Wildlife Observed or Detected on the Circle City Project During DSF Presence/Absence Surveys, July-September 2014 (Continued)

Order / Family	Latin Name	Common Name
Lepidoptera		Butterflies, Moths
Nymphalidae	<i>Vanessa annabella</i>	West Coast Lady
Nymphalidae	<i>Vanessa cardui</i>	Painted Lady
Pieridae	<i>Colias eurytheme</i>	Alfalfa Sulphur
Pieridae	<i>Phoebis sennae</i>	Cloudless Sulphur
Pieridae	<i>Pieris rapae</i>	Cabbage White
Pieridae	<i>Pontia protodice</i>	Checkered White
Papilionidae	<i>Papilio cressphontes</i>	Giant Swallowtail
Pyralidae	Unidentified	Snout Moth
Sphingidae	<i>Manducta sexta</i>	Tomato Hornworm Moth
Isopoda		Woodlice
Armadillidae	Unidentified	Pillbug
Arachnida		Spiders
Araneidae	Unidentified	Orb Weaver Spider
Dipluridae	Unidentified	Funnel Web Spider
Oxyopidae	<i>Peucetia viridans</i>	Green Lynx Spider
Salticidae	<i>Phidippus formosus</i>	Jumping Spider
Salticidae	Unidentified	Jumping Spider
Thomisidae	Unidentified	Crab Spider
Birds		
Pelecaniformes		Ibises, Egrets, Herons
Threskiornithidae	<i>Plegadis chihi</i>	White-faced Ibis
Anseriformes		Ducks, Geese
Anatidae	<i>Anas cyanoptera</i>	Cinnamon Teal
Anatidae	<i>Anas platyrhynchos</i>	Mallard
Accipitriformes		Hawks, Eagles, Vultures
Cathartidae	<i>Cathartes aura</i>	Turkey Vulture
Accipitridae	<i>Buteo jamaicensis</i>	Red-tail Hawk
Falconiformes		Falcons
Falconidae	<i>Falco peregrinus</i>	Peregrine Falcon
Falconidae	<i>Falco sparverius</i>	American Kestrel
Charadriiformes		Plovers, Sandpipers, Phalaropes
Charadriidae	<i>Charadrius vociferus</i>	Killdeer
Recurvirostridae	<i>Himantopus mexicanus</i>	Black-necked Stilt
Scolopacidae	<i>Actitis macularius</i>	Spotted Sandpiper
Scolopacidae	<i>Calidris mauri</i>	Western Sandpiper
Scolopacidae	<i>Calidris minutilla</i>	Least Sandpiper
Dicus Biological		

Appendix B. Wildlife Observed or Detected on the Circle City Project During DSF Presence/Absence Surveys, July-September 2014 (Continued)

Order / Family	Latin Name	Common Name
Charadriiformes		Plovers, Sandpipers, Phalaropes
Scolopacidae	<i>Limnodromus</i> species	Dowitcher
Columbiformes		Doves
Columbidae	<i>Columba livia</i>	Rock Pigeon
Columbidae	<i>Streptopelia decaocto</i>	Eurasian Collared-Dove
Columbidae	<i>Zenaida macroura</i>	Mourning Dove
Strigiformes		Owls
Tytonidae	<i>Tyto alba</i>	Barn Owl
Apodiformes		Hummingbirds, Swifts
Trochilidae	<i>Calypte anna</i>	Anna's Hummingbird
Trochilidae	<i>Selasphorus rufus</i>	Rufous Hummingbird
Passeriformes		Songbirds
Tyrannidae	<i>Myiarchus cinerascens</i>	Ash-throated Flycatcher
Tyrannidae	<i>Sayornis nigricans</i>	Black Phoebe
Tyrannidae	<i>Sayornis sayi</i>	Say's Phoebe
Tyrannidae	<i>Tyrannus verticalis</i>	Western Kingbird
Tyrannidae	<i>Tyrannus vociferans</i>	Cassin's Kingbird
Laniidae	<i>Lanius ludovicianus</i>	Loggerhead Shrike
Corvidae	<i>Corvus brachyrhynchos</i>	American Crow
Corvidae	<i>Corvus corax</i>	Common Raven
Passeriformes		Songbirds
Hirundinidae	<i>Hirundo rustica</i>	Barn Swallow
Hirundinidae	<i>Petrochelidon pyrrhonota</i>	Cliff Swallow
Hirundinidae	<i>Stelgidopteryx serripennis</i>	Northern Rough-winged Swallow
Mimidae	<i>Mimus polyglottos</i>	Northern Mockingbird
Sturnidae	<i>Sturnus vulgaris</i>	European Starling*
Emberizidae	<i>Melospiza melodia</i>	Song Sparrow
Emberizidae	<i>Passerculus sandwichensis</i>	Savannah Sparrow
Cardinalidae	<i>Passerina caerulea</i>	Blue Grosbeak
Icteridae	<i>Agelaius phoeniceus</i>	Red-winged Blackbird
Icteridae	<i>Euphagus cyanocephalus</i>	Brewer's Blackbird
Icteridae	<i>Icterus bullockii</i>	Bullock's Oriole
Icteridae	<i>Icterus cucullatus</i>	Hooded Oriole
Icteridae	<i>Quiscalus mexicanus</i>	Great-tailed Grackle
Icteridae	<i>Molothrus ater</i>	Brown-headed Cowbird
Fringillidae	<i>Carpodacus mexicanus</i>	House Finch
Passeridae	<i>Passer domesticus</i>	House Sparrow

Dicus Biological

Appendix B. Wildlife Observed or Detected on the Circle City Project During DSF Presence/Absence Surveys, July-September 2014 (Continued)

Order / Family	Latin Name	Common Name
Mammals		
Lagomorpha		
Leporidae	<i>Lepus californicus</i>	Hares, Rabbits Black-tailed Jackrabbit
Leporidae	<i>Sylvilagus audubonii</i>	Desert Cottontail
Rodentia		
Sciuridae	<i>Spermophilus beecheyi</i>	Rodents California Ground Squirrel
Reptiles & Amphibians		
Squamata		
Colubridae	<i>Coluber flagellum piceus</i>	Scaled Reptiles Red Racer (Coachwhip)
Phrynosomatidae	<i>Sceloporus occidentalis</i>	Western Fence Lizard
Phrynosomatidae	<i>Sceloporus orcutti</i>	Granite Spiny Lizard
Phrynosomatidae	<i>Uta stansburiana elegans</i>	Western Side-blotched Lizard

Appendix C

Circle City Project—Vascular Plant List

Appendix C. Vascular Plants Observed on the Circle City Project during Delhi Sands Fly Presence/Absence Surveys, July-September 2014

Latin Name	Common Name
Amaranthaceae <i>Amaranthus albus</i> <i>Amaranthus palmeri</i>	Amaranth Family Tumbleweed* Palmer's amaranth*
Asteraceae <i>Ambrosia acanthicarpa</i> <i>Baccharis salicifolia</i> <i>Centaurea melitensis</i> <i>Erigeron bonariensis</i> <i>Lactuca serriola</i> <i>Oncosiphon piluliferum</i> <i>Verbesina enceliodes</i> <i>Xanthium spinosum</i> <i>Xanthium strumarium</i>	Composite Family Annual bur-sage Mulefat Tocalote* Horseweed* Prickly lettuce* Stink-net Golden crownbeard* Spiny cocklebur* Rough cocklebur
Boraginaceae <i>Heliotropium curassavicum</i> var. <i>oculatum</i>	Borage Family Alkali heliotrope
Brassicaceae <i>Hirschfeldia incana</i> <i>Sisymbrium irio</i>	Mustard Family Short-pod mustard* London rocket*
Chenopodiaceae <i>Atriplex suberecta</i> <i>Chenopodium album</i> <i>Kochia scoparia</i> <i>Salsola tragus</i>	Goosefoot Family Sprawling saltbush* Lamb's quarters Common kochia* Russian thistle*
Cucurbitaceae <i>Cucurbita palmata</i>	Cucumber Family Coyote melon
Euphorbiaceae <i>Croton californicus</i>	Spurge Family California croton
Geraniaceae <i>Erodium cicutarium</i>	Geranium Family Red-stemmed filaree*
Malvaceae <i>Abutilon theophrasti</i> <i>Malva parviflora</i>	Mallow Family Velvetleaf* Cheeseweed*
Myrtaceae <i>Eucalyptus camaldulensis</i>	Myrtle Family Red gum*
Polygonaceae <i>Polygonum aviculare</i>	Buckwheat Family Common knotweed*

Dicus Biological

Appendix C. Vascular Plants Observed on the Circle City Project during Delhi Sands Fly Presence/Absence Surveys, July-September 2014 (Continued)

Latin Name	Common Name
Portulacaceae <i>Portulaca oleracea</i>	Purslane Family Common purslane*
Salicaceae <i>Salix lasiolepis</i>	Willow Family Arroyo willow
Solanaceae <i>Datura stramonium</i> <i>Datura wrightii</i> <i>Nicotiana glauca</i> <i>Nicotiana quadrivalvis</i> <i>Solanum elaeagnifolium</i> <i>Solanum rostratum</i> <i>Solanum nigrum</i>	Nightshade Family Thorn apple Jimsonweed Tree tobacco* Indian tobacco White horse-nettle* Buffalo berry Black nightshade*
Zygophyllaceae <i>Tribulus terrestris</i>	Caltrop Family Puncturevine*
Poaceae <i>Avena</i> species <i>Bromus diandrus</i> <i>Bromus madritensis</i> ssp. <i>rubens</i> <i>Cynodon dactylon</i> <i>Digitaria sanguinalis</i> <i>Echinochloa crus-galli</i> <i>Hordeum</i> species <i>Leptochloa fusca</i> ssp. <i>uninervia</i> <i>Schismus barbatus</i> <i>Sorghum halepense</i>	Grass Family Wild oat* Ripgut grass* Foxtail chess* Bermuda grass* Crab grass* Barnyardgrass* Mediterranean barley* Mexican sprangletop Mediterranean grass* Johnsongrass*

* Denotes non-native or introduced taxon

** Denotes sensitive status taxon

Appendix D

Circle City Project—Field Notes

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: BARCLE CITY Portion of Site Surveyed: N Acreage Surveyed: Biologist(s): MELANIE DICUS
 Date: 07-04-14 Time (Start/End): 11:05 / 14:30 Cloud Cover (Start/End): 5 / 10% Temperature in °F (Start/End): 95 / 101

Wind Speed in Beaufort (Start/End): 0.5 / 4.70 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Asioctera chrysalis</i> <input type="checkbox"/> <i>Asioctera convergens</i> <input checked="" type="checkbox"/> <i>Neomacrus pantherina</i> <input type="checkbox"/> Asilidae <input checked="" type="checkbox"/> <i>Efferia albibarbaris</i> <input type="checkbox"/> <i>Malliphora fauriei</i> <input type="checkbox"/> <i>Proctocentrus</i> sp. <input type="checkbox"/> <i>Saropogon lateris</i> <input type="checkbox"/> <i>Stenopogon brevicaudus</i> <input type="checkbox"/> Beetidae (May Flies) <input type="checkbox"/> <i>Callibaetis pacificus</i> <input checked="" type="checkbox"/> Bombytidae <input type="checkbox"/> <i>Esoprosopus</i> sp. <input type="checkbox"/> <i>Ligya gascopylla</i> <input type="checkbox"/> <i>Myricanomyia</i> sp. <input type="checkbox"/> <i>Pocillanthurus aretiasa</i> <input type="checkbox"/> <i>Pocillanthurus</i> sp. <input type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenopsis unguis</i> <input type="checkbox"/> <i>Calliphora</i> sp. <input type="checkbox"/> <i>Eucalliphora lilaesa</i> <input type="checkbox"/> <i>Phaenicia cupripita</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> Campidae sp. <input type="checkbox"/> <i>Physocentralia texana</i> <input type="checkbox"/> Culicidae - mosquitoes <input type="checkbox"/> <i>Cnephia</i> sp. <input checked="" type="checkbox"/> Drosophilidae <input type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> Sarcophagidae <input type="checkbox"/> <i>Sarcophaga</i> sp. <input type="checkbox"/> Stratiomyidae <input type="checkbox"/> Syrphidae <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Erastria tenax</i> <input type="checkbox"/> <i>Metatypus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> Tabanidae 	<p><i>Ichneumon</i> sp.</p> <p>Dasytomutilla coccineohirta</p> <p>Dasytomutilla californica</p> <p><i>Dasytomutilla sackeni</i> (lg.)</p> <p><i>Dasytomutilla clypeinervis</i></p> <p><i>Campomeris folacea</i></p> <p><i>Triella albicoma</i></p> <p><i>Adalia bipunctata</i></p> <p><input checked="" type="checkbox"/> <i>Chilocorus orbis</i></p> <p><i>Coccinella</i> sp.</p> <p><i>Harmonia asyridis</i></p> <p><i>Hippodamia convergens</i></p> <p><i>Olla v-nigrum</i></p> <p>Chrysomelidae</p> <p><i>Dialbrotica ballista</i></p> <p><i>D. undecimpunctata</i></p> <p><i>Lebia trilineata</i></p> <p><i>Homaldisca</i> sp.</p> <p>Cicadidae</p> <p><i>Chalcidophidae (Coccinellid)</i></p> <p><i>Dactylopiidae</i></p> <p><i>Dactylopius</i> sp.</p> <p>Membracidae</p> <p><i>Amantia expansa</i></p> <p>Psyllidae</p> <p><i>Glycaspis brimblecombei</i></p> <p>Neuroptera:</p> <p><i>Chrysopidae</i></p> <p><i>Chrysopa</i> sp.</p> <p><i>Myrmeleontidae</i></p> <p><i>Brachymerus</i> sp.</p> <p><input checked="" type="checkbox"/> <i>Myrmelion</i> sp.</p> <p>Raphidiidae (Snakeflies)</p> <p>Dermatoptera:</p> <p><i>Porficula auricularia</i></p> <p>Orthoptera:</p> <p>Acrididae</p> <p><i>Dissosteira pictipennis</i></p> <p><i>Leprus intermedium</i></p> <p><i>Melanoplus</i> sp.</p> <p><i>Schistocerca nigra</i></p> <p><i>Schistocerca</i> sp.</p>	<p>Pentatomidae</p> <p><i>Chlorochroa ligata</i></p> <p><input checked="" type="checkbox"/> <i>Chlorochroa uhleri</i> ssp.</p> <p><i>Murgantia histrionica</i></p> <p><i>Podisus</i> sp.</p> <p><i>Thyanta pallidivirens</i></p> <p>Trichoptera</p> <p><i>Trichoptera aurora</i></p> <p>Reduviidae</p> <p><i>Aplonotus crassipes</i></p> <p><i>Rhyacionia ventralis</i></p> <p><i>Zelus tetracanthus</i></p> <p>Homoptera:</p> <p>Aphididae</p> <p><i>Aphis panis</i></p> <p>Cercopidae</p> <p><i>Erythema collocata</i></p> <p><i>Libellula croceipennis</i></p> <p>Cicadidae</p> <p><i>Libellula saturata</i></p> <p>Dactylopiidae (Coccinellid)</p> <p><i>Pantia flavescens</i></p> <p><i>Perithemis luteola</i></p> <p><i>Progonophus borealis</i></p> <p><i>Sympetrum corquium</i></p> <p><i>Sympetrum illotum</i></p> <p><i>Tramea lacerata</i></p> <p><i>Tramea ovata</i></p> <p><i>Argia</i> sp.</p> <p><i>Enallagma</i> sp.</p> <p><i>Telebasis salva</i></p> <p>Lepidoptera:</p> <p><i>Atalapha campestris</i></p> <p><i>Erynia funerals</i></p> <p><i>Heliopteryx ericetorum</i></p> <p><i>Hyalephya phyleus</i></p> <p><i>Lerodera eufala</i></p> <p><i>Paratytoche melane</i></p> <p><i>Polites sabuleti</i></p> <p><input checked="" type="checkbox"/> <i>Pyrgus albescens</i></p> <p><i>Popilio cressiphoides</i></p> <p><i>Popilio rutilus</i></p> <p><i>Colias eurytheme</i></p>	<p>Trimerotropis californica</p> <p><i>Trimerotropis pallidipennis</i></p> <p><i>Crychus</i> sp.</p> <p><i>Oecanthus fulvoni</i></p> <p>Tettigonidae</p> <p><i>Aotianthe expansa</i></p> <p><i>Scudderella mexicana</i></p> <p><i>Stenopelmatus</i> sp.</p> <p><i>Iris oratoria</i></p> <p><i>Stagnonotus californica</i></p> <p><i>Purabacillus hayesii</i></p> <p>Orthoptera:</p> <p><i>Aeschna multicolor</i></p> <p><i>Anax panis</i></p> <p><i>Erythemis collocata</i></p> <p><i>Libellula croceipennis</i></p> <p><i>Libellula saturata</i></p> <p><i>Pachydiplax longipennis</i></p> <p><i>Pantia flavescens</i></p> <p><i>Perithemis luteola</i></p> <p><i>Progonophus borealis</i></p> <p><i>Sympetrum corquium</i></p> <p><i>Sympetrum illotum</i></p> <p><i>Tramea lacerata</i></p> <p><i>Tramea ovata</i></p> <p><i>Argia</i> sp.</p> <p><i>Enallagma</i> sp.</p> <p><i>Telebasis salva</i></p> <p>Lepidoptera:</p> <p><i>Atalapha campestris</i></p> <p><i>Erynia funerals</i></p> <p><i>Heliopteryx ericetorum</i></p> <p><i>Hyalephya phyleus</i></p> <p><i>Lerodera eufala</i></p> <p><i>Paratytoche melane</i></p> <p><i>Polites sabuleti</i></p> <p><input checked="" type="checkbox"/> <i>Pyrgus albescens</i></p> <p><i>Popilio cressiphoides</i></p> <p><i>Popilio rutilus</i></p> <p><i>Colias eurytheme</i></p>
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Bird Species Observed: DUJ C&I W&L HOFI NOMO HOSF MOSO EUCD BUB
EUST BPH BASW ANCB SAPH R&BL MAL

Other Wildlife Species Observed: W. FENCE LIZARD

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: S Acreage Surveyed: 50 Biologist(s): MELANIE NICUS
 Date: 07-05-14 Time (Start/End): 0745/1415 Cloud Cover (Start/End): 10/24 15-70 Temperature in °F (Start/End): 85/96

Arthropod Species Observed: Wind Speed in Beaufort (Start/End): 0/14-9 DSF Detected (Circle): Y (N)

Diptera:	<i>Tabanus pauciflor</i>	<i>Ichneumon</i> sp.	<i>Pentatomidae</i>	<i>Trimerotropis californica</i>	<i>Pieris rapae</i>
<i>R. terminalis abdominalis</i>	<i>Tachinidae</i>	<i>Dasyneura coccollocollaria</i>	<i>Chlorochroa ligata</i>	<i>Trimerotropis pallidipennis</i>	<i>Pontia protodice</i>
<i>Apocera chrysobata</i>	<i>Archyus apicifer</i>	<i>Dasyneura californica</i>	<i>Chlorochroa whitei/sayi</i>	<i>Gryllus</i> sp.	<i>Brevipalpus exilis</i>
<i>Apocera convergens</i>	<i>Gymnosoma fuliginosum</i>	<i>Dasyneura sackertii</i> (lg.)	<i>Murgantia histrionica</i>	<i>Oecanthus fulvoni</i>	<i>Hemiarctus ceramius</i>
<i>Nemomydas pantherina</i>	<i>Thaerividae</i> (Subetto Fly)	<i>Dasyneura clymenestra</i>	<i>Podisus</i> sp.	<i>Tettigoniidae</i>	<i>Leucophaea acron</i>
<i>Aspilota</i>	<i>Ceratitis capitata</i>	<i>Compsoveris taloca</i>	<i>Thysania pallidivirens</i>	<i>Antonie the expansa</i>	<i>Lygodes marina</i>
<i>Epilera albibarbaris</i>	<i>Tipulidae</i>	<i>Triela adione</i>	<i>Trichoptera aurora</i>	<i>Scudderia mexicana</i>	<i>Strymon melinus</i>
<i>Meligethes fuscus</i>	<i>Nephrotoma</i> sp.	<i>Pezomachus</i>	<i>Reduviidae</i>	<i>Stenopelmatus</i> sp.	<i>Apodemus morone virgata</i>
<i>Proctocanthus</i> sp.	Hymenoptera:	<i>Pegaspis mulleri</i>	<i>Apomyrma crassipes</i>	<i>Iris oratoria</i>	<i>Agraulis vanillae</i>
<i>Sarcophaga laticrus</i>	<i>Ants</i>	<i>Sphacidae</i>	<i>Myrmecoris ventralis</i>	<i>Stegomyia californica</i>	<i>Danus gilippus</i>
<i>Stenopogon breviscaudatus</i>	<i>Formicidae</i>	<i>Amimophila alberti</i>	<i>Zelus tetracanthus</i>	<i>Parabacillus hegeris</i>	<i>Precis coenia</i>
<i>Beetidae</i> (May Flies)	<i>Tridomyrmex humilis</i>	<i>Amimophila alberti</i>	Homoptera:	<i>Delima multicolor</i>	<i>Vernassa annabellae</i>
<i>Callibaetis pacificus</i>	<i>Formica</i> sp.	<i>Amimophila alberti</i>	<i>Aphididae</i>	<i>Inasa junata</i>	<i>Vernassa abalantia</i>
<i>Bombus</i> sp.	<i>Liometopum occidentale</i>	<i>Amimophila alberti</i>	<i>Cercopidae</i>	<i>Erythemis collocata</i>	<i>Vernassa caroli</i>
<i>Euclyptus</i> sp.	<i>Messor pergandei</i>	<i>Amimophila alberti</i>	<i>Cicadellidae</i>	<i>Libellula croceipennis</i>	<i>Vernassa virginiana</i>
<i>Ligyra graciliflax</i>	<i>Proconomyrmex californica</i>	<i>Amimophila alberti</i>	<i>Homolalididae</i>	<i>Libellula aurata</i>	<i>Arctiidae</i>
<i>Myricomyia</i> sp.	<i>Solenopsis</i> sp.	<i>Amimophila alberti</i>	<i>Cicadidae</i>	<i>Dactylopiidae</i> (Coccinellid)	<i>Noctuidae</i>
<i>Poecilanthrax areolaris</i>	Bees	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	<i>Autographa californica</i>
<i>Poecilanthrax</i> sp.	<i>Anthophoridae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	<i>Schinia</i> sp.
<i>Traxophora pellucida</i>	<i>Anthophora urbana</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	<i>Cecropiidae</i>
<i>Villa atrata</i>	<i>Melissodes</i> sp.	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	<i>Pyralidae</i>
<i>Zenax swainson</i>	<i>Anthophora varipuncta</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	<i>Paranthrene rubralis</i>
<i>Calliphora</i> sp.	<i>Apus mellifera</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	<i>Hyles lineata</i>
<i>Euclyptus lulara</i>	<i>Bombus californicus</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	<i>Manduca sexta</i>
<i>Phaenicia cuprina</i>	<i>Bombus cruehli</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	Arachnida:
<i>Phaenicia sericata</i>	<i>Bombus terrestris</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	<i>Araneidae</i>
<i>Cnephidae</i> sp.	<i>Bombus vosnesenskii</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	<i>Praxites viridus</i>
<i>Phaenocarpa texana</i>	<i>Halicidae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	<i>Dipuluridae</i>
<i>Culicidae</i> - mosquitoes	<i>Agapostemon</i> sp.	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	<i>Leurogrychus pacificus</i>
<i>Culex</i> sp.	<i>Nomia nevadensis</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	<i>Larodectus hesperus</i>
<i>Phaenocarpa texana</i>	<i>Megachilidae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	<i>Salicidae</i>
<i>Culex</i> sp.	<i>Dianthidium</i> sp.	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	<i>Phidippus formosus</i>
<i>Phaenocarpa texana</i>	<i>Megachile</i> sp.	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	<i>Thomisidae</i>
<i>Culex</i> sp.	<i>Perrilla</i> sp.	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	Wasps	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chalcididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Culex</i> sp.	<i>Chrysididae</i>	<i>Amimophila alberti</i>	<i>Dactylopiidae</i>	<i>Dactylopiidae</i>	
<i>Phaenocarpa texana</i>	<i>Chrysididae</</i>				

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CALLE CITY Portion of Site Surveyed: NELTA Acreage Surveyed: 35 Biologist(s): MELANIE DAVIS
 Date: 07-06-14 Time (Start/End): 1105 / 1430 Cloud Cover (Start/End): 20% / 0 Temperature in °F (Start/End): 94 / 97

Wind Speed in Beaufort (Start/End): 0-3 / 1-6 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminalis abdominalis</i> <input type="checkbox"/> <i>Aphocera ely solitaria</i> <input type="checkbox"/> <i>Phaenocarpa convergens</i> <input checked="" type="checkbox"/> <i>Neomomyia panalacrina</i> Asilidae <input checked="" type="checkbox"/> <i>Efferia albibarbaris</i> <input type="checkbox"/> <i>Malliphora fuscica</i> <input type="checkbox"/> <i>Proctocentrus</i> sp. <input type="checkbox"/> <i>Sarcophaga lateris</i> <input type="checkbox"/> <i>Stenopogon brevicaudus</i> Bacidae (May Flies) <input type="checkbox"/> <i>Callibaetis pacificus</i> Bembidiidae <input checked="" type="checkbox"/> <i>Exoprosopa</i> sp. <input type="checkbox"/> <i>Ligota pascopyliax</i> <input type="checkbox"/> <i>Mythomyia</i> sp. <input type="checkbox"/> <i>Poecilanthrax arctiflora</i> <input type="checkbox"/> <i>Poecilanthrax</i> sp. <input checked="" type="checkbox"/> <i>Trotophora pellicida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenar simpsoni</i> <input type="checkbox"/> <i>Calliphora</i> sp. <input type="checkbox"/> <i>Eucalliphora lalae</i> <input type="checkbox"/> <i>Phaenicia caprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> Cremyidae sp. <input type="checkbox"/> <i>Physocephala texana</i> Callicidae - mosquitoes Culicidae <input type="checkbox"/> <i>Condylofyllus</i> sp. Drosophilidae <input checked="" type="checkbox"/> <i>Alseca domestica</i> Sarcophagidae <input type="checkbox"/> <i>Sarcophaga</i> sp. Stratiomyidae Syrphidae <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eratalia tenax</i> <input type="checkbox"/> <i>Metasyphus americanus</i> <input type="checkbox"/> <i>Tobacella mexicana</i> Tabanidae 	<p><i>Ichneumon</i> sp.</p> <p>Dasyneutilla coccineohirta</p> <p>Dasyneutilla californica</p> <p><i>Dasyneutilla sackeri</i> (lg.)</p> <p><i>Dasyneutilla clytemnestra</i></p> <p>Camponeris tolteca</p> <p><i>Trella aldicone</i></p> <p>Pompilidae</p> <p><i>Pezomachus</i> sp.</p> <p>Sphacidae</p> <p><i>Amnophila alberti</i></p> <p><i>Amnophila</i> sp.</p> <p><input checked="" type="checkbox"/> <i>Bembix americana cinctata</i></p> <p><i>Bembix melanopasta</i></p> <p><i>Bicyrtus</i> sp.</p> <p><i>Cerceris</i> sp.</p> <p><i>Chlorion detritum</i></p> <p><i>Eucerceris insignis</i></p> <p><i>Haplousoides diversus</i></p> <p><i>Hoplousoides</i> sp.</p> <p><i>Isodoti aeligens</i></p> <p><input checked="" type="checkbox"/> <i>Microbembix californica</i></p> <p><input checked="" type="checkbox"/> <i>Phlaenanthus multifurcatus</i></p> <p><input checked="" type="checkbox"/> <i>Phlaenanthus ventralis</i></p> <p><i>Psobonia</i> sp.</p> <p><i>Prionyx fovi</i></p> <p><i>Prionyx</i> sp.</p> <p><i>Scutiphron carmentarium</i></p> <p><i>Sphegichneumonius</i></p> <p><i>Stizoides renicinctus</i></p> <p><i>Tachytes elongatus</i></p> <p>Tiphiidae</p> <p>Vespidae - unidentified</p> <p><i>Eumenes bollii</i></p> <p><i>Eumenes crucifera</i></p> <p><i>Euclypterus armillata</i></p> <p><i>Pollistes apachus</i></p> <p><input checked="" type="checkbox"/> <i>Pollistes dorsalis</i></p> <p><i>Pollistes exclamans</i></p> <p><input checked="" type="checkbox"/> <i>Pollistes fuscatus aurifer</i></p>	<p>Pentatomidae</p> <p><i>Chlorochroa ligata</i></p> <p><input checked="" type="checkbox"/> <i>Chlorochroa ulmeri</i> sayi</p> <p><i>Murgantia histrionica</i></p> <p><i>Podisus</i> sp.</p> <p><i>Thyanta pallidivirens</i></p> <p>Reduviidae</p> <p><input checked="" type="checkbox"/> <i>Triatominae</i></p> <p><input checked="" type="checkbox"/> <i>Rhynocoris ventralis</i></p> <p><i>Zelus tetracanthus</i></p> <p>Homoptera:</p> <p>Aphididae</p> <p><input checked="" type="checkbox"/> <i>Cercopidae</i></p> <p>Cicadellidae</p> <p><i>Homaldisa</i> sp.</p> <p>Cicadidae</p> <p><i>Dactylopiidae (Coccinell)</i></p> <p><i>Dactylopius</i> sp.</p> <p>Membracidae</p> <p><i>Antianthe expansa</i></p> <p>Psyllidae</p> <p><i>Glyptotendipes brimblecombei</i></p> <p>Neuroptera:</p> <p>Chrysopidae</p> <p><i>Chrysopa</i> sp.</p> <p>Myrmeleontidae</p> <p><i>Brachynemurus</i> sp.</p> <p><i>Myrmeleon</i> sp.</p> <p>Raphidiidae (Snakeflies)</p> <p>Dermaptera:</p> <p><i>Forficula auricularia</i></p> <p>Orthoptera:</p> <p>Acrididae</p> <p><i>Dusosaurus pacificus</i></p> <p><i>Lepus intermedius</i></p> <p><i>Melanoplus</i> sp.</p> <p><i>Schistocerca nitens</i></p> <p><i>Schistocerca</i> sp.</p>	<p>Trimerotropis californica</p> <p><input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i></p> <p><i>Gryllus</i> sp.</p> <p><input checked="" type="checkbox"/> <i>Breviplanum exilis</i></p> <p><i>Hemipterus ceramius</i></p> <p><i>Icaricia acinosa</i></p> <p><i>Leptotus marina</i></p> <p><i>Strymon melinus</i></p> <p><i>Apodemia morosa virgata</i></p> <p><i>Agranitia vanillae</i></p> <p><i>Danana glipopus</i></p> <p><i>Danus plicipennis</i></p> <p><i>Plectis coenia</i></p> <p><i>Vinesta amabilella</i></p> <p><i>Vinesta atalantia</i></p> <p><i>Vinesta cardui</i></p> <p><i>Vinesta virginiana</i></p> <p>Arctiidae</p> <p>Noctuidae</p> <p><i>Atorographa californica</i></p> <p><i>Sclania</i> sp.</p> <p>Geometridae</p> <p><input checked="" type="checkbox"/> <i>Paranithrene roborata</i></p> <p><i>Hyles lineata</i></p> <p><i>Manduca sexta</i></p> <p>Arachnida:</p> <p>Araneidae</p> <p><input checked="" type="checkbox"/> <i>Praxiphanes viridifus</i></p> <p>Dipluridae</p> <p><i>Leurogrychus pacificus</i></p> <p><i>Lutrodercus hesperus</i></p> <p>Salicidae</p> <p><input checked="" type="checkbox"/> <i>Thomisidae</i></p> <p>Spiders</p> <p><i>Polistes sabuleti</i></p> <p><i>Pyrgus albescens</i></p> <p><i>Popilio crenophictus</i></p> <p><i>Popilio rubidus</i></p> <p><i>Cobitis erythemus</i></p>
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Bird Species Observed: WYKI MOSE HDFI KILL CAKI NDNO ELSW EUCD SOSP
BLGE RTTA BLHO BSNW EWBL TUNU MODO SAPH EUST
ANRU OSBL NANS AMIA

Other Wildlife Species Observed:
SALIZARD
W. F. W. LIZARD

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: YELLE CITY Portion of Site Surveyed: S Acreage Surveyed: 50 Biologist(s): MELANIE DICUS
 Date: 07-07-14 Time (Start/End): 0451/1415 Cloud Cover (Start/End): 0 / 0 Temperature in °F (Start/End): 39 / 96

Arthropod Species Observed: Wind Speed in Beaufort (Start/End): 0 / 0-3 DSF Detected (Circle): Y

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terrestris abdominalis</i> <input type="checkbox"/> <i>Apocera chrysolata</i> <input type="checkbox"/> <i>Apocera conyersi</i> <input checked="" type="checkbox"/> <i>Neomomyia pantherina</i> <input type="checkbox"/> <i>Astilbe</i> <input checked="" type="checkbox"/> <i>Efferia albibarbaris</i> <input type="checkbox"/> <i>Malliphora faurii</i> <input type="checkbox"/> <i>Proctocentrus</i> sp. <input type="checkbox"/> <i>Sorogon luteus</i> <input type="checkbox"/> <i>Stenogon brevicornis</i> <input type="checkbox"/> <i>Beechidae</i> (May Flies) <input type="checkbox"/> <i>Callibaetis pacificus</i> <input checked="" type="checkbox"/> <i>Bombiidae</i> <input type="checkbox"/> <i>Esopropo</i> sp. <input type="checkbox"/> <i>Ligra gazophylax</i> <input type="checkbox"/> <i>Mythomyia</i> sp. <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax</i> sp. <input type="checkbox"/> <i>Taxophora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenia amason</i> <input type="checkbox"/> <i>Calliphora</i> sp. <input type="checkbox"/> <i>Eucalliphora litsea</i> <input type="checkbox"/> <i>Phaenicia cupriwa</i> <input type="checkbox"/> <i>Phaenicia sericana</i> <input type="checkbox"/> <i>Conopidae</i> sp. <input type="checkbox"/> <i>Physocphala texana</i> <input type="checkbox"/> <i>Culicidae</i> - mosquitoes <input type="checkbox"/> <i>Cuterebridae</i> <input type="checkbox"/> <i>Cordylomyia</i> sp. <input checked="" type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga</i> sp. <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Erastus tenax</i> <input type="checkbox"/> <i>Metasyphus americanus</i> <input type="checkbox"/> <i>Pobocella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichnumon</i> sp.</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Dasyneutilla coccinohirta</i> <input type="checkbox"/> <i>Dasyneutilla californica</i> <input type="checkbox"/> <i>Dasyneutilla sackeni</i> (lg.) <input type="checkbox"/> <i>Dasyneutilla chymenestra</i> <input type="checkbox"/> <i>Camposomeris talteca</i> <input type="checkbox"/> <i>Trielis alcion</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pezomachus</i> <input type="checkbox"/> <i>Pezomachus</i> sp. <input checked="" type="checkbox"/> <i>Sphelidae</i> <input type="checkbox"/> <i>Ammogobilia alberti</i> <input type="checkbox"/> <i>Ammogobilia</i> sp. <input type="checkbox"/> <i>Bembix americana comata</i> <input type="checkbox"/> <i>Bembix melanopasta</i> <input type="checkbox"/> <i>Bicyrtis</i> sp. <input type="checkbox"/> <i>Cerceris</i> sp. <input checked="" type="checkbox"/> <i>Chalobion californica</i> <input type="checkbox"/> <i>Chalobion perurium</i> <input type="checkbox"/> <i>Excerceris insignis</i> <input type="checkbox"/> <i>Hoplitoidea diversus</i> <input type="checkbox"/> <i>Hoplitoidea</i> sp. <input type="checkbox"/> <i>Isodonia delegans</i> <input type="checkbox"/> <i>Microbembix californicus</i> <input type="checkbox"/> <i>Philanthus multifurcatus</i> <input type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Podalonia</i> sp. <input type="checkbox"/> <i>Prionyx foai</i> <input type="checkbox"/> <i>Prionyx</i> sp. <input type="checkbox"/> <i>Sedulipron capmentarium</i> <input type="checkbox"/> <i>Spilax ichneumonius</i> <input type="checkbox"/> <i>Stizoides renicinctus</i> <input type="checkbox"/> <i>Tachylex elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae</i> - unidentified <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input checked="" type="checkbox"/> <i>Eudomyeris ornata</i> <input type="checkbox"/> <i>Polistes appachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamatus</i> <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> 	<p><i>Yespula permixtivivica</i></p> <p>Coloptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa albiflavifolia</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus</i> sp. <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichopoda aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Aplomeris crassipes</i> <input type="checkbox"/> <i>Rhynocoris ventralis</i> <input type="checkbox"/> <i>Zelus tetracanthus</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aphididae</i> <input type="checkbox"/> <i>Cercopidae</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homalotidae</i> sp. <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactylopiidae</i> (Coccinellae) <input type="checkbox"/> <i>Dactylopsis</i> sp. <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Antennarie expansa</i> <input type="checkbox"/> <i>Pysyllidae</i> <input checked="" type="checkbox"/> <i>Glyptotendipes brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa</i> sp. <input type="checkbox"/> <i>Myrmeleonidae</i> <input type="checkbox"/> <i>Brachynemurus</i> sp. <input type="checkbox"/> <i>Myrmeleon</i> sp. <input type="checkbox"/> <i>Raphidiidae</i> (Snakeflies) <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Lepus intermedium</i> <input type="checkbox"/> <i>Melanoplus</i> sp. <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca</i> sp.
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Bird Species Observed: HOSP LORA NZIO WTKI ROLA SAPH TUVU BAST DAKI
GLPH KOOB KOFI EULD KIE BAW ROP1 BNST BRBL
WFB

Other Wildlife Species Observed: LGS
SUBLEARD
WFLICLIARD

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: N Acreage Surveyed: 35 Biologist(s): MILANIE DAVIS
 Date: 07-11-14 Time (Start/End): 0930 / 1300 Cloud Cover (Start/End): 0 / 0 Temperature in °F (Start/End): 78 / 91

Wind Speed in ^{MPH}Beaufort (Start/End): 0-2 / 2-5 DSF Detected (Circle): Y ⊙

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terrestris abdominalis</i> <input type="checkbox"/> <i>Aplocera chrysolata</i> <input type="checkbox"/> <i>Aplocera convergens</i> <input checked="" type="checkbox"/> <i>Neomyia pantheana</i> <input type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Ejleria albibarbaris</i> <input type="checkbox"/> <i>Malliphora fairsii</i> <input type="checkbox"/> <i>Proctacanthus sp.</i> <input type="checkbox"/> <i>Sarcophaga larrea</i> <input type="checkbox"/> <i>Stenomogon brevicaulus</i> <input type="checkbox"/> <i>Basidae (Mint Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligva gascapylax</i> <input type="checkbox"/> <i>Mythomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arctiflora</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input type="checkbox"/> <i>Toxophora pelliculata</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenax simpsoni</i> <input checked="" type="checkbox"/> <i>Calliphora sp.</i> <input checked="" type="checkbox"/> <i>Eucalliphora liliana</i> <input checked="" type="checkbox"/> <i>Phaenicia cupripes</i> <input checked="" type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physocephala texana</i> <input type="checkbox"/> <i>Callitidae - mesoquines</i> <input type="checkbox"/> <i>Caterbridgeae</i> <input type="checkbox"/> <i>Condylostylus sp.</i> <input checked="" type="checkbox"/> <i>Drosophilidae</i> <input type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metastaphus americanus</i> <input type="checkbox"/> <i>Poicocella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichneumon sp.</i></p> <p>Colletes:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Dasyneura coccinohirta</i> <input type="checkbox"/> <i>Dasyneura californica</i> <input type="checkbox"/> <i>Dasyneura sadleri</i> (lg.) <input type="checkbox"/> <i>Dasyneura chymenestra</i> <input type="checkbox"/> <i>Componeura tolteca</i> <input type="checkbox"/> <i>Tritela alcyone</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pezomachus midae</i> <input checked="" type="checkbox"/> <i>Sphexidae</i> <input type="checkbox"/> <i>Mimophila alberti</i> <input checked="" type="checkbox"/> <i>Mimophila sp.</i> <input type="checkbox"/> <i>Bembix americana comata</i> <input type="checkbox"/> <i>Bembix melanopis</i> <input checked="" type="checkbox"/> <i>Picyrus sp.</i> <input type="checkbox"/> <i>Cerceris sp.</i> <input type="checkbox"/> <i>Chalcidion californicus</i> <input type="checkbox"/> <i>Chalcidion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisoidea diversis</i> <input type="checkbox"/> <i>Hoplisoidea sp.</i> <input type="checkbox"/> <i>Prodoni aelgana</i> <input type="checkbox"/> <i>Microbembix californica</i> <input type="checkbox"/> <i>Philanthus multifasciatus</i> <input type="checkbox"/> <i>Philanthus ventidubris</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Prionyx facti</i> <input type="checkbox"/> <i>Prionyx sp.</i> <input type="checkbox"/> <i>Scaphiron eucementarium</i> <input type="checkbox"/> <i>Spilax ichneumonius</i> <input type="checkbox"/> <i>Stizoides renicinctus</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Eudomyrus armillata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> <input checked="" type="checkbox"/> <i>Polistes fuscatus aurifer</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa tuberculosa</i> <input type="checkbox"/> <i>Coregonus fulvoni</i> <input type="checkbox"/> <i>Tetragonidae</i> <input type="checkbox"/> <i>Antianthe expansus</i> <input type="checkbox"/> <i>Scudderella mexicana</i> <input type="checkbox"/> <i>Stenopelmatus sp.</i> <input type="checkbox"/> <i>Iris oratoria</i> <input type="checkbox"/> <i>Stagnonantis californica</i> <input type="checkbox"/> <i>Purpabacillus heaperis</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aphididae</i> <input type="checkbox"/> <i>Cercopidae</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homaldisca sp.</i> <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactylopiidae (Coccinellae)</i> <input type="checkbox"/> <i>Dactylopius sp.</i> <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input checked="" type="checkbox"/> <i>Psyllidae</i> <input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Myrmeleontidae</i> <input type="checkbox"/> <i>Brachyneururus sp.</i> <input type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermatoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Polycaula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Disosteira pictipennis</i> <input type="checkbox"/> <i>Lepus intermedium</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Scleroceera nitens</i> <input type="checkbox"/> <i>Scleroceera sp.</i>
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Bird Species Observed:
 CARL BLAF HOFI ANCL BASW EUCD HOSP NOMO BLPH
 SAPH WELI AMHU MOLO TUVU CARK AMKE BVOR RMA
 CLSN EUST GRBL

Other Wildlife Species Observed:
SE LIZARD V. FENCE WEAVER

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: SD Biologist(s): MELANIE DAVIS
 Date: 07-12-14 Time (Start/End): 0745 / 1415 Cloud Cover (Start/End): 50% / 50% Temperature in °F (Start/End): 81 / 94

Arthropod Species Observed: no # Wind Speed in Beaufort (Start/End): 0-1 / 3-6 DSF Detected (Circle): Y (N)

Diptera:	<i>Tabanus punctifer</i>	<i>Vespa pennsylvanica</i>	<i>Pentatomidae</i>	<i>Trimerotropis californica</i>	<i>Pieris rapae</i>
<i>R. terminalis abdominalis</i>	<i>Tachinidae</i>	<i>Chalcididae</i>	<i>Chlorochroa ligata</i>	<i>Trimerotropis pallidipennis</i>	<i>Pontia protodice</i>
<i>Apicitera chrysolata</i>	<i>Agrobryconia</i>	<i>Buprestidae</i>	<i>Chlorochroa albifrons</i>	<i>Gryllus sp.</i>	<i>Hemiphysalis</i>
<i>Agrocera convergens</i>	<i>Gymnosoma fuliginosum</i>	<i>Carabidae</i>	<i>Marganitia bistriatica</i>	<i>Oecanthus fulvoni</i>	<i>Hemiphysalis</i>
<i>Xenopoda posthirsuta</i>	<i>Therividae (Shilcto Fly)</i>	<i>Cerambycidae</i>	<i>Podisus sp.</i>	<i>Antianthe expansa</i>	<i>Jacirica acron</i>
<i>Asilidae</i>	<i>Cerialtina capitata</i>	<i>Coccinellidae</i>	<i>Thyanus pallidivirens</i>	<i>Trichopoda aurora</i>	<i>Leptodes marina</i>
<i>Egeria albibarbaris</i>	<i>Trielidae</i>	<i>Adalia bipunctata</i>	<i>Reduviidae</i>	<i>Stenopelmatus sp.</i>	<i>Strymon melinus</i>
<i>Meligethes fuscus</i>	<i>Pezomachus</i>	<i>Chilocorus orbus</i>	<i>Apionem crassipes</i>	<i>Iris oratoria</i>	<i>Alpodemia morio virgata</i>
<i>Practocanthus sp.</i>	<i>epus sp.</i>	<i>Coccinella sp.</i>	<i>Rhyacionia ventralis</i>	<i>Stagmomantis californica</i>	<i>Damias gilgipus</i>
<i>Saropogon laticus</i>	<i>Sphacidae</i>	<i>Hippodamia convergens</i>	<i>Zelus tetracanthus</i>	<i>Parabacillus hepersis</i>	<i>Damias plexippus</i>
<i>Stemogon brevivittatus</i>	<i>Olla v-nigrum</i>	<i>Chrysomelidae</i>	Homoptera:	Odontata:	<i>Pteris coeniza</i>
<i>Basidae (May Flies)</i>	<i>Chrysomelidae</i>	<i>Diatraea hufschu</i>	<i>Homaldisia sp.</i>	<i>Asana multicolor</i>	<i>Vanessa atalanta</i>
<i>Calibaetis pacifica</i>	<i>D. undecimmaculata</i>	<i>Lema trilineata</i>	<i>Dactyloptera sp.</i>	<i>Inax junius</i>	<i>Vanessa cardui</i>
<i>Bombylidae</i>	<i>Tachyella laticollis</i>	<i>Curculionidae</i>	<i>Dermaptera (Click Beetles)</i>	<i>Homaldisia sp.</i>	<i>Vanessa virginiensis</i>
<i>Eurostoppo sp.</i>	<i>Chlorion aerarium</i>	<i>Dermaptera</i>	<i>Haliplidae</i>	<i>Dactyloptera sp.</i>	<i>Vanessa virginiensis</i>
<i>Ligula parophylla</i>	<i>Eucercera insignis</i>	<i>Haliplidae</i>	<i>Hydrophilidae</i>	<i>Perithous intensa</i>	<i>Progomphus borealis</i>
<i>Myricomyia sp.</i>	<i>Hoplidoidea diversis</i>	<i>Hydrophilidae</i>	<i>Meloidae</i>	<i>Pachyptera longipennis</i>	<i>Schinia sp.</i>
<i>Pocillidtherax arethusa</i>	<i>Hoplidoidea diversis</i>	<i>Meloidae</i>	<i>Neuroptera:</i>	<i>Pantala flavescens</i>	<i>Progomphus borealis</i>
<i>Pocillidtherax sp.</i>	<i>Microthemis californica</i>	<i>Neuroptera:</i>	<i>Chrysopidae</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Taxiphora pilulicida</i>	<i>Philanthus multivittatus</i>	<i>Chrysopidae</i>	<i>Chrysopa sp.</i>	<i>Pachyptera longipennis</i>	<i>Symptetrus corruptum</i>
<i>Vulla atrata</i>	<i>Philanthus venittabris</i>	<i>Rhipiphoridae</i>	<i>Macrosawgon sp.</i>	<i>Pantala flavescens</i>	<i>Symptetrus corruptum</i>
<i>Zenar sampton</i>	<i>Podalonia sp.</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Calliphora sp.</i>	<i>Prioryx fovi</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Eucalliphora liliana</i>	<i>Prioryx sp.</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Phaenicia caprina</i>	<i>Sceliphron caryocarpium</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Phaenicia sericata</i>	<i>Sphex ichneumonius</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Sicoides renicinctus</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Tiphiidae</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Vespidae - unidentified</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Eumenes bollii</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Eumenes cructifera</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Eulophus annulata</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes apachus</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Polistes dorsalis</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Polistes exclamans</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Conopidae sp.</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Ptysocephala texana</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Callitriche - mosquitoes</i>	<i>Polistes fuscatus aurifer</i>	<i>Macrosawgon sp.</i>	<i>Macrosawgon sp.</i>	<i>Perithous intensa</i>	<i>Symptetrus corruptum</i>
<i>Culex</i>					

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIECLE 014 Portion of Site Surveyed: 34 Acreage Surveyed: 34 Biologist(s): M Dicus
 Date: 07-18-14 Time (Start/End): 1000/1300 Cloud Cover (Start/End): 50/65 Temperature in °F (Start/End): 76 / 82

Arthropod Species Observed: Wind Speed in Beaufort (Start/End): 0-1 / 0-5 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> - <i>R. terminatus abdominalis</i> - <i>Apocera chrysozona</i> - <i>Apocera convergens</i> - <i>Neomomydas pantherina</i> - <i>Aulidae</i> - <i>Eliana albirostris</i> - <i>Mallophaga fauritzi</i> - <i>Proctosentulus sp.</i> - <i>Sarcophaga luteus</i> - <i>Stenopogon breviscaulis</i> - <i>Bacidae (May Flies)</i> - <i>Callibaetis pacificus</i> - <i>Bombyliidae</i> - <i>Euclyptus sp.</i> - <i>Ligota gracipylax</i> - <i>Mythimomyia sp.</i> - <i>Poecilanthrax areolaris</i> - <i>Poecilanthrax sp.</i> - <i>Toxophora pellicuda</i> - <i>Villa atrata</i> - <i>Zenaid macron</i> - <i>Calliphora sp.</i> - <i>Eucalliphora lilaca</i> - <i>Phaenicia riparia</i> - <i>Phaenicia sericata</i> - <i>Conopidae sp.</i> - <i>Physocophala texana</i> - <i>Culicidae - mosquitoes</i> - <i>Cyberbiidae</i> - <i>Candlishiellus sp.</i> - <i>Drosophilidae</i> - <i>Musca domestica</i> - <i>Sarcophagidae</i> - <i>Sarcophaga sp.</i> - <i>Syrphomyiidae</i> - <i>Syrphidae</i> - <i>Allograpta obliqua</i> - <i>Erastalis tenax</i> - <i>Menypterus americanus</i> - <i>Volucella mezzana</i> - <i>Tabanidae</i> 	<p><i>Ichneumon sp.</i></p> <p>Coleoptera:</p> <ul style="list-style-type: none"> - <i>Dasytomilla coccinellaria</i> - <i>Dasytomilla californica</i> - <i>Dasytomilla sackeri</i> (lg.) - <i>Dasytomilla chymenestra</i> - <i>Campsomera tallica</i> - <i>Triela albione</i> - <i>Pomphiliidae</i> - <i>Adalia bipunctata</i> - <i>Chilocorus orbis</i> - <i>Coccinella sp.</i> - <i>Hippodamia convergens</i> - <i>Gilia v-nigrum</i> - Chrysomelidae: - <i>Diabrotica balteata</i> - <i>D. undecimpunctata</i> - <i>Lema trilineata</i> - <i>Tachymela laticollis</i> - Curculionidae - Elmestidae (Click Beetles) - Halipidae - Hydrophilidae - Meloidae - <i>Nemognathus lurida apicalis</i> - Collopyidae - Rhipiphoridae - <i>Macrostigom flavipenne</i> - Macroselidae - <i>Corvus muribilis</i> - <i>Paracotopis sp.</i> - <i>Staphylinus maxillosus</i> - Tenebrionidae - <i>Eleodes sp.</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> - <i>Eurosternus armillata</i> - <i>Polistes apachus</i> - <i>Polistes dorsalis</i> - <i>Polistes exclamans</i> - <i>Polistes fuscatus aurifer</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> - <i>Chlorochroa ligata</i> - <i>Chlorochroa uhlerii</i> sayi - <i>Murgantia histrionica</i> - <i>Podisus sp.</i> - <i>Thyanta pallidivirens</i> - <i>Trichopepla aurora</i> - Reduviidae - <i>Apioneris crassipes</i> - <i>Rhynocoris ventralis</i> - <i>Zelus tetracanthus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> - Aphididae - <i>Inax junius</i> - Cercopidae - Cicadellidae - <i>Homaldisca sp.</i> - Cicadidae - Dactylopiidae (Coccinellal) - <i>Dactylopius sp.</i> - Membracidae - <i>Antianthe expansa</i> - Psyllidae - <i>Glyptotendipes brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> - Chrysopidae - <i>Chrysopa sp.</i> - Myrmeleontidae - <i>Brachyneurinus sp.</i> - <i>Myrmeleon sp.</i> - Raphidiidae (Snakeflies) <p>Dermatoptera:</p> <ul style="list-style-type: none"> - <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> - Acrididae - <i>Dissosteira pictipennis</i> - <i>Leptus intermedius</i> - <i>Melanoplus sp.</i> - <i>Schistocerca niensis</i> - <i>Schistocerca sp.</i> 	<p>Trimerotropis californica</p> <ul style="list-style-type: none"> - <i>Trimerotropis pallidipennis</i> - <i>Gryllus sp.</i> - <i>Hemiarthrus certus</i> - <i>Icaricia ocreo</i> - <i>Leptodes marina</i> - <i>Seymour melinus</i> - <i>Apodemia morano virgata</i> - <i>Agrostis vanillae</i> - <i>Durania gilippus</i> - <i>Dumia phaeoptus</i> - <i>Pteris caesia</i> - <i>Yanessa ornabellia</i> - <i>Yanessa aulana</i> - <i>Yanessa carabii</i> - <i>Yanessa virginianus</i> - Arctiidae - Noctuidae - <i>Autographa californica</i> - <i>Schinia sp.</i> - Gemmatidae - Pyralidae - <i>Parantheze robiniae</i> - <i>Hydra lineata</i> - <i>Manduca sexta</i> <p>Arachnida:</p> <ul style="list-style-type: none"> - Araneidae - Dipluridae - <i>Leuropterus pacificus</i> - <i>Larocetus hesperus</i> - Salticidae - <i>Phidippus formosus</i> - Thomisidae
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Bird Species Observed: RTA MOD-5AHT CAL BKLO
ADSF KATI BEAT NANO GUSW
LOST COAT KATI IUTU
ANLE TUID KML EUCS

Other Wildlife Species Observed:
W. FLYCATCHER
SB BAZARD
LAGS
COTTONTAIL

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE EST Portion of Site Surveyed: Acreege Surveyed Biologist(s): Alana & Orlis
 Date: 07-19-14 Time (Start/End): 1000 / 1400 Cloud Cover (Start/End): 100% / 75% Temperature in °F (Start/End): 71 / 81

Arthropod Species Observed: Wind Speed in Beaufort (Start/End): 1-4 / 4-9 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Archyus apicifer</i> <input checked="" type="checkbox"/> <i>Gymnosoma fuliginosum</i> <input checked="" type="checkbox"/> <i>Therividae (Stiletto Fly)</i> <input type="checkbox"/> <i>Ceratitus capitata</i> <input type="checkbox"/> <i>Tipulidae</i> <input type="checkbox"/> <i>Nephrotoma sp.</i> <p>Hymenoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Andromyrmex humilis</i> <input type="checkbox"/> <i>Formica sp.</i> <input type="checkbox"/> <i>Lionetopus occidentalis</i> <input type="checkbox"/> <i>Messor pergandei</i> <input checked="" type="checkbox"/> <i>Progomymnax californica</i> <input type="checkbox"/> <i>Solenopsis sp.</i> <p>Bees</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Anthophoridae</i> <input type="checkbox"/> <i>Anthophora urbana</i> <input type="checkbox"/> <i>Melissodes sp.</i> <input type="checkbox"/> <i>Apis mellifera</i> <input type="checkbox"/> <i>Bombus californicus</i> <input type="checkbox"/> <i>Bombus croceus</i> <input type="checkbox"/> <i>Bombus sonorus</i> <input type="checkbox"/> <i>Bombus vosnesenskii</i> <input type="checkbox"/> <i>Halictidae</i> <input type="checkbox"/> <i>Agapostemon sp.</i> <input type="checkbox"/> <i>Nomia nevadensis</i> <input type="checkbox"/> <i>Megachilidae</i> <input type="checkbox"/> <i>Diamictidium sp.</i> <input type="checkbox"/> <i>Megachile sp.</i> <input type="checkbox"/> <i>Percidita sp.</i> <p>Wasps</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metapygus americanus</i> <input checked="" type="checkbox"/> <i>Polybia mexicana</i> <input type="checkbox"/> <i>Tahamidae</i> 	<p><i>Ichneumon sp.</i></p> <p>Chalcididae:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Dasyneura californica</i> <input type="checkbox"/> <i>Dasyneura snyderi</i> (fig.) <input type="checkbox"/> <i>Dasyneura chryseiventris</i> <input type="checkbox"/> <i>Triela albicoma</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilocorus orbus</i> <input type="checkbox"/> <i>Coccinella sp.</i> <input checked="" type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Dibrachia balteata</i> <input checked="" type="checkbox"/> <i>P. undecimpunctata</i> <input type="checkbox"/> <i>Lebia trilineata</i> <input type="checkbox"/> <i>Tachyella lanicola</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Dermestidae</i> <input type="checkbox"/> <i>Elateridae (Click Beetles)</i> <input type="checkbox"/> <i>Halipidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops sp.</i> <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosiagon flavipennis</i> <input type="checkbox"/> <i>Macrosiagon sp.</i> <input type="checkbox"/> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracatantia sp.</i> <input type="checkbox"/> <i>Staphylinus maculatus</i> <input type="checkbox"/> <i>Tenebrionidae</i> <input checked="" type="checkbox"/> <i>Elaeodes sp.</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Eurodynerus annulata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhlerii</i> (sax) <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichopoda aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Aplonotus crassipes</i> <input type="checkbox"/> <i>Phymacorix ventralis</i> <input type="checkbox"/> <i>Zelus tetrocatus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aphididae</i> <input type="checkbox"/> <i>Cercopidae</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homaldisca sp.</i> <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactyloptera (Cockchurn)</i> <input type="checkbox"/> <i>Docyloptera sp.</i> <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Amisotoma expansa</i> <input checked="" type="checkbox"/> <i>Syllidae</i> <input checked="" type="checkbox"/> <i>Glyptotendipes brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Myrmeleonidae</i> <input type="checkbox"/> <i>Brachynemurus sp.</i> <input type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Leprus intermedius</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Sclerotocera nitens</i> <input type="checkbox"/> <i>Sclerotocera sp.</i>
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Bird Species Observed:

<u>RTHA</u>	<u>BLPT</u>	<u>TUVU</u>	<u>GRSW</u>	<u>GNST</u>	<u>MALL</u>
<u>SATH</u>	<u>KILW</u>	<u>AMKE</u>	<u>BOFI</u>	<u>ORAL</u>	<u>RWBL</u>
<u>HOFP</u>	<u>NAMO</u>	<u>HOFL</u>	<u>CLSW</u>	<u>WFTB</u>	<u>EUST</u>
<u>AMBL</u>	<u>SAKI</u>	<u>COCA</u>	<u>MOBO</u>	<u>LESA</u>	<u>EUCD</u>

Other Wildlife Species Observed:

CORONAIL
SB LIZARD
W. FISH LIZARD
CATS

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CIM Portion of Site Surveyed: N Acreage Surveyed: 34 Biologist(s): MELANIE DICUS
 Date: 07-20-14 Time (Start/End): 1106 / 1400 Cloud Cover (Start/End): 15% / 8 Temperature in °F (Start/End): 79 / 86

Arthropod Species Observed: Wind Speed in Beaufort (Start/End): 3-7 / 2-7 DSF Detected (Circle): Y (N)

<p>DIPTERA:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apocera chrysalina</i> <input type="checkbox"/> <i>Apocera convergens</i> <input checked="" type="checkbox"/> <i>Nemopoda postherna</i> <input checked="" type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Effigia albibrachis</i> <input type="checkbox"/> <i>Malliphora fuscata</i> <input type="checkbox"/> <i>Proctocnemea sp.</i> <input type="checkbox"/> <i>Sarcophaga latera</i> <input type="checkbox"/> <i>Stenogon brevisculus</i> <input type="checkbox"/> <i>Beetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligota gazophylax</i> <input type="checkbox"/> <i>Mithocomyia sp.</i> <input type="checkbox"/> <i>Porciliophora arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input type="checkbox"/> <i>Taxophora pellicida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenopsis sinopson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input type="checkbox"/> <i>Eucalliphora lilara</i> <input type="checkbox"/> <i>Plazencia cuprina</i> <input type="checkbox"/> <i>Plazencia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Pty socophala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input type="checkbox"/> <i>Copidomyia sp.</i> <input type="checkbox"/> <i>ProsopeIIDae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input checked="" type="checkbox"/> <i>Psyllididae</i> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasynthes americana</i> <input type="checkbox"/> <i>Yulocilla mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon sp.</i> <input type="checkbox"/> <i>Dasyneura coccinellina</i> <input type="checkbox"/> <i>Dasyneura californica</i> <input type="checkbox"/> <i>Dasyneura sackeni (lg.)</i> <input type="checkbox"/> <i>Dasyneura chryseiventris</i> <input type="checkbox"/> <i>Compsopteris tolteca</i> <input type="checkbox"/> <i>Trietia alicione</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pezomachus</i> <input type="checkbox"/> <i>Pezomachus sp.</i> <input type="checkbox"/> <i>Sphacidae</i> <input checked="" type="checkbox"/> <i>Monophila alberti</i> <input type="checkbox"/> <i>Monophila sp.</i> <input checked="" type="checkbox"/> <i>Bembix americana comata</i> <input type="checkbox"/> <i>Bembix melanopsis</i> <input type="checkbox"/> <i>Bicyrtus sp.</i> <input type="checkbox"/> <i>Cerceris sp.</i> <input checked="" type="checkbox"/> <i>Chalcididae</i> <input type="checkbox"/> <i>Chalcididae</i> <input type="checkbox"/> <i>Eucerebra insignis</i> <input type="checkbox"/> <i>Haplouscoides diversus</i> <input type="checkbox"/> <i>Haplouscoides sp.</i> <input type="checkbox"/> <i>Isodontia areolaris</i> <input type="checkbox"/> <i>Microbembix californicus</i> <input type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Prionyx fuscus</i> <input checked="" type="checkbox"/> <i>Prionyx sp.</i> <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Stizoides revoicinctus</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bolivi</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Euclypterus annulata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Tabanus pumifer</i> <input type="checkbox"/> <i>Tachinidae</i> <input type="checkbox"/> <i>Archinosia apicifer</i> <input type="checkbox"/> <i>Gynostoma fuliginosum</i> <input type="checkbox"/> <i>Therevidae (Stiletto Fly)</i> <input type="checkbox"/> <i>Ceratitis capitata</i> <input type="checkbox"/> <i>Tipulidae</i> <input type="checkbox"/> <i>Nephrotoma sp.</i> <p>Hymenoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Ants</i> <input type="checkbox"/> <i>Formicidae</i> <input type="checkbox"/> <i>Iradymerus humilis</i> <input type="checkbox"/> <i>Formica sp.</i> <input type="checkbox"/> <i>Liometopum occidentale</i> <input type="checkbox"/> <i>Messor pergandei</i> <input checked="" type="checkbox"/> <i>Pogonomyrmex californicus</i> <input type="checkbox"/> <i>Solenopsis sp.</i> <p>Bees</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Anthophoridae</i> <input type="checkbox"/> <i>Anthophora urbana</i> <input type="checkbox"/> <i>Melissodes sp.</i> <input checked="" type="checkbox"/> <i>Psilocopa varipunctata</i> <input type="checkbox"/> <i>Apis mellifera</i> <input type="checkbox"/> <i>Bombus californicus</i> <input type="checkbox"/> <i>Bombus croceus</i> <input type="checkbox"/> <i>Bombus sonorus</i> <input type="checkbox"/> <i>Bombus vosnesenskii</i> <input type="checkbox"/> <i>Halicidae</i> <input checked="" type="checkbox"/> <i>Agroplitenon sp.</i> <input checked="" type="checkbox"/> <i>Nomia nevadensis</i> <input type="checkbox"/> <i>Megachilidae</i> <input type="checkbox"/> <i>Dianthidium sp.</i> <input type="checkbox"/> <i>Megachile sp.</i> <input type="checkbox"/> <i>Perditia sp.</i> <p>Wasps</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chalcididae</i> <input type="checkbox"/> <i>Chrysididae</i> <input type="checkbox"/> <i>Chrysoidea pacifica</i> <input type="checkbox"/> <i>Paraspea edwardsi</i> <input type="checkbox"/> <i>Ichneumonidae</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Chlorochroa ligata</i> <input type="checkbox"/> <i>Chlorochroa uhleri-sayi</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Triphlepa aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Apionemertis crassipes</i> <input type="checkbox"/> <i>Rhyacionia ventralis</i> <input type="checkbox"/> <i>Zelus tetracanthus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aphididae</i> <input type="checkbox"/> <i>Cercopidae</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homaldisca sp.</i> <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactylopiidae (Coccinellae)</i> <input type="checkbox"/> <i>Dactylopius sp.</i> <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Astilbidae</i> <input checked="" type="checkbox"/> <i>Psyllididae</i> <input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Myrmeleonidae</i> <input type="checkbox"/> <i>Brachyneururus sp.</i> <input type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Leptus intermedius</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca sp.</i> 	<p>Pterostropis californica</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i> <input type="checkbox"/> <i>Oryzopsis sp.</i> <input type="checkbox"/> <i>Gryllus exilis</i> <input type="checkbox"/> <i>Hemipterus cerasinus</i> <input type="checkbox"/> <i>Leucophaea acron</i> <input checked="" type="checkbox"/> <i>Leptotettix mariana</i> <input checked="" type="checkbox"/> <i>Strymon melinus</i> <input type="checkbox"/> <i>Apodemia mormo virgata</i> <input type="checkbox"/> <i>Agrostis vanillae</i> <input type="checkbox"/> <i>Danania gilpinus</i> <input type="checkbox"/> <i>Danau plectippus</i> <input type="checkbox"/> <i>Pteris cornia</i> <input type="checkbox"/> <i>Vanessa annabella</i> <input checked="" type="checkbox"/> <i>Vanessa atalanta</i> <input type="checkbox"/> <i>Vanessa cardui</i> <input type="checkbox"/> <i>Vanessa virginiensis</i> <input type="checkbox"/> <i>Arctiidae</i> <input type="checkbox"/> <i>Noctuidae</i> <input type="checkbox"/> <i>Autographa californica</i> <input type="checkbox"/> <i>Sclerita sp.</i> <input checked="" type="checkbox"/> <i>Geometridae</i> <input checked="" type="checkbox"/> <i>Pyralidae</i> <input type="checkbox"/> <i>Paraspherone robiniae</i> <input type="checkbox"/> <i>Hydra litorea</i> <input type="checkbox"/> <i>Manduca sexta</i> <p>Arachnida:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Araneidae</i> <input type="checkbox"/> <i>Proctos viridius</i> <input checked="" type="checkbox"/> <i>Dipluridae</i> <input type="checkbox"/> <i>Leuropterus pacificus</i> <input type="checkbox"/> <i>Larodectus hesperus</i> <input type="checkbox"/> <i>Salicidae</i> <input checked="" type="checkbox"/> <i>Phidippus formosus</i> <input type="checkbox"/> <i>Thomisidae</i> <p>Lepidoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Adalopdes campestris</i> <input type="checkbox"/> <i>Erynnis funeralis</i> <input type="checkbox"/> <i>Heliopterus erictorum</i> <input checked="" type="checkbox"/> <i>Thyphlepha phyleus</i> <input type="checkbox"/> <i>Lerodea rufala</i> <input type="checkbox"/> <i>Paratrytone melane</i> <input checked="" type="checkbox"/> <i>Polites sabuleti</i> <input type="checkbox"/> <i>Pyrgus albescens</i> <input type="checkbox"/> <i>Papilio cresphontes</i> <input type="checkbox"/> <i>Papilio rutulus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i>
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Bird Species Observed:
 CAIK WEK1 MODO
 BLPH TUVU QASW
 NMO ALPH
 HOSP ATHA

Other Wildlife Species Observed:
W. FENCE LIZARD
SO LIZARD

L. SANDA HILARS

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CANAL CITY Portion of Site Surveyed: N Acreage Surveyed: 34 Biologist(s): MELANIE DICUS
 Date: 07-25-14 Time (Start/End): 1100 / 1400 Cloud Cover (Start/End): 50% / 60% Temperature in °F (Start/End): 89 / 98

Wind Speed in Beaufort (Start/End): 0-3 / 1-7 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminalis abdominalis</i> <input type="checkbox"/> <i>Apocera chrysalis</i> <input checked="" type="checkbox"/> <i>Apocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas powelli</i> <input type="checkbox"/> <i>Asilidae</i> <input type="checkbox"/> <i>Efferia albibarbis</i> <input type="checkbox"/> <i>Malliphora fuscipes</i> <input type="checkbox"/> <i>Proctocentrus sp.</i> <input type="checkbox"/> <i>Sarcophaga latera</i> <input type="checkbox"/> <i>Stenomogon breviscaulus</i> <input type="checkbox"/> <i>Beziidae (Mey Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Esperopsis sp.</i> <input type="checkbox"/> <i>Ligya geomysilar</i> <input type="checkbox"/> <i>Mylabris sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input checked="" type="checkbox"/> <i>Asaphora pallidula</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenax ampson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia stricata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physocphala texana</i> <input type="checkbox"/> <i>Callitidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input type="checkbox"/> <i>Condyliarius sp.</i> <input type="checkbox"/> <i>Drosophilidae</i> <input type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input checked="" type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Erastus tenax</i> <input type="checkbox"/> <i>Metatypus americanus</i> <input type="checkbox"/> <i>Polocella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichneumon sp.</i></p> <p><i>Dasyneura coccinellaria</i></p> <p><i>Dasyneura californica</i></p> <p><i>Dasyneura sackeni</i> (fig.)</p> <p><i>Dasyneura chymenestra</i></p> <p><i>Compsopteris toluca</i></p> <p><i>Triela aldone</i></p> <p><i>Praonidae</i></p> <p><i>Pezomachus sp.</i></p> <p><input checked="" type="checkbox"/> <i>Sphelidae</i></p> <p><input checked="" type="checkbox"/> <i>Homoptera</i></p> <p><i>Bembix americana comata</i></p> <p><i>Bembix melanopis</i></p> <p><i>Bicyrtis sp.</i></p> <p><i>Cerceris sp.</i></p> <p><i>Chlorion atrarium</i></p> <p><i>Eucerceris insignis</i></p> <p><i>Hoplomachus diversus</i></p> <p><i>Hoplomachus sp.</i></p> <p><i>Inodaxi aelgans</i></p> <p><i>Microbembix californica</i></p> <p><i>Philonthus multifasciatus</i></p> <p><i>Philonthus ventralis</i></p> <p><i>Podalonia sp.</i></p> <p><i>Priomyz fazi</i></p> <p><i>Priomyz sp.</i></p> <p><i>Scaphiron caementarium</i></p> <p><i>Sphecoctonus mexicanus</i></p> <p><i>Stizoides ruscicornis</i></p> <p><i>Tachytes elongatus</i></p> <p><i>Tiphidae</i></p> <p><i>Vespidae - unidentified</i></p> <p><i>Eumecurus bollii</i></p> <p><i>Eumecurus crucifera</i></p> <p><i>Eurodynerus annulata</i></p> <p><i>Pollistes apachus</i></p> <p><i>Pollistes dorsalis</i></p> <p><i>Pollistes usclamanus</i></p> <p><i>Pollistes sinicus</i></p>	<p><i>Vespa pennsylvanica</i></p> <p>Colletes:</p> <p><i>Buprestidae</i></p> <p><i>Carabidae</i></p> <p><i>Cerambycidae</i></p> <p><i>Coccinellidae</i></p> <p><i>Adalia bipunctata</i></p> <p><i>Chilocorus orbus</i></p> <p><i>Coccinella sp.</i></p> <p><i>Harmonia axyridis</i></p> <p><input checked="" type="checkbox"/> <i>Hippodamia convergens</i></p> <p><i>Olla v-nigrum</i></p> <p><i>Chrysomelidae</i></p> <p><input checked="" type="checkbox"/> <i>Diabrotica balteata</i></p> <p><i>D. undecimnotata</i></p> <p><i>Leina trilineata</i></p> <p><i>Tachymela laticollis</i></p> <p><i>Cursilionidae</i></p> <p><i>Dermetidae</i></p> <p><i>Elateridae (Click Beetles)</i></p> <p><i>Halipidae</i></p> <p><i>Hydrophilidae</i></p> <p><i>Meloidae</i></p> <p><i>Nemognatha larida apicalis</i></p> <p><i>Melyridae</i></p> <p><i>Collops sp.</i></p> <p><i>Rhipiphoridae</i></p> <p><i>Macrosagron flavipenne</i></p> <p><i>Macrosagron sp.</i></p> <p><i>Acanthacidae</i></p> <p><input checked="" type="checkbox"/> <i>Cotinus murbilis</i></p> <p><i>Paracalpa sp.</i></p> <p><i>Staphylinus maxillatus</i></p> <p><i>Tenebrionidae</i></p> <p><input checked="" type="checkbox"/> <i>Eleodes sp.</i></p> <p>Hemiptera:</p> <p><i>Lygaeidae</i></p> <p><i>Lygaeus intermedius</i></p> <p><i>Melanoplus sp.</i></p> <p><i>Schistocerca nigra</i></p> <p><i>Schistocerca sp.</i></p>	<p>Pentatomidae</p> <p><i>Chlorochroa ligata</i></p> <p><i>Chlorochroa wherryi</i></p> <p><i>Murgantia histrionica</i></p> <p><i>Podisus sp.</i></p> <p><i>Thysania pallidivirens</i></p> <p><i>Trichopoda aurora</i></p> <p><i>Reduviidae</i></p> <p><i>Apionidae</i></p> <p><i>Rhinoceros ventralis</i></p> <p><i>Zelus tetracanthus</i></p> <p>Hemiptera:</p> <p><i>Aphis multicolor</i></p> <p><i>Aphis junius</i></p> <p><i>Erythelium calocata</i></p> <p><i>Homalidusa sp.</i></p> <p><i>Libellula saturata</i></p> <p><i>Pachydiplax longipennis</i></p> <p><i>Pantala flavescens</i></p> <p><i>Perithous lateralis</i></p> <p><i>Progomphus borealis</i></p> <p><input checked="" type="checkbox"/> <i>Sympetrum corruptum</i></p> <p><i>Sympetrum libellula</i></p> <p><i>Tramea lacerata</i></p> <p><i>Tramea orusta</i></p> <p><i>Argia sp.</i></p> <p><i>Enallagma sp.</i></p> <p><i>Telebasis salva</i></p> <p>Lenticulata:</p> <p><i>Anisoptera</i></p> <p><i>Asioidea campestris</i></p> <p><i>Eryonis fernalis</i></p> <p><i>Heliopterus erictorum</i></p> <p><i>Hylophila phyleus</i></p> <p><i>Lerodea eufala</i></p> <p><i>Paratrytone melane</i></p> <p><i>Polites sabuleti</i></p> <p><input checked="" type="checkbox"/> <i>Pygus albicans</i></p> <p><i>Papilio crephloides</i></p> <p><i>Papilio rufulus</i></p> <p><input checked="" type="checkbox"/> <i>Colias eurytheme</i></p>
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Bird Species Observed: NOMO HOSP BASH
HOFI SAPH CORA
TUVU WEKI
CAKI AMKE

Other Wildlife Species Observed:
SA LIZARD
COTTONTAIL
CATS

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: WALLE CUM Portion of Site Surveyed: S Acreage Surveyed: 50 Biologist(s): M. Dicus
 Date: 07-26-14 Time (Start/End): 1000 / 1400 Cloud Cover (Start/End): 15% / 10% Temperature in °F (Start/End): 86° / 85°

Arthropod Species Observed: Wind Speed in Beaufort (Start/End): 1-4 / 3-9 DSF Detected (Circle): Y (N)

DIPTERA: <i>R. terminatus obdorminalis</i> <i>Aplocera chrysalis</i> <i>Aplocera convergens</i> <i>Nemomyza pantherina</i> Asilidae <i>Efferia albibarbaris</i> <i>Mallaphora foveata</i> <i>Proctocentrus</i> sp. <i>Soropogon luteus</i> <i>Stenopogon breviscaulus</i> Beetidae (Mey Flies) <i>Callibaetis pacificus</i> Bombiidae <i>Euclyptus</i> sp. <i>Liguro-ga-clyptus</i> <i>Mythomyia</i> sp. <i>Poecilanthrax areolaris</i> <i>Poecilanthrax</i> sp. <i>Toxophora pellucida</i> <i>Vilva ornata</i> <i>Zenaidura simpsoni</i> <i>Calliphora</i> sp. <i>Eucalliphora lilaea</i> <i>Phaenicia cuprina</i> <i>Phaenicia sericata</i> Cnecopidae sp. <i>Physoccephala texana</i> Culicidae - mosquitoes Cuterebridae <i>Condyliaryctus</i> sp. Drosophilidae <i>Musca domestica</i> Sarcophagidae <i>Sarcophaga</i> sp. Stratiomyidae Syrphidae <i>Allograpta obliqua</i> <i>Eristalis tenax</i> <i>Metasyphus americanus</i> <i>Yobocella mexicana</i> Tabanidae	<i>Ichneumon</i> sp. <i>Dasyneura cocciniphila</i> <i>Dasyneura californica</i> <i>Dasyneura sachem</i> (lg.) <i>Dasyneura chymenestra</i> <i>Camposomeris tolteca</i> <i>Triclistus alcyon</i> <i>Prospilidae</i> <i>Pezomachus</i> sp. Sphecidae <i>Amomphila alberti</i> <i>Amomphila</i> sp. <i>Bembix americana comata</i> <i>Bembix melanopis</i> <i>Bicyrtis</i> sp. <i>Ceratitis</i> sp. <i>Chlorion aerarium</i> <i>Excavator insignis</i> <i>Hoplisis diversus</i> <i>Hoplisis</i> sp. <i>Inodini aelgeus</i> <i>Microbembix californica</i> <i>Philanthus multicaucularis</i> <i>Philanthus ventralis</i> <i>Podalonia</i> sp. <i>Prionyx fazi</i> <i>Prionyx</i> sp. <i>Sedilphron caementarium</i> <i>Spheez ichneumonius</i> <i>Stizoides renicinctus</i> <i>Tachytes elongatus</i> Vespidae - unidentified <i>Eumenes bollii</i> <i>Eumenes crucifera</i> <i>Euclyptus annulata</i> <i>Pollistes apachus</i> <i>Pollistes abraxas</i> <i>Pollistes exclamans</i> <i>Pollistes fuscatus aurifer</i>	Vespa pennsylvanica Coloptera: <i>Buprestidae</i> Carabidae <i>Cerambycidae</i> Coccinellidae <i>Adalia bipunctata</i> <i>Chilocorus orbus</i> <i>Coccinella</i> sp. <i>Hippodamia convergens</i> <i>Olla v-nigrum</i> Chrysomelidae <i>Diabrotica balteata</i> <i>P. undecimpunctata</i> <i>Lebia trilineata</i> Tachymeria laticollis Curculionidae Dermestidae Elateridae (Click Beetles) Halipidae Hydrophilidae Meloidae <i>Neomagdala lurida apicalis</i> Melyridae <i>Collapsa</i> sp. Rhipiphoridae <i>Macrosigona flavipennis</i> Macrosigona sp. Scarabaeidae <i>Colinus multilobis</i> Paracolepa sp. Staphylinidae macillatus Tenebrionidae Eleodes sp.	Pentatomidae <i>Chlorochroa ligata</i> <i>Chlorochroa whittellii</i> sp. <i>Murgantia histrionica</i> <i>Podisus</i> sp. <i>Thyanta pallidivirens</i> Trichoptera aurora Reduviidae <i>Apicomera crassipes</i> <i>Rhyocoris ventralis</i> <i>Zelus tetrocatus</i>	Homoptera: Aphididae Cercopidae Cicadellidae Homalidae sp. Cicadidae Dactylopiidae (Coccinical) <i>Dactylopius</i> sp. Membracidae <i>Antianthe expansa</i> Psyllidae <i>Glycaspis brimblecombei</i>	Neuroptera: Chrysopidae <i>Chrysopa</i> sp. Myrmeleontidae <i>Brachymeurus</i> sp. <i>Myrmeleon</i> sp. Raphidiidae (Snakeflies)	Lepidoptera: <i>Atalapha campestris</i> <i>Erynnis finereola</i> <i>Heliopteryx erictorum</i> <i>Phlegethona phylax</i> <i>Lerema enyala</i> Paratyton melane Pollis sabuleti <i>Pyrgus albescens</i> <i>Popillia crephomites</i> <i>Popillia rubilis</i> <i>Colias eurytheme</i>	Frimerotropis californica Trimerotropis pallidipennis <i>Gryllus</i> sp. <i>Oecanthus fulvini</i> Tettigoniidae <i>Antianthe expansa</i> <i>Saxidaria mexicana</i> <i>Stenopelmatus</i> sp. Iris oratoria Stagmomantis californica Parabacillus hesperis	Odonata: <i>Aeshna multicolor</i> Anax junius <i>Erythemis collocata</i> <i>Fibellula croceipennis</i> Libellula auctaria Noctuidae <i>Autographa californica</i> <i>Schinia</i> sp. Geometridae Pyralidae <i>Paranthrene robiniae</i> <i>Hyles lineata</i> <i>Mameuca sexta</i>	Arachnida: Araneidae Peucetia viridula Dipluridae <i>Neurocybus pacificus</i> <i>Paracatantia hesperis</i> Salticidae Thomisidae
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Bird Species Observed: Other Wildlife Species Observed:

<u>ROPI</u>	<u>BASH</u>	<u>BLPH</u>	<u>KILL</u>	<u>CAKI</u>	<u>MODO</u>
<u>MOSP</u>	<u>SAPH</u>	<u>AMVE</u>	<u>EUST</u>	<u>EUGA</u>	<u>WELI</u>
<u>COBA</u>	<u>ANRU</u>	<u>AMCA</u>	<u>WFID</u>	<u>RWBL</u>	<u>NOMO</u>
<u>TUVU</u>	<u>BTHA</u>	<u>BNST</u>	<u>BRBL</u>		

SB LIZARD
CAUS
BTJR
COTONTAIL

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: GREEN CITY Portion of Site Surveyed: N Acreage Surveyed: 34 Biologist(s): MELANIE D) WUS
 Date: 07-27-14 Time (Start/End): 1105 / 1400 Cloud Cover (Start/End): 40% / 50% Temperature in °F (Start/End): 90 / 93

Wind Speed in Beaufort (Start/End): 2-6 / 3-10 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminalis abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysolata</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input checked="" type="checkbox"/> <i>Neomomyia pantherina</i> Asilidae <input checked="" type="checkbox"/> <i>Efferia albi-barbata</i> <input type="checkbox"/> <i>Melophora fuscata</i> <input type="checkbox"/> <i>Proctocaninus sp.</i> <input type="checkbox"/> <i>Sarcophaga lateris</i> <input type="checkbox"/> <i>Stenopogon breviscapus</i> Becidae (May Flies) <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> Bombyliidae <input type="checkbox"/> <i>Esoposaga sp.</i> <input type="checkbox"/> <i>Ligya gaeaplyllax</i> <input type="checkbox"/> <i>Myiucomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax areolaris</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input checked="" type="checkbox"/> <i>Taxiphora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenar simpsoni</i> <input type="checkbox"/> <i>Galliphora sp.</i> <input checked="" type="checkbox"/> <i>Exochophora liliana</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Cnephidae sp.</i> <input type="checkbox"/> <i>Physoccephala texana</i> <input type="checkbox"/> <i>Callicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input type="checkbox"/> <i>Condylostylus sp.</i> <input type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Alusca domestica</i> <input type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metzgeriophus americanus</i> <input type="checkbox"/> <i>Pobocella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Johnstonia sp.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Dasyneura cocciniphora</i> Colletes: <input type="checkbox"/> <i>Dasyneura californica</i> <input type="checkbox"/> <i>Dasyneura sordani</i> (lg.) <input type="checkbox"/> <i>Dasyneura clypeiventra</i> <input type="checkbox"/> <i>Campaneris tallica</i> <input type="checkbox"/> <i>Triela olivacea</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pezomachus</i> <input type="checkbox"/> <i>Pezomachus</i> <input checked="" type="checkbox"/> <i>Sphecidae</i> <input type="checkbox"/> <i>Amphipila alberti</i> <input checked="" type="checkbox"/> <i>Amphipila sp.</i> <input type="checkbox"/> <i>Bembix americana cumata</i> <input type="checkbox"/> <i>Bembix melanopis</i> <input type="checkbox"/> <i>Bicyrtis sp.</i> <input checked="" type="checkbox"/> <i>Cerceris sp.</i> <input type="checkbox"/> <i>Chalybion californicus</i> <input type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplosoides divinus</i> <input checked="" type="checkbox"/> <i>Hoplosoides sp.</i> <input type="checkbox"/> <i>Isodontia aequalis</i> <input type="checkbox"/> <i>Microbembix californicus</i> <input type="checkbox"/> <i>Philanthus multivittatus</i> <input type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Priomyza faza</i> <input type="checkbox"/> <i>Priomyza sp.</i> <input type="checkbox"/> <i>Scolophora camentarium</i> <input type="checkbox"/> <i>Spheco ichneumonius</i> <input type="checkbox"/> <i>Stizoides renicinctus</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input checked="" type="checkbox"/> <i>Stenomacrus annulata</i> <input checked="" type="checkbox"/> <i>Pollistes apachus</i> <input type="checkbox"/> <i>Pollistes dorsalis</i> <input type="checkbox"/> <i>Pollistes exclamans</i> <input type="checkbox"/> <i>Pollistes fuscatus aurifer</i> 	<p><i>Vespa pennsylvanica</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chalcididae</i> <input type="checkbox"/> <i>Blacus</i> <input type="checkbox"/> <i>Carabidae</i> <input type="checkbox"/> <i>Cerambycidae</i> <input type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilocorus orbus</i> <input type="checkbox"/> <i>Coccinella sp.</i> <input type="checkbox"/> <i>Harmostis acyrtila</i> <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input type="checkbox"/> <i>D. undecimpunctata</i> <input type="checkbox"/> <i>Homalodacra sp.</i> <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactyloptera (Coccinellid)</i> <input type="checkbox"/> <i>Dactyloptera sp.</i> <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Anthrenus expansus</i> <input type="checkbox"/> <i>Psyllidae</i> <input checked="" type="checkbox"/> <i>Glyptotendipes bimblecombei</i> Neuroptera: <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Myrmeleontidae</i> <input type="checkbox"/> <i>Brachynemurus sp.</i> <input type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> Dermatoptera: <input type="checkbox"/> <i>Fossilcula auricularia</i> Orthoptera: <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Disosteira pictipennis</i> <input type="checkbox"/> <i>Lepus intermedius</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Schistocerca gregaria</i> <input type="checkbox"/> <i>Schistocerca sp.</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Myndus albiventris</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichoplusia aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Alpioneris crassipes</i> <input type="checkbox"/> <i>Rhynocoris ventralis</i> <input type="checkbox"/> <i>Zelus tetracanthus</i> Hemiptera: <input type="checkbox"/> <i>Coreidae</i> <input type="checkbox"/> <i>Ceropidae</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homalodacra sp.</i> <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactyloptera (Coccinellid)</i> <input type="checkbox"/> <i>Dactyloptera sp.</i> <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Anthrenus expansus</i> <input type="checkbox"/> <i>Psyllidae</i> <input checked="" type="checkbox"/> <i>Glyptotendipes bimblecombei</i> Neuroptera: <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Myrmeleontidae</i> <input type="checkbox"/> <i>Brachynemurus sp.</i> <input type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> Dermatoptera: <input type="checkbox"/> <i>Fossilcula auricularia</i> Orthoptera: <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Disosteira pictipennis</i> <input type="checkbox"/> <i>Lepus intermedius</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Schistocerca gregaria</i> <input type="checkbox"/> <i>Schistocerca sp.</i> 	<p>Primeratropis californica</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i> <input type="checkbox"/> <i>Gryllus sp.</i> <input type="checkbox"/> <i>Oecanthus fulvini</i> <input type="checkbox"/> <i>Tettigoniidae</i> <input type="checkbox"/> <i>Antianthe expansa</i> <input type="checkbox"/> <i>Scudderella mexicana</i> <input type="checkbox"/> <i>Stenopelmatus sp.</i> <input type="checkbox"/> <i>Iris eratoria</i> <input type="checkbox"/> <i>Stagmomantis californica</i> <input type="checkbox"/> <i>Parabacillus hesperis</i> Orthoptera: <input type="checkbox"/> <i>Aeschna multicolor</i> <input type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collarata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula saturata</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input type="checkbox"/> <i>Pantala flavescens</i> <input type="checkbox"/> <i>Perithemis intensa</i> <input type="checkbox"/> <i>Progomphus borealis</i> <input checked="" type="checkbox"/> <i>Symptetrus corruptum</i> <input type="checkbox"/> <i>Symptetrus illotum</i> <input type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea ovata</i> <input checked="" type="checkbox"/> <i>Argia sp.</i> <input type="checkbox"/> <i>Enallagma sp.</i> <input type="checkbox"/> <i>Tetlibasis salva</i> Leptodactyla: <input type="checkbox"/> <i>Atalapha conspersa</i> <input type="checkbox"/> <i>Erythemis funerals</i> <input type="checkbox"/> <i>Heliopetes ericetorum</i> <input checked="" type="checkbox"/> <i>Hylephila phyllota</i> <input type="checkbox"/> <i>Lerema rufula</i> <input type="checkbox"/> <i>Panorhiza melane</i> <input type="checkbox"/> <i>Polites abuleti</i> <input type="checkbox"/> <i>Pyrgus albescens</i> <input type="checkbox"/> <i>Papilio crephobates</i> <input type="checkbox"/> <i>Papilio rutubus</i> <input checked="" type="checkbox"/> <i>Colias erytheme</i> 	<p>Peris rappa</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Pontia protodice</i> <input checked="" type="checkbox"/> <i>Brephilia exilis</i> <input type="checkbox"/> <i>Hemiaris ceratonia</i> <input type="checkbox"/> <i>Jacarilla acron</i> <input checked="" type="checkbox"/> <i>Apanteles murina</i> <input type="checkbox"/> <i>Strymon melinus</i> <input type="checkbox"/> <i>Agrotaia morosa virgulata</i> <input type="checkbox"/> <i>Agraulis vanillae</i> <input type="checkbox"/> <i>Panassa gilippus</i> <input checked="" type="checkbox"/> <i>Danaus plexippus</i> <input type="checkbox"/> <i>Precla coenia</i> <input type="checkbox"/> <i>Vanessa annabellia</i> <input type="checkbox"/> <i>Vanessa atalanta</i> <input checked="" type="checkbox"/> <i>Vanessa cardui</i> <input type="checkbox"/> <i>Vanessa virginiensis</i> <input type="checkbox"/> <i>Atrolidae</i> <input type="checkbox"/> <i>Noctuidae</i> <input type="checkbox"/> <i>Autographa californica</i> <input type="checkbox"/> <i>Sphinx sp.</i> <input type="checkbox"/> <i>Geometridae</i> <input checked="" type="checkbox"/> <i>Pyralidae</i> <input type="checkbox"/> <i>Paranthera robiniae</i> <input type="checkbox"/> <i>Hyles lineata</i> <input type="checkbox"/> <i>Mameba sexta</i> Arachnidae: <input type="checkbox"/> <i>Araneidae</i> <input type="checkbox"/> <i>Psecus viridius</i> <input checked="" type="checkbox"/> <i>Diplocephala</i> <input type="checkbox"/> <i>Leurogrychus pacificus</i> <input type="checkbox"/> <i>Macrocratus hesperus</i> <input checked="" type="checkbox"/> <i>Salticidae</i> <input checked="" type="checkbox"/> <i>Haplopus formosus</i> <input type="checkbox"/> <i>Thomisidae</i> V. B. HILBERS
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Bird Species Observed:
 TUVU HOSP CAKI MODO
 BLPH WEXI
 NOMO LORA BRSW
 BSHA HOOR SAPH

Other Wildlife Species Observed:
 COTTONTAIL
 SA LI ZARD

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CRICKET CITY Portion of Site Surveyed: S Acreage Surveyed: 48 Biologist(s): MELANIE DICUS
 Date: 07-28-14 Time (Start/End): 1000 / 1400 Cloud Cover (Start/End): 99% / 60% Temperature in °F (Start/End): 31 / 96

Arthropod Species Observed: Wind Speed in Beaufort (Start/End): 1-4 / 4-9 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Spaerota chrysolabia</i> <input checked="" type="checkbox"/> <i>Spinocera convergens</i> <input type="checkbox"/> <i>Nemomydas pantherina</i> Astilidae <input checked="" type="checkbox"/> <i>Efferia albibarbis</i> <input type="checkbox"/> <i>Mallaphora foveata</i> <input type="checkbox"/> <i>Proctosandrus</i> sp. <input type="checkbox"/> <i>Stenopogon huiensis</i> <input type="checkbox"/> <i>Stenopogon breviscaudus</i> Beetidae (May Flies) <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> Bombyliidae <input type="checkbox"/> <i>Eurostoeus</i> sp. <input type="checkbox"/> <i>Ligya gaz-copulata</i> <input type="checkbox"/> <i>Mythocomyia</i> sp. <input type="checkbox"/> <i>Psephenobittacus arethusa</i> <input type="checkbox"/> <i>Poecilanthrax</i> sp. <input type="checkbox"/> <i>Taxophora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenax simpsoni</i> <input checked="" type="checkbox"/> <i>Calliphora</i> sp. <input type="checkbox"/> <i>Phaenicia capriana</i> <input type="checkbox"/> <i>Phaenicia arctica</i> <input type="checkbox"/> <i>Conopidae</i> sp. <input type="checkbox"/> <i>Physocephala tesana</i> Culicidae - mosquitoes Caterebidae <input type="checkbox"/> <i>Condyliaryctus</i> sp. Drosophilidae <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga</i> sp. Stratiomyidae Syrphidae <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Pobocella mexicana</i> Tabanidae 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Chelmonax</i> sp. <input type="checkbox"/> <i>Dasympyla coccinellata</i> <input type="checkbox"/> <i>Dasympyla californica</i> <input type="checkbox"/> <i>Dasympyla sacheni</i> (lg.) <input type="checkbox"/> <i>Dasympyla chymenestera</i> <input type="checkbox"/> <i>Compsoemera tallica</i> <input type="checkbox"/> <i>Trietia elictione</i> Pompilidae <input type="checkbox"/> <i>Pegasis milaki</i> <input type="checkbox"/> <i>Pegasis</i> sp. <input checked="" type="checkbox"/> <i>Sphacidae</i> <input type="checkbox"/> <i>Amnophila alberti</i> <input type="checkbox"/> <i>Amnophila</i> sp. <input checked="" type="checkbox"/> <i>Bembix americana comata</i> <input type="checkbox"/> <i>Bembix melanopasta</i> <input type="checkbox"/> <i>Bicyrtis</i> sp. <input checked="" type="checkbox"/> <i>Exercitus</i> sp. <input checked="" type="checkbox"/> <i>Chabychia californica</i> <input type="checkbox"/> <i>Chlorion percarium</i> <input type="checkbox"/> <i>Eucereus insignis</i> <input type="checkbox"/> <i>Haplodides diversus</i> <input type="checkbox"/> <i>Hoplodides</i> sp. <input type="checkbox"/> <i>Trodoni aelgonus</i> <input checked="" type="checkbox"/> <i>Microbembix californica</i> <input type="checkbox"/> <i>Phylanthus multimauculata</i> <input type="checkbox"/> <i>Phylanthus ventralis</i> <input type="checkbox"/> <i>Podalaria</i> sp. <input type="checkbox"/> <i>Prionyx fovi</i> <input type="checkbox"/> <i>Prionyx</i> sp. <input type="checkbox"/> <i>Scaliphron caementarium</i> <input type="checkbox"/> <i>Spelz ichneumonitis</i> <input type="checkbox"/> <i>Stroides renicinctus</i> <input type="checkbox"/> <i>Tachyeta elongatus</i> Tiphidae <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Euclyptus annulata</i> <input checked="" type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> 	<ul style="list-style-type: none"> Pentatomidae <input type="checkbox"/> <i>Chlorochroa ligata</i> <input type="checkbox"/> <i>Chlorochroa whitlitsayi</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus</i> sp. <input checked="" type="checkbox"/> <i>Lygona pallidivirens</i> <input type="checkbox"/> <i>Trichopleris aurora</i> <input type="checkbox"/> <i>Rebunividae</i> <input type="checkbox"/> <i>Apioneris crassipes</i> <input type="checkbox"/> <i>Rhynocoris ventralis</i> <input type="checkbox"/> <i>Zelus tetrocinctus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> Aphididae <input checked="" type="checkbox"/> <i>Aphis mulicolar</i> <input checked="" type="checkbox"/> <i>Aphis junius</i> <input type="checkbox"/> <i>Erythrina colloclata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula saharata</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input type="checkbox"/> <i>Pantala flavescens</i> <input type="checkbox"/> <i>Perilebia intensa</i> <input checked="" type="checkbox"/> <i>Trogamphus borealis</i> <input checked="" type="checkbox"/> <i>Sympetrum corruptum</i> <input checked="" type="checkbox"/> <i>Sympetrum litatum</i> <input checked="" type="checkbox"/> <i>Tramea lacustris</i> <input type="checkbox"/> <i>Tramea paucata</i> <input checked="" type="checkbox"/> <i>Argia</i> sp. <input type="checkbox"/> <i>Enallagma</i> sp. <input type="checkbox"/> <i>Tetlibasis aenea</i> <p>Leptodactyla:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Atalapha campestris</i> <input type="checkbox"/> <i>Erynnis funerals</i> <input checked="" type="checkbox"/> <i>Heliopeles ericetorum</i> <input checked="" type="checkbox"/> <i>Hylophila phyleus</i> <input type="checkbox"/> <i>Lerema eufala</i> <input type="checkbox"/> <i>Paratrytone melane</i> <input type="checkbox"/> <i>Polites sabuleti</i> <input checked="" type="checkbox"/> <i>Pyrgus albescentis</i> <input type="checkbox"/> <i>Papilio cressphonis</i> <input type="checkbox"/> <i>Papilio rubus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i> 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Pteris rapae</i> <input checked="" type="checkbox"/> <i>Pontia protodice</i> <input checked="" type="checkbox"/> <i>Braphidom exilis</i> <input type="checkbox"/> <i>Helioargus cervinus</i> <input type="checkbox"/> <i>Icaricia acmon</i> <input type="checkbox"/> <i>Leptidea marina</i> <input type="checkbox"/> <i>Strymon melinus</i> <input type="checkbox"/> <i>Apodemis morone virgultii</i> <input type="checkbox"/> <i>Agraulis vanillae</i> <input type="checkbox"/> <i>Danaus gilippus</i> <input type="checkbox"/> <i>Danaus plicatippus</i> <input type="checkbox"/> <i>Precis cenia</i> <input checked="" type="checkbox"/> <i>Yponomeuta annabellia</i> <input checked="" type="checkbox"/> <i>Yponomeuta atalantia</i> <input checked="" type="checkbox"/> <i>Yponomeuta cardui</i> <input type="checkbox"/> <i>Yponomeuta virginianensis</i> Arctiidae Noctuidae <input type="checkbox"/> <i>Autographa californica</i> <input checked="" type="checkbox"/> <i>Schinia</i> sp. Plecombridae <input checked="" type="checkbox"/> <i>Pyralidae</i> <input type="checkbox"/> <i>Parasphene roburice</i> <input type="checkbox"/> <i>Hytes lineata</i> <input type="checkbox"/> <i>Monacha sexta</i> <p>Arctiidae:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Arctiidae</i> <input checked="" type="checkbox"/> <i>Persea viridina</i> <p>Dipluridae</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Larodectus hesperus</i> Salticidae <input checked="" type="checkbox"/> <i>Phidippus formosus</i> Thomisidae
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Bird Species Observed: OSW CORA LOPI ONST EUST
HOSP GLPT GSW BRAL CAKI
SAPL AMCA ANHU WFIG ROHA
HOPI TUVU KULL EVGD MODD

Other Wildlife Species Observed: CMS W-FENCE LIZARD
SBLIZARD
GOTTONTAIL
BTJA

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: N Acreage Surveyed: 34 Biologist(s): M. J. DUCUS
 Date: 09-03-14 Time (Start/End): 1105/1405 Cloud Cover (Start/End): 0/10 Temperature in °F (Start/End): 79/88

Arthropod Species Observed: _____ Wind Speed in Brentfort (Start/End): 0-4/6-10 DSF Detected (Circle): Y N

Diptera:	<i>Tabanus punctifer</i>	<i>Ichneumon</i> sp.	Penatiomidae	<input checked="" type="checkbox"/> <i>Trimerotropis californica</i>	<i>Pteris rufae</i>
	Tachinidae	<i>Dasyneutella coccinelliformis</i>	<input checked="" type="checkbox"/> <i>Chlorochroa ligata</i>	<input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i>	<input checked="" type="checkbox"/> <i>Ponera protracta</i>
	<i>Arethya opificer</i>	<i>Dasyneutella californica</i>	<input checked="" type="checkbox"/> <i>Morgantia histronica</i>	<i>Crythlis</i> sp.	<input checked="" type="checkbox"/> <i>Brehinohem exilis</i>
	<i>Gynostoma fuliginosum</i>	<i>Dasyneutella sackeni</i> (lg.)	Coloptera:	<i>Tetigoniidae</i>	<input checked="" type="checkbox"/> <i>Leptodes acron</i>
	Therevidae (Silletto Fly)	<i>Dasyneutella clymenestria</i>	Buprestidae	<i>Leptodes</i> sp.	<input checked="" type="checkbox"/> <i>Leptodes marino</i>
	<i>Ceratias capitata</i>	<i>Campaneris tolteca</i>	Carabidae	<i>Scapheria mexicana</i>	<i>Strymon melinus</i>
	Tipulidae	<i>Trietis albicorne</i>	Cerambycidae	<input checked="" type="checkbox"/> <i>Scapheria</i> sp.	<i>Agrotis morio virgula</i>
	<i>Nephrotoma</i> sp.	<i>Pompilidae</i>	<i>Adalia bipunctata</i>	<input checked="" type="checkbox"/> <i>Iris oratoria</i>	<i>Agrotis vanillae</i>
	Hymenoptera:	<i>Pezomachus mellei</i>	<i>Chilocorus orbis</i>	<input checked="" type="checkbox"/> <i>Stegomyia californica</i>	<i>Danus gigas</i>
	Ants	<i>Lasius sp.</i>	<i>Coccinella</i> sp.	<i>Parabacillus hispidus</i>	<i>Danus pleurippus</i>
	Formicidae	<input checked="" type="checkbox"/> <i>Lasius</i> sp.	<i>Harmostia axyridis</i>	Odonata:	<i>Praxinosia</i>
	<i>Irabomyrmex humilis</i>	<input checked="" type="checkbox"/> <i>Lasius</i> sp.	<i>Hippodamia convergens</i>	<input checked="" type="checkbox"/> <i>Aeshna multicolor</i>	<i>Zanessa umabellia</i>
	<i>Formica</i> sp.	<i>Lasius</i> sp.	<i>Olla v-nigrum</i>	<input checked="" type="checkbox"/> <i>Aeshna atalantia</i>	<i>Zanessa caribai</i>
	<i>Liometopum occidentale</i>	<i>Bombus americana</i> 100%	Elateridae (Click Beetles)	<input checked="" type="checkbox"/> <i>Erythemis collocata</i>	<i>Zanessa virginensis</i>
	<i>Messor pergandeii</i>	<i>Bombus melanopsis</i>	Chrysomelidae	<i>Libellula croceipennis</i>	<input checked="" type="checkbox"/> <i>Arctidae</i>
	<i>Myrmica</i> sp.	<i>Bombus</i> sp.	<i>Diabrotica balteata</i>	<i>Libellula sanarata</i>	<i>Noctuidae</i>
	<input checked="" type="checkbox"/> <i>Myrmica</i> sp.	<i>Cerceris</i> sp.	<i>D. undecimmaculata</i>	<i>Pachydiplax longipennis</i>	<i>Atalapha californica</i>
	<i>Solenopsis</i> sp.	<i>Chalcidion californicus</i>	<i>Lema trilineata</i>	<i>Pantala flavescens</i>	<i>Geometridae</i>
	Bees	<i>Chlorion aerarium</i>	<i>Tachymela laeticalis</i>	<i>Perithemis intonsa</i>	<i>Pyralidae</i>
	Anthophoridae	<i>Euceris</i> sp.	<i>Carulionidae</i>	<input checked="" type="checkbox"/> <i>Progomphus borealis</i>	<i>Parnanthe rubiniae</i>
	<i>Anthophora urbana</i>	<input checked="" type="checkbox"/> <i>Hoplissoides diversus</i>	<i>Hydroptilidae</i>	<i>Sympetrum corruptum</i>	<i>Hyles lineata</i>
	<i>Melissodes</i> sp.	<i>Hoplissoides</i> sp.	Meloidae	<i>Sympetrum thitum</i>	<i>Mansuetica sexta</i>
	<input checked="" type="checkbox"/> <i>Apis mellifera</i>	<i>Isodonis oelgens</i>	Melyridae	<i>Tramea lacustrata</i>	
	<i>Bombus californicus</i>	<i>Microbambus californicus</i>	<i>Chrysopa</i> sp.	<i>Tramea onusta</i>	Arachnida:
	<i>Bombus croceiventris</i>	<i>Philanthus multimaculatus</i>	<i>Chrysopa</i> sp.	<i>Argia</i> sp.	<i>Araneidae</i>
	<i>Bombus sonorus</i>	<i>Philanthus ventralis</i>	Rhipiphoridae	<i>Enallagma</i> sp.	<i>Arctocentrua viridans</i>
	<i>Bombus vanewickii</i>	<i>Podalonia</i> sp.	Macroleontidae	<i>Telebasis subvt</i>	<input checked="" type="checkbox"/> <i>Dipluridae</i>
	Halictidae	<i>Priority</i> sp.	<input checked="" type="checkbox"/> <i>Macroleontomus</i> sp.	Lepidoptera:	<i>Larrodia pacifica</i>
	<i>Agapostemon</i> sp.	<i>Sceliphron caementarium</i>	<i>Macrosigona</i> sp.	<i>Anatopodes campestris</i>	<i>Larrodia hesperus</i>
	<i>Nomia nevalensis</i>	<i>Spixes ichneumonoides</i>	<i>Carabidae</i>	<i>Erynnis floricola</i>	<i>Salicidae</i>
	Megachilidae	<i>Stizoides remicinctum</i>	<i>Cottinus multibilis</i>	<input checked="" type="checkbox"/> <i>Stelopterus erictorum</i>	<i>Phalippus formosus</i>
	<i>Dianthidium</i> sp.	<i>Tachytes elongatus</i>	<i>Paracotulpa</i> sp.	<i>Hylephila phylax</i>	<input checked="" type="checkbox"/> <i>Thomisidae</i>
	<i>Megachile</i> sp.	Tipulidae	<i>Staphylinus maxillosus</i>	<i>Lerodea eufala</i>	
	<i>Pendula</i> sp.	Vespadidae - unidentified	<i>Aenebronia</i>	<i>Paratrytone melane</i>	
	Wasps	<i>Eumenes bollii</i>	<input checked="" type="checkbox"/> <i>Aenebronia</i>	<input checked="" type="checkbox"/> <i>Polites subleiti</i>	
	Chalcididae	<i>Eumenes crucifera</i>	Hemiptera:	<i>Pyrgus albescens</i>	
	Claytonidae	<i>Euclyptus annulata</i>	Lygaeidae	<i>Papilio cresphontes</i>	
	<i>Chrysaora pacifica</i>	<i>Polistes apachus</i>	<i>Lygaeus kalmii</i>	<i>Papilio crathonus</i>	
	<i>Parnopes edwardsii</i>	<i>Polistes dorsalis</i>	Pyrrhocoridae	<input checked="" type="checkbox"/> <i>Colias euryleme</i>	
	Ichneumonidae	<i>Polistes exclamans</i>	<i>Schistocerca nitens</i>		
			<i>Schistocerca</i> sp.		

Bird Species Observed: WMO MODO COBA HOPI CAKI
SOSP TUVU KILL AMCR
OLPH BASW ETHA HOSP
EUCS PEFA ROP1 AMLE

Other Wildlife Species Observed:
SB LIZARD

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CAROL CITY Portion of Site Surveyed: S Acreage Surveyed: M.D./C/S Biologist(s): M.D./C/S
 Date: 09-04-14 Time (Start/End): 10:00 / 14:00 Cloud Cover (Start/End): 100% / 0 Temperature in °F (Start/End): 71 / 86

Wind Speed in Beaufort (Start/End): 0-7 / 3-5 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apocera chrysolata</i> <input type="checkbox"/> <i>Apocera convergens</i> <input type="checkbox"/> <i>Artemita pantherina</i> <input checked="" type="checkbox"/> <i>Effleria albobarbatus</i> <input type="checkbox"/> <i>Malloflora foveata</i> <input type="checkbox"/> <i>Procladius</i> sp. <input checked="" type="checkbox"/> <i>Saropogon luteus</i> <input checked="" type="checkbox"/> <i>Saropogon brevisculis</i> <input type="checkbox"/> <i>Esakiidae</i> (May Flies) <input checked="" type="checkbox"/> <i>Bombylidae</i> <input type="checkbox"/> <i>Exoprosopa</i> sp. <input checked="" type="checkbox"/> <i>Leptogasteria</i> <input type="checkbox"/> <i>Mythomyia</i> sp. <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax</i> sp. <input checked="" type="checkbox"/> <i>Tilla atrata</i> <input type="checkbox"/> <i>Zenox simpson</i> <input type="checkbox"/> <i>C. caliphura</i> sp. <input type="checkbox"/> <i>Eucalliphora lilaia</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericea</i> <input type="checkbox"/> <i>Conopidae</i> sp. <input type="checkbox"/> <i>Physosephala texana</i> <input type="checkbox"/> <i>Culicidae</i> - mosquitoes <input type="checkbox"/> <i>Culex</i> sp. <input checked="" type="checkbox"/> <i>C. androsylus</i> sp. <input type="checkbox"/> <i>Prosopehidae</i> <input type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> <i>Sarcophagidae</i> sp. <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input checked="" type="checkbox"/> <i>Metatryphus americanus</i> <input checked="" type="checkbox"/> <i>Fulicella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Tabanus punctifer</i> <input type="checkbox"/> <i>Tachinidae</i> <input type="checkbox"/> <i>Archytopis apicifer</i> <input type="checkbox"/> <i>Myrmecomyia fuliginosa</i> <input type="checkbox"/> <i>Therevidae</i> (Shilto Fly) <input type="checkbox"/> <i>Ceratix capitata</i> <input type="checkbox"/> <i>Tipulidae</i> <input type="checkbox"/> <i>Nephrotoma</i> sp. <p>Hymenoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Formicidae</i> <input type="checkbox"/> <i>Andromyrmex humilis</i> <input type="checkbox"/> <i>Formica</i> sp. <input type="checkbox"/> <i>Liometopum occidentale</i> <input type="checkbox"/> <i>Messor pergandei</i> <input checked="" type="checkbox"/> <i>Pogonomyrmex californicus</i> <input type="checkbox"/> <i>Solenopsis</i> sp. <p>Bees</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Anthophoridae</i> <input type="checkbox"/> <i>Anthophora arborea</i> <input type="checkbox"/> <i>Melissodes</i> sp. <input checked="" type="checkbox"/> <i>Xilocopa varipuncta</i> <input type="checkbox"/> <i>Bombus californicus</i> <input type="checkbox"/> <i>Bombus croceus</i> <input type="checkbox"/> <i>Bombus sonorus</i> <input type="checkbox"/> <i>Bombus vosnesenskii</i> <input type="checkbox"/> <i>Halictidae</i> <input type="checkbox"/> <i>Agapostemon</i> sp. <input type="checkbox"/> <i>Nomia nevadensis</i> <input type="checkbox"/> <i>Megachilidae</i> <input type="checkbox"/> <i>Dianthidium</i> sp. <input type="checkbox"/> <i>Megachile</i> sp. <input type="checkbox"/> <i>Pentidae</i> sp. <p>Wasps</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chalcididae</i> <input type="checkbox"/> <i>Chrysididae</i> <input checked="" type="checkbox"/> <i>Chrysurus pacifica</i> <input checked="" type="checkbox"/> <i>Parnopes edwardsii</i> <input type="checkbox"/> <i>Ichneumonidae</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon</i> sp. <input checked="" type="checkbox"/> <i>Dasympyla coccinellifera</i> <input type="checkbox"/> <i>Dasympyla californica</i> <input type="checkbox"/> <i>Dasympyla sockeni</i> (q.) <input type="checkbox"/> <i>Camponotus tolteca</i> <input type="checkbox"/> <i>Triclistus albione</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pezomachus</i> <input type="checkbox"/> <i>Pezomachus</i> sp. <input type="checkbox"/> <i>Sphecidae</i> <input checked="" type="checkbox"/> <i>Amorphila albiflora</i> <input checked="" type="checkbox"/> <i>Amorphila</i> sp. <input checked="" type="checkbox"/> <i>Bembix americana</i> <u>LOATA</u> <input type="checkbox"/> <i>Bembix</i> sp. <input type="checkbox"/> <i>Bembix melanopus</i> <input checked="" type="checkbox"/> <i>Dacnusa</i> sp. <input checked="" type="checkbox"/> <i>Dacnusa</i> sp. <input type="checkbox"/> <i>Chalcididae</i> <input checked="" type="checkbox"/> <i>Diapriidae</i> <input checked="" type="checkbox"/> <i>D. undecimpunctata</i> <input type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymeta laticollis</i> <input type="checkbox"/> <i>Curauloniidae</i> <input type="checkbox"/> <i>Halipidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input checked="" type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Collops</i> sp. <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosiagon flavipennis</i> <input type="checkbox"/> <i>Macrosiagon</i> sp. <input checked="" type="checkbox"/> <i>Scamboidae</i> <input checked="" type="checkbox"/> <i>Cottinus multibilis</i> <input type="checkbox"/> <i>Paracatolpa</i> sp. <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> <i>Tenebrionidae</i> <input type="checkbox"/> <i>Eledex</i> sp. <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Lygaeidae</i> <input type="checkbox"/> <i>Pygmaea kabriti</i> <input type="checkbox"/> <i>Pygmaea</i> sp. <input checked="" type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Largus cinclus</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> <input type="checkbox"/> <i>Vespa pennsylvanica</i> <p>Coleoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Buprestidae</i> <input type="checkbox"/> <i>Carabidae</i> <input type="checkbox"/> <i>Cerambycidae</i> <input type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input checked="" type="checkbox"/> <i>Chilocorus orbus</i> <input type="checkbox"/> <i>Coccinella</i> sp. <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elateridae</i> (Click Beetles) <input checked="" type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Homalididae</i> <input type="checkbox"/> <i>Homalididae</i> sp. <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactylopiidae</i> (Coccinellid) <input type="checkbox"/> <i>Dactylopius</i> sp. <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Anthrenidae</i> <input checked="" type="checkbox"/> <i>Glyptotendipes bimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa</i> sp. <input type="checkbox"/> <i>Myrmeleontidae</i> <input checked="" type="checkbox"/> <i>Archymeris</i> sp. <input checked="" type="checkbox"/> <i>Myrmeleon</i> sp. <input type="checkbox"/> <i>Raphidiidae</i> (Snakeflies) <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Disosticta pictipennis</i> <input type="checkbox"/> <i>Leprus intermedium</i> <input type="checkbox"/> <i>Melanoplus</i> sp. <input checked="" type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca</i> sp. 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Pentatomidae</i> <input checked="" type="checkbox"/> <i>Chlorochroa ligata</i> <input type="checkbox"/> <i>Chlorochroa uhleri</i> <u>SAM</u> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus</i> sp. <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichopepla atraria</i> <input type="checkbox"/> <i>Reclusiidae</i> <input type="checkbox"/> <i>Apionidae</i> <input type="checkbox"/> <i>Rhinocoris ventralis</i> <input type="checkbox"/> <i>Zelus tetrocatus</i> <p>Odontata:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Aeshna multicolor</i> <input checked="" type="checkbox"/> <i>Aeshna junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input checked="" type="checkbox"/> <i>Libellula croceipes</i> <input checked="" type="checkbox"/> <i>Libellula samarra</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input checked="" type="checkbox"/> <i>Pantala flavescens</i> <input checked="" type="checkbox"/> <i>Perithemis intensa</i> <input type="checkbox"/> <i>Progomphus borealis</i> <input type="checkbox"/> <i>Symphetrum corruptum</i> <input type="checkbox"/> <i>Symphetrum illinoense</i> <input type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea onusta</i> <input type="checkbox"/> <i>Argia</i> sp. <input type="checkbox"/> <i>Enallagma</i> sp. <input type="checkbox"/> <i>Telebasis salva</i> <p>Lepidoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Atalapha campestris</i> <input type="checkbox"/> <i>Erynnis florealis</i> <input type="checkbox"/> <i>Heliopterus erictorum</i> <input checked="" type="checkbox"/> <i>Hylophila phycus</i> <input type="checkbox"/> <i>Lerodea eufala</i> <input type="checkbox"/> <i>Paratyton melane</i> <input checked="" type="checkbox"/> <i>Polites subditi</i> <input type="checkbox"/> <i>Pyrgus abserca</i> <input type="checkbox"/> <i>Papilio cressphoniensis</i> <input type="checkbox"/> <i>Papilio rutulus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Pieris rapae</i> <input type="checkbox"/> <i>Pontia protodice</i> <input checked="" type="checkbox"/> <i>Hemiphanes cernuus</i> <input type="checkbox"/> <i>Leucania ornata</i> <input type="checkbox"/> <i>Leptotes martha</i> <input type="checkbox"/> <i>Styrax melana</i> <input type="checkbox"/> <i>Agrotema normae virgata</i> <input type="checkbox"/> <i>Agrotis vanillae</i> <input type="checkbox"/> <i>Danaus gilippus</i> <input type="checkbox"/> <i>Danaus plexippus</i> <input type="checkbox"/> <i>Precis coenia</i> <input checked="" type="checkbox"/> <i>Vanessa annabella</i> <input checked="" type="checkbox"/> <i>Vanessa atalanta</i> <input checked="" type="checkbox"/> <i>Vanessa cardui</i> <input checked="" type="checkbox"/> <i>Vanessa virginiensis</i> <input type="checkbox"/> <i>Noctuidae</i> <input type="checkbox"/> <i>Autographa californica</i> <input type="checkbox"/> <i>Scotia</i> <input checked="" type="checkbox"/> <i>Geometridae</i> <input type="checkbox"/> <i>Pyralidae</i> <input type="checkbox"/> <i>Paranthrene robiniae</i> <input type="checkbox"/> <i>Hyalella lineata</i> <input type="checkbox"/> <i>Manichaea sexta</i> <p>Arachnida:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Araucidae</i> <input checked="" type="checkbox"/> <i>Secotia viridans</i> <input type="checkbox"/> <i>Dipluridae</i> <input type="checkbox"/> <i>Leuroscelus pacificus</i> <input type="checkbox"/> <i>Latrodectus hesperus</i> <input type="checkbox"/> <i>Hemiphanes cernuus</i> <input checked="" type="checkbox"/> <i>Thomisidae</i> <p>B. PHYLAS</p>
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Bird Species Observed:
EUSI FWBL BNST BLPH SAPH
LOZA KLIL JANS WAB RTHA
BEAL COE BSW AMLE ROPI
EULD LESA TUVU MALL AMLR

Other Wildlife Species Observed:
SBLEZED
STJR
COAOTWHP

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: N Acreage Surveyed: 37 Biologist(s): M. J. CUS
 Date: 09-06-14 Time (Start/End): 0930 / 1250 Cloud Cover (Start/End): 0 / 5% Temperature in °F (Start/End): 83 / 94

Arthropod Species Observed: _____ Wind Speed in ^{mi}Beaufort (Start/End): 0-1 / 4-6 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. arminatus abdaminidus</i> <input type="checkbox"/> <i>Asiocera chrysolata</i> <input checked="" type="checkbox"/> <i>Hypocera convergens</i> <input type="checkbox"/> <i>Nemomyia pantherina</i> <input type="checkbox"/> <i>Avilidae</i> <input type="checkbox"/> <i>Efferia albobarbatus</i> <input type="checkbox"/> <i>Mallophora fuscifera</i> <input type="checkbox"/> <i>Proctocentrus</i> sp. <input checked="" type="checkbox"/> <i>Sarcophaga latens</i> <input type="checkbox"/> <i>Sarcophaga breviscaudus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bembylidae</i> <input type="checkbox"/> <i>Euxestopogon</i> sp. <input type="checkbox"/> <i>Ligra gazophylax</i> <input type="checkbox"/> <i>Mythcomystia</i> sp. <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenax simpsoni</i> <input checked="" type="checkbox"/> <i>Calliphora</i> sp. <input checked="" type="checkbox"/> <i>Eucalliphora lilacea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Ctenopoda</i> sp. <input type="checkbox"/> <i>Physocphala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input type="checkbox"/> <i>Condylostylus</i> sp. <input checked="" type="checkbox"/> <i>Drosophilidae</i> <input type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga</i> sp. <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Libellula mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><input checked="" type="checkbox"/> <i>Chironomus</i> sp.</p> <p><i>Dasyamulla coccineohirta</i></p> <p><i>Dasyamulla californica</i></p> <p><i>Dasyamulla sackeri</i> (sp.)</p> <p><i>Dasyamulla chytomestra</i></p> <p><i>Camptomeris tolteca</i></p> <p><i>Trileta aldrichi</i></p> <p><i>Psephenidae</i></p> <p><i>Psephenus mildlet</i></p> <p><i>Leptocentrus</i> sp.</p> <p><i>Stenobothrus</i> sp.</p> <p><i>Stenobothrus humilis</i></p> <p><i>Formicidae</i></p> <p><i>Formica</i> sp.</p> <p><i>Lasius californicus</i></p> <p><i>Messor pergandei</i></p> <p><i>Pogonomyrmex californicus</i></p> <p><i>Solenopsis</i> sp.</p> <p>Beet</p> <p><i>Anthophoridae</i></p> <p><i>Anthophora urbana</i></p> <p><i>Melissodes</i> sp.</p> <p><i>Stylocopa varipunctata</i></p> <p><i>Apis mellifera</i></p> <p><i>Bombus californicus</i></p> <p><i>Bombus croceiventris</i></p> <p><i>Bombus sonorus</i></p> <p><i>Bombus vosnesenskii</i></p> <p><i>Haliictidae</i></p> <p><i>Agropteron</i> sp.</p> <p><i>Nomia nevadensis</i></p> <p><i>Megachilidae</i></p> <p><i>Dianthidium</i> sp.</p> <p><i>Megachile</i> sp.</p> <p><i>Pendula</i> sp.</p> <p>Wasps</p> <p><i>Chalcididae</i></p> <p><i>Chrysididae</i></p> <p><i>Chrysothorax pacifica</i></p> <p><i>Parnopes edwardsii</i></p> <p><i>Ichneumonidae</i></p>	<p><i>Pollistes fuscatus aurifer</i></p> <p><i>Pezomachus pennsylvanicus</i></p> <p>Culicoptera:</p> <p><i>Buprestidae</i></p> <p><i>Carabidae</i></p> <p><i>Cerambycidae</i></p> <p><i>Coccinellidae</i></p> <p><i>Adalia bipunctata</i></p> <p><i>Chilocorus orbis</i></p> <p><i>Coccinella</i> sp.</p> <p><i>Harmostoma acyridis</i></p> <p><i>Hippodamia convergens</i></p> <p><i>Orthocentrus</i></p> <p><i>Flattidae (Click Beetles)</i></p> <p><i>Chrysomelidae</i></p> <p><i>Diatraea balteata</i></p> <p><i>D. undecimpunctata</i></p> <p><i>Lema trilineata</i></p> <p><i>Tachyura laticollis</i></p> <p><i>Curculionidae</i></p> <p><i>Halipidae</i></p> <p><i>Hydrophilidae</i></p> <p><i>Meloidae</i></p> <p><i>Nemognathus lurtida apicalis</i></p> <p><i>Melyridae</i></p> <p><i>Collops</i> sp.</p> <p><i>Rhipiphoridae</i></p> <p><i>Macrosiagon flavipennis</i></p> <p><i>Macrosiagon</i> sp.</p> <p><i>Scamboidae</i></p> <p><i>Cotinus mutabilis</i></p> <p><i>Paracotopis</i> sp.</p> <p><i>Staphylinus maculosus</i></p> <p><i>Staphylinidae</i></p> <p><i>Eleodes</i> sp.</p> <p>Hemiptera:</p> <p><i>Emesene bollii</i></p> <p><i>Emesene crucifera</i></p> <p><i>Eusymmeris annulata</i></p> <p><i>Pollistes opaculus</i></p> <p><i>Pollistes dorsalis</i></p> <p><i>Pollistes cinctus</i></p>	<p>Penialtoidae</p> <p><i>Chlorochroa ligata</i></p> <p><i>Chlorochroa uberti</i> (S&H)</p> <p><i>Margantia histronica</i></p> <p><i>Pavania</i> sp.</p> <p><i>Thyanta pallidivirens</i></p> <p><i>Trichopelia carora</i></p> <p><i>Reduviidae</i></p> <p><i>Apicomeris crassipes</i></p> <p><i>Stenomacrus ventralis</i></p> <p><i>Zelus tetracolumbus</i></p> <p>Odonata:</p> <p><i>Aeshna multicolor</i></p> <p><i>Anax junius</i></p> <p><i>Erythemis collocata</i></p> <p><i>Libellula croceipennis</i></p> <p><i>Libellula subarata</i></p> <p><i>Rhycolopler longipennis</i></p> <p><i>Pantala flavescens</i></p> <p><i>Perrillemis intensa</i></p> <p><i>Progomphus borealis</i></p> <p><i>Sympetrum corruptum</i></p> <p><i>Sympetrum illinoim</i></p> <p><i>Tramea lacerata</i></p> <p><i>Tramea ornata</i></p> <p><i>Argia</i> sp.</p> <p><i>Enallagma</i> sp.</p> <p><i>Telebasis salva</i></p> <p>Leptoptera:</p> <p><i>Atalopodes campetris</i></p> <p><i>Erynnis fumerata</i></p> <p><i>Plebejus ericetorum</i></p> <p><i>Hylephila phyllenus</i></p> <p><i>Icrodea enflata</i></p> <p><i>Paratrytone melane</i></p> <p><i>Pyrgus abjectus</i></p> <p><i>Papilio cresphontes</i></p> <p><i>Apollonia rutilus</i></p> <p><i>Colias eurytheme</i></p>
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Bird Species Observed: _____ Other Wildlife Species Observed: _____

HOF KILL EVD COEA
LAK SAPH MOBO BAW
NONO AMEE ANCB TUVU
ALPH ROFI LOHA

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: ORLECY Portion of Site Surveyed: ALL Acreage Surveyed: 22 Biologist(s): A. Dicus, J. Dicus
 Date: 09-12-14 Time (Start/End): 1000/1320 Cloud Cover (Start/End): 0/0 Temperature in °F (Start/End): 35/19

Arthropod Species Observed: Wind Speed in mph (Start/End): 0-2/2-5 DSF Detected (Circle): Y (N)

- | | | | |
|---|--|--|--|
| <p>Diptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Tabanus punctifer</i> <input type="checkbox"/> <i>R. terminalis abdominalis</i> <input type="checkbox"/> <i>Aspicera chrysolabia</i> <input type="checkbox"/> <i>Aspicera convergens</i> <input type="checkbox"/> <i>Neomomyia pantherina</i> <input type="checkbox"/> <i>Aedidae</i> <input checked="" type="checkbox"/> <i>Effigia albatubarbaris</i> <input type="checkbox"/> <i>Malligora laevis</i> <input type="checkbox"/> <i>Proctocanarus sp.</i> <input type="checkbox"/> <i>Saropogon luteus</i> <input checked="" type="checkbox"/> <i>Stenopogon breviscubus</i> <input type="checkbox"/> <i>Bacidae (May Flies)</i> <input type="checkbox"/> <i>Callibaetis pacificus</i> <input checked="" type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Eurogaster sp.</i> <input type="checkbox"/> <i>Ligra gascophylax</i> <input type="checkbox"/> <i>Mydomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arribasus</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input type="checkbox"/> <i>Zasaphora pellicuda</i> <input checked="" type="checkbox"/> <i>Villa arata</i> <input type="checkbox"/> <i>Zenus simpson</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input checked="" type="checkbox"/> <i>Eucalliphora lila</i> <input type="checkbox"/> <i>Phaenicia caprina</i> <input type="checkbox"/> <i>Phaenicia terricola</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physocphala izama</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input type="checkbox"/> <i>Conchylonyx sp.</i> <input checked="" type="checkbox"/> <i>Drosophilidae</i> <input type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Tabanidae</i> | <p>Ichneumonidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Pollax fuscatus aurifer</i> <input type="checkbox"/> <i>Vespa pennsylvanica</i> <p>Colletidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Dasyneura cocciniphora</i> <input checked="" type="checkbox"/> <i>Dasyneura californica</i> <input type="checkbox"/> <i>Dasyneura sackenii (lg.)</i> <input type="checkbox"/> <i>Dasyneura cyrenestrata</i> <input type="checkbox"/> <i>Compsoeris talica</i> <input type="checkbox"/> <i>Friesia allicione</i> <input type="checkbox"/> <i>Pomphiliidae</i> <input type="checkbox"/> <i>Pegastus milderi</i> <input type="checkbox"/> <i>Proctos sp.</i> <input checked="" type="checkbox"/> <i>Sphecidae</i> <input type="checkbox"/> <i>Amnophila alberti</i> <input checked="" type="checkbox"/> <i>Amnophila sp.</i> <input checked="" type="checkbox"/> <i>Bembix americana comata</i> <input type="checkbox"/> <i>Bembix melanopis</i> <input type="checkbox"/> <i>Bicyrtis sp.</i> <input type="checkbox"/> <i>Cerceris sp.</i> <input checked="" type="checkbox"/> <i>Dasyneura californica</i> <input checked="" type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisisidius diversus</i> <input type="checkbox"/> <i>Hoplisisidius sp.</i> <input type="checkbox"/> <i>Isodonii aetegana</i> <input type="checkbox"/> <i>Microbembix californicus</i> <input checked="" type="checkbox"/> <i>Phyllanthus multimaculata</i> <input type="checkbox"/> <i>Phyllanthus ventralis</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Prionyx fovi</i> <input type="checkbox"/> <i>Prionyx sp.</i> <input type="checkbox"/> <i>Sceliphron coementarium</i> <input type="checkbox"/> <i>Sphegus ichneumonius</i> <input type="checkbox"/> <i>Stizoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eugenes bolivi</i> <input type="checkbox"/> <i>Gnemes crucifera</i> <input checked="" type="checkbox"/> <i>Euclypterus annulata</i> <input checked="" type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> | <p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleri/sayii</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichopoda auroa</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Apioneris crassipes</i> <input type="checkbox"/> <i>Chilocorus orbus</i> <input type="checkbox"/> <i>Coccinella sp.</i> <input checked="" type="checkbox"/> <i>Zelus tetrocaneatus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Olla yuligrum</i> <input type="checkbox"/> <i>Elatridae (Click Beetles)</i> <input type="checkbox"/> <i>Cercopidae</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Hemaladiscia sp.</i> <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactylopiidae (Coccinellae)</i> <input type="checkbox"/> <i>Dactylopius sp.</i> <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Antonine expanza</i> <input type="checkbox"/> <i>Psyllidae</i> <input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input checked="" type="checkbox"/> <i>Myrmeleonidae</i> <input type="checkbox"/> <i>Myrmeleon sp.</i> <input checked="" type="checkbox"/> <i>Raphididae (Snakeflies)</i> <p>Dermatoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Foeficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Disosteira pictipennis</i> <input type="checkbox"/> <i>Lepus inermis</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input checked="" type="checkbox"/> <i>Schistocerca gregaria</i> <input checked="" type="checkbox"/> <i>Schistocerca nitens</i> <input checked="" type="checkbox"/> <i>Schistocerca</i> | <p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Microstigma californica</i> <input checked="" type="checkbox"/> <i>Trinervatropis pallidipennis</i> <input type="checkbox"/> <i>Gryllus sp.</i> <input type="checkbox"/> <i>Oecanthus fulvifrons</i> <input type="checkbox"/> <i>Tettigoniidae</i> <input type="checkbox"/> <i>Anantisthe exposita</i> <input type="checkbox"/> <i>Scudderia mexicana</i> <input type="checkbox"/> <i>Stenopelmatus sp.</i> <input checked="" type="checkbox"/> <i>Iris oratoria</i> <input type="checkbox"/> <i>Stegomyia californica</i> <input type="checkbox"/> <i>Parabacillus hezperis</i> <p>Odonata:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aeshna multicolor</i> <input type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipes</i> <input type="checkbox"/> <i>Libellula saarata</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input type="checkbox"/> <i>Pantala flavescens</i> <input type="checkbox"/> <i>Perithemis intensa</i> <input type="checkbox"/> <i>Pseudagrion borealis</i> <input checked="" type="checkbox"/> <i>Sympetrum corruptum</i> <input type="checkbox"/> <i>Sympetrum libellum</i> <input type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea onusta</i> <input checked="" type="checkbox"/> <i>Argia sp.</i> <input type="checkbox"/> <i>Ethalagma sp.</i> <input type="checkbox"/> <i>Tetlibasis saha</i> <p>Lepidoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Atalopodes compectra</i> <input type="checkbox"/> <i>Erynnis fernalis</i> <input type="checkbox"/> <i>Heliopterus ericciorum</i> <input checked="" type="checkbox"/> <i>Alysiptera phyllisus</i> <input type="checkbox"/> <i>Lerodea eufala</i> <input type="checkbox"/> <i>Pararystone melane</i> <input type="checkbox"/> <i>Polites sabuleti</i> <input checked="" type="checkbox"/> <i>Pyrgus albescens</i> <input type="checkbox"/> <i>Papilio cresphonites</i> <input type="checkbox"/> <i>Papilio rana</i> <input checked="" type="checkbox"/> <i>Collis eurythene</i> |
|---|--|--|--|

Bird Species Observed:
EUD SOSP BASW CAEL EUST
NOND HDEL CORA HOSP MIL
LOPI BLPH ANKE MNDO LESA
KIL ROLA TUU BRBL WESA

Other Wildlife Species Observed:
OTUR
SBLEZARD
W HENGE LIZARD
LABS

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: ALL Acreage Surveyed: 82 Biologist(s): J. DAVIS, M. DAVIS
 Date: 09-14-14 Time (Start/End): 1040/1400 Cloud Cover (Start/End): 50/20% Temperature in °F (Start/End): 78/106

Arthropod Species Observed: 1-2/1-5 Wind Speed in mph (Start/End): 1-2/1-5 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Aplocera chrysalis</i> <input type="checkbox"/> <i>Aplocera convergens</i> <input type="checkbox"/> <i>Neomomydas pantherina</i> <input type="checkbox"/> <i>Aedidae</i> <input checked="" type="checkbox"/> <i>Efferia albarbaris</i> <input type="checkbox"/> <i>Mallifera fustris</i> <input type="checkbox"/> <i>Prostocentrus sp.</i> <input type="checkbox"/> <i>Seropogon luteus</i> <input checked="" type="checkbox"/> <i>Seropogon breviscaulus</i> <input type="checkbox"/> Bactidae (May Flies) <input type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> Bembelidae <input type="checkbox"/> <i>Eurostoma sp.</i> <input type="checkbox"/> <i>Ligona paciphylax</i> <input type="checkbox"/> <i>Mythomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax arcticus</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input checked="" type="checkbox"/> <i>Toxophora pellucida</i> <input type="checkbox"/> <i>Villa ornata</i> <input type="checkbox"/> <i>Zonaxa simpsoni</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input type="checkbox"/> <i>Eucalliphora lilacea</i> <input type="checkbox"/> <i>Phaenicia caprina</i> <input type="checkbox"/> <i>Phaenicia serripes</i> <input type="checkbox"/> Conopidae sp. <input type="checkbox"/> <i>Physocophala teana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> Culexidae <input type="checkbox"/> <i>Condylostylus sp.</i> <input checked="" type="checkbox"/> <i>Drosophilidae</i> <input type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpus obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyphus americanus</i> <input type="checkbox"/> <i>Yobactilia mexicana</i> <input type="checkbox"/> Tabanidae 	<p>Ichneumonidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon sp.</i> <input type="checkbox"/> <i>Dasyneutilla coccinohirta</i> <p>Coloptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Dasyneutilla californica</i> <input type="checkbox"/> <i>Dasyneutilla sackeni</i> (fig.) <input type="checkbox"/> <i>Dasyneutilla chytrenestrata</i> <input type="checkbox"/> <i>Compsoaneta talacca</i> <input type="checkbox"/> <i>Triela albicane</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pezomachus orbis</i> <input type="checkbox"/> <i>Coccinella sp.</i> <input checked="" type="checkbox"/> <i>Sphexidae</i> <input type="checkbox"/> <i>Amphiphila albiflora</i> <input checked="" type="checkbox"/> <i>Antimophila sp.</i> <input checked="" type="checkbox"/> <i>Bembis americana comata</i> <input type="checkbox"/> <i>Bembis melanoparsa</i> <input type="checkbox"/> <i>Blyttus sp.</i> <input checked="" type="checkbox"/> <i>Cerceris sp.</i> <input type="checkbox"/> <i>Chaulybion californicus</i> <input type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisisoides diversus</i> <input type="checkbox"/> <i>Hoplisisoides sp.</i> <input type="checkbox"/> <i>Isodromi ocellatus</i> <input type="checkbox"/> <i>Microbembis californicus</i> <input checked="" type="checkbox"/> <i>Phylanthus multimaculata</i> <input checked="" type="checkbox"/> <i>Phylanthus westlandi</i>-5f <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Prionyx fazi</i> <input type="checkbox"/> <i>Prionyx sp.</i> <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphex ichneumonius</i> <input type="checkbox"/> <i>Sitoides remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bolivi</i> <input type="checkbox"/> <i>Eumenes cricifera</i> <input type="checkbox"/> <i>Euclypterus annulata</i> <input type="checkbox"/> <i>Palastes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa whiterisapi</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Thysania pallidivirens</i> <input type="checkbox"/> <i>Trichopoda aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Apimorcis crassipes</i> <input type="checkbox"/> <i>Myrmocoris ventralis</i> <input checked="" type="checkbox"/> <i>Zelus tetrocinctus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Aphididae <input type="checkbox"/> <i>Aphis junonis</i> <input type="checkbox"/> <i>Erythema collarata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula zoinata</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input type="checkbox"/> <i>Pantala flavescens</i> <input type="checkbox"/> <i>Perithemis intensa</i> <input type="checkbox"/> <i>Progonophus borealis</i> <input type="checkbox"/> <i>Symptetrus corruptum</i> <input type="checkbox"/> <i>Symptetrus illaham</i> <input type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea onusta</i> <input type="checkbox"/> <i>Argia sp.</i> <input type="checkbox"/> <i>Enallagma sp.</i> <input type="checkbox"/> <i>Telebasis salva</i> <p>Leptoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Atalapha campestris</i> <input type="checkbox"/> <i>Erynnis funeralis</i> <input type="checkbox"/> <i>Heliopterus erictorum</i> <input checked="" type="checkbox"/> <i>Hylophila phyleus</i> <input type="checkbox"/> <i>Lerodea eufala</i> <input type="checkbox"/> <i>Paratytona melane</i> <input type="checkbox"/> <i>Polites sabuleti</i> <input checked="" type="checkbox"/> <i>Pyrgus albescens</i> <input type="checkbox"/> <i>Popillia cressphontes</i> <input type="checkbox"/> <i>Popillia rufipes</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Myrmeleontidae</i> <input checked="" type="checkbox"/> <i>Brachyneururus sp.</i> <input checked="" type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermatoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Diosasteria pictipennis</i> <input type="checkbox"/> <i>Lepus intermedius</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Schistocerca gregaria</i> <input type="checkbox"/> <i>Schistocerca sp.</i>
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Bird Species Observed:
CAJ TUUV ANLR HOA8 EUST LUL
COBA BLPH NONO FUCD KOP1
PEFA SADOJ BASW BABL MAIL
SAPH CHTA HOPI AWOJ CITE

Other Wildlife Species Observed:
SB LIZARD
WGS
BTJR

SARADA HILARYS

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: ALL Acreage Surveyed: 82 Biologist(s): J. DAVIS, M. DAVIS
 Date: 09-16-14 Time (Start/End): 1040 / 1400 Cloud Cover (Start/End): 08 / 20% Temperature in °F (Start/End): 85 / 107

Arthropod Species Observed: _____
 Wind Speed in mph (Start/End): 0-3 / 6-10 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminalis abdominalis</i> <input type="checkbox"/> <i>Apocera chrysostata</i> <input type="checkbox"/> <i>Apocera convergens</i> <input type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Efferia albobarbaris</i> <input type="checkbox"/> <i>Mellicophora fawcetti</i> <input type="checkbox"/> <i>Proctosentulus sp.</i> <input type="checkbox"/> <i>Sarcophaga lutea</i> <input checked="" type="checkbox"/> <i>Senecogon breviscaulis</i> <input type="checkbox"/> <i>Besidae (May Flies)</i> <input type="checkbox"/> <i>Callibaetis pacificus</i> <input checked="" type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Empoasca sp.</i> <input type="checkbox"/> <i>Ligya gascophyllax</i> <input type="checkbox"/> <i>Myiocomya sp.</i> <input type="checkbox"/> <i>Poecilanthrax areolaris</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input type="checkbox"/> <i>Taxophora pellucidata</i> <input type="checkbox"/> <i>Villa arana</i> <input type="checkbox"/> <i>Zenar simpsoni</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cupripes</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Phytophthora lezana</i> <input type="checkbox"/> <i>Callitriche - mosquitoes</i> <input type="checkbox"/> <i>Caterpillars</i> <input type="checkbox"/> <i>Condylostylus sp.</i> <input type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Yobrella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><input checked="" type="checkbox"/> <i>Ichneumonidae</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> <input type="checkbox"/> <i>Ichneumon sp.</i> <input type="checkbox"/> <i>Dasymeris coccineohirta</i> <input type="checkbox"/> <i>Dasymeris californica</i> <input type="checkbox"/> <i>Dasymeris packeri (fig.)</i> <input type="checkbox"/> <i>Dasymeris cyathinestrata</i> <input type="checkbox"/> <i>Compsoveris talteca</i> <input type="checkbox"/> <i>Triela albione</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Phaenocarpa orbis</i> <input type="checkbox"/> <i>Coccinella sp.</i> <input type="checkbox"/> <i>Harmonia axyridis</i> <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elateridae (Click Beetles)</i> <input type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input type="checkbox"/> <i>D. undecimpunctata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymela lamicalis</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Colletes sp.</i> <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosigona flavipennis</i> <input checked="" type="checkbox"/> <i>Macrosigona sp.</i> <input type="checkbox"/> <i>Scarabaeidae</i> <input type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracolepa sp.</i> <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> <i>Panorhidae</i> <input checked="" type="checkbox"/> <i>Eleodes sp.</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Euclypterus areolaris</i> <input checked="" type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<p><input checked="" type="checkbox"/> <i>Asilidae</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chloroceryx ligata</i> <input type="checkbox"/> <i>Chloroceryx uhleri/sayi</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Pedionus sp.</i> <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichopoda aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Aphididae</i> <input checked="" type="checkbox"/> <i>Rhynchoscyta ventralis</i> <input checked="" type="checkbox"/> <i>Zelus tetracontatus</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Aphididae</i> <input type="checkbox"/> <i>Cercopidae</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homalidae sp.</i> <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactylopiidae (Coccinellid)</i> <input type="checkbox"/> <i>Dactylopius sp.</i> <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Antennidae expansa</i> <input type="checkbox"/> <i>Psyllidae</i> <input checked="" type="checkbox"/> <i>Glyptotendipes brimblecombi</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Myrmeleontidae</i> <input type="checkbox"/> <i>Brachynemurus sp.</i> <input type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acridae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Lepus internedius</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca sp.</i>
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Bird Species Observed: _____
 TUNW IMUL WGA ROPI
 EUST SOSP ROBL
 GRAL KILL SANS
 ALPH LESA MATHA

Other Wildlife Species Observed: _____
 COTTONTAIL
 SQUIRREL
 SKUNK

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CARLE CITY Portion of Site Surveyed: N Acreage Surveyed: 35 Biologist(s): MILANE DICUS
 Date: 08-01-14 Time (Start/End): 0945/1250 Cloud Cover (Start/End): 0/100 Temperature in °F (Start/End): 83/96

Arthropod Species Observed: W Wind Speed in Beaufort (Start/End): 0-3/0-7 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apocera chrysolata</i> <input type="checkbox"/> <i>Apocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomyia pantherina</i> <input checked="" type="checkbox"/> <i>Efferia albibarbaris</i> <input type="checkbox"/> <i>Proctocentrus sp.</i> <input type="checkbox"/> <i>Sarcophaga latera</i> <input type="checkbox"/> <i>Stenopogon brevicaulus</i> <input type="checkbox"/> <i>Beetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bembylidae</i> <input type="checkbox"/> <i>Agropyroptera sp.</i> <input type="checkbox"/> <i>Ligota gazophylax</i> <input checked="" type="checkbox"/> <i>Mythocomyia sp.</i> <input type="checkbox"/> <i>Pocillanthera arethusa</i> <input type="checkbox"/> <i>Pocillanthera sp.</i> <input checked="" type="checkbox"/> <i>Taxophora pellicuda</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenopsis saxonum</i> <input checked="" type="checkbox"/> <i>Calliphora sp.</i> <input checked="" type="checkbox"/> <i>Eucalliphora lilana</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Cecropidae sp.</i> <input type="checkbox"/> <i>Phyzopoda texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Culicerebidae</i> <input type="checkbox"/> <i>Condylostylus sp.</i> <input type="checkbox"/> <i>Prosopeulidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allogopta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Meurypterus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichneumon sp.</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Dasyneura coccinellivora</i> <p>Coleoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Dasyneura californica</i> <input type="checkbox"/> <i>Buprestidae</i> <input type="checkbox"/> <i>Carabidae</i> <input type="checkbox"/> <i>Cerambycidae</i> <input type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilocorus orbus</i> <input type="checkbox"/> <i>Coccinella sp.</i> <input checked="" type="checkbox"/> <i>Harmosia acyridis</i> <input checked="" type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input type="checkbox"/> <i>D. undecimpunctata</i> <input type="checkbox"/> <i>Lebia trilineata</i> <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Tachymela laticollis</i> <input type="checkbox"/> <i>Curculionidae</i> <input checked="" type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplitoides diversus</i> <input type="checkbox"/> <i>Hoplitoides sp.</i> <input type="checkbox"/> <i>Isodonti aolegans</i> <input checked="" type="checkbox"/> <i>Microbembix californicus</i> <input checked="" type="checkbox"/> <i>Philanthus multimaculatus</i> <input type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Prioxys foxi</i> <input type="checkbox"/> <i>Prioxys sp.</i> <input type="checkbox"/> <i>Scoliphron caementarium</i> <input type="checkbox"/> <i>Spilax ichneumonius</i> <input type="checkbox"/> <i>Stizoides renicinctus</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bolivi</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Prodynerus armulata</i> <input checked="" type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa uhleritzi</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichopepla aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Triatominae</i> <input checked="" type="checkbox"/> <i>Rhinocoris ventralis</i> <input type="checkbox"/> <i>Zelus tetracanthus</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Phyllidae</i> <input checked="" type="checkbox"/> <i>Glyptotendipes bimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input checked="" type="checkbox"/> <i>Myrmeleontidae</i> <input type="checkbox"/> <i>Brachynemurus sp.</i> <input type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Leprus intermedius</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca sp.</i>
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Bird Species Observed: ANNE NOMO SOSP ATL CAK
MOFI GLPH COHV ANKE WKA
HO SP QASW FUVU MODO
SAPH RNA FVSI EVA

Other Wildlife Species Observed:
SB LIZARD
LATS
W. FENCE WIZARD

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: GALE 014 Portion of Site Surveyed: 34 Acreage Surveyed: 34 Biologist(s): A. Davis
 Date: 08-03-14 Time (Start/End): 1105/1400 Cloud Cover (Start/End): 65%/85% Temperature in °F (Start/End): 82/92

Arthropod Species Observed: Wind Speed in Beaufort (Start/End): 0-1/0-5 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. irremediatus abdominalis</i> <input type="checkbox"/> <i>Apocera chrysothorax</i> <input checked="" type="checkbox"/> <i>Apocera convergens</i> <input type="checkbox"/> <i>Acromyza pantherina</i> <input checked="" type="checkbox"/> <i>Aspilota albibarbaris</i> <input type="checkbox"/> <i>Mallotropa fuscata</i> <input type="checkbox"/> <i>Proctocentrus sp.</i> <input checked="" type="checkbox"/> <i>Stenopogon brevisculus</i> <input type="checkbox"/> <i>Bacidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bombiidae</i> <input checked="" type="checkbox"/> <i>Exoprosopa sp.</i> <input checked="" type="checkbox"/> <i>Ligota gascopyli</i> <input type="checkbox"/> <i>Mythomomyia sp.</i> <input type="checkbox"/> <i>Pocillanthes areolaris</i> <input type="checkbox"/> <i>Pocillanthes sp.</i> <input checked="" type="checkbox"/> <i>Protophora per-labialis</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenaidura macroura</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input type="checkbox"/> <i>Eucalliphora lilacea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physocleptus texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input type="checkbox"/> <i>Condyloporus sp.</i> <input type="checkbox"/> <i>Prosopepla</i> <input checked="" type="checkbox"/> <i>Alasco domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input checked="" type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Polybia mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichneumon sp.</i></p> <p>Coleoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Daymutila coccinelliformis</i> <input checked="" type="checkbox"/> <i>Daymutila sordens</i> (lg.) <input type="checkbox"/> <i>Daymutila clypeinervis</i> <input type="checkbox"/> <i>Triela allicione</i> <input type="checkbox"/> <i>Pentaptilidae</i> <input type="checkbox"/> <i>Pezomachus mildei</i> <input type="checkbox"/> <i>Epispis sp.</i> <input checked="" type="checkbox"/> <i>Sphecidae</i> <input checked="" type="checkbox"/> <i>Amnophila albertyi</i> <input checked="" type="checkbox"/> <i>Amnophila sp.</i> <input checked="" type="checkbox"/> <i>Bembix americana comata</i> <input type="checkbox"/> <i>Bembix melanopis</i> <input type="checkbox"/> <i>Bicyrtis sp.</i> <input type="checkbox"/> <i>Cerceris sp.</i> <input checked="" type="checkbox"/> <i>Chalybion californicum</i> <input checked="" type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisoides diversus</i> <input type="checkbox"/> <i>Hoplisoides sp.</i> <input type="checkbox"/> <i>Isodonti celogens</i> <input type="checkbox"/> <i>Microbembix californicus</i> <input checked="" type="checkbox"/> <i>Phalanthus multineoculatus</i> <input type="checkbox"/> <i>Phalanthus ventralis</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Prionyx fortii</i> <input type="checkbox"/> <i>Prionyx sp.</i> <input type="checkbox"/> <i>Sedilphron caementarium</i> <input type="checkbox"/> <i>Sphegus ichneumonius</i> <input type="checkbox"/> <i>Sticoides renicinctus</i> <input type="checkbox"/> <i>Taphidus elongatus</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input checked="" type="checkbox"/> <i>Eumenes crucifera</i> <input checked="" type="checkbox"/> <i>Euodynerus annulata</i> <input type="checkbox"/> <i>Pollistes apachus</i> <input type="checkbox"/> <i>Pollistes dorsalis</i> <input type="checkbox"/> <i>Pollistes exclamans</i> <input type="checkbox"/> <i>Pollistes fuscatus aurifer</i> 	<p>Ichneumonidae</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa whiterleyi</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichopoda aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Spilomeris crassipes</i> <input checked="" type="checkbox"/> <i>Thymocoris ventralis</i> <input checked="" type="checkbox"/> <i>Zelus tetracanthus</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aphididae</i> <input type="checkbox"/> <i>Cercopidae</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homalidae sp.</i> <input type="checkbox"/> <i>Cixiidae</i> <input type="checkbox"/> <i>Dactylopsius sp.</i> <input type="checkbox"/> <i>Membranidae</i> <input type="checkbox"/> <i>Antlionidae expansa</i> <input checked="" type="checkbox"/> <i>Psyllidae</i> <input checked="" type="checkbox"/> <i>Glyptotendipes brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Myrmeleonidae</i> <input type="checkbox"/> <i>Brachyneururus sp.</i> <input checked="" type="checkbox"/> <i>Myrmeleon sp.</i> <input checked="" type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Disosteira pictipennis</i> <input type="checkbox"/> <i>Leprus intermedium</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input checked="" type="checkbox"/> <i>Schistocerca gregaria</i>
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Other Wildlife Species Observed:

<u>HOPI</u>	<u>MOBO</u>	<u>AMKE</u>
<u>NOHO</u>	<u>TUNU</u>	<u>QASW</u>
<u>OLPH</u>	<u>SAOH</u>	<u>SOSP</u>
<u>AMCE</u>	<u>QHTA</u>	

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: 5 Acreage Surveyed: 48 Biologist(s): MELANIE DICUS
 Date: 08-04-14 Time (Start/End): 1000/1400 Cloud Cover (Start/End): 15% / 5% Temperature in °F (Start/End): 79 / 90

Arthropod Species Observed: 0-3 / 4-8 Wind Speed in Beaufort (Start/End): 0-3 / 4-8 DSF Detected (Circle): Y (N)

Diptera:	<i>Tabanus punctifer</i>	<i>Delaniana sp.</i>	Pentatomidae	<i>Triemeropsis s. laevis</i>	<i>Pieris cappa</i>
<i>R. terminatus abdominalis</i>	<i>Tachinidae</i>	<i>Dasymutilla coccinohirta</i>	<i>Phobocera ligata</i>	<i>Gryllus sp.</i>	<i>Pontia protodesca</i>
<i>Apocera chrysalis</i>	<i>Arcyptus apicifer</i>	<i>Dasymutilla californica</i>	<i>Morgantia ulteriosa</i>	<i>Occamillus fulvipes</i>	<i>Prophila erichsonii</i>
<i>Apocera convergens</i>	<i>Gynostoma fuliginosum</i>	<i>Dasymutilla sackeni</i> (lg.)	<i>Pandanus sp.</i>	<i>Tetragonidae</i>	<i>Hemiptera cervinosa</i>
<i>Nemomydas pallidior</i>	<i>Therevidae</i> (Stiletto Fly)	<i>Dasymutilla clypeinervis</i>	<i>Phyanta pallidivirens</i>	<i>Scutellaria mexicana</i>	<i>Isotriaena</i>
<i>Stilbidae</i>	<i>Ceratopogon capitata</i>	<i>Campanomeria fulvica</i>	<i>Trichopogon aurora</i>	<i>Stenopelmatus</i>	<i>Apocrita areolaris</i> (Vergely)
<i>Effigia albibarbaris</i>	<i>Tipulidae</i>	<i>Triella albicorne</i>	<i>Reduviidae</i>	<i>Iris oratoria</i>	<i>Agrostis varidula</i>
<i>Melophora foveata</i>	<i>Nephrotoma sp.</i>	<i>Pomphiliidae</i>	<i>Ipomermis crassipes</i>	<i>Succinomatia s. viriformis</i>	<i>Darwin gilgipus</i>
<i>Proctacanthus sp.</i>	Hymenoptera:	<i>Pepsis mellei</i>	<i>Chilocorus erbus</i>	<i>Parabacillus h. peris</i>	<i>Gomus pleuropus</i>
<i>Sarcophaga luteus</i>	Ant	<i>Pepsis sp.</i>	<i>Coccinella sp.</i>	<i>Phytococcus</i>	<i>Praxiprosopus</i>
<i>Stenopogon breviscapus</i>	<i>Formicidae</i>	<i>Sphecidae</i>	<i>Harmodia asyrida</i>	<i>Phytococcus</i>	<i>Vanessa areolaris</i>
<i>Basidiidae</i> (May Flies)	<i>Iradyomyces humilis</i>	<i>Homophila alberti</i>	<i>Hippodamia convergens</i>	<i>Phytococcus</i>	<i>Vanessa tabanidis</i>
<i>Caliborrus pacificus</i>	<i>Formica sp.</i>	<i>Bembix americana comata</i>	<i>Olla v-nigrum</i>	<i>Phytococcus</i>	<i>Vanessa cardui</i>
<i>Bombylidae</i>	<i>Lionetopum occidentale</i>	<i>Bembix melanops</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	<i>Vanessa virginesca</i>
<i>Esopopidae sp.</i>	<i>Messor pergandei</i>	<i>Bicyrtis sp.</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	<i>Acrididae</i>
<i>Ligotya gaeophylax</i>	<i>Pogonomyrmex californica</i>	<i>Cerceris sp.</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	<i>Noctuidae</i>
<i>Myticomyia sp.</i>	<i>Solenopsis sp.</i>	<i>Chalybion californicus</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	<i>Autographa californica</i>
<i>Pocillanthrus areolaris</i>	Bee	<i>Chlorion aerarium</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	<i>Helianthus sp.</i>
<i>Pocillanthrus sp.</i>	<i>Anthophoridae</i>	<i>Eucerceris insignis</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	<i>Pyralidae</i>
<i>Proctophora pellicuda</i>	<i>Anthophora urbana</i>	<i>Hoplisisodes diversus</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	<i>Paranitrene nobilise</i>
<i>Villa atrata</i>	<i>Melissodes sp.</i>	<i>Hoplisisodes sp.</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	<i>Hyles laetitia</i>
<i>Zenax nixonson</i>	<i>Stenopogon urbana</i>	<i>Isobontia elegans</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	<i>Manduca sexta</i>
<i>Calliphora sp.</i>	<i>Stenopogon varipuncta</i>	<i>Microbomia californicus</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	<i>Arachnidae</i>
<i>Eucalliphora lilacea</i>	<i>Apis mellifera</i>	<i>Philanthus multivittatus</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	<i>Araneidae</i>
<i>Phaenicia cuprina</i>	<i>Bombus californicus</i>	<i>Philanthus ventralis</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	<i>Peuceba viridula</i>
<i>Phaenicia sericata</i>	<i>Bombus croceus</i>	<i>Pockatonia sp.</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	<i>Dipteridae</i>
<i>Physocleptia texana</i>	<i>Bombus sonorus</i>	<i>Prionyx foxi</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	<i>Leurocybus parvicornis</i>
<i>Culicidae - mosquitoes</i>	<i>Bombus vosnesenskii</i>	<i>Prionyx sp.</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	<i>Salticidae</i>
<i>Cuterebridae</i>	<i>Halictidae</i>	<i>Sceliphron caementarium</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	<i>Phidippus formicoides</i>
<i>Condyliacanthus sp.</i>	<i>Agapostemon sp.</i>	<i>Sphex ichneumonius</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	<i>Thomisidae</i>
<i>Prosochilidae</i>	<i>Novia nevadensis</i>	<i>Stizoides remsickensis</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	<i>A. HILARIS</i>
<i>Alusca domestica</i>	<i>Megachilidae</i>	<i>Tachytes elongatus</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	
<i>Sarcophagidae</i>	<i>Dianthidium sp.</i>	<i>Tiphidae</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	
<i>Sarcophaga sp.</i>	<i>Megachile sp.</i>	<i>Vespidae - unidentified</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	
<i>Stratiomyidae</i>	<i>Pendula sp.</i>	<i>Eumenes bollii</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	
<i>Syrphidae</i>	Wasps	<i>Eumenes crucifera</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	
<i>Allograpta obliqua</i>	<i>Chalcididae</i>	<i>Brachymerus annulata</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	
<i>Eristalis tenax</i>	<i>Chrysididae</i>	<i>Polistes apachus</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	
<i>Metasymphys americanus</i>	<i>Phyura pacifica</i>	<i>Polistes dorsalis</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	
<i>Volucella mexicana</i>	<i>Paropop edwardsii</i>	<i>Polistes exclamans</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	
<i>Tabanidae</i>	<i>Ichneumonidae</i>	<i>Polistes cinereus</i>	<i>Phytococcus</i>	<i>Phytococcus</i>	

Bird Species Observed: HOSP BSHA EUCD QUST WISA
BSW SNPH ANKK GRBL WFIB
GRPH KILL HOFI COPT NOMO
TUVU AMUL MOOD EUSI CAKI

Other Wildlife Species Observed:
SB WEARD W. FENCE WEARD
COGONAIL CAKS
BTJR
COACTHHP

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CALLE CITY Portion of Site Surveyed: N Acreage Surveyed: 34 Biologist(s): MELANIE DICUS
 Date: 08-08-14 Time (Start/End): 1105 / 1400 Cloud Cover (Start/End): 0 / 0 Temperature in °F (Start/End): 78 / 88

Arthropod Species Observed: Beaufort (Start/End): 2-5 / 2-6 Wind Speed in Beaufort (Start/End): 2-5 / 2-6 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. scirrinatus abdominalis</i> <input type="checkbox"/> <i>Archytas apicifer</i> <input type="checkbox"/> <i>Gymnosoma fuliginosum</i> <input checked="" type="checkbox"/> <i>Therevidae</i> (Sluteo Fly) <input type="checkbox"/> <i>Ceratitis capitata</i> <input type="checkbox"/> Tipulidae <input type="checkbox"/> <i>Nephrotoma</i> sp. Hymenoptera: <input checked="" type="checkbox"/> <i>Stenopogon breviscaudus</i> <input type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Exochorago</i> sp. <input type="checkbox"/> <i>Ligusa geophylax</i> <input type="checkbox"/> <i>Mythicosmia</i> sp. <input type="checkbox"/> <i>Pezilander arulifera</i> <input type="checkbox"/> <i>Poculanthrax</i> sp. <input checked="" type="checkbox"/> <i>Tramphora pellucida</i> <input type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenar simpson</i> <input type="checkbox"/> <i>Calliphora</i> sp. <input type="checkbox"/> <i>Eucalliphora lilana</i> <input type="checkbox"/> <i>Phaenicia caprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Ctenophidae</i> sp. <input type="checkbox"/> <i>Physoccephala texana</i> <input type="checkbox"/> <i>Culicidae</i> - mosquitoes <input type="checkbox"/> <i>Cuterebridae</i> <input type="checkbox"/> <i>Agropostemon</i> sp. <input type="checkbox"/> <i>Nomia nevadensis</i> <input type="checkbox"/> <i>Megachilidae</i> <input checked="" type="checkbox"/> <i>Dianthidium</i> sp. <input type="checkbox"/> <i>Megachile</i> sp. <input type="checkbox"/> <i>Perdita</i> sp. Wasps <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Erasilia tenax</i> <input type="checkbox"/> <i>Metanypus americanus</i> <input type="checkbox"/> <i>Polistes mexicanus</i> <input type="checkbox"/> <i>Tachinidae</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon</i> sp. <input type="checkbox"/> <i>Dasynutilla coccinellivora</i> <input type="checkbox"/> <i>Dasynutilla californica</i> <input type="checkbox"/> <i>Dasynutilla sackeni</i> (lg.) <input type="checkbox"/> <i>Dasynutilla chymenocara</i> <input type="checkbox"/> <i>Compsoverris tallica</i> <input type="checkbox"/> <i>Triela plicata</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Chilocorus orbis</i> <input type="checkbox"/> <i>Coccinella</i> sp. <input checked="" type="checkbox"/> <i>Harmonia axyridis</i> <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input type="checkbox"/> <i>D. undecimpunctata</i> <input type="checkbox"/> <i>Leuca irilineata</i> <input type="checkbox"/> <i>Tachymela laticollis</i> <input type="checkbox"/> <i>Carmelipnidae</i> <input type="checkbox"/> <i>Dermestidae</i> (Click Beetles) <input type="checkbox"/> <i>Elaeteridae</i> <input type="checkbox"/> <i>Haliplidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognathus lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collaps</i> sp. <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosomus flavipennis</i> <input type="checkbox"/> <i>Macrosomus</i> sp. <input checked="" type="checkbox"/> <i>Carabidae</i> <input type="checkbox"/> <i>Coleinus mutabilis</i> <input type="checkbox"/> <i>Paracolepa</i> sp. <input type="checkbox"/> <i>Tenebrionidae</i> <input type="checkbox"/> <i>Elerodes</i> sp. Hemiptera: <input type="checkbox"/> <i>Audymenus annulata</i> <input type="checkbox"/> <i>Polistes opachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Leucostoma californica</i> <input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i> <input type="checkbox"/> <i>Cyathus</i> sp. <input checked="" type="checkbox"/> <i>Murgantia huttonica</i> <input type="checkbox"/> <i>Podatus</i> sp. <input type="checkbox"/> <i>Thysania pallidivirens</i> <input type="checkbox"/> <i>Trichoptera aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Apiomeris crassipes</i> <input type="checkbox"/> <i>Phymatodes ventralis</i> <input checked="" type="checkbox"/> <i>Zelus tetrocanthus</i> Homoptera: <input type="checkbox"/> <i>Aphididae</i> <input checked="" type="checkbox"/> <i>Cercopidae</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homaldisia</i> sp. <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactylopiidae</i> (Coccinell) <input type="checkbox"/> <i>Dactylopius</i> sp. <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Anulimite exarosa</i> <input type="checkbox"/> <i>Psyllidae</i> <input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i> Neuroptera: <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa</i> sp. <input type="checkbox"/> <i>Myrmeleontidae</i> <input checked="" type="checkbox"/> <i>Prochyneura</i> sp. <input type="checkbox"/> <i>Myrmeleon</i> sp. <input type="checkbox"/> <i>Raphidiidae</i> (Snakeflies) Dermaptera: <input type="checkbox"/> <i>Forficula auricularia</i> Orthoptera: <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Disosteira pictipennis</i> <input type="checkbox"/> <i>Lepus intermedius</i> <input type="checkbox"/> <i>Melanoplus</i> sp. <input type="checkbox"/> <i>Schistocerca nitens</i> <input checked="" type="checkbox"/> <i>Schistocerca</i> sp. 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Pentatomidae</i> <input checked="" type="checkbox"/> <i>Chlorothrax ligata</i> <input checked="" type="checkbox"/> <i>Chlorothrax uhleri/suyi</i> <input type="checkbox"/> <i>Murgantia huttonica</i> <input type="checkbox"/> <i>Podatus</i> sp. <input type="checkbox"/> <i>Thysania pallidivirens</i> <input type="checkbox"/> <i>Trichoptera aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Apiomeris crassipes</i> <input type="checkbox"/> <i>Phymatodes ventralis</i> <input checked="" type="checkbox"/> <i>Zelus tetrocanthus</i> Homoptera: <input type="checkbox"/> <i>Aphididae</i> <input checked="" type="checkbox"/> <i>Cercopidae</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homaldisia</i> sp. <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactylopiidae</i> (Coccinell) <input type="checkbox"/> <i>Dactylopius</i> sp. <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Anulimite exarosa</i> <input type="checkbox"/> <i>Psyllidae</i> <input checked="" type="checkbox"/> <i>Glycaspis brimblecombei</i> Neuroptera: <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa</i> sp. <input type="checkbox"/> <i>Myrmeleontidae</i> <input checked="" type="checkbox"/> <i>Prochyneura</i> sp. <input type="checkbox"/> <i>Myrmeleon</i> sp. <input type="checkbox"/> <i>Raphidiidae</i> (Snakeflies) Dermaptera: <input type="checkbox"/> <i>Forficula auricularia</i> Orthoptera: <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Disosteira pictipennis</i> <input type="checkbox"/> <i>Lepus intermedius</i> <input type="checkbox"/> <i>Melanoplus</i> sp. <input type="checkbox"/> <i>Schistocerca nitens</i> <input checked="" type="checkbox"/> <i>Schistocerca</i> sp.
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Bird Species Observed: LOSH QASW SAPH MOBO
HOSE RTA4 TUVU WEX1
COSE GRIT ALIV
Hof1 AMKE CAKI

Other Wildlife Species Observed:
SOLIZARD
CALRS

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: S Acreage Surveyed: 48 Biologist(s): M. D. C. V. S.
 Date: 08-09-14 Time (Start/End): 0950 / 1400 Cloud Cover (Start/End): 0 / 0 Temperature in °F (Start/End): 78 / 91

Arthropod Species Observed: Wind Speed in ~~Beaufort~~ (Start/End): 0-2 / 2-6 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. ferrugineus abdominalis</i> <input type="checkbox"/> <i>Archyus chrysolata</i> <input type="checkbox"/> <i>Apocera convergens</i> <input checked="" type="checkbox"/> <i>Acanomyia ponderosa</i> <input checked="" type="checkbox"/> <i>Asilidae</i> <input type="checkbox"/> <i>Efferia albibarboris</i> <input type="checkbox"/> <i>Malliphora foveata</i> <input type="checkbox"/> <i>Proctocaninus sp.</i> <input type="checkbox"/> <i>Saropogon luteus</i> <input type="checkbox"/> <i>Stenopogon breviscubus</i> <input type="checkbox"/> <i>Blattidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Eurostoma sp.</i> <input type="checkbox"/> <i>Ligra patophylax</i> <input type="checkbox"/> <i>Mythimomyia sp.</i> <input type="checkbox"/> <i>Pocillanthera areolaris</i> <input type="checkbox"/> <i>Pocillanthera sp.</i> <input type="checkbox"/> <i>Taxophora pellicida</i> <input type="checkbox"/> <i>Ptila atrata</i> <input type="checkbox"/> <i>Zenox simpsoni</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input checked="" type="checkbox"/> <i>Eucalliphora lilacea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Ctenopidae sp.</i> <input type="checkbox"/> <i>Physacphala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Culicerebidae</i> <input type="checkbox"/> <i>Cordylomyia sp.</i> <input type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasymples americanus</i> <input checked="" type="checkbox"/> <i>Polacella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichneumon sp.</i></p> <p>Coleoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Dasytomilla coccinellaria</i> <input checked="" type="checkbox"/> <i>Dasytomilla californica</i> <input type="checkbox"/> <i>Dasytomilla zachvatzi (lg.)</i> <input type="checkbox"/> <i>Dasytomilla cyrenensis</i> <input type="checkbox"/> <i>Trielus albione</i> <input type="checkbox"/> <i>Pomphiliidae</i> <input type="checkbox"/> <i>Pezomachus mildei</i> <input type="checkbox"/> <i>Pezomachus sp.</i> <input type="checkbox"/> <i>Sphitacidae</i> <input checked="" type="checkbox"/> <i>Amphiphila alberti</i> <input type="checkbox"/> <i>Amphiphila sp.</i> <input checked="" type="checkbox"/> <i>Bembis americana comata</i> <input type="checkbox"/> <i>Bembis melanopasta</i> <input type="checkbox"/> <i>Bicyrtes sp.</i> <input type="checkbox"/> <i>Ceraurus sp.</i> <input type="checkbox"/> <i>Chalybion californicus</i> <input type="checkbox"/> <i>Chalybion aerarium</i> <input type="checkbox"/> <i>Dicreteris insignis</i> <input type="checkbox"/> <i>Haplodactylus diversus</i> <input type="checkbox"/> <i>Haplodactylus sp.</i> <input type="checkbox"/> <i>Inodactylus calceola</i> <input checked="" type="checkbox"/> <i>Microbembis californicus</i> <input checked="" type="checkbox"/> <i>Philonthus multimaculata</i> <input type="checkbox"/> <i>Philonthus ventralis</i> <input type="checkbox"/> <i>Podonota sp.</i> <input type="checkbox"/> <i>Prionyx fasci</i> <input type="checkbox"/> <i>Prionyx sp.</i> <input type="checkbox"/> <i>Scaphiron caementarium</i> <input type="checkbox"/> <i>Spines ichneumonius</i> <input type="checkbox"/> <i>Sisoides renicinctus</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bolivi</i> <input type="checkbox"/> <i>Eumenes cricifera</i> <input checked="" type="checkbox"/> <i>Euclypterus annulata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> 	<p>Pentatomidae:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa whittleyi</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichopoda aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Apionera crassipes</i> <input type="checkbox"/> <i>Rhyacionia ventralis</i> <input type="checkbox"/> <i>Zelus tetracanthus</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input checked="" type="checkbox"/> <i>A. undecimnotata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymela laticollis</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Dactylopiidae (Coccinical)</i> <input type="checkbox"/> <i>Dactylopius sp.</i> <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Aphididae expansa</i> <input type="checkbox"/> <i>Syllidae</i> <input checked="" type="checkbox"/> <i>Glyptotendipes brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Myrmeleonidae</i> <input checked="" type="checkbox"/> <i>Brachyneururus sp.</i> <input type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermatoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Fossilida auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dioscortera pictipennis</i> <input type="checkbox"/> <i>Leptus intermedius</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca sp.</i>
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Other Wildlife Species Observed:

<u>SB LIZARD</u>	<u>W. FENCE LIZARD</u>
<u>CAJON</u>	<u>W. FENCE LIZARD</u>
<u>HO SP</u>	<u>W. FENCE LIZARD</u>
<u>CAJON</u>	<u>W. FENCE LIZARD</u>

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: N Acreage Surveyed: 34 Biologist(s): M. DICUS
 Date: 08-10-14 Time (Start/End): 1105 / 1400 Cloud Cover (Start/End): 50% / 20% Temperature in °F (Start/End): 83 / 95

Wind Speed in Beaufort (Start/End): 4-8 / 5-10 DSF Detected (Circle): Y (N)

Arthropod Species Observed:

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus</i> adominialis <input type="checkbox"/> <i>Archaea chrysolata</i> <input checked="" type="checkbox"/> <i>Spicocera convergens</i> <input checked="" type="checkbox"/> <i>Acanomydas pantherina</i> <input checked="" type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Efferia albarbaris</i> <input checked="" type="checkbox"/> <i>Mallophora fannix</i> <input type="checkbox"/> <i>Proctocanthus</i> sp. <input type="checkbox"/> <i>Saropogon lateris</i> <input type="checkbox"/> <i>Steropogon brevisculus</i> Beetle (May Flies) <input checked="" type="checkbox"/> <i>Adalibates pacificus</i> <input checked="" type="checkbox"/> <i>Bombus</i> hidae <input type="checkbox"/> <i>Euxestopus</i> sp. <input type="checkbox"/> <i>Ligana guzophyllax</i> <input type="checkbox"/> <i>Mythomomya</i> sp. <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax</i> sp. <input checked="" type="checkbox"/> <i>Oxypora pellucida</i> <input checked="" type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenax simpsoni</i> <input type="checkbox"/> <i>Calliphora</i> sp. <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae</i> sp. <input type="checkbox"/> <i>Physocophala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input checked="" type="checkbox"/> <i>Caerebidae</i> <input checked="" type="checkbox"/> <i>Condylostylus</i> sp. <input type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga</i> sp. <input type="checkbox"/> <i>Stratiomyidae</i> <input checked="" type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Tobacchia mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Polistes fasciatus aurifer</i> <input type="checkbox"/> <i>Respula pennsylvanica</i> Colletes: <input type="checkbox"/> <i>Buprestidae</i> <input type="checkbox"/> <i>Carabidae</i> <input checked="" type="checkbox"/> <i>Cerambycidae</i> <input type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Harmonia axyridis</i> <input checked="" type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elateridae (Click Beetles)</i> <input checked="" type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input checked="" type="checkbox"/> <i>D. undecimpunctata</i> <input type="checkbox"/> <i>Lema trifasciata</i> <input type="checkbox"/> <i>Tachyella lanitcola</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Halipidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha lorrada apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops</i> sp. <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosagion flavipenne</i> <input type="checkbox"/> <i>Macrosagion</i> sp. <input checked="" type="checkbox"/> <i>Xanthidae</i> <input checked="" type="checkbox"/> <i>Coluna nitidibilis</i> <input type="checkbox"/> <i>Paracolepa</i> sp. <input type="checkbox"/> <i>Staphylinus maxillosus</i> <input type="checkbox"/> <i>Tenebrionidae</i> <input type="checkbox"/> <i>Eleodes</i> sp. Hemiptera: <input checked="" type="checkbox"/> <i>Lygaeidae</i> <input checked="" type="checkbox"/> <i>Lygaeus kalmii</i> <input type="checkbox"/> <i>Pyrrhocoridae</i> <input type="checkbox"/> <i>Largus cinctus</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Penatiomidae</i> <input checked="" type="checkbox"/> <i>Phlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa ulteri / SAU</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Polonia</i> sp. <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichoptera aurora</i> <input type="checkbox"/> <i>Resulvidae</i> <input type="checkbox"/> <i>Apionem crassipes</i> <input type="checkbox"/> <i>Phytocoris ventralis</i> <input checked="" type="checkbox"/> <i>Zelus tetracanthus</i> Homoptera: <input type="checkbox"/> <i>Aphididae</i> <input checked="" type="checkbox"/> <i>Cercopidae</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homalidae</i> sp. <input checked="" type="checkbox"/> <i>Dactylopiidae (Coccinell)</i> <input type="checkbox"/> <i>Diachryptus</i> sp. <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Antonine cyprana</i> <input type="checkbox"/> <i>Syllidae</i> <input checked="" type="checkbox"/> <i>Glycyptis brimblecombei</i> Neuroptera: <input type="checkbox"/> <i>Cynopidae</i> <input checked="" type="checkbox"/> <i>Chrysopa</i> sp. <input type="checkbox"/> <i>Myrmeleontidae</i> <input checked="" type="checkbox"/> <i>Archymerurus</i> sp. <input type="checkbox"/> <i>Myrmeleon</i> sp. <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> Dermatoptra: <input type="checkbox"/> <i>Foerficula aricularia</i> Orthoptera: <input type="checkbox"/> <i>Acrilidae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Lepus intermedius</i> <input type="checkbox"/> <i>Melanoplus</i> sp. <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca</i> sp.
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Other Wildlife Species Observed:

SB LIZARD

W/FENCE LIZARD

COTTONTAIL

Bird Species Observed:

BLPH COCA SAPT BSW

LOSH CALT MOBO RTHA

CAKI HOSP HOPI AMKE

AMUC TUVU BVOR

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIALE CITY Portion of Site Surveyed: 48 Biologist(s): M. DICUS
 Date: 08-11-14 Time (Start/End): 1000 / 1400 Cloud Cover (Start/End): 5% / 30% Temperature in °F (Start/End): 79 / 95

Arthropod Species Observed: meat Wind Speed in meat (Start/End): 0-2 / 5-10 DSF Detected (Circle): Y Q

Diptera:	<i>Tabanus punctifer</i>	<i>Ichneumon</i> sp.	Pentatomidae	<i>Trimerotropis californica</i>	<i>Pteris rapae</i>
<i>R. terminatus abdominalis</i>	Tachinidae	<i>Dasympyla coccincolirata</i>	<i>Chlorochroa ligata</i>	<i>Trimerotropis pallidipennis</i>	<i>Pontia protodice</i>
<i>Apioecra chrysolata</i>	<i>Archytas apicifer</i>	<i>Dasympyla californica</i>	<i>Chlorochroa uberti</i>	<i>Gryllus</i> sp.	<i>Brephulidius exilis</i>
<i>Spooecra convergens</i>	<i>Gymnosoma fuliginosum</i>	<i>Dasympyla sackeni</i> (lg.)	Coleoptera:	<i>Decanilla fulvata</i>	<i>Hemiarergus ceratumn</i>
<i>Artemyia las pantherina</i>	<i>Therevidae</i> (Shiloto Fly)	<i>Dasympyla chytenustra</i>	<i>Polyctes</i> sp.	Tetrigonidae	<i>Icaricia acmon</i>
<i>Artemyia las pantherina</i>	<i>Ceratitis capitata</i>	<i>Campomeris toluca</i>	<i>Thysanota expansa</i>	<i>Antonie</i> sp.	<i>Lepidoptera marina</i>
<i>Efferia albarbaris</i>	Tipulidae	<i>Trielis alcionae</i>	<i>Trichoptera aurora</i>	<i>Scudderia mexicana</i>	<i>Strimon melinus</i>
<i>Melolontha foveola</i>	<i>Nephrotoma</i> sp.	<i>Psephenellidae</i>	Reduviidae	<i>Stenopelmatus</i> sp.	<i>Apodemia morio virgula</i>
<i>Proctocentrus</i> sp.	Hymenoptera:	<i>Pispis milderi</i>	<i>Apioneris crassipes</i>	<i>Iris aratoria</i>	<i>Agramis vanillae</i>
<i>Stenopogon brevisculis</i>	Aphididae	<i>Pispis</i> sp.	<i>Chilocharis orbis</i>	<i>Stegomyia californica</i>	<i>Danus vilippus</i>
<i>Esaiidae</i> (May Flies)	<i>Homoptera convergens</i>	<i>Sphacelidae</i>	<i>Coccinella</i> sp.	<i>Parabacillus hesperis</i>	<i>Danus plexippus</i>
<i>Bombus</i> sp.	<i>Homoptera acyridis</i>	<i>Elateridae</i> (Click Beetles)	<i>Hippodamia convergens</i>	Odonata:	<i>Precis coenia</i>
<i>Ecoprosopa</i> sp.	<i>Olla v-nigrum</i>	<i>Chrysomelidae</i>	<i>Hippodamia convergens</i>	<i>Aeshna multicolor</i>	<i>Amesia amabilis</i>
<i>Ligra gazophylax</i>	<i>Bembix americana</i> Common	<i>Homoptera</i> sp.	<i>Olla v-nigrum</i>	<i>Aeshna junonia</i>	<i>Amesia abantia</i>
<i>Mythimonia</i> sp.	<i>Bembix melanocephala</i>	<i>Chrysomelidae</i>	<i>Elateridae</i> (Click Beetles)	<i>Erythemis collocata</i>	<i>Amesia carabi</i>
<i>Poecilanthrax archbuthi</i>	<i>Bembix melanopsis</i>	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Libellula croceipennis</i>	<i>Amesia virginienis</i>
<i>Poecilanthrax</i> sp.	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Libellula saturata</i>	<i>Ancistridae</i>
<i>Torophora pellucida</i>	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Dactyloplax longipennis</i>	<i>Noctuidae</i>
<i>Villa atrata</i>	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Pantala flavescens</i>	<i>Adelphapha californica</i>
<i>Zenois simpsoni</i>	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Perithemis intensa</i>	<i>Ichneumon</i>
<i>Calliphora</i> sp.	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Progomphus borealis</i>	<i>Gesneriidae</i>
<i>Eucalliphora liloca</i>	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Sympetrum corruptum</i>	<i>Pyralidae</i>
<i>Phaenicia cuprina</i>	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Sympetrum illotum</i>	<i>Paranthrene robiniae</i>
<i>Phaenicia sericata</i>	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Tramea lacerata</i>	<i>Hyales laterata</i>
<i>Conopside</i> sp.	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Tramea onusta</i>	<i>Manduca sexta</i>
<i>Physosephala texana</i>	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Argia</i> sp.	Arachnida:
<i>Culicidae</i> - mosquitoes	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Enallagma</i> sp.	<i>Aranidae</i>
<i>Culex</i> sp.	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Telebasis salvii</i>	<i>Psephenidae</i>
<i>Condylostoma</i> sp.	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Macrosiphum</i> sp.	<i>Dipluridae</i>
<i>Phrosopelidae</i>	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Myrmelcon</i> sp.	<i>Leurostichus pacificus</i>
<i>Atasca domestica</i>	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Raphididae</i> (Snakeflies)	<i>Latrechus hesperis</i>
<i>Sarcophagidae</i>	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Forficula auricularia</i>	<i>Salicidae</i>
<i>Sarcophaga</i> sp.	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Phlebotomus</i>	<i>Philippus formosus</i>
<i>Aratiomyidae</i>	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Erodea rufala</i>	<i>Thomisidae</i>
<i>Syrphidae</i>	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Paratytoche melane</i>	
<i>Allograpta obliqua</i>	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Pygites sabulerti</i>	
<i>Eristalis tenax</i>	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Pygites albescens</i>	D. HILDAE
<i>Metatryphus americanus</i>	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Papilio crephlophomus</i>	
<i>Polioptila mexicana</i>	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Papilio rutabae</i>	
<i>Tabanidae</i>	<i>Bembix</i> sp.	<i>Chrysomelidae</i>	<i>Chrysomelidae</i>	<i>Colias euryleme</i>	

Bird Species Observed: BSW RFH BLFH BEEL BNST NOMO Other Wildlife Species Observed: SG WEARD
MOBP TUVU SAPT EUST AMKE AWBL ATFL OTJR
EUCD KJUL ROCI ORBL LESA CAXI LAGS
COTONTAIL

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: Carle CIM Portion of Site Surveyed: 5 Acreage Surveyed: 48 Biologist(s): M. D. C. J. S.
 Date: 08-15-14 Time (Start/End): 1000 / 1400 Cloud Cover (Start/End): 0 / 0 Temperature in °F (Start/End): 86 / 96

Wind Speed in ^{mph} Beetfl (Start/End): 0-1 / 6-8 DSF Detected (Circle): Y (N)

Arthropod Species Observed:

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Tachinidae</i> <input type="checkbox"/> <i>Archyia apicifer</i> <input checked="" type="checkbox"/> <i>Gymnosoma fuliginosum</i> <input checked="" type="checkbox"/> <i>Therevidae</i> (Stiletto Fly) <input checked="" type="checkbox"/> <i>Ceratitis capitata</i> <input type="checkbox"/> <i>Tipulidae</i> <input type="checkbox"/> <i>Nephrotoma</i> sp. <p>Hymenoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Formicidae</i> <input checked="" type="checkbox"/> <i>Andromyrmex humilis</i> <input type="checkbox"/> <i>Formica</i> sp. <input type="checkbox"/> <i>Lasiopterus occidentale</i> <input type="checkbox"/> <i>Messor pergandei</i> <input type="checkbox"/> <i>Pogonomyrmex californica</i> <input type="checkbox"/> <i>Solenopsis</i> sp. <p>Beet</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Anthophoridae</i> <input checked="" type="checkbox"/> <i>Anthophora urbana</i> <input type="checkbox"/> <i>Melissodes</i> sp. <input checked="" type="checkbox"/> <i>Xylocopa varipuncta</i> <input checked="" type="checkbox"/> <i>Apis mellifera</i> <input type="checkbox"/> <i>Bombus californicus</i> <input type="checkbox"/> <i>Bombus croceus</i> <input type="checkbox"/> <i>Bombus sonorus</i> <input type="checkbox"/> <i>Bombus vosnesenskii</i> <input type="checkbox"/> <i>Habrobracon</i> <input checked="" type="checkbox"/> <i>Agrocybe</i> sp. <input type="checkbox"/> <i>Nomia nevadensis</i> <input type="checkbox"/> <i>Megachilidae</i> <input type="checkbox"/> <i>Dianthidium</i> sp. <input type="checkbox"/> <i>Megachile</i> sp. <input type="checkbox"/> <i>Pentidita</i> sp. <p>Wasps</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chalcididae</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Chrysididae</i> <input checked="" type="checkbox"/> <i>Trypoxylon pacifica</i> <input checked="" type="checkbox"/> <i>Parnopes edwardsii</i> <input type="checkbox"/> <i>Ichneumonidae</i> 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Polistes fuscatus aurifer</i> <input type="checkbox"/> <i>Paspula pennsylvanica</i> <p>Coleoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Buprestidae</i> <input type="checkbox"/> <i>Carabidae</i> <input type="checkbox"/> <i>Cerambycidae</i> <input type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilocorus orbus</i> <input type="checkbox"/> <i>Coccinella</i> sp. <input checked="" type="checkbox"/> <i>Harmonia axyridis</i> <input type="checkbox"/> <i>Harmonia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input checked="" type="checkbox"/> <i>Elateridae</i> (Click Beetles) <input type="checkbox"/> <i>Garysonellidae</i> <input checked="" type="checkbox"/> <i>D. undecimpunctata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymeta laticollis</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Haliphidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input checked="" type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Callaps</i> sp. <input type="checkbox"/> <i>Rhyssoboridae</i> <input type="checkbox"/> <i>Macrosiagon flavipenne</i> <input type="checkbox"/> <i>Macrosiagon</i> sp. <input type="checkbox"/> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Catantops mutabilis</i> <input type="checkbox"/> <i>Paracatantops</i> sp. <input type="checkbox"/> <i>Staphylinus micellus</i> <input type="checkbox"/> <i>Tenebrionidae</i> <input type="checkbox"/> <i>Eleodes</i> sp. <p>Hemiptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Eumenes crucifera</i> <input checked="" type="checkbox"/> <i>Psodynerus annulata</i> <input checked="" type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Amecion</i> sp. <input checked="" type="checkbox"/> <i>Dasyneura coccinoburta</i> <input checked="" type="checkbox"/> <i>Dasyneura californica</i> <input type="checkbox"/> <i>Dasyneura sockeni</i> (lg.) <input type="checkbox"/> <i>Dasyneura chymenestra</i> <input type="checkbox"/> <i>Campoplex tolteca</i> <input type="checkbox"/> <i>Trielis adione</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pezomachus</i> <input type="checkbox"/> <i>Pezomachus</i> sp. <input checked="" type="checkbox"/> <i>Amomphila alberti</i> <input checked="" type="checkbox"/> <i>Amomphila</i> sp. <input checked="" type="checkbox"/> <i>Bembix americana</i> <input type="checkbox"/> <i>Bembix melanopis</i> <input type="checkbox"/> <i>Bicyrtis</i> sp. <input type="checkbox"/> <i>Cerceris</i> sp. <input type="checkbox"/> <i>Chalybion californicus</i> <input type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisisodes diversus</i> <input type="checkbox"/> <i>Hoplisisodes</i> sp. <input type="checkbox"/> <i>Isodontia elegans</i> <input checked="" type="checkbox"/> <i>Microbembix californicus</i> <input type="checkbox"/> <i>Philanthus multiauriculata</i> <input type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Podalonia</i> sp. <input type="checkbox"/> <i>Prionyx</i> sp. <input type="checkbox"/> <i>Prionyx</i> sp. <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Spilix ichneumonius</i> <input type="checkbox"/> <i>Sicosis remicinctum</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Vespidae</i> - unidentified <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input checked="" type="checkbox"/> <i>Psodynerus annulata</i> <input checked="" type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Microtropis californica</i> <input checked="" type="checkbox"/> <i>Trimerotropis pallidipennis</i> <input checked="" type="checkbox"/> <i>Gryllus</i> sp. <input type="checkbox"/> <i>Oecanthus fulvipes</i> <input type="checkbox"/> <i>Tettigoniidae</i> <input type="checkbox"/> <i>Antanthe expansa</i> <input type="checkbox"/> <i>Trichopoda mexicana</i> <input type="checkbox"/> <i>Stenopelmatus</i> sp. <input type="checkbox"/> <i>Iris oratoria</i> <input type="checkbox"/> <i>Stegonemata californica</i> <input type="checkbox"/> <i>Parabacillus hesperis</i> <p>Odonata:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aeshna multicolor</i> <input type="checkbox"/> <i>Anax junius</i> <input checked="" type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula saturata</i> <input checked="" type="checkbox"/> <i>Pantala flavescens</i> <input type="checkbox"/> <i>Perithemis intensa</i> <input type="checkbox"/> <i>Progomphus borealis</i> <input type="checkbox"/> <i>Sympetrum corruptum</i> <input type="checkbox"/> <i>Sympetrum florum</i> <input type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea onaxia</i> <input checked="" type="checkbox"/> <i>Argia</i> sp. <input type="checkbox"/> <i>Enallagma</i> sp. <input type="checkbox"/> <i>Telebasis salva</i> <p>Leptoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Atalapha campestris</i> <input type="checkbox"/> <i>Erythraea floerda</i> <input checked="" type="checkbox"/> <i>Metopius ericiorum</i> <input checked="" type="checkbox"/> <i>Hylephila phylacus</i> <input type="checkbox"/> <i>Leodea eufala</i> <input type="checkbox"/> <i>Paratyton melane</i> <input type="checkbox"/> <i>Polites subleiti</i> <input checked="" type="checkbox"/> <i>Pyrgus albescens</i> <input type="checkbox"/> <i>Papilio cresphomides</i> <input type="checkbox"/> <i>Papilio rutulus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Pieris rapae</i> <input checked="" type="checkbox"/> <i>Pieris protodice</i> <input checked="" type="checkbox"/> <i>Brephidium exilis</i> <input type="checkbox"/> <i>Hemiarctia ceramias</i> <input type="checkbox"/> <i>Icaricia oxmon</i> <input type="checkbox"/> <i>Lepidoptera</i> <input type="checkbox"/> <i>Stenopelmatus</i> <input type="checkbox"/> <i>Apolemia mormo virgulti</i> <input type="checkbox"/> <i>Agraulis vanillae</i> <input type="checkbox"/> <i>Danaus gilippus</i> <input type="checkbox"/> <i>Danaus plexippus</i> <input type="checkbox"/> <i>Precis coenia</i> <input type="checkbox"/> <i>Vanessa annabella</i> <input checked="" type="checkbox"/> <i>Vanessa atalanta</i> <input type="checkbox"/> <i>Vanessa cardui</i> <input type="checkbox"/> <i>Vanessa virginiensis</i> <input type="checkbox"/> <i>Arctiidae</i> <input type="checkbox"/> <i>Noctuidae</i> <input type="checkbox"/> <i>Autographa californica</i> <input type="checkbox"/> <i>Chimera</i> <input checked="" type="checkbox"/> <i>Geometridae</i> <input checked="" type="checkbox"/> <i>Pyralidae</i> <input type="checkbox"/> <i>Paranthrene robiniae</i> <input type="checkbox"/> <i>Hyles lineata</i> <input type="checkbox"/> <i>Manuca sexta</i> <p>Arachnida:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Araneidae</i> <input checked="" type="checkbox"/> <i>Psecutia viridans</i> <input type="checkbox"/> <i>Diplocephala</i> <input checked="" type="checkbox"/> <i>Teronomychus pacificus</i> <input type="checkbox"/> <i>Latrodectus hesperis</i> <input type="checkbox"/> <i>Salicidae</i> <input checked="" type="checkbox"/> <i>Phalippus formosus</i> <input type="checkbox"/> <i>Thomisidae</i> <p>B. HILARES</p>
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Bird Species Observed: HO SP CO RA HO FI RO PI AM CR MO DO BL PH LE SA SAPH BA GL WA AB BN ST EV CD LO SH AM KE RU BL EU ST EV CD

Other Wildlife Species Observed:
SB LIZARD
CAGS
GT JR
COACTHAWP

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CACIE CIM Portion of Site Surveyed: N Acreage Surveyed: 34 Biologist(s): M-ΔICUS
 Date: 08-16-14 Time (Start/End): 0945 / 1050 Cloud Cover (Start/End): 0 / 0 Temperature in °F (Start/End): 88 / 98

Arthropod Species Observed: Wind Speed in Beaufort (Start/End): 0-2 / 3-4 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Tabanus punctifer</i> <input type="checkbox"/> <i>R. ferrugineus abdominalis</i> <input type="checkbox"/> <i>Archives chrysolasia</i> <input checked="" type="checkbox"/> <i>Spioecera convergens</i> <input type="checkbox"/> <i>Nemomyia pantherina</i> <input checked="" type="checkbox"/> <i>Salixidae</i> <input checked="" type="checkbox"/> <i>Efferia albarbaris</i> <input checked="" type="checkbox"/> <i>Mallophora fasciata</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input checked="" type="checkbox"/> <i>Stenopogon luteus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>C. albicaeris pacificus</i> <input checked="" type="checkbox"/> <i>Bombyliidae</i> <input type="checkbox"/> <i>Eurostopoia sp.</i> <input type="checkbox"/> <i>Ligro gicophylax</i> <input type="checkbox"/> <i>Mydomyia sp.</i> <input type="checkbox"/> <i>Poecilanthrax areolaris</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input checked="" type="checkbox"/> <i>Loxophora pellucida</i> <input checked="" type="checkbox"/> <i>Villa atrata</i> <input type="checkbox"/> <i>Zenax simpsoni</i> <input type="checkbox"/> <i>Calliphora sp.</i> <input type="checkbox"/> <i>Eucalliphora lilacea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physoccephala texana</i> <input type="checkbox"/> <i>Culicidae - mosquitoes</i> <input type="checkbox"/> <i>Cuterebridae</i> <input type="checkbox"/> <i>Condylostylia sp.</i> <input checked="" type="checkbox"/> <i>Phaenicia domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Tobacilla mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichneumon sp.</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Dasympulilla coccineohirta</i> <input checked="" type="checkbox"/> <i>Dasympulilla californica</i> <input checked="" type="checkbox"/> <i>Dasympulilla sockeni</i> (lg.) <input type="checkbox"/> <i>Dasympulilla chytremestra</i> <input type="checkbox"/> <i>Campsomertis tolteca</i> <input type="checkbox"/> <i>Trichia albicoma</i> <input type="checkbox"/> <i>Pempillidae</i> <input type="checkbox"/> <i>Pezomachus milderi</i> <input type="checkbox"/> <i>Pezomachus sp.</i> <input checked="" type="checkbox"/> <i>Amnophila albicincta</i> <input checked="" type="checkbox"/> <i>Amnophila sp.</i> <input checked="" type="checkbox"/> <i>Bombus americanus</i> COMTA <input checked="" type="checkbox"/> <i>Bombus melanops</i> <input type="checkbox"/> <i>Bicyrtes sp.</i> <input type="checkbox"/> <i>Cerceris sp.</i> <input checked="" type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerebra insignis</i> <input type="checkbox"/> <i>Hoplisisoides sp.</i> <input type="checkbox"/> <i>Isodonia californica</i> <input checked="" type="checkbox"/> <i>Microbembix californicus</i> <input type="checkbox"/> <i>Philanthus ventralis</i> <input type="checkbox"/> <i>Psalidonia sp.</i> <input type="checkbox"/> <i>Prionyx foxi</i> <input type="checkbox"/> <i>Prionyx sp.</i> <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphecoctonus variator</i> <input type="checkbox"/> <i>Stizoides remicinctus</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bolivi</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input checked="" type="checkbox"/> <i>Exochynerus annulata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes chloralis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<p>Polistes fuscatus arififer</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Vespa pennsylvanica</i> <p>Coloptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Buprestidae</i> <input type="checkbox"/> <i>Carabidae</i> <input type="checkbox"/> <i>Cerambycidae</i> <input type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilocorus orbus</i> <input type="checkbox"/> <i>Coccinella sp.</i> <input checked="" type="checkbox"/> <i>Harmonia axyridis</i> <input type="checkbox"/> <i>Homodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elateridae (Click Beetles)</i> <input type="checkbox"/> <i>Phrynosomatidae</i> <input checked="" type="checkbox"/> <i>D. undecimpunctata</i> <input type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymela lenticularis</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Iliphiidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognatha larida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops sp.</i> <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosgon flavipennis</i> <input type="checkbox"/> <i>Macrosgon sp.</i> <input checked="" type="checkbox"/> <i>Cottinus mutabilis</i> <input type="checkbox"/> <i>Paracatopa sp.</i> <input type="checkbox"/> <i>Staphylinus macillosus</i> <input type="checkbox"/> <i>Tenebrionidae</i> <input type="checkbox"/> <i>Eledus sp.</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Lygaeidae</i> <input type="checkbox"/> <i>Lygaeus kabirii</i> <input type="checkbox"/> <i>Pyrrhocoridae</i> <input type="checkbox"/> <i>Largus cinctus</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Chlorochroa ligata</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichopepla carrea</i> <input type="checkbox"/> <i>Rehderia</i> <input type="checkbox"/> <i>Apioneris crassipes</i> <input type="checkbox"/> <i>Rhinoceros ventralis</i> <input type="checkbox"/> <i>Zelus tetracanthus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aphididae</i> <input checked="" type="checkbox"/> <i>Cercopidae</i> <input type="checkbox"/> <i>Cicadellidae</i> <input type="checkbox"/> <i>Homalicta sp.</i> <input type="checkbox"/> <i>Cicadidae</i> <input type="checkbox"/> <i>Dactylopiidae (Coccinellid)</i> <input type="checkbox"/> <i>Dactylopius sp.</i> <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Abantia expansa</i> <input type="checkbox"/> <i>Syllidae</i> <input checked="" type="checkbox"/> <i>Glyptotendipes bimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Trimeletidae</i> <input type="checkbox"/> <i>Brachymeimurus sp.</i> <input type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Disostera pictipennis</i> <input type="checkbox"/> <i>Lepus intermedus</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Schistocerca nitens</i> <input checked="" type="checkbox"/> <i>Schistocerca sp.</i> 	<p>Arachnida:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Araucidae</i> <input checked="" type="checkbox"/> <i>Arctidae viridans</i> <input type="checkbox"/> <i>Dipluridae</i> <input type="checkbox"/> <i>Lenonychia pacificus</i> <input type="checkbox"/> <i>Lathrolestes hesperus</i> <input type="checkbox"/> <i>Salicidae</i> <input type="checkbox"/> <i>Thalpius formosus</i> <input checked="" type="checkbox"/> <i>Thomisidae</i> <p>Collembola:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Tricentropus pallidipennis</i> <input type="checkbox"/> <i>Gryllus sp.</i> <input type="checkbox"/> <i>Decanthus fulvum</i> <input type="checkbox"/> <i>Tetrigonidae</i> <input type="checkbox"/> <i>Antithea expansa</i> <input type="checkbox"/> <i>Scutelleria mexicana</i> <input checked="" type="checkbox"/> <i>Stenopelmatus sp.</i> <input type="checkbox"/> <i>Iris aratoria</i> <input type="checkbox"/> <i>Stagonomantis californica</i> <input type="checkbox"/> <i>Parabacillus heyeris</i> <p>Odonata:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aeshna multicolor</i> <input type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula saturata</i> <input checked="" type="checkbox"/> <i>Pantala flavescens</i> <input type="checkbox"/> <i>Perithemis intensa</i> <input type="checkbox"/> <i>Progomphus borealis</i> <input type="checkbox"/> <i>Sympetrum corruptum</i> <input type="checkbox"/> <i>Sympetrum illotum</i> <input type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea ornata</i> <input checked="" type="checkbox"/> <i>Argia sp.</i> <input type="checkbox"/> <i>Enallagma sp.</i> <input type="checkbox"/> <i>Telebasis salva</i> <p>Psyllidoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aridopedes campestris</i> <input type="checkbox"/> <i>Erynnis finocleris</i> <input checked="" type="checkbox"/> <i>Heliopetes erictorum</i> <input type="checkbox"/> <i>Hylephila phylaea</i> <input type="checkbox"/> <i>Lerodea eufala</i> <input type="checkbox"/> <i>Paratyton melane</i> <input checked="" type="checkbox"/> <i>Polites sabuleti</i> <input checked="" type="checkbox"/> <i>Argus abjectus</i> <input checked="" type="checkbox"/> <i>Popilio cressphonites</i> <input checked="" type="checkbox"/> <i>Apollio rubus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i>
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Other Wildlife Species Observed:

SOLIZAR
CAIUS

Bird Species Observed:

RTNA TUVU HOSL CAKI
HOFI CORA LOSH PEFA
BASW WEKI MODO AMKE
NOMO SAPH BLTH

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: 5 Acreage Surveyed: 48 Biologist(s): M. DICUS
 Date: 08-17-14 Time (Start/End): 1000 / 1400 Cloud Cover (Start/End): 0 / 0 Temperature in °F (Start/End): 83 / 99

Anthropod Species Observed: Wind Speed in Beaufort (Start/End): 0-3 / 2-6 DSF Detected (Circle): Y (N)

Diptera:	Ichneumon sp.	Polistes fuscatus varifex	Pentatomidae	Trimerotropis californica	Pieris rapae
<i>R. terminalis</i> abdominalis	<i>Dasyamantilla coccinobirta</i>	<i>P. expulsa</i> pennsylvanica	<i>Chlorochroa ligata</i>	<i>Trimerotropis pallidipennis</i>	<i>Pontia protodice</i>
<i>Asiopecter chrysolasia</i>	<i>Dasyamantilla californica</i>	<i>P. expulsa</i> pennsylvanica	<i>Chlorochroa uhleri</i>	<i>Gryllus</i> sp.	<i>Pterophoridae</i>
<i>Agrocyba conyersi</i>	Coleoptera:	<i>Dasyamantilla sockeni</i> (lg.)	<i>Morgantilla histriónica</i>	<i>Decanthis fulvoni</i>	<i>Hemiarctus cernuus</i>
<i>Amomyia pantherina</i>	<i>Buprestidae</i>	<i>Dasyamantilla chymocentra</i>	<i>Pachytrochus</i> sp.	<i>Tettigoniidae</i>	<i>Leucostydia</i>
<i>Asilidae</i>	<i>Carabidae</i>	<i>Camposomeris foliacea</i>	<i>Phytomyia pallidovirens</i>	<i>Antiantilla exposita</i>	<i>A. leucostydia</i>
<i>Efferia albobarbata</i>	<i>Cerambycidae</i>	<i>Trielis albicoma</i>	<i>Trichopoda aurora</i>	<i>Stenopelmatas</i> sp.	<i>Strymon melinus</i>
<i>Meloidae</i>	<i>Coccinellidae</i>	<i>Pentapallidae</i>	<i>Reduviidae</i>	<i>Iris oratoria</i>	<i>Apolesia morio virgata</i>
<i>Proctocyanus</i> sp.	<i>Adalia bipunctata</i>	<i>Pezomachus</i> sp.	<i>Apionidae</i>	<i>Iris oratoria</i>	<i>Agrotis vanillae</i>
<i>Sarcophaga lutea</i>	<i>Chilocorus orbus</i>	<i>Pezomachus</i> sp.	<i>Myiocoris ventralis</i>	<i>Stenopelmatas californica</i>	<i>Danania gillipii</i>
<i>Stenopogon brevisculus</i>	<i>Coccinella</i> sp.	<i>Phaenopila albipennis</i>	<i>Zelus tetracanthus</i>	<i>Parabacillus hesperis</i>	<i>Danus plicipennis</i>
<i>Stenopogon luteus</i>	<i>Harmonia axyridis</i>	<i>Hippodamia convergens</i>	Hemiptera:	<i>Prepsis coenula</i>	<i>Prepsis coenula</i>
<i>Stenopogon luteus</i>	<i>Hippodamia convergens</i>	<i>Olla v-nigrum</i>	Aphididae	<i>Janassa atlantica</i>	<i>Janassa atlantica</i>
<i>Stenopogon luteus</i>	<i>Olla v-nigrum</i>	<i>Elateridae</i> (Click Beetles)	Cercopidae	<i>Janassa curvata</i>	<i>Janassa virginiana</i>
<i>Stenopogon luteus</i>	<i>Elateridae</i> (Click Beetles)	<i>Phytomyia</i> sp.	Cicadellidae	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Phytomyia</i> sp.	<i>Diabrotica</i> sp.	Homaldisca sp.	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Diabrotica</i> sp.	<i>D. unicolor</i>	Cicadidae	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>D. unicolor</i>	<i>Leuca trilineata</i>	Dactylopidae (Cochineal)	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Leuca trilineata</i>	<i>Tachymela laticollis</i>	Dactylopidae sp.	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Tachymela laticollis</i>	<i>Circulionidae</i>	Membracidae	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Circulionidae</i>	<i>Hydrophilidae</i>	Hydrophilidae	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Hydrophilidae</i>	<i>Meloidae</i>	Meloidae	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Meloidae</i>	<i>Nemognatha lurida opicalis</i>	Meloidae	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Nemognatha lurida opicalis</i>	<i>Melyridae</i>	Melyridae	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Melyridae</i>	<i>Collops</i> sp.	Collops sp.	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Collops</i> sp.	<i>Rhipiphoridae</i>	Rhipiphoridae	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Rhipiphoridae</i>	<i>Macroscoelus flavipennis</i>	Macroscoelus sp.	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Macroscoelus flavipennis</i>	<i>Macroscoelus</i> sp.	Macroscoelus sp.	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Macroscoelus</i> sp.	<i>Scarabaeidae</i>	Scarabaeidae	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Scarabaeidae</i>	<i>Paracotopis</i> sp.	Paracotopis sp.	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Paracotopis</i> sp.	<i>Staphylinus maculatus</i>	Staphylinus maculatus	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Staphylinus maculatus</i>	<i>Tenebrionidae</i>	Tenebrionidae	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Tenebrionidae</i>	<i>Elmidae</i> sp.	Elmidae sp.	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Elmidae</i> sp.	Hemiptera:	Hemiptera:	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	Hemiptera:	<i>Lygaeidae</i>	Lygaeidae	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Lygaeidae</i>	<i>Lygaeus kalmii</i>	Lygaeus kalmii	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Lygaeus kalmii</i>	<i>Pyrrhocoridae</i>	Pyrrhocoridae	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Pyrrhocoridae</i>	<i>Largus cinctus</i>	Largus cinctus	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Largus cinctus</i>	Neuroptera:	Neuroptera:	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	Neuroptera:	<i>Chrysopidae</i>	Chrysopidae	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Chrysopidae</i>	<i>Chrysopa</i> sp.	Chrysopa sp.	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Chrysopa</i> sp.	<i>Myrmeleontidae</i>	Myrmeleontidae	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Myrmeleontidae</i>	<i>Myrmeleon</i> sp.	Myrmeleon sp.	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Myrmeleon</i> sp.	<i>Raphididae</i> (Snakeflies)	Raphididae (Snakeflies)	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Raphididae</i> (Snakeflies)	Dermaptera:	Dermaptera:	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	Dermaptera:	<i>Forficula auricularia</i>	Forficula auricularia	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Forficula auricularia</i>	Orthoptera:	Orthoptera:	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	Orthoptera:	<i>Acrididae</i>	Acrididae	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Acrididae</i>	<i>Dissosteira pictipennis</i>	Dissosteira pictipennis	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Dissosteira pictipennis</i>	<i>Leptus albescens</i>	Leptus albescens	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Leptus albescens</i>	<i>Papilio cresphontes</i>	Papilio cresphontes	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Papilio cresphontes</i>	<i>Papilio rutulus</i>	Papilio rutulus	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Papilio rutulus</i>	<i>Colias eurytheme</i>	Colias eurytheme	<i>Arctiidae</i>	<i>Arctiidae</i>
<i>Stenopogon luteus</i>	<i>Colias eurytheme</i>	Other Wildlife Species Observed:	Other Wildlife Species Observed:	<i>Arctiidae</i>	<i>Arctiidae</i>

Bird Species Observed: HOFI BASW KILL SAPH GNST WFIB
EUCD BLPH HOSP AMKE EVST NOMO
COBA CLTA MODO BLBL LEST
COHA TUVU LOPI LOSH EWBL

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CARLE CITY Portion of Site Surveyed: N Acree Surveyed: 34 Biologist(s): M. DUCUS
 Date: 08-18-14 Time (Start/End): 1100 / 1400 Cloud Cover (Start/End): 0 / 10% Temperature in °F (Start/End): 91 / 101
 Arthropod Species Observed: Wind Speed in Beaufort (Start/End): 0-3 / 2-8 DSF Detected (Circle): Y N

Order	Family	Species	Observed
Diptera:	<i>R. irremediatus</i> ab-laminatus	<i>Pentatomidae</i>	<input checked="" type="checkbox"/>
		<i>Chlorochroa ligata</i>	<input checked="" type="checkbox"/>
	<i>Asiocera chrysolabia</i>	<i>Chlorochroa albiteri</i> / <u>SAV</u>	<input checked="" type="checkbox"/>
	<i>Asiocera convergens</i>	<i>Murgantia histrionica</i>	<input checked="" type="checkbox"/>
	<i>Xenomyia pantherina</i>	<i>Podisus</i> sp.	<input checked="" type="checkbox"/>
	<i>Efferia albobarbata</i>	<i>Thyanta pallidivirens</i>	<input checked="" type="checkbox"/>
	<i>Mallofara foveata</i>	<i>Trichopelia aurata</i>	<input checked="" type="checkbox"/>
	<i>Proctacanthus</i> sp.	<i>Rehaviidae</i>	<input checked="" type="checkbox"/>
	<i>Sarcophaga baleni</i>	<i>Apioneris crassipes</i>	<input checked="" type="checkbox"/>
	<i>Stenopogon breviscutis</i>	<i>Rhynocoris ventralis</i>	<input checked="" type="checkbox"/>
<i>Basidae</i> (May Flies)	<i>Zelus tetrocanthus</i>	<input checked="" type="checkbox"/>	
<i>Bambusidae</i>	Odonata:		
<i>Evostratops</i> sp.	<i>Aeshna multicolor</i>	<input checked="" type="checkbox"/>	
<i>Ligota gazophylax</i>	<i>Anax junius</i>	<input checked="" type="checkbox"/>	
<i>Mythimista</i> sp.	<i>Erythemis collocata</i>	<input checked="" type="checkbox"/>	
<i>Psephenilax arthura</i>	<i>Libellula croceipennis</i>	<input checked="" type="checkbox"/>	
<i>Psephenilax</i> sp.	<i>Cicadidae</i>	<input checked="" type="checkbox"/>	
<i>Toxophora peribicida</i>	<i>Dactylopiidae</i> (Coccinellae)	<input checked="" type="checkbox"/>	
<i>Villa arata</i>	<i>Ducytoplus</i> sp.	<input checked="" type="checkbox"/>	
<i>Zenax simpsoni</i>	<i>Membracidae</i>	<input checked="" type="checkbox"/>	
<i>Calliphora</i> sp.	<i>Anticarsus expansus</i>	<input checked="" type="checkbox"/>	
<i>Eucalliphora lilacea</i>	<i>Psyllidae</i>	<input checked="" type="checkbox"/>	
<i>Phaenicia cuprina</i>	<i>Glyptotendipes brimblecombei</i>	<input checked="" type="checkbox"/>	
<i>Phaenicia sericata</i>	Neuroptera:		
<i>Cynopidea</i> sp.	<i>Chrysopidae</i>	<input checked="" type="checkbox"/>	
<i>Physoccephala texana</i>	<i>Chrysopa</i> sp.	<input checked="" type="checkbox"/>	
<i>Culicidae</i> - mosquitoes	<i>Myrmeleontidae</i>	<input checked="" type="checkbox"/>	
<i>Culex</i> sp.	<i>Myrmeleon</i> sp.	<input checked="" type="checkbox"/>	
<i>Condylostylus</i> sp.	<i>Raphidiidae</i> (Snakeflies)	<input checked="" type="checkbox"/>	
<i>Prosopeulidae</i>	Dermoptera:		
<i>Musca domestica</i>	<i>Porphyra auricularia</i>	<input checked="" type="checkbox"/>	
<i>Sarcophaga</i> sp.	Orthoptera:		
<i>Sarcophaga</i> sp.	<i>Acrididae</i>	<input checked="" type="checkbox"/>	
<i>Stratiomyidae</i>	<i>Dioscoteira pictipennis</i>	<input checked="" type="checkbox"/>	
<i>Syrphidae</i>	<i>Leprus intermedium</i>	<input checked="" type="checkbox"/>	
<i>Allograpta obliqua</i>	<i>Melanoplus</i> sp.	<input checked="" type="checkbox"/>	
<i>Eristalis tenax</i>	<i>Schistocerca nitens</i>	<input checked="" type="checkbox"/>	
<i>Metasyrphus americanus</i>	<i>Schistocerca</i> sp.	<input checked="" type="checkbox"/>	
<i>Pocheilia mexicana</i>			
<i>Tabanidae</i>			

Bird Species Observed: BAW LOSH ANKL COLA SAPH RJHA TWU MODO EVED WEKI HOFI ROPI

Other Wildlife Species Observed: SB LEZARD W. FENCE LEZARD

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: 5 Acreage Surveyed: 48 Biologist(s): M. DICUS
 Date: 08-19-14 Time (Start/End): 1000 / 1400 Cloud Cover (Start/End): 20% / 25% Temperature in °F (Start/End): 75 / 86

Arthropod Species Observed: Wind Speed in Beaufort (Start/End): 2-5 / 4-10 DSF Detected (Circle): Y (N)

Diptera:	<i>Tobacco</i> punctifer	<i>Ichneumon</i> sp.	<i>Polistes</i> fuscatus aurifer	Pentatomidae:	<i>Trimerotropis californica</i>	<i>Trioxys rufus</i>
<i>R. terminatus abdorminatus</i>	<i>Tachinidae</i>	<i>Dasympyla coccineohirta</i>	<i>Espila pennsylvanica</i>	<i>Phlorochroa ligata</i>	<i>Trimerotropis pallidipennis</i>	<i>Panotia prodigiosa</i>
<i>Apococera chrysolata</i>	<i>Trochilidae</i>	<i>Dasympyla californica</i>	Coleoptera:	<i>Chlorochroa ulteri</i> / <u>SAV</u>	<i>Cryllus</i> sp.	<i>Brephidium exilis</i>
<i>Agrocyba convergens</i>	<i>Gymnastix fuliginosum</i>	<i>Dasympyla sackeni</i> (g.)	<i>Huprestidae</i>	<i>Murgantia histrionica</i>	<i>Decanthis fulvoni</i>	<i>Hemiarergus cervinus</i>
<i>Amomyia pantherina</i>	<i>Therevidae</i> (Stiletto Fly)	<i>Dasympyla chymensis</i>	<i>Carabidae</i>	<i>Podisus</i> sp.	<i>Tettigoniidae</i>	<i>Icaricia oceanus</i>
<i>Asilidae</i>	<i>Ceratomyxeris tolteca</i>	<i>Trioxys albione</i>	<i>Cerambycidae</i>	<i>Thynanus pallidivirens</i>	<i>Antoniae exposita</i>	<i>Epiplatys mirana</i>
<i>Efferia albicincta</i>	<i>Tripulidae</i>	<i>Pontopithecus</i>	<i>Coccinellidae</i>	<i>Trichopepla aurora</i>	<i>Scudderia mexicana</i>	<i>Strymon melinus</i>
<i>Mallophora fuscata</i>	<i>Nephrilotoma</i> sp.	<i>Pezomachus</i>	<i>Adalia bipunctata</i>	<i>Resulvinae</i>	<i>Nemophaenax</i> sp.	<i>Apodemus moerom virgultii</i>
<i>Proctocera</i> sp.	Hymenoptera:	<i>Sphecidae</i>	<i>Chilocorus orbis</i>	<i>Apioneris crassipes</i>	<i>Iris oratoria</i>	<i>Agrionis virgillae</i>
<i>Sarcophaga luteus</i>	<i>Ants</i>	<i>Hemophila alberr</i>	<i>Coccinella</i> sp.	<i>Rhynocoris ventralis</i>	<i>Stenomacrus californica</i>	<i>Danusus picipennis</i>
<i>Stenopogon brevicornis</i>	<i>Formicidae</i>	<i>Bombus americanus</i>	<i>Hippodamia convergens</i>	<i>Zelus tetrocanthus</i>	<i>Parabacillus hesperis</i>	<i>Pectis coarctata</i>
<i>Esocidae</i> (May Flies)	<i>Tridomyrmex humilis</i>	<i>Bombus morio</i>	<i>Olla v-nigrum</i>	Homoptera:	<i>Urosalpinx multicolor</i>	<i>Tamessa annabellia</i>
<i>Calibaetis pacificus</i>	<i>Formica</i> sp.	<i>Bombus melanopis</i>	<i>Elateridae</i> (Click Beetles)	<i>Aphididae</i>	<i>Atractodes junius</i>	<i>Tamessa carabii</i>
<i>Beetle</i>	<i>Liometopum occidentale</i>	<i>Bicyrtis</i> sp.	<i>Chrysomelidae</i>	<i>Cercopidae</i>	<i>Erythemis collocata</i>	<i>Tamessa virginensis</i>
<i>Lygus gaezophylax</i>	<i>Alexator pergande</i>	<i>Cerceris</i> sp.	<i>Diabrotica balteata</i>	<i>Homalictidae</i>	<i>Libellula subarata</i>	<i>Arctiidae</i>
<i>Psocoptera</i> sp.	<i>Pogonomymex californica</i>	<i>Hoplisoides</i> sp.	<i>A. undecimpunctata</i>	<i>Cicadidae</i>	<i>Pachylophax longipennis</i>	<i>Autioleba californica</i>
<i>Poecilanthrax areolaris</i>	<i>Solenopsis</i> sp.	<i>Chad hion californicus</i>	<i>Leona trilineata</i>	<i>Dactyloptera</i>	<i>Pantala flavescens</i>	<i>Schinia</i>
<i>Poecilanthrax</i> sp.	Bees	<i>Chlorion aerarium</i>	<i>Cuculionidae</i>	<i>Membracidae</i>	<i>Perithemis intensa</i>	<i>Pyralidae</i>
<i>Toxophora pellucida</i>	<i>Anthophoridae</i>	<i>Encerceris insignis</i>	<i>Halipidae</i>	<i>Sympyrum borealis</i>	<i>Progomphus borealis</i>	<i>Paramblyene robiniae</i>
<i>Villa atrata</i>	<i>Anthophora urbana</i>	<i>Hoplisoides</i> sp.	<i>Hydrophylidae</i>	<i>Stenopogon</i>	<i>Sympyrum illinoim</i>	<i>Hyles lineata</i>
<i>Proctos</i> sp.	<i>Melissodes</i> sp.	<i>Isodontia aequalis</i>	<i>Meloidae</i>	<i>Glycyptis brimblecombei</i>	<i>Tramea lacerata</i>	<i>Mansuetica secta</i>
<i>Eucalliphora flavus</i>	<i>Apis mellifera</i>	<i>Isodontia</i> sp.	<i>Nemophila lurida apticalis</i>	Neuroptera:	<i>Arctia</i> sp.	Arachnida:
<i>Phaenicia ferricata</i>	<i>Bombus californicus</i>	<i>Microbembix californicus</i>	<i>Melyridae</i>	<i>Chrysopidae</i>	<i>Enallagma</i> sp.	<i>Araneidae</i>
<i>Phaenicia cuprina</i>	<i>Bombus crotchii</i>	<i>Phidantbus multimaculata</i>	<i>Collops</i> sp.	<i>Chrysopa</i> sp.	<i>Telebasis salva</i>	<i>Arctiidae</i>
<i>Phaenicia ferricata</i>	<i>Bombus vosnesenskii</i>	<i>Phidantbus ventralis</i>	<i>Rhaphignathidae</i>	<i>Macrostigmus flavipennis</i>	<i>Macrostigmus</i> sp.	<i>Dipluridae</i>
<i>Physoccephala texana</i>	<i>Halictidae</i>	<i>Podalonia</i> sp.	<i>Macrostigmus</i>	<i>Myrmelonus</i> sp.	<i>Atalapha cuneipennis</i>	<i>Leurostichus hesperus</i>
<i>Culex</i> sp.	<i>Agropostemon</i> sp.	<i>Prionyx foxi</i>	<i>Carabidae</i>	<i>Raphididae</i> (Snakeflies)	<i>Erymus foveolus</i>	<i>Salicidae</i>
<i>Cnephia</i> sp.	<i>Nomia nevadensis</i>	<i>Prionyx</i> sp.	<i>Cottinus mutabilis</i>	Dermaptera:	<i>Heliopetes ericetorum</i>	<i>Psilippus formosus</i>
<i>Phrosopidae</i>	<i>Megachilidae</i>	<i>Spilix ichneumonius</i>	<i>Staphylinus macillous</i>	<i>Forficula auricularia</i>	<i>Hylephila phyllus</i>	<i>Thomisidae</i>
<i>Atasca domestica</i>	<i>Diamphidum</i> sp.	<i>Suzoides remicinctum</i>	<i>Gnathocera</i> sp.	Orthoptera:	<i>Lerodea eufala</i>	G. HILGUS
<i>Sarcophaga</i> sp.	<i>Megachile</i> sp.	<i>Tachytes elongatus</i>	<i>Vespidae</i> - unidentified	<i>Acrididae</i>	<i>Paratone melane</i>	
<i>Stratiomyidae</i>	<i>Pendia</i> sp.	<i>Tiphidae</i>	<i>Eumenes bollii</i>	<i>Dissosteira pictipennis</i>	<i>Polistes subleiti</i>	
<i>Syrphidae</i>	Wasps	<i>Vespidae</i> - unidentified	<i>Eumenes crucifera</i>	<i>Leprus intermedium</i>	<i>Pyrgus albescens</i>	
<i>Allograpta obliqua</i>	<i>Chalcididae</i>	<i>Eumenes bollii</i>	<i>Euclyptus annulata</i>	<i>Melanoplus</i> sp.	<i>Papilio cresphontes</i>	
<i>Eristalis tenax</i>	<i>Chrysididae</i>	<i>Euclyptus annulata</i>	<i>Polistes apachus</i>	<i>Schistocerca nitens</i>	<i>Papilio rutulus</i>	
<i>Metasymphyla americana</i>	<i>Phytomyza pacifica</i>	<i>Polistes dorsalis</i>	<i>Polistes exclamans</i>	<i>Schistocerca</i> sp.	<i>Colias eurytheme</i>	
<i>Volucella mexicana</i>	<i>Ichneumonidae</i>					

Bird Species Observed: BAW BLPH NOMO AMKE BNST GRST
ATHA BAK1 POPI BAOL LESA
EUCD TUW SAPH EUST MAL
HOSP CORA KILL MOJD WFIB

Other Wildlife Species Observed:
SB WEARD
BTJE
COYONTAL
CALS

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: N Acreage Surveyed: 34 Biologist(s): M. ARJUS
 Date: 08-20-14 Time (Start/End): 105/1405 Cloud Cover (Start/End): 20%/70% Temperature in °F (Start/End): 80/89

Arthropod Species Observed: _____ Wind Speed in ^{mph}Beaufort (Start/End): 1-3 / 0-5 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Tabanus punctifer</i> <input type="checkbox"/> <i>R. ictericus</i> <input type="checkbox"/> <i>R. ictericus abdominalis</i> <input type="checkbox"/> <i>Archytas apicifer</i> <input type="checkbox"/> <i>Gynoprosoma fuliginosum</i> <input type="checkbox"/> <i>Therividae (Shinletto Fly)</i> <input type="checkbox"/> <i>Ceratitis capitata</i> <input type="checkbox"/> <i>Tipulidae</i> <input type="checkbox"/> <i>Nephrotoma sp.</i> <p>Hymenoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pepsus mildei</i> <input type="checkbox"/> <i>Pepsus sp.</i> <input type="checkbox"/> <i>Sphexidae</i> <input type="checkbox"/> <i>Amnophila albertyi</i> <input type="checkbox"/> <i>Amnophila sp.</i> <input checked="" type="checkbox"/> <i>Bembix americana comata</i> <input type="checkbox"/> <i>Bembix melanopasta</i> <input type="checkbox"/> <i>Bicyrtes sp.</i> <input type="checkbox"/> <i>Cerceris sp.</i> <input type="checkbox"/> <i>Chalybion californicus</i> <input type="checkbox"/> <i>Chalybion aeternum</i> <input type="checkbox"/> <i>Eucerteris insignis</i> <input type="checkbox"/> <i>Hoplisisidius diversus</i> <input type="checkbox"/> <i>Hoplisisidius sp.</i> <input type="checkbox"/> <i>Isodontia elegans</i> <input checked="" type="checkbox"/> <i>Microbambus californicus</i> <input type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Philanthus venidabris</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Prionyx fessi</i> <input type="checkbox"/> <i>Prionyx sp.</i> <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphegus ichneumonius</i> <input type="checkbox"/> <i>Sicoides renicinctus</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Euclypterus annulata</i> <input checked="" type="checkbox"/> <i>Polistes opachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> <p>Bees</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Anthophoridae</i> <input type="checkbox"/> <i>Anthophora urbana</i> <input type="checkbox"/> <i>Melissodes sp.</i> <input checked="" type="checkbox"/> <i>Megacopta varians</i> <input type="checkbox"/> <i>Apis mellifera</i> <input type="checkbox"/> <i>Bombus californicus</i> <input type="checkbox"/> <i>Bombus croceus</i> <input type="checkbox"/> <i>Bombus sonorus</i> <input type="checkbox"/> <i>Bombus vosnesenskii</i> <input type="checkbox"/> <i>Halictidae</i> <input type="checkbox"/> <i>Agapostemon sp.</i> <input type="checkbox"/> <i>Ngamia nevadensis</i> <input type="checkbox"/> <i>Macgillivraya</i> <input type="checkbox"/> <i>Dianthidium sp.</i> <input type="checkbox"/> <i>Megachile sp.</i> <input checked="" type="checkbox"/> <i>Perditia sp.</i> <p>Wasps</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chalcididae</i> <input type="checkbox"/> <i>Chrysididae</i> <input type="checkbox"/> <i>Chrysurus pacifica</i> <input type="checkbox"/> <i>Parapropis edwardsii</i> <input type="checkbox"/> <i>Ichneumonidae</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input type="checkbox"/> <i>Chlorochroa wherryi</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Trioxys pallidivirens</i> <input checked="" type="checkbox"/> <i>Trichopoda aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Apiomeris crassipes</i> <input type="checkbox"/> <i>Rhyacionia ventralis</i> <input type="checkbox"/> <i>Zelus tetroactanthus</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aphididae</i> <input checked="" type="checkbox"/> <i>Aphis malvicolour</i> <input type="checkbox"/> <i>Aphis juncea</i> <input type="checkbox"/> <i>Erythremis collocata</i> <input type="checkbox"/> <i>Libinia croceipennis</i> <input type="checkbox"/> <i>Libinia saarista</i> <input checked="" type="checkbox"/> <i>Pantala flavescens</i> <input type="checkbox"/> <i>Perithemis intensa</i> <input type="checkbox"/> <i>Progonophus borealis</i> <input type="checkbox"/> <i>Sympetrum corruptum</i> <input type="checkbox"/> <i>Sympetrum illotum</i> <input type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea ornata</i> <input type="checkbox"/> <i>Argia sp.</i> <input type="checkbox"/> <i>Enallagma sp.</i> <input type="checkbox"/> <i>Telebasis salva</i> <p>Leptidoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Andopodes campestris</i> <input type="checkbox"/> <i>Erynnis funealis</i> <input checked="" type="checkbox"/> <i>Heliopteryx erictorum</i> <input type="checkbox"/> <i>Lerema eryala</i> <input type="checkbox"/> <i>Paratrytone melane</i> <input checked="" type="checkbox"/> <i>Polites sabuleti</i> <input type="checkbox"/> <i>Polyus albescens</i> <input type="checkbox"/> <i>Papilio cresphontes</i> <input checked="" type="checkbox"/> <i>Papilio rutulus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Lepus intermedium</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca sp.</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Myrmeleontidae</i> <input type="checkbox"/> <i>Brachyneururus sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Collembola:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Dasymeris coccineohirta</i> <input type="checkbox"/> <i>Dasymeris californica</i> <input type="checkbox"/> <i>Dasymeris sackeni (lg.)</i> <input type="checkbox"/> <i>Dasymeris chymenocentra</i> <input type="checkbox"/> <i>Comptosia nitens</i> <input type="checkbox"/> <i>Triela aktione</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pepsus mildei</i> <input type="checkbox"/> <i>Pepsus sp.</i> <input type="checkbox"/> <i>Sphexidae</i> <input type="checkbox"/> <i>Amnophila albertyi</i> <input type="checkbox"/> <i>Amnophila sp.</i> <input checked="" type="checkbox"/> <i>Bembix americana comata</i> <input type="checkbox"/> <i>Bembix melanopasta</i> <input type="checkbox"/> <i>Bicyrtes sp.</i> <input type="checkbox"/> <i>Cerceris sp.</i> <input type="checkbox"/> <i>Chalybion californicus</i> <input type="checkbox"/> <i>Chalybion aeternum</i> <input type="checkbox"/> <i>Eucerteris insignis</i> <input type="checkbox"/> <i>Hoplisisidius diversus</i> <input type="checkbox"/> <i>Hoplisisidius sp.</i> <input type="checkbox"/> <i>Isodontia elegans</i> <input checked="" type="checkbox"/> <i>Microbambus californicus</i> <input type="checkbox"/> <i>Philanthus multimaculata</i> <input type="checkbox"/> <i>Philanthus venidabris</i> <input type="checkbox"/> <i>Podalonia sp.</i> <input type="checkbox"/> <i>Prionyx fessi</i> <input type="checkbox"/> <i>Prionyx sp.</i> <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Sphegus ichneumonius</i> <input type="checkbox"/> <i>Sicoides renicinctus</i> <input type="checkbox"/> <i>Tachytes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Euclypterus annulata</i> <input checked="" type="checkbox"/> <i>Polistes opachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> 	<p>Amphibia:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Hemierophis californica</i> <input checked="" type="checkbox"/> <i>Trimerotropus pallidipennis</i> <input type="checkbox"/> <i>Gryllus sp.</i> <input checked="" type="checkbox"/> <i>Onychophora fulvipes</i> <input type="checkbox"/> <i>Tetragonidae</i> <input type="checkbox"/> <i>Anisotriton expansa</i> <input type="checkbox"/> <i>Scaphiopus mexicanus</i> <input checked="" type="checkbox"/> <i>Strymon melleus</i> <input type="checkbox"/> <i>Apoecyba mormo vernalis</i> <input type="checkbox"/> <i>Agraulis vanillae</i> <input type="checkbox"/> <i>Danaus gilippus</i> <input type="checkbox"/> <i>Danaus plexippus</i> <input type="checkbox"/> <i>Preclis coenia</i> <input type="checkbox"/> <i>Vanessa annabella</i> <input type="checkbox"/> <i>Vanessa atalanta</i> <input type="checkbox"/> <i>Vanessa cardui</i> <input type="checkbox"/> <i>Vanessa virginiensis</i> <input type="checkbox"/> <i>Arctiidae</i> <input type="checkbox"/> <i>Noctuidae</i> <input type="checkbox"/> <i>Autographa californica</i> <input type="checkbox"/> <i>Sphinx sp.</i> <input checked="" type="checkbox"/> <i>Geometridae</i> <input type="checkbox"/> <i>Pyralidae</i> <input type="checkbox"/> <i>Paranthrene robiniae</i> <input type="checkbox"/> <i>Hyles lineata</i> <input type="checkbox"/> <i>Manubaca setus</i> <p>Arachnida:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Araneidae</i> <input checked="" type="checkbox"/> <i>Proctia viridius</i> <p>Diptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Leptomyia pacifica</i> <input type="checkbox"/> <i>Lutrodractus hesperus</i> <input type="checkbox"/> <i>Salicidae</i> <input checked="" type="checkbox"/> <i>Phidippus formosus</i> <input type="checkbox"/> <i>Thomisidae</i> <p>PHOBUS SCORAE</p> <p>A. MILARIS</p>
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Other Wildlife Species Observed:

SB LIZARD

Bird Species Observed:

BLSW MODD TUNU
COLA BLPH CAKI
MYFA SAPH LOSH
AMEE HOFI KILL

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: 5 Acreage Surveyed: 48 Biologist(s): M. Dicus
 Date: 08-21-14 Time (Start/End): 09:50 / 14:00 Cloud Cover (Start/End): 0 / 10% Temperature in °F (Start/End): 79 / 88

Arthropod Species Observed: Wind Speed in Beaufort (Start/End): 0-3 / 1-7 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apiocera chrysohalia</i> <input type="checkbox"/> <i>Apiocera convergens</i> <input type="checkbox"/> <i>Nemomydas pomiliterina</i> <input checked="" type="checkbox"/> <i>Efferia albivittata</i> <input type="checkbox"/> <i>Mallotophora foveata</i> <input type="checkbox"/> <i>Proctocanthus sp.</i> <input type="checkbox"/> <i>Stenopogon luteus</i> <input checked="" type="checkbox"/> <i>Stenopogon breviscaulus</i> <input type="checkbox"/> <i>Baetidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Bembyliidae</i> <input type="checkbox"/> <i>Exoprosopa sp.</i> <input type="checkbox"/> <i>Ligya geophylax</i> <input type="checkbox"/> <i>Myricomyia sp.</i> <input type="checkbox"/> <i>Pocillanthes areolaris</i> <input type="checkbox"/> <i>Pocillanthes sp.</i> <input type="checkbox"/> <i>Tarophora pellucida</i> <input type="checkbox"/> <i>Lybia atrata</i> <input type="checkbox"/> <i>Zenax simpsoni</i> <input checked="" type="checkbox"/> <i>Calliphora sp.</i> <input checked="" type="checkbox"/> <i>Exalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physocphala texana</i> <input type="checkbox"/> <i>Callitidae - mosquitoes</i> <input type="checkbox"/> <i>Caterinidae</i> <input type="checkbox"/> <i>Cynophylax sp.</i> <input type="checkbox"/> <i>Prosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasympyla americana</i> <input checked="" type="checkbox"/> <i>Pobocella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichneumon sp.</i></p> <p>Chalcididae:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Dasyneura coccineohirta</i> <input type="checkbox"/> <i>Dasyneura californica</i> <input type="checkbox"/> <i>Dasyneura sackeni</i> (lg.) <input type="checkbox"/> <i>Dasyneura cyathinervis</i> <input type="checkbox"/> <i>Campoplex tolteca</i> <input type="checkbox"/> <i>Trielus albione</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pepys milleti</i> <input type="checkbox"/> <i>Pepus sp.</i> <input checked="" type="checkbox"/> <i>Sphictidae</i> <input checked="" type="checkbox"/> <i>Amnophila alberti</i> <input type="checkbox"/> <i>Amnophila sp.</i> <input type="checkbox"/> <i>Bembix americana conata</i> <input type="checkbox"/> <i>Bembix melanopis</i> <input type="checkbox"/> <i>Bicyrtus</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachyphala lamicalis</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Dermestidae</i> <input type="checkbox"/> <i>Elateridae (Click Beetles)</i> <input type="checkbox"/> <i>Haliplidae</i> <input type="checkbox"/> <i>Hydroptylidae</i> <input checked="" type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemognathus lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops sp.</i> <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrosoma flavipennis</i> <input type="checkbox"/> <i>Macrosoma sp.</i> <input checked="" type="checkbox"/> <i>Scarabaeidae</i> <input type="checkbox"/> <i>Colinus muribus</i> <input type="checkbox"/> <i>Paracatopa sp.</i> <input type="checkbox"/> <i>Staphylinus merillonus</i> <input type="checkbox"/> <i>Tenebrionidae</i> <input type="checkbox"/> <i>Eleodes sp.</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Eumenes crucifera</i> <input type="checkbox"/> <i>Saundersia annulata</i> <input checked="" type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> 	<p>Pentatomidae:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Chlorochroa ligata</i> <input type="checkbox"/> <i>Chlorochroa uhleritanyi</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Trioxys pallidivirens</i> <input type="checkbox"/> <i>Trichopepla aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Apiomeris crassipes</i> <input type="checkbox"/> <i>Rhynchosia ventralis</i> <input type="checkbox"/> <i>Zelus tetracanthus</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aphididae</i> <input checked="" type="checkbox"/> <i>Aphis multicolor</i> <input type="checkbox"/> <i>Aphis junius</i> <input type="checkbox"/> <i>Erythema collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula sabulina</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input checked="" type="checkbox"/> <i>Pantala flavescens</i> <input type="checkbox"/> <i>Perrhenis intensa</i> <input type="checkbox"/> <i>Progomphus borealis</i> <input type="checkbox"/> <i>Sympetrum corruptum</i> <input type="checkbox"/> <i>Sympetrum illotum</i> <input type="checkbox"/> <i>Tramea lacustris</i> <input type="checkbox"/> <i>Tramea onusta</i> <input type="checkbox"/> <i>Argia sp.</i> <input type="checkbox"/> <i>Enallagma sp.</i> <input type="checkbox"/> <i>Telebasis salva</i> <p>Leptodactyla:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Atalapha compestris</i> <input type="checkbox"/> <i>Erynnis funeralis</i> <input checked="" type="checkbox"/> <i>Heliopterus erictorium</i> <input type="checkbox"/> <i>Hyalephila phyleus</i> <input type="checkbox"/> <i>Lerodes eufala</i> <input type="checkbox"/> <i>Paratrachea melane</i> <input checked="" type="checkbox"/> <i>Polites subulteri</i> <input type="checkbox"/> <i>Pyrgus albescens</i> <input type="checkbox"/> <i>Papilio cresphontes</i> <input type="checkbox"/> <i>Papilio rutulus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input checked="" type="checkbox"/> <i>Myrmeleonidae</i> <input type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermaptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Leprus intermedialis</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input checked="" type="checkbox"/> <i>Schistocerca nitens</i> <input checked="" type="checkbox"/> <i>Schistocerca sp.</i>
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Other Wildlife Species Observed:

<u>SO LIZARD</u>	<u>CATS</u>	<u>CORONAL</u>
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Bird Species Observed:

<u>BLFH</u>	<u>HOFI</u>	<u>EUST</u>	<u>MODE</u>	<u>RWBL</u>
<u>BASW</u>	<u>ANR2</u>	<u>ATFL</u>	<u>BGST</u>	<u>EUCD</u>
<u>RTHA</u>	<u>SAPH</u>	<u>ANNE</u>	<u>WFIB</u>	<u>CAKI</u>
<u>ROPI</u>	<u>TUVU</u>	<u>GRBL</u>	<u>LESA</u>	

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: N Acreage Surveyed: 34 Biologist(s): M. DAVIS
 Date: 08-22-14 Time (Start/End): 1000/1255 Cloud Cover (Start/End): 0 / 0 Temperature in °F (Start/End): 79 / 90
 Arthropod Species Observed: Wind Speed in Beaufort (Start/End): 2-4 / 4-8 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terricola abdominalis</i> <input type="checkbox"/> <i>Apocera chrysolana</i> <input type="checkbox"/> <i>Apocera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input checked="" type="checkbox"/> <i>Aulide</i> <input checked="" type="checkbox"/> <i>Efferia albibarbaris</i> <input checked="" type="checkbox"/> <i>Molophilus fauveli</i> <input type="checkbox"/> <i>Proctacanthus sp.</i> <input type="checkbox"/> <i>Sarcophaga laevis</i> <input checked="" type="checkbox"/> <i>Sarcophaga brevicornis</i> Bacidae (May Flies) <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> Bombyliidae <input type="checkbox"/> <i>Esoprosopa sp.</i> <input type="checkbox"/> <i>Liguro sarcophylax</i> <input type="checkbox"/> <i>Mythicomya sp.</i> <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax sp.</i> <input type="checkbox"/> <i>Trochophora pellucida</i> <input type="checkbox"/> <i>Vulla atrata</i> <input type="checkbox"/> <i>Zenax simpsoni</i> <input checked="" type="checkbox"/> <i>Calliphora sp.</i> <input checked="" type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cyprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Conopidae sp.</i> <input type="checkbox"/> <i>Physoccephala texana</i> <input type="checkbox"/> <i>Celididae - mosquitoes</i> <input type="checkbox"/> <i>Catereridae</i> <input type="checkbox"/> <i>Condylostylus sp.</i> <input type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input checked="" type="checkbox"/> <i>Sarcophagidae</i> <input checked="" type="checkbox"/> <i>Sarcophaga sp.</i> <input type="checkbox"/> <i>Aristomyiidae</i> <input checked="" type="checkbox"/> <i>Syrphidae</i> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input checked="" type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichnumon sp.</i></p> <p>Coleoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Dasymutilla coccinellaria</i> <input type="checkbox"/> <i>Dasymutilla californica</i> <input type="checkbox"/> <i>Dasymutilla sockeri</i> (fig.) <input type="checkbox"/> <i>Dasymutilla chryseolineata</i> <input type="checkbox"/> <i>Campoplex tolicca</i> <input type="checkbox"/> <i>Trilepis alcyone</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pezomachus sp.</i> <input type="checkbox"/> <i>Pezomachus sp.</i> <input type="checkbox"/> <i>Sphacidae</i> <input type="checkbox"/> <i>Amphipila alberti</i> <input checked="" type="checkbox"/> <i>Amphipila sp.</i> <input checked="" type="checkbox"/> <i>Bembix americana comata</i> <input type="checkbox"/> <i>Bembix melanopasta</i> <input type="checkbox"/> <i>Bicyrtis sp.</i> <input type="checkbox"/> <i>Cerceris sp.</i> <input type="checkbox"/> <i>Chalybion californica</i> <input type="checkbox"/> <i>Chalybion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Haplusoides diversus</i> <input type="checkbox"/> <i>Haplusoides sp.</i> <input type="checkbox"/> <i>Isodont aelegans</i> <input type="checkbox"/> <i>Microbembix californica</i> <input checked="" type="checkbox"/> <i>Philonthus multinotatus</i> <input checked="" type="checkbox"/> <i>Philonthus multinotatus sp.</i> <input type="checkbox"/> <i>Podabulbia sp.</i> <input type="checkbox"/> <i>Prionyx fovi</i> <input type="checkbox"/> <i>Prionyx sp.</i> <input type="checkbox"/> <i>Scaphiron caementarium</i> <input type="checkbox"/> <i>Sphegichneumonius</i> <input type="checkbox"/> <i>Stizoides reticulatus</i> <input type="checkbox"/> <i>Tachyus elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespidae - unidentified</i> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input checked="" type="checkbox"/> <i>Stenodynerus ornulata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> <input type="checkbox"/> <i>Polistes fuscopus aurifer</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Chlorochroa ligata</i> <input type="checkbox"/> <i>Chlorochroa wherryi/saysi</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Thymus pallidivirens</i> <input type="checkbox"/> <i>Trichopoda aurora</i> <input type="checkbox"/> <i>Reduviidae</i> <input type="checkbox"/> <i>Apioneris crassipes</i> <input type="checkbox"/> <i>Phytocoris ventrifus</i> <input checked="" type="checkbox"/> <i>Zelus tetracontatus</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> Aphididae: <input type="checkbox"/> <i>Aphis multicolor</i> <input checked="" type="checkbox"/> <i>Anas junius</i> <input type="checkbox"/> <i>Erythema collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula saturata</i> <input type="checkbox"/> <i>Dactylopiidae (Coccinell)</i> <input type="checkbox"/> <i>Dactylopius sp.</i> <input type="checkbox"/> <i>Membracidae</i> <input type="checkbox"/> <i>Andianthe expansa</i> <input checked="" type="checkbox"/> <i>Syllidae</i> <input checked="" type="checkbox"/> <i>Glyptostyris brimblecombei</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa sp.</i> <input type="checkbox"/> <i>Myrmeleontidae</i> <input checked="" type="checkbox"/> <i>Brachynemurus sp.</i> <input type="checkbox"/> <i>Myrmeleon sp.</i> <input type="checkbox"/> <i>Raphidiidae (Snakeflies)</i> <p>Dermatoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Forficula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Leprus intermedium</i> <input type="checkbox"/> <i>Melanoplus sp.</i> <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca sp.</i>
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Bird Species Observed:

BASW HOOP RTHA SAPH
HOFI MOBO COCA AMKE
BLPH TUVU WEKI
NOMO AMTV SAKI

Other Wildlife Species Observed:

SB LIZARD
WRENCE WEARD

S. MILLERS

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: WELLE CITY Portion of Site Surveyed: S Acreage Surveyed: 48 Biologist(s): M. D. CUS
 Date: 07-27-14 Time (Start/End): 1000/1400 Cloud Cover (Start/End): 0-1/10% Temperature in °F (Start/End): 86/110

Arthropod Species Observed: 0-1/3-7 Wind Speed in Beaufort (Start/End): 0-1/3-7 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminalis</i> abdominalis <input type="checkbox"/> <i>Apocera chrysolata</i> <input type="checkbox"/> <i>Apocera convergens</i> <input type="checkbox"/> <i>Neomysdas pantherina</i> <input type="checkbox"/> <i>Asilidae</i> <input type="checkbox"/> <i>Efferia albibarbaris</i> <input type="checkbox"/> <i>Mediophora fawcett</i> <input type="checkbox"/> <i>Proctocerosus</i> sp. <input type="checkbox"/> <i>Sarcophaga hucus</i> <input type="checkbox"/> <i>Senopogon brevicaulis</i> <input type="checkbox"/> <i>Baetidae</i> (May Flies) <input type="checkbox"/> <i>Callibaetis pacificus</i> <input type="checkbox"/> <i>Blattbeetidae</i> <input type="checkbox"/> <i>Esopteroidea</i> sp. <input type="checkbox"/> <i>Liguro gazophylax</i> <input type="checkbox"/> <i>Mythomyia</i> sp. <input type="checkbox"/> <i>Poecilohyalus areolaris</i> <input type="checkbox"/> <i>Poecilometax</i> sp. <input type="checkbox"/> <i>Trotophora pellucida</i> <input checked="" type="checkbox"/> <i>Villa arata</i> <input type="checkbox"/> <i>Zenopsis simpson</i> <input type="checkbox"/> <i>Calliphora</i> sp. <input type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> <i>Physocophala texana</i> <input type="checkbox"/> <i>Callicidae</i> - mosquitoes <input type="checkbox"/> <i>Culicerebidae</i> <input type="checkbox"/> <i>Cnephia</i> sp. <input type="checkbox"/> <i>Drosophilidae</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga</i> sp. <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> <i>Syrphidae</i> <input type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metasyrphus americanus</i> <input type="checkbox"/> <i>Yobucella mexicana</i> <input type="checkbox"/> <i>Tabanidae</i> 	<p><i>Ichneumon</i> sp.</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Dasyneura coccinellivora</i> <input type="checkbox"/> <i>Dasyneura californica</i> <input type="checkbox"/> <i>Dasyneura sackeni</i> (lg.) <input type="checkbox"/> <i>Dasyneura chymenestra</i> <input type="checkbox"/> <i>Camponotus fallax</i> <input type="checkbox"/> <i>Triethis olivace</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Pepsis mildei</i> <input type="checkbox"/> <i>Pezomachus</i> sp. <input checked="" type="checkbox"/> <i>Sphecidae</i> <input type="checkbox"/> <i>Anomophila alberti</i> <input type="checkbox"/> <i>Anomophila</i> sp. <input checked="" type="checkbox"/> <i>Bembix americana comata</i> <input type="checkbox"/> <i>Bembix melanopasta</i> <input type="checkbox"/> <i>Bicyrtis</i> sp. <input type="checkbox"/> <i>Cerceris</i> sp. <input checked="" type="checkbox"/> <i>Chalcidion californicus</i> <input type="checkbox"/> <i>Chlorion aerarium</i> <input type="checkbox"/> <i>Eucerceris insignis</i> <input type="checkbox"/> <i>Hoplisodex diversus</i> <input type="checkbox"/> <i>Hoplisodex</i> sp. <input checked="" type="checkbox"/> <i>Ischnura californica</i> <input type="checkbox"/> <i>Microbembix californicus</i> <input checked="" type="checkbox"/> <i>Philaenus multicaucalis</i> <input type="checkbox"/> <i>Philaenus ventralis</i> <input type="checkbox"/> <i>Podalonia</i> sp. <input type="checkbox"/> <i>Priocera fodi</i> <input type="checkbox"/> <i>Priocera</i> sp. <input type="checkbox"/> <i>Sceliphron caementarium</i> <input type="checkbox"/> <i>Spiloxis schneemanni</i> <input type="checkbox"/> <i>Stenobothrus ruficornis</i> <input type="checkbox"/> <i>Tachyodes elongatus</i> <input type="checkbox"/> <i>Tiphidae</i> <input type="checkbox"/> <i>Vespa</i> - unidentified <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input checked="" type="checkbox"/> <i>Euclyptus annulata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> 	<p><i>Yespula pennsylvanica</i></p> <p>Coleoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Buprestidae</i> <input type="checkbox"/> <i>Carabidae</i> <input type="checkbox"/> <i>Cerambycidae</i> <input type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilocorus orbus</i> <input type="checkbox"/> <i>Coccinella</i> sp. <input type="checkbox"/> <i>Harmonia axyridis</i> <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input type="checkbox"/> <i>D. undecimpunctata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymeris lanicollis</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Dermeestidae</i> <input type="checkbox"/> <i>Elateridae</i> (Click Beetles) <input type="checkbox"/> <i>Halipidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemogarrhis lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Colletes</i> sp. <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrostomus flavipennis</i> <input type="checkbox"/> <i>Microstomus</i> sp. <input type="checkbox"/> <i>Scarabaeidae</i> <input checked="" type="checkbox"/> <i>Colinus mutabilis</i> <input type="checkbox"/> <i>Paracolepa</i> sp. <input type="checkbox"/> <i>Staphylinus macillosus</i> <input type="checkbox"/> <i>Tenebrionidae</i> <input type="checkbox"/> <i>Eleodes</i> sp. <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Lygaeidae</i> <input type="checkbox"/> <i>Lygaeus kalmii</i> <input type="checkbox"/> <i>Pyrrhocoridae</i> <input type="checkbox"/> <i>Largus cinctus</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorocerya ligata</i> <input checked="" type="checkbox"/> <i>Chlorocerya whiterisii</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus</i> sp. <input type="checkbox"/> <i>Thysanus pallidivirens</i> <input type="checkbox"/> <i>Trichopoda aurora</i> <input type="checkbox"/> <i>Pedunculidae</i> <input type="checkbox"/> <i>Plumbeus crassipes</i> <input checked="" type="checkbox"/> <i>Rhymocoris ventralis</i> <input type="checkbox"/> <i>Zelus tetrocervinus</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Aphis multicolor</i> <input checked="" type="checkbox"/> <i>Aphis junias</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula sabulosa</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input checked="" type="checkbox"/> <i>Pantala flavescens</i> <input checked="" type="checkbox"/> <i>Perithemis interpres</i> <input type="checkbox"/> <i>Progomphus borealis</i> <input type="checkbox"/> <i>Sympetrum corruptum</i> <input type="checkbox"/> <i>Sympetrum illotum</i> <input type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea onusta</i> <input type="checkbox"/> <i>Argia</i> sp. <input type="checkbox"/> <i>Enallagma</i> sp. <input type="checkbox"/> <i>Telebasis salina</i> <p>Lepidoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Atalapha compressa</i> <input type="checkbox"/> <i>Erynnis juvenalis</i> <input checked="" type="checkbox"/> <i>Heliopeles erictorum</i> <input checked="" type="checkbox"/> <i>Hylophila phyticus</i> <input checked="" type="checkbox"/> <i>Lerema rufala</i> <input type="checkbox"/> <i>Parasitocera melane</i> <input type="checkbox"/> <i>Polites sabuleti</i> <input checked="" type="checkbox"/> <i>Pyrgus albescens</i> <input type="checkbox"/> <i>Popilio crephloides</i> <input type="checkbox"/> <i>Popilio rutillus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i> 	<p>Phlebotomidae</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Phlebotomus californicus</i> <input checked="" type="checkbox"/> <i>Phlebotomus pallidipennis</i> <input checked="" type="checkbox"/> <i>Gryllus</i> sp. <input type="checkbox"/> <i>Deconitulus fulvoni</i> <input type="checkbox"/> <i>Antitonia expansa</i> <input type="checkbox"/> <i>Scudderia mexicana</i> <input type="checkbox"/> <i>Stenopelmatus</i> sp. <input checked="" type="checkbox"/> <i>Iris oratoria</i> <input type="checkbox"/> <i>Danania gilgiplex</i> <input type="checkbox"/> <i>Danania plicatipes</i> <input checked="" type="checkbox"/> <i>Precta coenosa</i> <input type="checkbox"/> <i>Yanessa ornabellii</i> <input checked="" type="checkbox"/> <i>Yanessa atabaska</i> <input checked="" type="checkbox"/> <i>Yanessa cordus</i> <input type="checkbox"/> <i>Yanessa virginianus</i> <input type="checkbox"/> <i>Arctidae</i> <input type="checkbox"/> <i>Noctuidae</i> <input type="checkbox"/> <i>Autographa californica</i> <input type="checkbox"/> <i>Schinia</i> sp. <input type="checkbox"/> <i>Geometridae</i> <input checked="" type="checkbox"/> <i>Pyralidae</i> <input type="checkbox"/> <i>Paranthrene robiniae</i> <input type="checkbox"/> <i>Hyles lineata</i> <input type="checkbox"/> <i>Manduca sexta</i> <p>Arachnida:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Araneidae</i> <input checked="" type="checkbox"/> <i>Diplocephala</i> <p>Lepidoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Atalapha compressa</i> <input type="checkbox"/> <i>Erynnis juvenalis</i> <input checked="" type="checkbox"/> <i>Heliopeles erictorum</i> <input checked="" type="checkbox"/> <i>Hylophila phyticus</i> <input checked="" type="checkbox"/> <i>Lerema rufala</i> <input type="checkbox"/> <i>Parasitocera melane</i> <input type="checkbox"/> <i>Polites sabuleti</i> <input checked="" type="checkbox"/> <i>Pyrgus albescens</i> <input type="checkbox"/> <i>Popilio crephloides</i> <input type="checkbox"/> <i>Popilio rutillus</i> <input checked="" type="checkbox"/> <i>Colias eurytheme</i>
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Bird Species Observed: EUD RTHA POPI KILL BNST
GLPH COLA AMUR WFBG RUSL
BAFW MODD BRBL LESA HOSP
TUVU EVST ATAL CITE CARI

Other Wildlife Species Observed:
SB LIZARD
COTTONTAIL

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CIRCLE CITY Portion of Site Surveyed: N Acreage Surveyed: 34 Biologist(s): M. DAVIS
 Date: 08-30-14 Time (Start/End): 0950/1255 Cloud Cover (Start/End): 0/0 Temperature in °F (Start/End): 85/99

Wind Speed in Beaufort (Start/End): 0-2/0-2 DSF Detected (Circle): Y **(N)**

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus abdominalis</i> <input type="checkbox"/> <i>Apioera chrysolasia</i> <input type="checkbox"/> <i>Apioera convergens</i> <input checked="" type="checkbox"/> <i>Nemomydas pantherina</i> <input type="checkbox"/> Asilidae <input type="checkbox"/> <i>Efferia albibarbaris</i> <input type="checkbox"/> <i>Malliphora fuscata</i> <input type="checkbox"/> <i>Prociocentrus</i> sp. <input checked="" type="checkbox"/> <i>Sarcophaga luteus</i> <input checked="" type="checkbox"/> <i>Stenopogon breviscaulus</i> <input type="checkbox"/> Beetidae (May Flies) <input checked="" type="checkbox"/> <i>Callibaetis pacificus</i> <input checked="" type="checkbox"/> Bombyliidae <input type="checkbox"/> <i>Exoprosopa</i> sp. <input type="checkbox"/> <i>Ligra gascopylar</i> <input type="checkbox"/> <i>Mythicomyia</i> sp. <input type="checkbox"/> <i>Poecilanthrax arethusa</i> <input type="checkbox"/> <i>Poecilanthrax</i> sp. <input checked="" type="checkbox"/> <i>Taxophora pellucida</i> <input checked="" type="checkbox"/> <i>Vilva atrata</i> <input type="checkbox"/> <i>Zenar simpson</i> <input type="checkbox"/> <i>Calliphora</i> sp. <input checked="" type="checkbox"/> <i>Eucalliphora lilaea</i> <input type="checkbox"/> <i>Phaenicia cuprina</i> <input type="checkbox"/> <i>Phaenicia sericata</i> <input type="checkbox"/> Conopidae sp. <input type="checkbox"/> <i>Physocphala texana</i> <input type="checkbox"/> Culicidae - mosquitoes <input type="checkbox"/> Culex <input type="checkbox"/> <i>Cynodynerus</i> sp. <input type="checkbox"/> <i>Prosenophila</i> <input checked="" type="checkbox"/> <i>Musca domestica</i> <input type="checkbox"/> <i>Sarcophagidae</i> <input type="checkbox"/> <i>Sarcophaga</i> sp. <input type="checkbox"/> <i>Stratiomyidae</i> <input type="checkbox"/> Syrphidae <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis texan</i> <input type="checkbox"/> <i>Metatypus americanus</i> <input type="checkbox"/> <i>Volucella mexicana</i> <input type="checkbox"/> Tabanidae 	<p><i>Ichneumon</i> sp.</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Dasyneutilla coccincolina</i> <input type="checkbox"/> <i>Dasyneutilla californica</i> <input type="checkbox"/> <i>Dasyneutilla sackeni</i> (lg.) <input type="checkbox"/> <i>Dasyneutilla chytmenestra</i> <input type="checkbox"/> <i>Camponotus tolteca</i> <input type="checkbox"/> <i>Triclistus alcyone</i> <input type="checkbox"/> <i>Pompilidae</i> <input type="checkbox"/> <i>Praxista orbis</i> <input type="checkbox"/> <i>Coccinella</i> sp. <input type="checkbox"/> <i>Harmonia axyridis</i> <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Gila v-nigrum</i> <input type="checkbox"/> Chrysomelidae <input type="checkbox"/> <i>Diabrotica balteata</i> <input type="checkbox"/> <i>D. undecimmaculata</i> <input type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymela laticollis</i> <input type="checkbox"/> Curculionidae <input type="checkbox"/> <i>Dermestidae</i> <input type="checkbox"/> <i>Blattariae</i> (Click Beetles) <input type="checkbox"/> Halipidae <input type="checkbox"/> Hydrophilidae <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Neomognathia lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops</i> sp. <input type="checkbox"/> Rhizophoridae <input type="checkbox"/> <i>Macrasigan flavipenne</i> <input type="checkbox"/> <i>Macrasigan</i> sp. <input type="checkbox"/> Scarabaeidae <input type="checkbox"/> <i>Cotinus multibris</i> <input type="checkbox"/> <i>Paracotlops</i> sp. <input type="checkbox"/> <i>Staphylinus mexillonus</i> <input type="checkbox"/> Tenebrionidae <input type="checkbox"/> <i>Eleodes</i> sp. <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Eumecurus crucifera</i> <input type="checkbox"/> <i>Eumecurus annulata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamatus</i> <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> 	<p>Colletes:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Carabidae</i> <input type="checkbox"/> <i>Cerambycidae</i> <input type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Adalia bipunctata</i> <input type="checkbox"/> <i>Chilocorus orbis</i> <input type="checkbox"/> <i>Coccinella</i> sp. <input type="checkbox"/> <i>Harmonia axyridis</i> <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Gila v-nigrum</i> <input type="checkbox"/> Chrysomelidae <input type="checkbox"/> <i>Diabrotica balteata</i> <input type="checkbox"/> <i>D. undecimmaculata</i> <input type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymela laticollis</i> <input type="checkbox"/> Curculionidae <input type="checkbox"/> <i>Dermestidae</i> <input type="checkbox"/> <i>Blattariae</i> (Click Beetles) <input type="checkbox"/> Halipidae <input type="checkbox"/> Hydrophilidae <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Neomognathia lurida apicalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops</i> sp. <input type="checkbox"/> Rhizophoridae <input type="checkbox"/> <i>Macrasigan flavipenne</i> <input type="checkbox"/> <i>Macrasigan</i> sp. <input type="checkbox"/> Scarabaeidae <input type="checkbox"/> <i>Cotinus multibris</i> <input type="checkbox"/> <i>Paracotlops</i> sp. <input type="checkbox"/> <i>Staphylinus mexillonus</i> <input type="checkbox"/> Tenebrionidae <input type="checkbox"/> <i>Eleodes</i> sp. <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Eumecurus crucifera</i> <input type="checkbox"/> <i>Eumecurus annulata</i> <input type="checkbox"/> <i>Polistes apachus</i> <input type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamatus</i> <input type="checkbox"/> <i>Polistes fuscatus aurifer</i> 	<p>Pentatomidae</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input checked="" type="checkbox"/> <i>Chlorochroa whiterisoyi</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus</i> sp. <input type="checkbox"/> <i>Thyanta pallidivirens</i> <input type="checkbox"/> <i>Trichopoda aurora</i> <input type="checkbox"/> Reduviidae <input type="checkbox"/> <i>Apioneris crassipes</i> <input type="checkbox"/> <i>Rhyacionis ventralis</i> <input type="checkbox"/> <i>Zelus tetrocatus</i> <p>Homoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aeshna multicolor</i> <input type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula saturata</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input checked="" type="checkbox"/> <i>Pantala flavescens</i> <input type="checkbox"/> <i>Schinia</i> sp. <input type="checkbox"/> <i>Geometridae</i> <input checked="" type="checkbox"/> <i>Pyralidae</i> <input type="checkbox"/> <i>Paranurene robiniae</i> <input type="checkbox"/> <i>Hyles lineata</i> <input type="checkbox"/> <i>Marabuca acuta</i> <p>Neuroptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Chrysopidae</i> <input type="checkbox"/> <i>Chrysopa</i> sp. <input type="checkbox"/> <i>Myrmeleonidae</i> <input type="checkbox"/> <i>Phacynum</i> sp. <input checked="" type="checkbox"/> <i>Myrmeleon</i> sp. <input type="checkbox"/> <i>Raphidiidae</i> (Snakeflies) <p>Dermatoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Farfugula auricularia</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Acrididae</i> <input type="checkbox"/> <i>Dissosteira pictipennis</i> <input type="checkbox"/> <i>Leptus intermedius</i> <input type="checkbox"/> <i>Melanoplus</i> sp. <input type="checkbox"/> <i>Schistocerca nitens</i> <input type="checkbox"/> <i>Schistocerca</i> sp. 	<p>Trimerotropis californica</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Trimerotropis pallidipennis</i> <input type="checkbox"/> <i>Gryllus</i> sp. <input type="checkbox"/> <i>Oecanthus fultoni</i> <input type="checkbox"/> <i>Tettigoniidae</i> <input type="checkbox"/> <i>Ambianthe expansa</i> <input type="checkbox"/> <i>Scudderia mexicana</i> <input type="checkbox"/> <i>Stenopematus</i> sp. <input type="checkbox"/> <i>Iris oratoria</i> <input type="checkbox"/> <i>Stagnomonis californica</i> <input type="checkbox"/> <i>Parabacillus hesperis</i> <p>Orthoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aeshna multicolor</i> <input type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input type="checkbox"/> <i>Libellula saturata</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input checked="" type="checkbox"/> <i>Pantala flavescens</i> <input type="checkbox"/> <i>Schinia</i> sp. <input type="checkbox"/> <i>Geometridae</i> <input checked="" type="checkbox"/> <i>Pyralidae</i> <input type="checkbox"/> <i>Paranurene robiniae</i> <input type="checkbox"/> <i>Hyles lineata</i> <input type="checkbox"/> <i>Marabuca acuta</i> <p>Arachnida:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Araneidae</i> <input type="checkbox"/> <i>Evocasia viridula</i> <input checked="" type="checkbox"/> <i>Dipluridae</i> <input type="checkbox"/> <i>Leurogryllus pacificus</i> <input type="checkbox"/> <i>Lamproctus hesperus</i> <input type="checkbox"/> <i>Selkidae</i> <input checked="" type="checkbox"/> <i>Thomisidae</i> <p>B. TRICHS</p>
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Other Wildlife Species Observed:

SE WIZARD

Bird Species Observed:

NOBO ANKE BAKI TUW
EUD ANCS ANIN KASH
NOSE BASW COA BINA
SAPT MODO BLPH

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CALLE CITY Portion of Site Surveyed: 48 Acreage Surveyed: 48 Biologist(s): M. D. R. S.
 Date: 08-31-14 Time (Start/End): 1000 / 1400 Cloud Cover (Start/End): 10% / 5% Temperature in °F (Start/End): 81 / 96

Wind Speed in Beaufort (Start/End): 2-4 / 3-6 DSF Detected (Circle): Y (N)

<p>Diptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>R. terminatus ab-dominialis</i> <input type="checkbox"/> <i>Apiocera chrysolata</i> <input type="checkbox"/> <i>Apocera convergens</i> <input type="checkbox"/> <i>Nyomonys pantherina</i> <input checked="" type="checkbox"/> <i>Asilidae</i> <input checked="" type="checkbox"/> <i>Efferia albobarbata</i> <input type="checkbox"/> <i>Malloflora foveata</i> <input type="checkbox"/> <i>Proctopogon sp.</i> <input type="checkbox"/> <i>Sarcophaga latens</i> <input type="checkbox"/> <i>Stenopogon breviscaulus</i> <input type="checkbox"/> <i>Basidae (May Flies)</i> <input checked="" type="checkbox"/> <i>Anthobocytus pacificus</i> <input type="checkbox"/> <i>Bombus</i> <input type="checkbox"/> <i>Formicidae</i> <input type="checkbox"/> <i>Tridomyrmex humilis</i> <input type="checkbox"/> <i>Formica sp.</i> <input type="checkbox"/> <i>Liometopum occidentale</i> <input type="checkbox"/> <i>Alexsar pergandeii</i> <input checked="" type="checkbox"/> <i>Pogonomyrmex californica</i> <input type="checkbox"/> <i>Solenopsis sp.</i> <p>Bees</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Anthophoridae</i> <input type="checkbox"/> <i>Anthophora arborea</i> <input type="checkbox"/> <i>Melissodes sp.</i> <input checked="" type="checkbox"/> <i>Alysiocopa varipunctata</i> <input checked="" type="checkbox"/> <i>Apis mellifera</i> <input type="checkbox"/> <i>Bombus californicus</i> <input type="checkbox"/> <i>Bombus cratchii</i> <input type="checkbox"/> <i>Bombus sonorus</i> <input type="checkbox"/> <i>Bombus vosnesenskii</i> <input type="checkbox"/> <i>Halictidae</i> <input checked="" type="checkbox"/> <i>Agropostemon sp.</i> <input type="checkbox"/> <i>Agonia nevadensis</i> <input type="checkbox"/> <i>Megachilidae</i> <input type="checkbox"/> <i>Dianthidium sp.</i> <input type="checkbox"/> <i>Megachile sp.</i> <input type="checkbox"/> <i>Pentidae sp.</i> <p>Wasps</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Trypidae</i> <input checked="" type="checkbox"/> <i>Allograpta obliqua</i> <input type="checkbox"/> <i>Eristalis tenax</i> <input type="checkbox"/> <i>Metastylus americanus</i> <input checked="" type="checkbox"/> <i>Pobocella metaciana</i> <input type="checkbox"/> <i>Tabantidae</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Ichneumon sp.</i> <input checked="" type="checkbox"/> <i>Polistes fuscatus aurifer</i> <input checked="" type="checkbox"/> <i>Vespa pennsylvanica</i> <p>Coleoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Buprestidae</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Cerambycidae</i> <input type="checkbox"/> <i>Coccinellidae</i> <input type="checkbox"/> <i>Chilocorus orbus</i> <input type="checkbox"/> <i>Rhyacionia ventralis</i> <input type="checkbox"/> <i>Coccinella sp.</i> <input type="checkbox"/> <i>Harmolina acyrida</i> <input type="checkbox"/> <i>Hippodamia convergens</i> <input type="checkbox"/> <i>Olla v-nigrum</i> <input type="checkbox"/> <i>Elateridae (Click Beetles)</i> <input type="checkbox"/> <i>Chrysomelidae</i> <input checked="" type="checkbox"/> <i>Diabrotica balteata</i> <input type="checkbox"/> <i>D. undecimpunctata</i> <input checked="" type="checkbox"/> <i>Lema trilineata</i> <input type="checkbox"/> <i>Tachymela laticollis</i> <input type="checkbox"/> <i>Curculionidae</i> <input type="checkbox"/> <i>Halipidae</i> <input type="checkbox"/> <i>Hydrophilidae</i> <input type="checkbox"/> <i>Meloidae</i> <input type="checkbox"/> <i>Nemophila larida opticalis</i> <input type="checkbox"/> <i>Melyridae</i> <input type="checkbox"/> <i>Collops sp.</i> <input type="checkbox"/> <i>Rhipiphoridae</i> <input type="checkbox"/> <i>Macrostegon flavipennis</i> <input checked="" type="checkbox"/> <i>Macrostegon sp.</i> <input checked="" type="checkbox"/> <i>Carabidae</i> <input type="checkbox"/> <i>Cotinus mutabilis</i> <input type="checkbox"/> <i>Paracotopis sp.</i> <input type="checkbox"/> <i>Staphylinus nebulosus</i> <input type="checkbox"/> <i>Gnathorhynchidae</i> <input checked="" type="checkbox"/> <i>Eleodes sp.</i> <p>Hemiptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Eumenes bollii</i> <input type="checkbox"/> <i>Eumenes crucifera</i> <input checked="" type="checkbox"/> <i>Euclyptus annulata</i> <input type="checkbox"/> <i>Colletes opachus</i> <input checked="" type="checkbox"/> <i>Polistes dorsalis</i> <input type="checkbox"/> <i>Polistes exclamans</i> 	<ul style="list-style-type: none"> <input type="checkbox"/> <i>Penatomidae</i> <input type="checkbox"/> <i>Chlorochroa ligata</i> <input type="checkbox"/> <i>Chlorochroa uhleri</i> <input type="checkbox"/> <i>Murgantia histrionica</i> <input type="checkbox"/> <i>Podisus sp.</i> <input type="checkbox"/> <i>Tettigoniidae</i> <input type="checkbox"/> <i>Anthrenus mexicanus</i> <input type="checkbox"/> <i>Scudderia mexicana</i> <input type="checkbox"/> <i>Stenoplectrus sp.</i> <input type="checkbox"/> <i>Iris oregonia</i> <input type="checkbox"/> <i>Stagmomantis californica</i> <input type="checkbox"/> <i>Parabacillus hesperis</i> <p>Odonata:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Aeshna multicolor</i> <input checked="" type="checkbox"/> <i>Anax junius</i> <input type="checkbox"/> <i>Erythemis collocata</i> <input type="checkbox"/> <i>Libellula croceipennis</i> <input checked="" type="checkbox"/> <i>Libellula saharata</i> <input type="checkbox"/> <i>Pachydiplax longipennis</i> <input checked="" type="checkbox"/> <i>Pantala flavescens</i> <input type="checkbox"/> <i>Perithemis intensa</i> <input type="checkbox"/> <i>Progomphus borealis</i> <input type="checkbox"/> <i>Sympetrum corruptum</i> <input type="checkbox"/> <i>Sympetrum illinoense</i> <input type="checkbox"/> <i>Tramea lacerata</i> <input type="checkbox"/> <i>Tramea onusta</i> <input type="checkbox"/> <i>Argia sp.</i> <input type="checkbox"/> <i>Enallagma sp.</i> <input type="checkbox"/> <i>Telebasis salva</i> <p>Lepidoptera:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Atalopodes campetris</i> <input type="checkbox"/> <i>Erynnis borealis</i> <input type="checkbox"/> <i>Heliopterus erictorum</i> <input checked="" type="checkbox"/> <i>Hyalephila phyllis</i> <input checked="" type="checkbox"/> <i>Lerodea eufala</i> <input type="checkbox"/> <i>Paratytonne melane</i> <input type="checkbox"/> <i>Polytes sabuleti</i> <input type="checkbox"/> <i>Pyrgus albus</i> <input type="checkbox"/> <i>Papilio cresphontes</i> <input type="checkbox"/> <i>Papilio rutulus</i> <input checked="" type="checkbox"/> <i>Colias eurymene</i> 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Pieris rapae</i> <input checked="" type="checkbox"/> <i>Panthera protodice</i> <input type="checkbox"/> <i>Brephidium exilis</i> <input type="checkbox"/> <i>Hemiaris coronatus</i> <input type="checkbox"/> <i>Icaricia oregon</i> <input type="checkbox"/> <i>Leptotes marana</i> <input type="checkbox"/> <i>Strymon melinus</i> <input type="checkbox"/> <i>Apodemia morio virgulta</i> <input type="checkbox"/> <i>Agraulis vanillae</i> <input type="checkbox"/> <i>Dianthus gilippus</i> <input type="checkbox"/> <i>Danais plexippus</i> <input type="checkbox"/> <i>Precis coenia</i> <input type="checkbox"/> <i>Vanessa annabella</i> <input type="checkbox"/> <i>Vanessa atalanta</i> <input checked="" type="checkbox"/> <i>Vanessa cardui</i> <input type="checkbox"/> <i>Vanessa virginiensis</i> <input checked="" type="checkbox"/> <i>Arctidae</i> <input type="checkbox"/> <i>Noctuidae</i> <input type="checkbox"/> <i>Argiope californica</i> <input type="checkbox"/> <i>Xerina</i> <input checked="" type="checkbox"/> <i>Acronictidae</i> <input checked="" type="checkbox"/> <i>Pyralidae</i> <input type="checkbox"/> <i>Paranthrene robiniae</i> <input type="checkbox"/> <i>Hyles lineata</i> <input type="checkbox"/> <i>Manduca sexta</i> <p>Arachnida:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Araneidae</i> <input checked="" type="checkbox"/> <i>Euceta viridans</i> <input type="checkbox"/> <i>Dipluridae</i> <input type="checkbox"/> <i>Leuropterus pacificus</i> <input type="checkbox"/> <i>Lathrolechus hesperus</i> <input type="checkbox"/> <i>Salicidae</i> <input type="checkbox"/> <i>Phidippus formosus</i> <input type="checkbox"/> <i>Thomisidae</i> <p>I. B. H. I. A. S.</p>
--	---	---	--

Bird Species Observed:

HOSP RTA ROP1 BNST WESA SAVS

COA EUST BARL WFB BLSL

BAW TUN MADO GTE DO

KIL AMCA EUST LESA EUCD

Other Wildlife Species Observed:

SOULZARD

BJR

COTONTAIL

CAOS

Delhi Sands Flower-Loving Fly Focused Survey Field Notes Form

Project Name: CARUE 2.14 Portion of Site Surveyed: N Acreage Surveyed: 34 Biologist(s): M.A.C.S
 Date: 09-22-14 Time (Start/End): 1105 / 1405 Cloud Cover (Start/End): 0 / 0 Temperature in °F (Start/End): 88 / 98

Wind Speed in Beaufort (Start/End): 0-6 / 2-8 DSF Detected (Circle): Y (N)

Arthropod Species Observed:	Wind Speed in Beaufort (Start/End):	Cloud Cover (Start/End):	Temperature in °F (Start/End):	Biologist(s):	Acreage Surveyed:	Portion of Site Surveyed:
Diptera:						
<i>R. terminans abdominalis</i>	<i>Polistes fuscatus aurifer</i>	<i>Penatiomidae</i>	<i>Trimerotropis californica</i>	<i>Pieris rapae</i>		
<i>Anisocera chrysolasia</i>	<i>P. espinia pennsylvanica</i>	<i>Alorochroa ligata</i>	<i>Trimerotropis pallidipennis</i>	<i>Pontia protosilice</i>		
<i>Gynostoma convergens</i>	Coloptera:	<i>Chlorochroa ulteri</i> / <i>S.M.A</i>	<i>Gryllus</i> sp.	<i>Brephidium exilis</i>		
<i>Nemomyia pantherina</i>	<i>Byrrhidae</i>	<i>Murgantia histrionica</i>	<i>Oecanthus fulvifrons</i>	<i>Hemitarax cernuus</i>		
<i>Efferia albobarbata</i>	<i>Carabidae</i>	<i>Polistes</i> sp.	<i>Tettigoniidae</i>	<i>Leucis argemone</i>		
<i>Melolontha foveata</i>	<i>Cerambycidae</i>	<i>Thyanta pallidivirens</i>	<i>Antennae expansa</i>	<i>Leptodes mariana</i>		
<i>Proctoponus lateris</i>	<i>Coccinellidae</i>	<i>Trichoptera aurora</i>	<i>Scudderia mexicana</i>	<i>Strymon melinus</i>		
<i>Sirotopogon breviscubus</i>	<i>Chilocorus orbus</i>	<i>Reduviidae</i>	<i>Aenoplenatus</i> sp.	<i>Apelandia mormo virgata</i>		
<i>Escaidae</i> (May Flies)	<i>Coccinella</i> sp.	<i>Apioneris crassipes</i>	<i>Iris oratorius</i>	<i>Agrilus variolae</i>		
<i>Anthomyia</i>	<i>Harmonia axyridis</i>	<i>Chilocorus orbus</i>	<i>Thyocoris ventralis</i>	<i>Danania villosa</i>		
<i>Formicidae</i>	<i>Hippodamia convergens</i>	<i>Coccinella</i> sp.	<i>Zelus tetrocanthus</i>	<i>Danania villosa</i>		
<i>Tridomyrmex humilis</i>	<i>Olla v-nigrum</i>	<i>Chrysomelidae</i>		<i>Danania villosa</i>		
<i>Formica</i> sp.	<i>Elateridae</i> (Click Beetles)	<i>Homaldisca</i> sp.		<i>Danania villosa</i>		
<i>Liuocotupum occidentale</i>	<i>Chrysomelidae</i>	<i>Dactylopiidae</i> (Coccinellae)		<i>Danania villosa</i>		
<i>Messor pergandei</i>	<i>Di. undecimpunctata</i>	<i>Dactylopiidae</i>		<i>Danania villosa</i>		
<i>Pogonomymet californica</i>	<i>Lema trilineata</i>	<i>Tachyneta laticollis</i>		<i>Danania villosa</i>		
<i>Solenopsis</i> sp.	<i>Cucullionidae</i>	<i>Haliplidae</i>		<i>Danania villosa</i>		
Bees	<i>Hydroptilidae</i>	<i>Meloidae</i>		<i>Danania villosa</i>		
<i>Anthophoridae</i>	<i>Meloidae</i>	<i>Nemoglyphis larkida apicalis</i>		<i>Danania villosa</i>		
<i>Anthophora arborea</i>	<i>Meloidae</i>	<i>Chrysoptera</i>		<i>Danania villosa</i>		
<i>Melissodes</i> sp.	<i>Colletes</i> sp.	<i>Chrysopa</i> sp.		<i>Danania villosa</i>		
<i>Alysiopa varipuncta</i>	<i>Rhaphididae</i>	<i>Myrmecoleonidae</i>		<i>Danania villosa</i>		
<i>Apsis mellifera</i>	<i>Macrostegon flavipennis</i>	<i>Myrmecoleon</i> sp.		<i>Danania villosa</i>		
<i>Bombus californicus</i>	<i>Macrostegon</i> sp.	<i>Raphididae</i> (Snakeflies)		<i>Danania villosa</i>		
<i>Bombus croceus</i>	<i>Scarboidae</i>	Dermaptera:		<i>Danania villosa</i>		
<i>Bombus sonorae</i>	<i>Colinus mutabilis</i>	<i>Forficula auricularia</i>		<i>Danania villosa</i>		
<i>Bombus vosnesenskii</i>	<i>Paracotopis</i> sp.	Orthoptera:		<i>Danania villosa</i>		
<i>Haliptidae</i>	<i>Staphylinus macilloides</i>	<i>Acrididae</i>		<i>Danania villosa</i>		
<i>Agostemon</i> sp.	<i>Tiphidae</i>	<i>Dissosteira pictipennis</i>		<i>Danania villosa</i>		
<i>Neonia nevadensis</i>	<i>Vespidae</i> - unidentified	<i>Leptodes intermedium</i>		<i>Danania villosa</i>		
<i>Megachilidae</i>	<i>Eumenes bolivi</i>	<i>Melanopis</i> sp.		<i>Danania villosa</i>		
<i>Dianthidium</i> sp.	<i>Eumenes crucifera</i>	<i>Abisocera nitens</i>		<i>Danania villosa</i>		
<i>Megachile</i> sp.	<i>Euclypterus annulata</i>	<i>Schistocerca</i> sp.		<i>Danania villosa</i>		
<i>Perdita</i> sp.	<i>Polistes apachus</i>			<i>Danania villosa</i>		
Wasps	<i>Polistes dorsalis</i>			<i>Danania villosa</i>		
<i>Syrphidae</i>	<i>Polistes exclamans</i>			<i>Danania villosa</i>		
<i>Allograpta obliqua</i>				<i>Danania villosa</i>		
<i>Metastasis tenax</i>				<i>Danania villosa</i>		
<i>Metastasis americana</i>				<i>Danania villosa</i>		
<i>Pobocella mexicana</i>				<i>Danania villosa</i>		
<i>Tabanidae</i>				<i>Danania villosa</i>		

Bird Species Observed: BAW MDO NMO RHA EST
BLH SOSL HOSP WEKI AMHU
ANCL KILL TUVU GOLP CAKI
HOFL AMKE PEF A SAPH

Other Wildlife Species Observed:
SG LIZARD
CAGS

Appendix E

Circle City Project—CNDDDB Form

Mail to:
 California Natural Diversity Database
 California Dept. of Fish & Wildlife
 1807 13th Street, Suite 202
 Sacramento, CA 95811
 Fax: (916) 324-0475 email: CNDDDB@wildlife.ca.gov

For Office Use Only

Source Code _____ Quad Code _____
 Elm Code _____ Occ. No. _____
 EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 09/18/2013

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Rhaphiomidas terminatus abdominalis*

Common Name: Delhi Sands Flower-Loving Fly

Species Found? Yes No _____
 If not, why? _____
 Total No. Individuals _____ Subsequent Visit? yes no
 Is this an existing NDDDB occurrence? _____ no unk.
 Yes, Occ. # _____
 Collection? If yes: _____
 Number _____ Museum / Herbarium _____

Reporter: John and Melanie Dicus
 Address: PO Box 1333
Black Canyon City, Arizona, 85324
 E-mail Address: JWDicus@aol.com
 Phone: (623) 203-3096

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown _____
 wintering breeding nesting rookery burrow site other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

The survey areas consists of approximately 55 acres generally located south of Interstate 60, west of Hamner/Milliken Avenue, north of Santa Ana River corridor, and east of Archibald Avenue.

County: Riverside and San Bernardino Landowner / Mgr.: Southern California Edison transmission line easeme

Quad Name: Guasti, Corona North Elevation: 500-800 feet

T _____ R _____ Sec _____, _____ ¼ of _____ ¼, Meridian: H M S Source of Coordinates (GPS, topo. map & type): _____

T _____ R _____ Sec _____, _____ ¼ of _____ ¼, Meridian: H M S GPS Make & Model _____

DATUM: NAD27 NAD83 WGS84 Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 UTM Zone 11 OR Geographic (Latitude & Longitude)

Coordinates: Survey Areas: Township 2S and 3S, Range 7W, Sections 12 and 13 of the USGS Guasti and Sections 13, 23, 24, and 2 of Guasti and Corona North Quadrangle Maps

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

Habitat: Disturbed, ruderal vegetation dominated by non-native grasses (Bromus diandrus), Russian thistle (Salsola tragus), common kochia (Kochia scoparia), pigweed (Chenopodium sp.), and golden crownbeard (Verbesina enceliodes). Vegetative cover ranges from 0% to 100%, averaging 40% over the 55-acre survey area. Former land uses include fallow agriculture, abandoned dairy operations, dirt roads, and disked open space. Soils within the survey area are Delhi series, and topography is relatively flat, gently sloping to the south and southwest.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): Excellent Good Fair Poor

Immediate AND surrounding land use: Residential/commerical/industrial development; active/fallow dairy operations, disturbed open space

Visible disturbances: Disking; non-native vegetation; ORV, pedestrian, and equestrian traffic; illegal dumping

Threats: Dairy operations, disking, dumping, ORV traffic

Comments: This site was surveyed by federally permitted biologists twice per week, according to DSF protocol, between July 1, 2013 and September 18, 2013. No Delhi flies were observed.

Determination: (check one or more, and fill in blanks)

- Keyed (cite reference): _____
- Compared with specimen housed at: _____
- Compared with photo / drawing in: _____
- By another person (name): _____
- Other: _____

Photographs: (check one or more)

Slide	Print	Digital
Plant / animal	<input type="checkbox"/>	<input type="checkbox"/>
Habitat	<input type="checkbox"/>	<input type="checkbox"/>
Diagnostic feature	<input type="checkbox"/>	<input type="checkbox"/>

May we obtain duplicates at our expense? yes no

FINAL

**FOCUSED, PROTOCOL-LEVEL 2012/2013
WET SEASON FAIRY SHRIMP SURVEYS FOR
THE PROPOSED CIRCLE CITY SUBSTATION
AND MIRA LOMA-JEFFERSON
SUBTRANSMISSION LINE PROJECT,
RIVERSIDE AND SAN BERNARDINO
COUNTIES, CALIFORNIA**

Prepared for:

**UNITED STATES FISH AND WILDLIFE SERVICE
CARLSBAD FISH AND WILDLIFE OFFICE**
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

and

SOUTHERN CALIFORNIA EDISON
1218 S. Fifth Avenue, 265A
Monrovia, CA 91016

Prepared by:

BUSBY BIOLOGICAL SERVICES
1452 Vue Du Bay Court
San Diego, CA 92109

and

CHAMBERS GROUP, INC.
5 Hutton Centre Drive, Suite 750
Santa Ana, California 92707
(949) 261-5414

October 2013

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SECTION 1.0 – INTRODUCTION

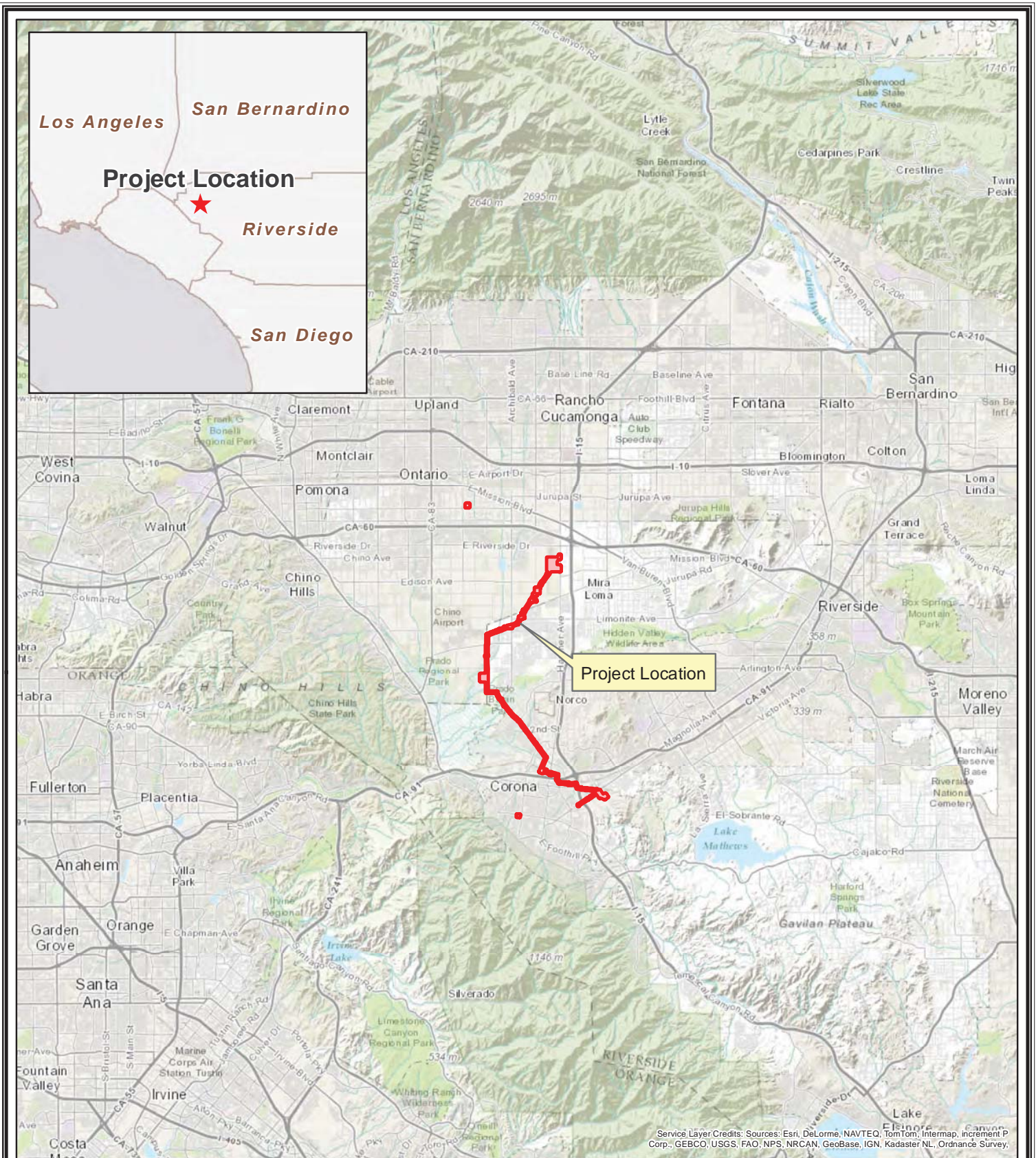
Busby Biological Services (BBS) performed focused, protocol-level wet season fairy shrimp surveys for Chambers Group, Inc. (Chambers Group) on behalf of Southern California Edison (SCE) for the proposed Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (proposed project) located in Riverside and San Bernardino counties in southern California (Figures 1 through 3).

1.1 PROJECT LOCATION AND DESCRIPTION

For the project, SCE proposes to (1) construct the Circle City Substation, a new 66/12 kilovolt (kV) distribution substation, with four 66 kV source line segments, six new 12 kV distribution circuit getaways, and a new 66 kV subtransmission line (Mira Loma-Jefferson); (2) upgrade the existing Mira Loma Substation; and (3) install new fiber optic cable and communication equipment to connect the proposed Circle City Substation to SCE's existing telecommunication system. The purpose of the proposed project is to ensure the availability of safe and reliable electric service to meet customer electrical demand in the Electrical Needs Area.

The majority of the proposed project route spans across the Corona North Quadrangle 7.5-Minute Topographic Map (U.S. Geological Survey [USGS] 1967a), with only the extreme northern portion of the project within the Guasti Quadrangle Map (USGS 1966) and the extreme southern portion of the project within the Corona South Quadrangle Map (USGS 1967b) (Figure 3). The proposed project route extends from the City of Ontario in San Bernardino County south through the City of Eastvale, the City of Norco, and the City of Corona in Riverside County. The project route primarily runs west of Interstate 15 (I-15) and north of State Route 91 (SR 91), with the southern end of the project route extending south of SR 91 and east of I-15 (Figures 1 through 3). A portion of the project area occurs within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) area. Land uses surrounding the proposed project area are dominated by industrial and agricultural uses, such as waste management facilities and various agricultural industries (e.g., manure facilities, dairy farms, croplands) within the northern portion and residential, commercial, and industrial uses in the southern portion (Figure 2). Undeveloped open space is present surrounding Prado Flood Control Basin near the center of the proposed project area.

Topography within the proposed project area is generally flat, with an elevation ranging from approximately 630 to 790 feet above mean sea level (msl). Several soil types occur within the proposed project area, including Arbuckle gravelly loam; Buchenau loam, slightly saline-alkali; Cajalco fine sandy loam; Chino silt loam; Chino silt loam, drained; Chualar clay loam; Cieneba rocky sandy loam; Cortina sandy loam; Cortina gravelly sandy loam; Delhi fine sand; Delhi loamy fine sand; Dello loamy sand, poorly drained; Dello loamy fine sand, gravelly substratum; Domino silt loam; gravel pits; Garretson gravelly very fine sandy loam; Grangeville loamy fine sand, drained; Grangeville fine sandy loam; Grangeville sandy loam, sandy substratum, drained, saline-alkali; Grangeville fine sandy loam, poorly drained, saline-alkali; Greenfield sandy loam; Hanford coarse sandy loam; Hilmar loamy sand; Hilmar loamy very fine sand; Hilmar loamy fine sand; Metz loamy fine sand, gravelly sand substratum; Pachappa fine sandy loam; Placentia fine sandy loam; Ramona sandy loam; Ramona very fine sandy loam; riverwash; rough broken land; San Emigdio fine sandy loam; San Emigdio fine sandy loam, deep; San Emigdio loam; Temescal rocky loam; terrace escarpments; and Waukena fine sandy loam, saline-alkali (USDA NRCS 1980, 1974)



 Project Location



1:400,000

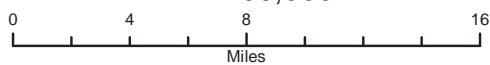
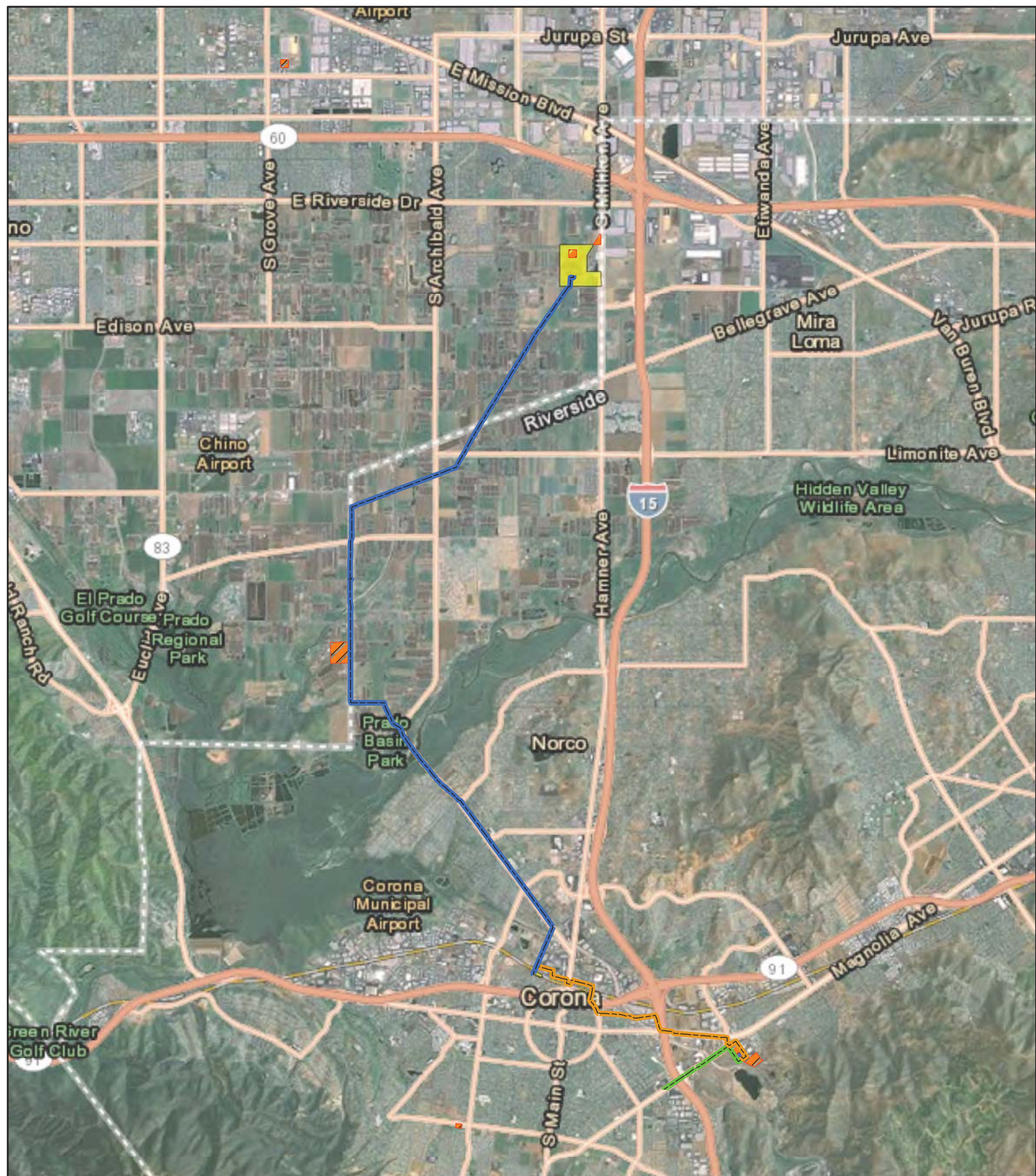








Figure 1
 Circle City & Mira Loma-
 Jefferson Sub Station
 Project Vicinity Map

Version Date: 7/22/2013



- | | |
|---|--|
| Transmission Line |  Staging Yard |
|  Corona - Circle City | Substation |
|  Mira Loma - Corona |  Existing |
|  Tap - Circle City |  Proposed |



1:120,000

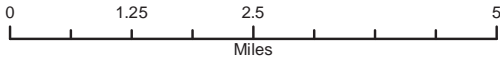
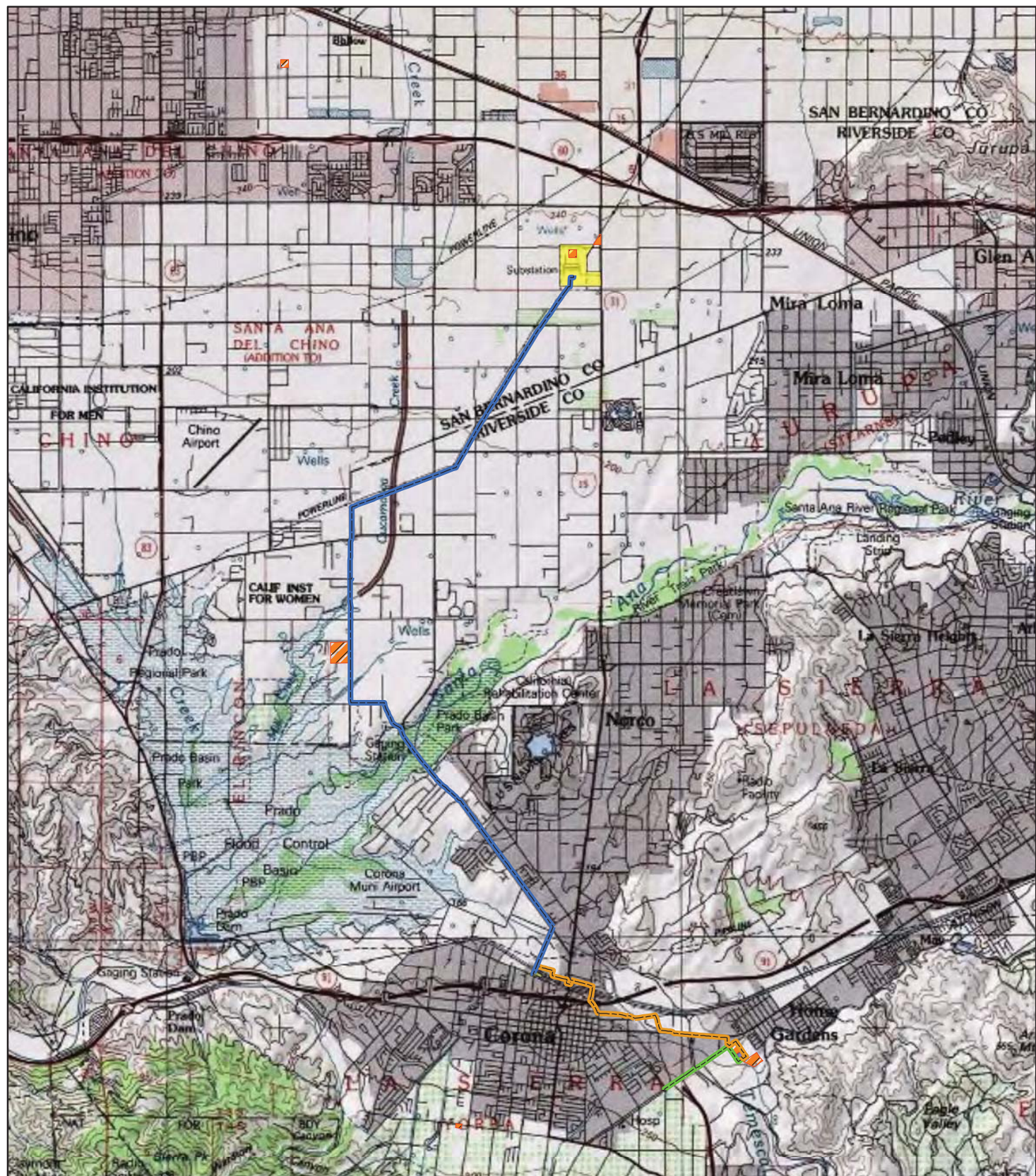








Figure 2
 Circle City & Mira Loma-
 Jefferson Sub Station
 Project Vicinity Map

Version Date: 7/23/2013





- | | |
|---|--|
| Transmission Line |  Staging Yard |
|  Corona - Circle City | Substation |
|  Mira Loma - Corona |  Existing |
|  Tap - Circle City |  Proposed |



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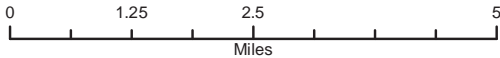


Figure 3
 Circle City & Mira Loma-
 Jefferson Sub Station
 Project Vicinity Map

Version Date: 7/23/2013

The focused fairy shrimp survey area includes the proposed project alignment as well as (1) a 300-foot buffer around all substations sites, including the existing Mira Loma Substation, the existing Corona Substation, the proposed Circle City Substation, and the alternative Circle City Substation site; (2) a 300-foot buffer on either side of the proposed Mira Loma-Jefferson 66 kV subtransmission line route, the two alternative Mira Loma-Jefferson 66 kV subtransmission line routes (i.e., Alternatives 2 and 3), and the proposed and alternative source line routes; and (3) a 300-foot buffer around all proposed material yards, access roads, guard structures, and pulling sites for the proposed routes (Figures 1 through 3).

1.2 PROJECT BACKGROUND

The proposed project survey area is located in a growing commercial and residential area, and it includes high vehicular traffic associated not only with the existing commercial and residential areas but also with other industrial and agricultural uses, such as waste management facilities and various agricultural industries (e.g., manure facilities, dairy farms) (Figures 1 through 3). Because of the high traffic along the proposed project route, the conditions within the proposed project area are highly disturbed and constantly changing, with new road ruts being formed by vehicles (e.g., cars, garbage/recycling trucks, cattle trucks, other commercial vehicle) that pull off the road onto the dirt road shoulders, especially when these shoulders are muddy following rain events. With these unpredictable influences, the proposed project survey area has the potential to change unexpectedly, both from a short-term and long-term perspective.

The proposed project area has the potential to support fairy shrimp habitat; therefore, focused fairy shrimp surveys are required to obtain project permits. In addition to the common fairy shrimp species, versatile fairy shrimp (*Branchinecta lindahli*), three federally listed and /or Western Riverside County MSHCP covered fairy shrimp species are known to occur within the vicinity of the proposed project, including Riverside fairy shrimp (*Streptocephalus woottoni*), vernal pool fairy shrimp (*Branchinecta lynchi*), and Santa Rosa Plateau fairy shrimp (*Linderiella santarosae*).

1.2.1 Fairy Shrimp Natural History

The Riverside fairy shrimp was federally listed as endangered in August of 1993 (USFWS 1993) and is a Western Riverside County MSHCP covered species. On December 4, 2012, U.S. Fish and Wildlife Service (USFWS) published a Final Rule revising the critical habitat for the Riverside fairy shrimp that became effective on January 3, 2013 (USFWS 2012). The previous critical habitat consisted of land in four units in Ventura, Orange, and San Diego Counties, California. The revised critical habitat now includes land in three units in Ventura, Orange, and San Diego Counties, California, for a total of approximately 1,724 acres, which represents critical habitat for this species. Areas in Riverside County are excluded from critical habitat in this final revised rule.

The vernal pool fairy shrimp was federally listed as threatened on September 19, 1994 (USFWS 1994) and is a Western Riverside County MSHCP covered species. On August 11, 2005, USFWS published a Final Rule designating 858,846 acres of critical habitat for 4 vernal pool crustaceans and 11 vernal pool plants that became effective on September, 12 2005 (USFWS 2005). This critical habitat includes land from Oregon south to Ventura County, California. Areas in Riverside County are excluded from critical habitat in this final revised rule.

Santa Rosa Plateau fairy shrimp is not formally listed by the resource agencies but is tracked by the California Department of Fish and Wildlife (CDFW) and is a Western Riverside County MSHCP covered

species. The only known habitat for this species is protected on the Santa Rosa Plateau Ecological Reserve, approximately 27 miles southeast of the proposed project area.

1.2.2 Previous Surveys

Focused, protocol-level wet season fairy shrimp surveys were conducted during the 2011/2012 wet season by BonTerra Consulting (2012). These surveys focused on basins with a potential to support Riverside fairy shrimp and were conducted in seven basins along the alignment. The common versatile fairy shrimp was detected in six of the seven basins.

SECTION 2.0 – SURVEY METHODS

The focused 2012/2013 wet season fairy shrimp surveys were conducted in accordance with the current USFWS survey protocol titled *Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods* and dated April 19, 1996. The detailed methods for the habitat assessment, basin identification and numbering, basin exclusions and protocol modifications, and basin sampling are discussed below.

2.1 HABITAT ASSESSMENT

Following the first substantial rain of the 2012/2013 rainy season, Chambers Group biologists performed an initial survey of the entire proposed project survey area to evaluate the condition of the known basins that were previously surveyed in 2011/2012 and to identify the locations of other potential new basins that would require sampling during the 2012/2013 wet season surveys. They recorded the locations of all known and potential basins by hand onto an aerial field map. These locations were digitized in the office and used to provide the field maps used during the focused wet season surveys.

In addition, BBS biologists assessed the entire proposed project survey area during each of the first seven visits to locate additional basins that required sampling. These basin locations were noted by hand onto aerial field maps and recorded using a hand held Global Positioning System (GPS) unit.

2.2 BASIN IDENTIFICATION & NUMBERING

The eight known basins that were previously surveyed by BonTerra Consulting in 2011/2012 were given the same numbers that were used during those previous surveys for consistency and to allow the data obtained during the 2012/2013 surveys to be compared with the previous survey results. New potential basins were numbered starting with 9, since the existing basins were labeled 1 to 8.

In areas where additional basins were identified within the vicinity of a previously-labeled basin, letter suffixes were assigned to each separate basin so that the data for each individual basin could be collected and presented separately for the 2012/2013 wet season surveys. If these basins eventually separated into two or more basins, numbers (i.e., a.1, a.2) were used to further identify these individual basins.

BBS and Chambers Group biologists recorded the locations of new basins by hand onto aerial field maps of the proposed project survey area. After a basin was sampled, the location of the basin was recorded using a hand held GPS unit and added to the digital database for the surveys.

2.3 BASIN EXCLUSIONS & PROTOCOL MODIFICATIONS

Many areas within the proposed project survey area are heavily disturbed by cattle/dairy ranching, vehicle activity, and other anthropogenic factors. BBS and Chambers Group biologists evaluated the entire proposed project survey area during the 2012/2013 wet season surveys for basins that have the potential to support fairy shrimp species. Basins identified during the habitat assessment that did not provide fairy shrimp habitat (i.e., areas that received inconsistent artificial water sources, agricultural ponds with low water quality, basins with manure runoff) and/or basins that did not remain inundated long enough to sample were excluded from the 2012/2013 wet season surveys.

In addition, the standard wet season sampling protocol was modified in areas where high traffic and anthropogenic impacts biased the results of the standard sampling methods. These modifications were based on information obtained during the sampling effort. They have been described in Section 3.0 – Results and Discussion.

2.4 BASIN SAMPLING

During the first sampling visit, BBS and Chambers Group biologists recorded the location of each sampled basin using a hand held GPS unit and recorded additional information about each basin, such as:

- estimated and actual maximum depth, length, and width
- air and water temperature
- habitat condition
- disturbance level
- disturbance type

The maximum dimensions of each basin were estimated during the first sampling of that basin, based on the observed conditions onsite. The dimensions, air temperature, and water temperature of each basin were measured and recorded during each successive sampling visit.

The habitat condition for each basin was classified as undisturbed, disturbed, ungrazed, or grazed, and the disturbance level was classified high, medium, or low. The disturbance type included classifications that BBS created because none of the classifications in the current USFWS protocol adequately described the basins within the proposed project survey area. BBS classified each basin as a road rut, a roadside ditch, or a manmade depression. A basin was classified as a road rut if it was a depression caused by vehicular activity along a road way or in a high traffic area with a dirt substrate. A basin was classified as a roadside ditch if it was a depression, usually linear, adjacent to an earthen berm that ponded because the area had been graded or contoured, and the basin was not caused by vehicular activity. A basin was classified as a manmade depression if it was not immediately adjacent to a roadway and if it ponded because of grading, contouring, or other human activity but was not caused by vehicular activity.

BBS sampled each inundated basin by sweeping a hand-held net through the water and examining the net contents. For each basin that was surveyed, BBS recorded the basin number, survey date, and air temperature, as well as the maximum depth, width, and length of the basin at the time of that sampling event. BBS also recorded the aquatic species observed in each basin. For fairy shrimp observed, BBS noted the reproductive status and approximate numbers of fairy shrimp in each basin and, when possible, identified which species were present.

SECTION 3.0 – RESULTS AND DISCUSSION

Focused, protocol-level 2012/2013 wet season surveys were conducted by permitted BBS biologists Melissa Busby (TE-080779-2) and Darin Busby (TE-115373-2), and assisted by several other biologists under the supervision of Melissa Busby or Darin Busby. Table 1 provides a summary of survey dates, surveyors, and assistants.

Table 1: Survey Number, Date, and Surveyors

Survey #	Date	Surveyors	Assistants
HA	10/12/12	--	Heather Franklin
HA	10/15/12	--	H. Franklin Linette Lina
1	10/26/12	Darin Busby	L. Lina
2	12/7/12	D. Busby	H. Franklin John Kanlund
3	12/20/12	D. Busby Melissa Busby	H. Franklin J. Kanlund
4	12/26/12	D. Busby M. Busby	--
4	12/27/12	D. Busby M. Busby	Rebecca Alvidrez J. Kanlund
5	1/3/13	D. Busby M. Busby	R. Alvidrez J. Kanlund
6	1/18/13	D. Busby M. Busby	Laura Gorman Maya Mazon
7	1/31/13	M. Busby	Corey Vane Travis Cooper
8	2/14/13	D. Busby	Alicia Hill Ian Maunsell
9	3/1/13	M. Busby	Seth Reimers
10	3/15/13	D. Busby M. Busby	I. Maunsell M. Mazon
11	3/27/13	--	L. Lina

3.1 HABITAT ASSESSMENT

BBS monitored the rain events for the 2012/2013 rainy season (National Oceanic and Atmospheric Administration [NOAA] 2012, 2013) to determine when to initiate surveys and to determine an appropriate sampling schedule. Following the first substantial rain of the 2012/2013 rainy season on October 9, 11, and 12, 2012, that inundated the potential basins within the proposed project survey area, Chambers Group biologists performed a habitat assessment on October 12 and 15, 2012 to identify known and potential basins (i.e., any ponding areas that may remain inundated and provide fairy shrimp habitat) within the proposed project survey area. During the habitat assessment, they identified 34 potential basins, including 8 basins that were previously mapped during the 2011/2012 wet season survey (BonTerra Consulting 2012) and 26 potential new basins.

In addition to the initial habitat assessment, BBS assessed the entire proposed project survey area for new basins, as the ground became increasingly saturated during each of the first seven survey visits, to determine the location of additional basins requiring sampling. These basins were surveyed following the most current USFWS protocol sampling guidelines. The results from these surveys are presented below.

3.2 BASIN IDENTIFICATION & NUMBERING

During the habitat assessment and subsequent 2012/2013 wet season surveys, 111 potential basins were identified that could potentially provide habitat for fairy shrimp. Appendix A, the Survey Tracking Table, provides a complete list of potential basins identified during the habitat assessment and/or subsequent 2012/2013 wet season surveys.

3.3 BASIN EXCLUSIONS & PROTOCOL MODIFICATIONS

Several basins were excluded from the 2012/2013 wet season surveys, and one protocol modification was approved by USFWS. These exclusions and modifications are summarized in Appendix A, Survey Tracking Table, and are described in detail, below.

3.3.1 Basin Exclusions

After the first wet season sampling survey on October 26, 2013, BBS identified several atypical basins within the proposed project survey area that are not reliant upon seasonal rain to remain inundated and, therefore, do not provide the typical inundation and drying patterns that are typically associated with suitable fairy shrimp habitat. During a conference call between BBS, Chambers Group, and USFWS on October 31, 2012, these atypical basins were discussed with regards to the 2012/2013 wet season survey. All parties on the conference call agreed that the agricultural ponds within the proposed project survey area did not require wet season fairy shrimp sampling because they are not seasonal wetlands, they support mosquito fish, and/or they contain very poor water quality that likely does not support fairy shrimp and presents potential health and safety concerns for the sampling biologists. Appendix B contains an email from Chambers Group to USFWS on November 2, 2012 summarizing the results of this conference call. BBS also excluded several other basins that were identified during subsequent surveys with extremely poor water quality because they were fed solely by runoff from manure piles.

In addition to the agricultural ponds and manure runoff basins described above, BBS excluded 25 additional basins that were identified during the initial habitat assessment and/or wet season surveys but that were not providing fairy shrimp habitat because they had remained dry despite significant rain events, had artificial water sources, or contained poor water quality such as the basins described above. These excluded basins are summarized in Table 2. Additional detail is provided in the Appendix A.

Table 2: Excluded Basins

Basin Number	Rationale for Excluding
A	Filled by artificial water source (i.e., water truck for dust control at gravel quarry/mine)
Wetland 1	Detention basin filled by urban runoff, not seasonal and had mosquito fish
1	Never inundated long enough to sample (same as Basin 27)
4	Basin never located. Conditions may have changed (i.e., basin graded, mowed) since 2011/2012 surveys.
4e	Entire basin on concrete and never expanded to natural substrate
8b	Never inundated long enough to sample
9	Never inundated long enough to sample
10	Never inundated long enough to sample
13	Never inundated long enough to sample
14	Never inundated long enough to sample
14a	Never inundated long enough to sample except on 12/27/12 when it was inaccessible because of locked gate
15	Never inundated long enough to sample
16	Never inundated long enough to sample
17	Never inundated long enough to sample
18	Never inundated long enough to sample
21	Filled by artificial water source (i.e., sprinkler)
22	Never inundated long enough to sample
24	Never inundated long enough to sample
25	Never inundated long enough to sample
26	Never inundated long enough to sample
27	Never inundated long enough to sample (Same basin as Basin 1)
28	Filled by artificial water source (broken pipe) that was repaired and no longer ponded
32	Along alternate route and not within proposed project survey area
33	Along alternate route and not within proposed project survey area
34	Along alternate route and not within proposed project survey area
35	Never inundated long enough to sample

BBS monitored all basins through the January 31, 2013, survey visit. If the basin had remained dry during all previous surveys, including surveys that followed heavy rain events, then BBS excluded these basins (Appendix A). These basins are described as “Never inundated long enough to sample” in Table 2.

Several basins were inundated by artificial water sources, such as a water truck, urban runoff, sprinkler, or a broken pipe. These areas were excluded because they were not influenced by rain and were not providing suitable conditions for fairy shrimp to complete their life cycle.

Appendix A, the Survey Tracking Table, provides a summary of all basins identified during the first seven surveys. Excluded basins are not discussed further in this report.

3.3.2 Protocol Modifications

The proposed project survey area is located within a highly disturbed environment. One area that required sampling is an approximately 15,600 square-foot (125-foot by 125-foot), high traffic, dirt parking lot that is surrounded by development in an industrial portion of the City of Corona (Figures 2 and 3). The lot receives regular vehicular traffic, ranging from small cars to large moving trucks, and appears to be used as a parking lot for many of the adjacent businesses.

Initially, the parking lot supported the previously identified Basin 2; however, as the ground became increasingly saturated during the 2012/2013 season, BBS located many additional basins within the dirt parking lot, and this area supported up to 27 basins (labeled as 2 through 2x with several separating even further to include .1 and .2 attributes). Because of the high vehicular traffic within the dirt parking lot, conducting the wet season fairy shrimp surveys within this area following the standard USFWS protocol was problematic. Following heavy rain events when the dirt lot became saturated and muddy, vehicular traffic often created new basins where none existed before or created connectivity between basins that were previously separated. Therefore, accurately identifying each individual basin became increasingly difficult as the wet season progressed. In addition, because of the dynamic and frequently changing conditions within this parking lot, collecting the data parameters on each individual basin and accurately attributing them to the correct basin also became increasingly difficult and time consuming.

BBS sent an email to USFWS on February 11, 2013, to explain the dynamic conditions within the dirt parking lot and to get approval to modify the current USFWS protocol to increase survey efficiency without compromising the quality of the data being collected. BBS proposed to continue to sample every basin within the dirt parking lot but to collect basin parameters (e.g., GPS location, depth, length, width, temperature) only when fairy shrimp were identified in the basin. USFWS approved the suggested protocol modification on February 12, 2013. Correspondence between BBS and USFWS can be found in Appendix C.

Appendix A, the Survey Tracking Table, provides a summary of each sampling event, including those conducted before and after the protocol modification. However, because the basin parameters were not collected after the protocol modification, the data sets for the basin parameters for all of the basins within the dirt parking lot do not include data from the entire survey season. Therefore, the other survey summary tables (Appendix D and Appendix E) refer to basins within the dirt parking lot as the "2 Complex," and individual basin data for the parking lot is not provided.

3.4 BASIN SAMPLING

This section provides a summary of the sampling effort, including the survey schedule (Table 1) and the basin sampling results.

3.4.1 Basin Sampling Schedule

The first protocol-level wet season survey was conducted on October 26, 2012, approximately two weeks after the first significant rain event. Following the first survey, the basins dried, and surveys were put on hold until after the next significant rain event.

The second survey was conducted on December 7, 2012, approximately one week after the next significant rain on November 30, 2012. Another storm passed through the region approximately one week after the second survey.

The third survey was conducted on December 20, 2012 and focused on sampling the basins that had been inundated for at least 2 weeks (i.e., those that were sampled on December 7, 2012). In addition, the proposed project survey area was assessed for other basins that had been inundated for only one week, too soon to conduct the first sampling of these basins according to the USFWS protocol, and that would require sampling the following week if still inundated.

The fourth survey was conducted over two days, December 26 and 27, 2012. Heavy rain occurred immediately before this survey, with light rains at the beginning of December 26, 2012. Basins that had been sampled during the third survey on December 20, 2012, were not sampled again because only one week had passed in between these surveys. The heavy rain between these surveys guaranteed these basins would still be inundated the following week, allowing for sampling during this survey. Basins that appeared to be inundated only because of the current storm also were not sampled, but BBS noted that they were wet and would require sampling if still inundated during the next survey. If there was any question about the duration the basin had been inundated, BBS sampled the basin.

The fifth survey occurred on January 3, 2013. BBS sampled all basins that were inundated during this survey, including those that had been sampled on December 20, 2012, and were on schedule (per the USFWS protocol) to be sampled as well as those that had been sampled for the first time on December 26 or 27, 2012. BBS sampled all the basins on January 3, 2013 to allow the scheduled sampling efforts to reach the same frequency since all basins had been inundated longer than two weeks.

The fifth through eleventh surveys were conducted according to the suggested schedule in the current USFWS protocol, spaced approximately every two weeks. A final site visit was conducted on March 27, 2013, during which all basins were dry and therefore no sampling was conducted. No significant rain events occurred following this visit, so no additional sampling visits were required for the project during 2013.

Appendix A contains the Survey Tracking Table, which provides an overall summary of each basin per survey. The results of the 2012/2013 wet season survey are discussed in further detail below.

3.4.2 Basin Sampling Results

Because the proposed project area was very large and supported 111 potential basins, BBS assembled a Survey Tracking Table (Appendix A) to easily record information about each potential basin during each survey. All potential basins are included on this table; however, basins that were eventually excluded are not included on any other tables.

After identifying the basins requiring surveys and excluding 25 potential basins, as described above, BBS sampled 86 basins during the 2012/2013 survey season (Figures 4.1 through 4.11; Appendix F, Photographs 1 to 7).

Figure 4
 Circle City and Mira Loma-
 Jefferson Sub Station
 Fairy Shrimp Survey Results
 Map

Overview Version Date: 8/6/2013

 Survey Area (300ft Buffer)

Client Data
 Access Roads
 Staging Yard

Substation
 Existing
 Proposed

Transmission Line
 Corona - Circle City
 Mira Loma - Corona
 Tap - Circle City



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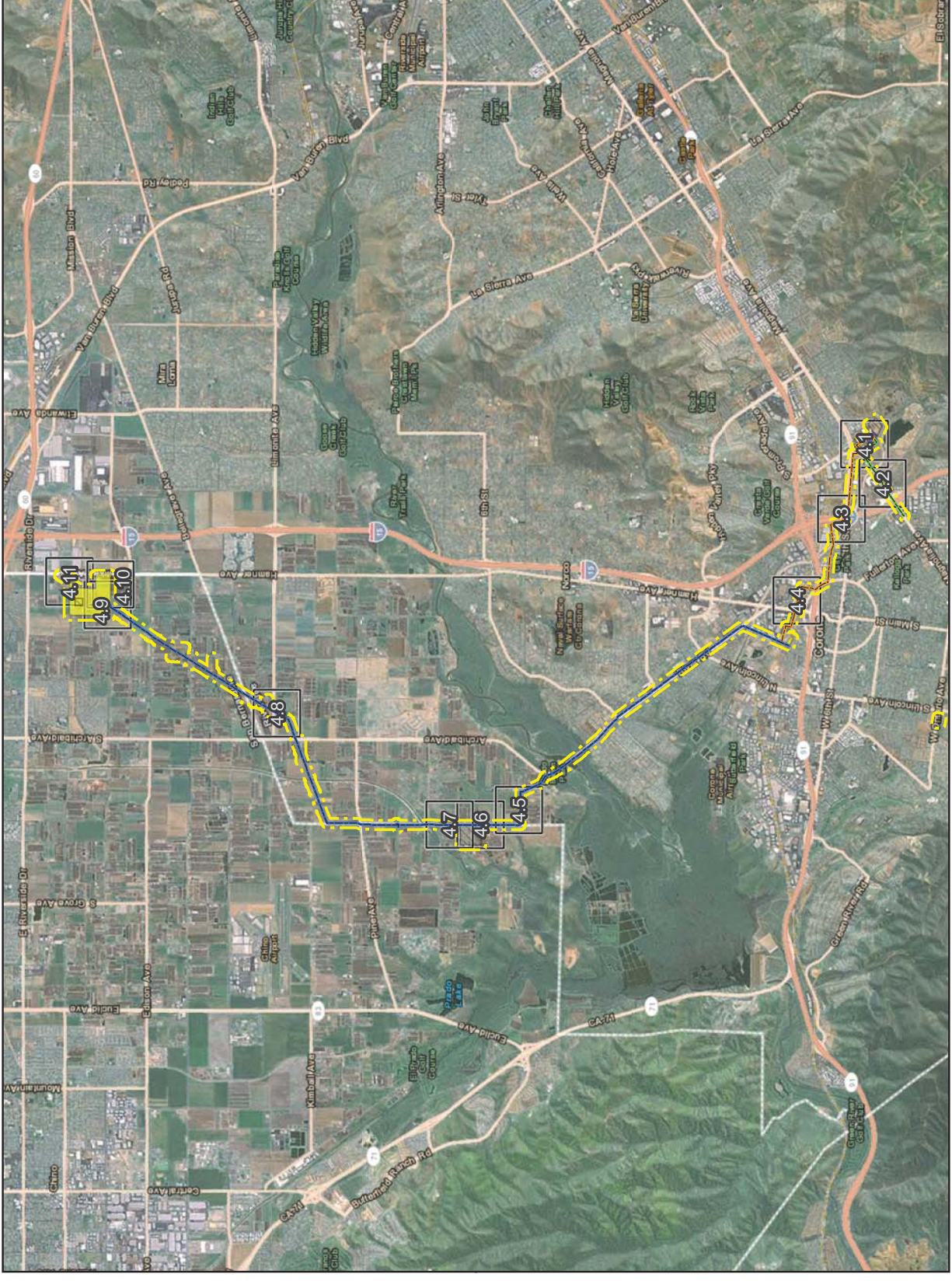
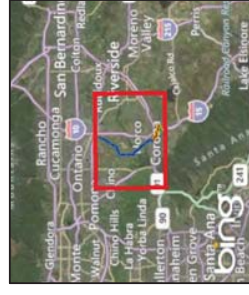
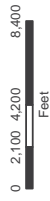












Figure 4.1
 Circle City and Mira Loma-
 Jefferson Sub Station
 Fairy Shrimp Survey Results
 Map

Version Date: 8/6/2013

-  Survey Area (300ft Buffer)
- Fairy Shrimp Survey Results**
-  Fairy Shrimp Not Detected
-  Fairy Shrimp Detected
- Client Data**
-  Access Roads
-  Staging Yard
- Substation**
-  Existing
-  Proposed
- Transmission Line**
-  Corona - Circle City
-  Mira Loma - Corona
-  Tap - Circle City

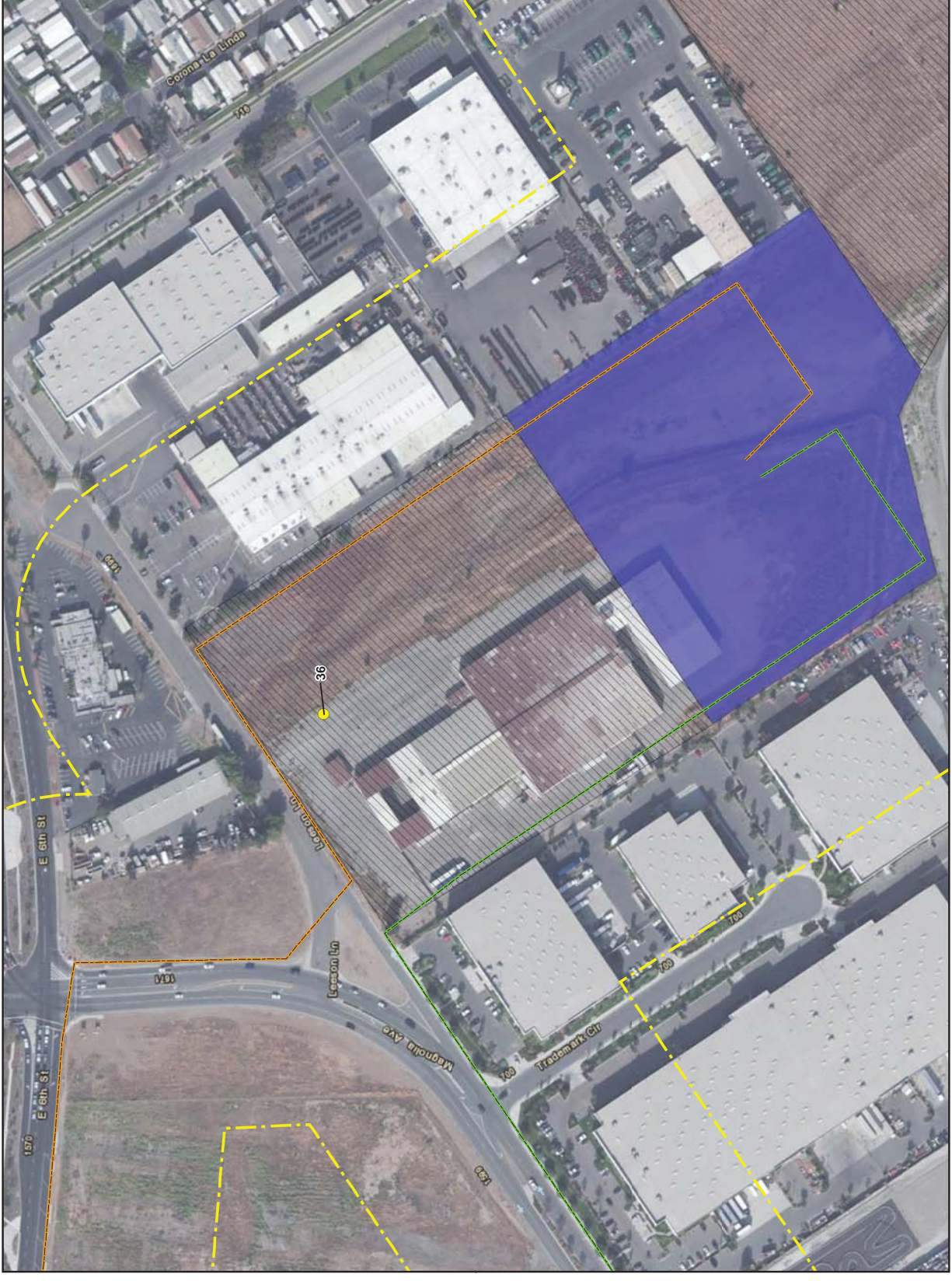












Figure 4.2
 Circle City and Mira Loma-
 Jefferson Sub Station
 Fairy Shrimp Survey Results
 Map

Version Date: 8/6/2013

-  Survey Area (300ft Buffer)
- Fairy Shrimp Survey Results**
-  Fairy Shrimp Not Detected
-  Fairy Shrimp Detected
- Client Data**
-  Access Roads
-  Staging Yard
- Substation**
-  Existing
-  Proposed
- Transmission Line**
-  Corona - Circle City
-  Mira Loma - Corona
-  Tap - Circle City

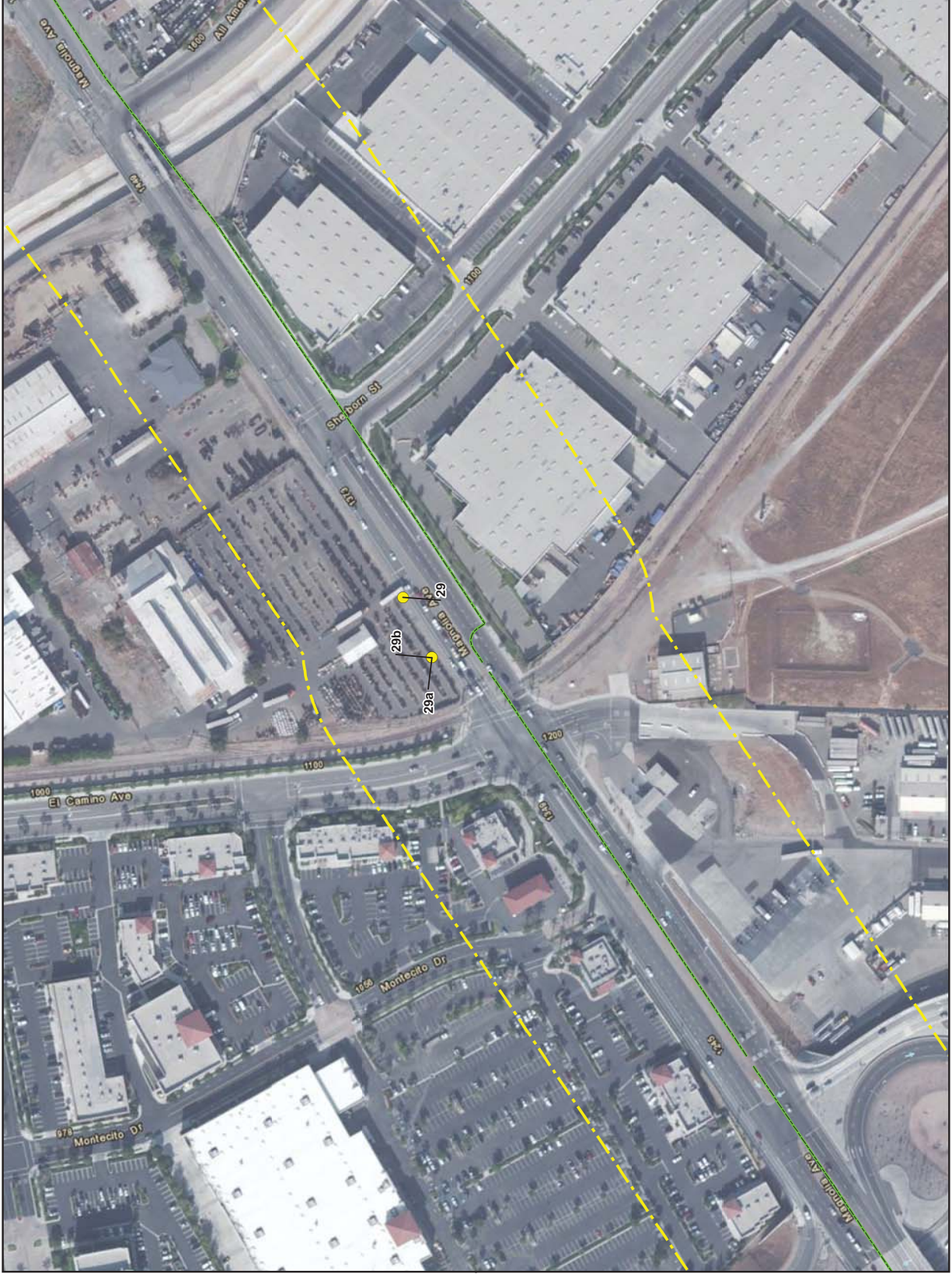
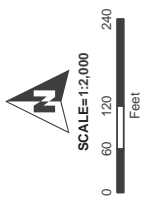












Figure 4.3
 Circle City and Mira Loma-
 Jefferson Sub Station
 Fairy Shrimp Survey Results
 Map

Version Date: 8/9/2013

-  Survey Area (300ft Buffer)
- Fairy Shrimp Survey Results**
-  Fairy Shrimp Not Detected
-  Fairy Shrimp Detected
- Client Data**
-  Access Roads
-  Staging Yard
- Substation**
-  Existing
-  Proposed
- Transmission Line**
-  Corona - Circle City
-  Mira Loma - Corona
-  Tap - Circle City

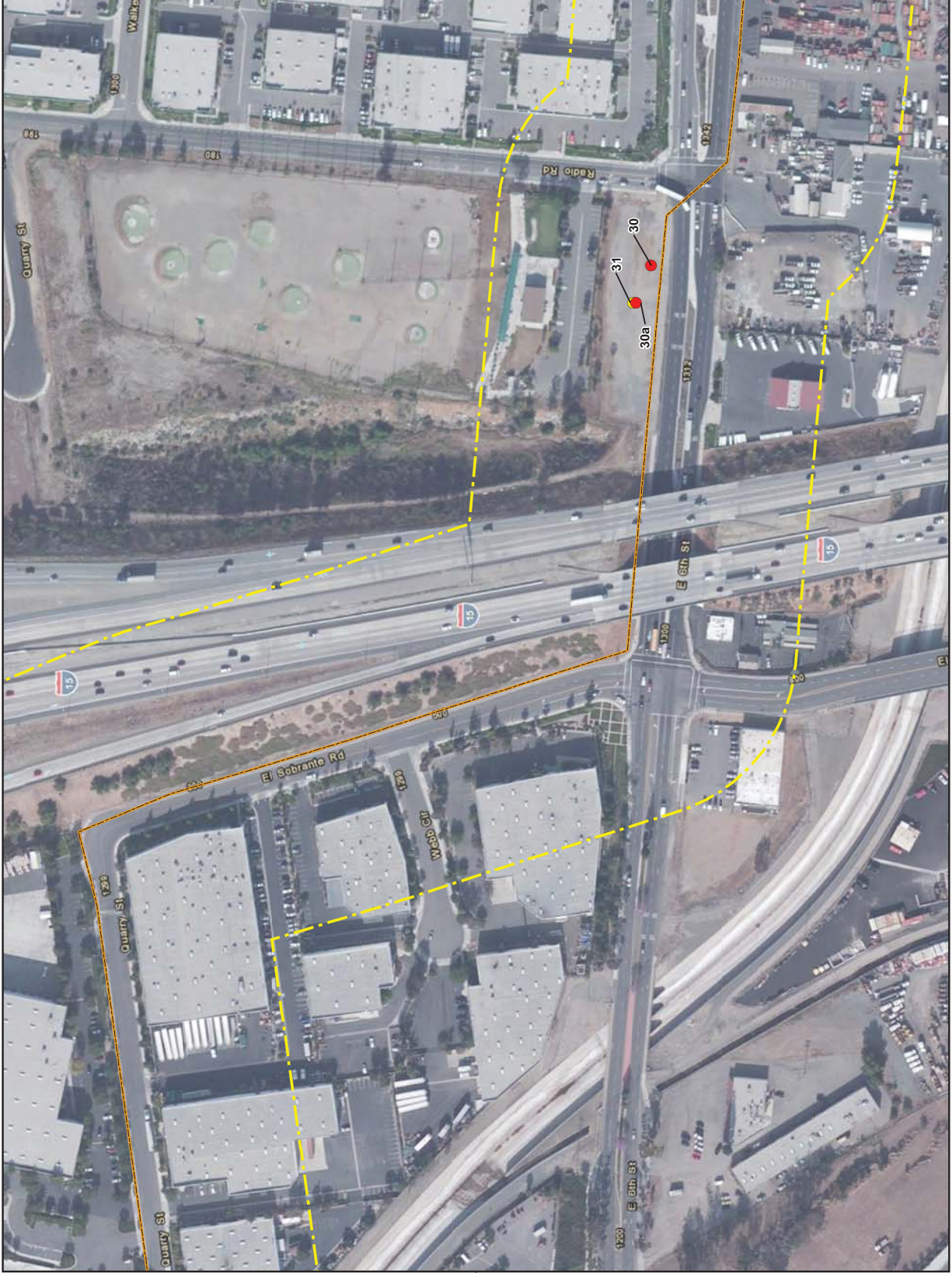












Figure 4.4
 Circle City and Mira Loma-
 Jefferson Sub Station
 Fairy Shrimp Survey Results
 Map

Version Date: 8/6/2013

-  Survey Area (300ft Buffer)
- Fairy Shrimp Survey Results**
-  Fairy Shrimp Not Detected
-  Fairy Shrimp Detected
- Client Data**
-  Access Roads
-  Staging Yard
- Substation**
-  Existing
-  Proposed
- Transmission Line**
-  Corona - Circle City
-  Mira Loma - Corona
-  Tap - Circle City

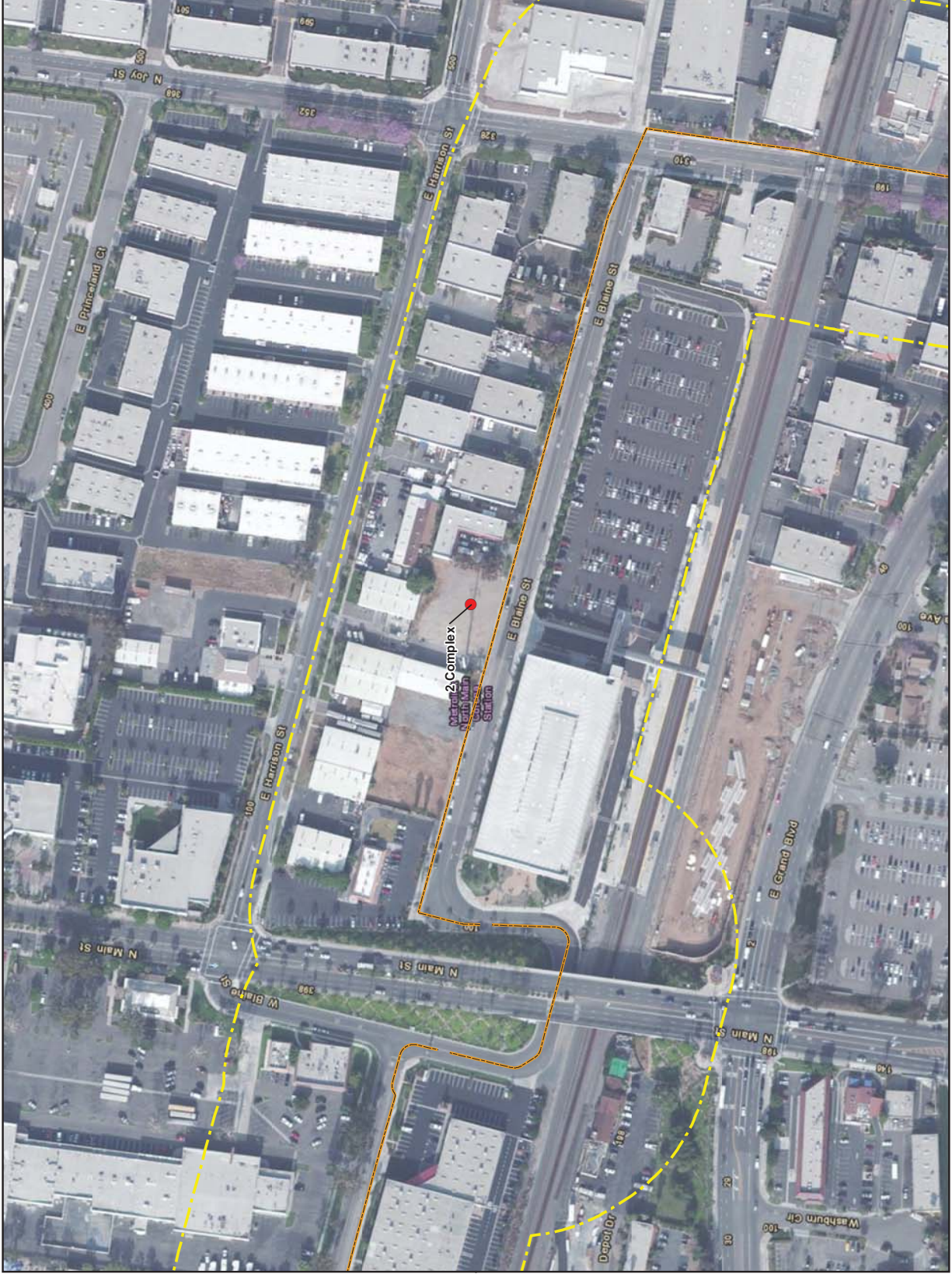


Figure 4.5
 Circle City and Mira Loma-
 Jefferson Sub Station
 Fairy Shrimp Survey Results
 Map

Version Date: 8/6/2013

- Survey Area (300ft Buffer)
- Fairy Shrimp Survey Results**
 - Fairy Shrimp Not Detected
 - Fairy Shrimp Detected
- Client Data**
 - Access Roads
 - Staging Yard
- Substation**
 - Existing
 - Proposed
- Transmission Line**
 - Corona - Circle City
 - Mira Loma - Corona
 - Tap - Circle City

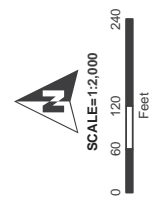












Figure 4.6
 Circle City and Mira Loma-
 Jefferson Sub Station
 Fairy Shrimp Survey Results
 Map

Version Date: 8/6/2013

-  Survey Area (300ft Buffer)
- Fairy Shrimp Survey Results**
-  Fairy Shrimp Not Detected
-  Fairy Shrimp Detected
- Client Data**
-  Access Roads
-  Staging Yard
- Substation**
-  Existing
-  Proposed
- Transmission Line**
-  Corona - Circle City
-  Mira Loma - Corona
-  Tap - Circle City

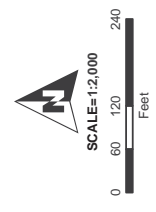


Figure 4.7
 Circle City and Mira Loma-
 Jefferson Sub Station
 Fairy Shrimp Survey Results
 Map

Version Date: 8/6/2013

- Survey Area (300ft Buffer)
- Fairy Shrimp Survey Results**
- Fairy Shrimp Not Detected
- Fairy Shrimp Detected
- Client Data**
- Access Roads
- Staging Yard
- Substation**
- Existing
- Proposed
- Transmission Line**
- Corona - Circle City
- Mira Loma - Corona
- Tap - Circle City

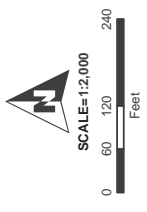
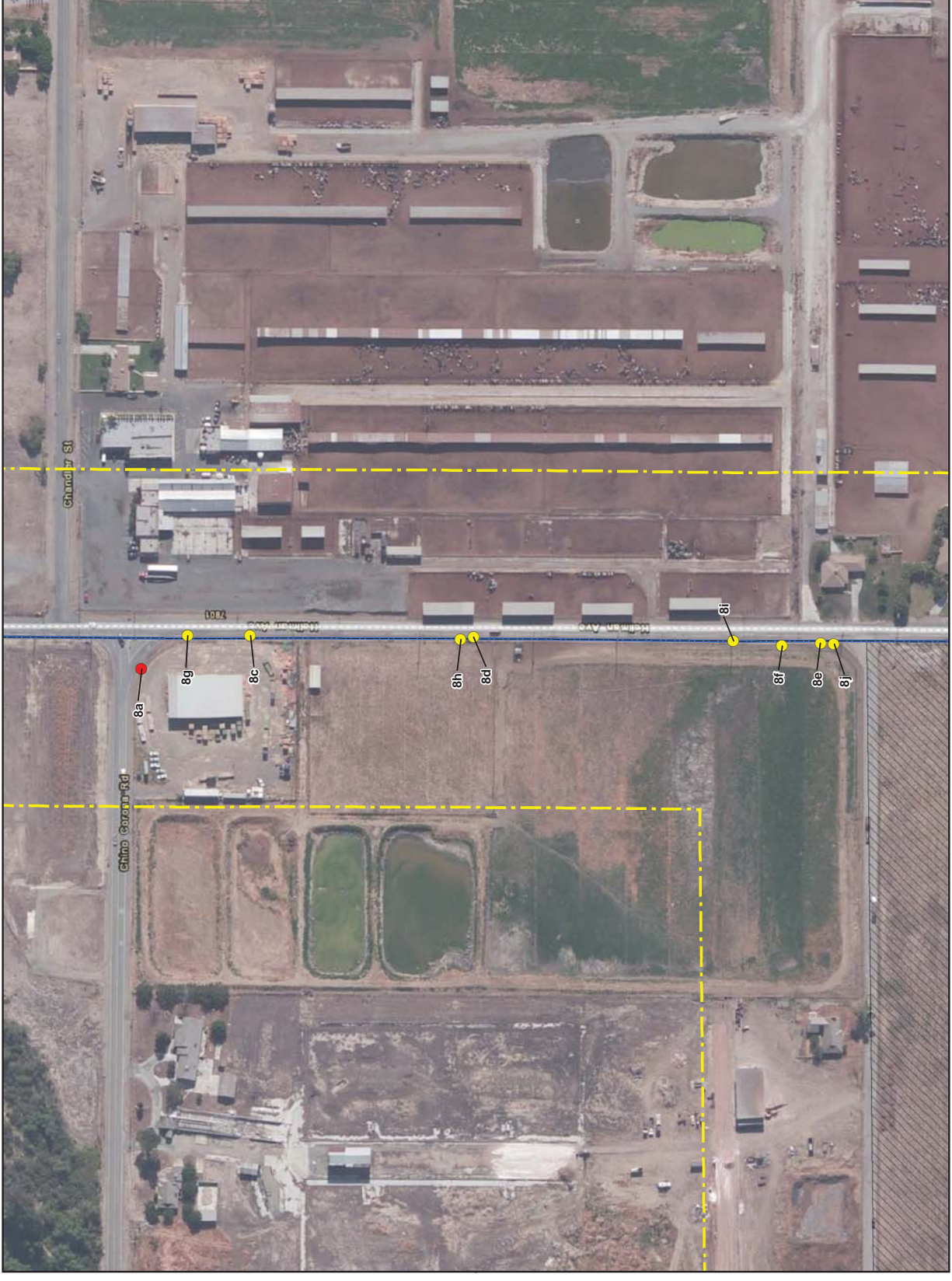


Figure 4.8
 Circle City and Mira Loma-
 Jefferson Sub Station
 Fairy Shrimp Survey Results
 Map











Version Date: 8/6/2013

- Survey Area (300ft Buffer)
- Fairy Shrimp Survey Results**
 - Fairy Shrimp Not Detected
 - Fairy Shrimp Detected
- Client Data**
 - Access Roads
 - Staging Yard
- Substation**
 - Existing
 - Proposed
- Transmission Line**
 - Corona - Circle City
 - Mira Loma - Corona
 - Tap - Circle City



Figure 4.9
 Circle City and Mira Loma-
 Jefferson Sub Station
 Fairy Shrimp Survey Results
 Map

Version Date: 8/6/2013

-  Survey Area (300ft Buffer)
- Fairy Shrimp Survey Results**
-  Fairy Shrimp Not Detected
-  Fairy Shrimp Detected
- Client Data**
-  Access Roads
-  Staging Yard
- Substation**
-  Existing
-  Proposed
- Transmission Line**
-  Corona - Circle City
-  Mira Loma - Corona
-  Tap - Circle City

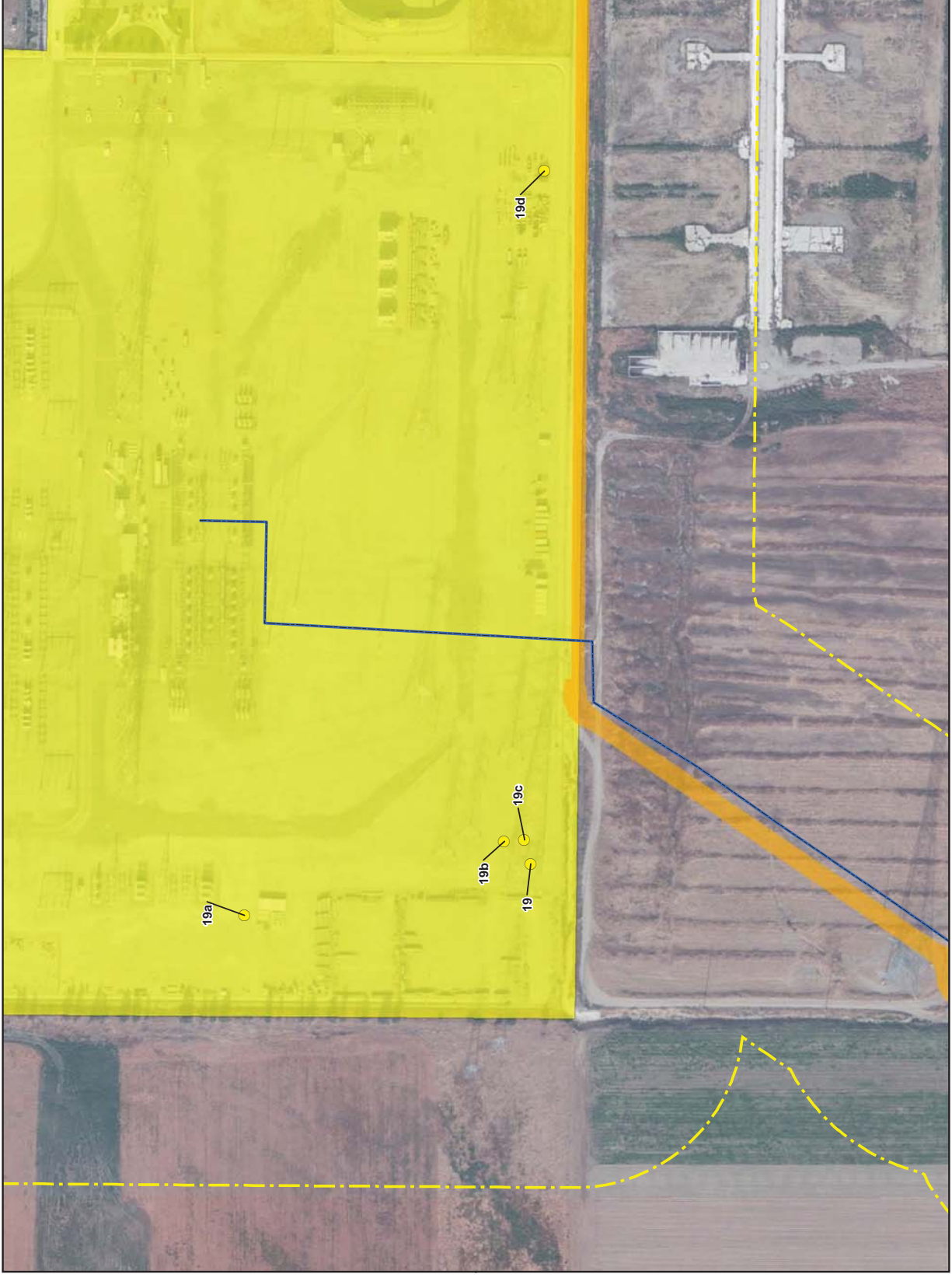












Figure 4.10
 Circle City and Mira Loma-
 Jefferson Sub Station
 Fairy Shrimp Survey Results
 Map

Version Date: 8/6/2013

-  Survey Area (300ft Buffer)
- Fairy Shrimp Survey Results**
-  Fairy Shrimp Not Detected
-  Fairy Shrimp Detected
- Client Data**
-  Access Roads
-  Staging Yard
- Substation**
-  Existing
-  Proposed
- Transmission Line**
-  Corona - Circle City
-  Mira Loma - Corona
-  Tap - Circle City

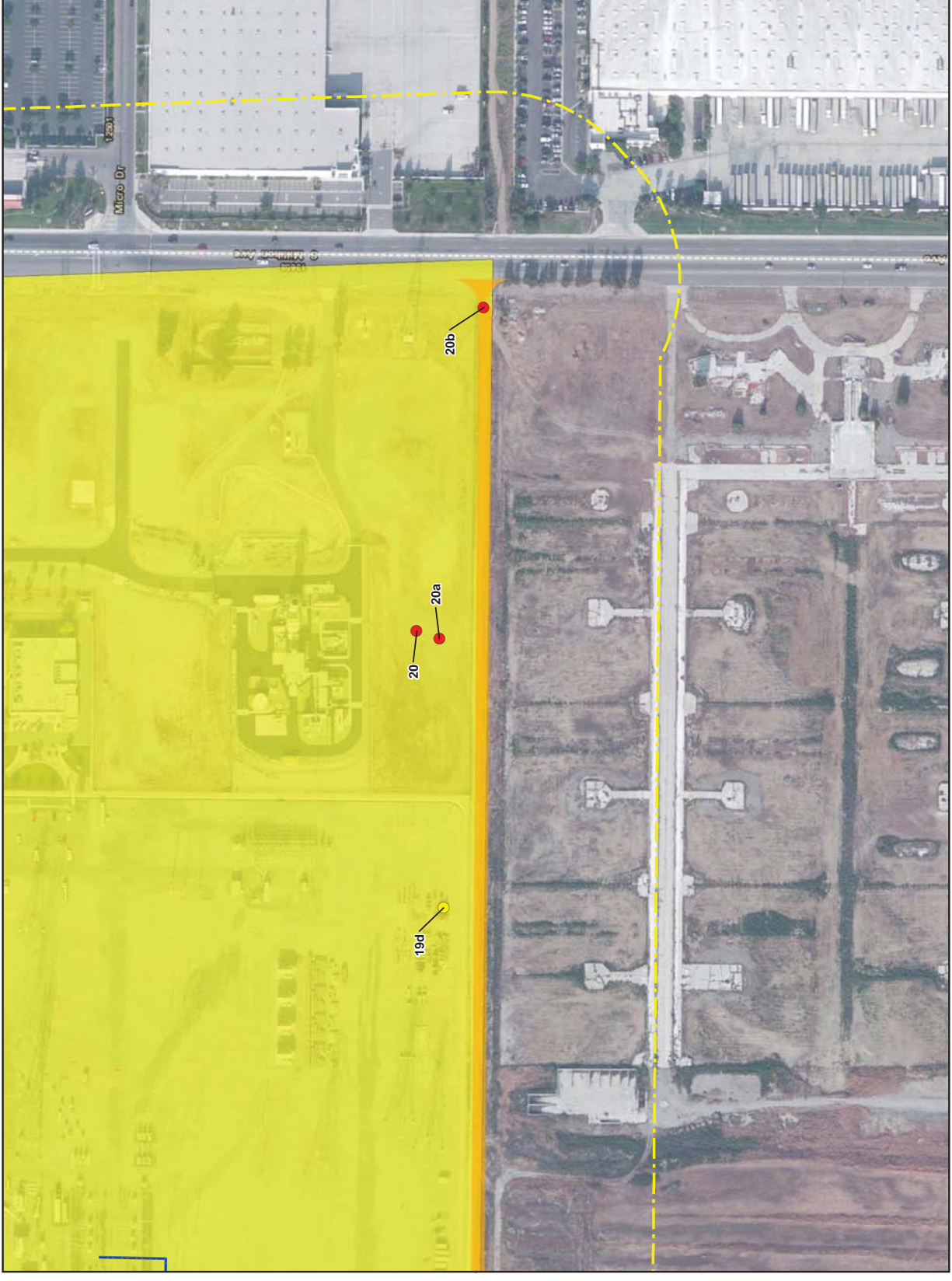
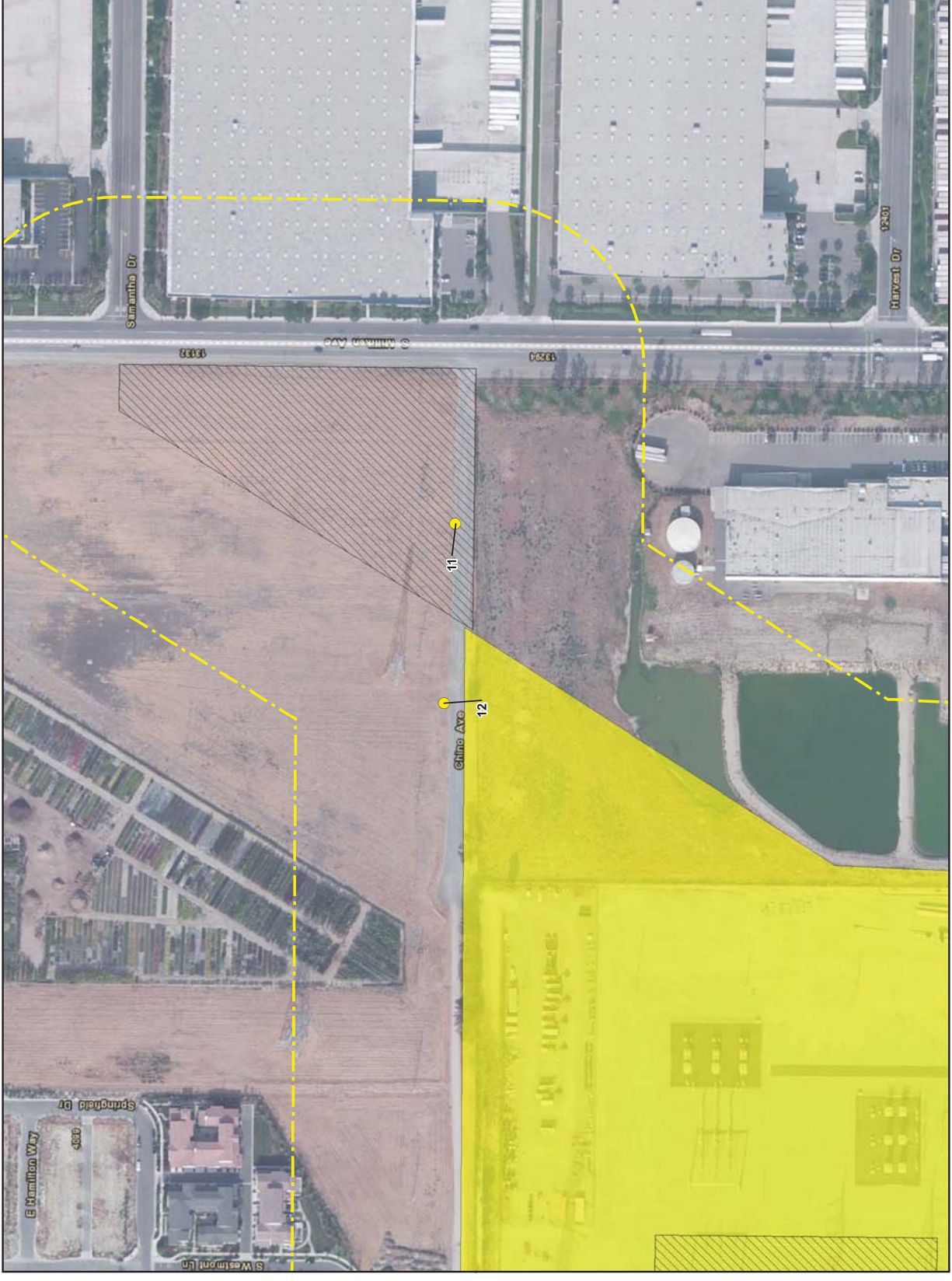


Figure 4.11
 Circle City and Mira Loma-
 Jefferson Sub Station
 Fairy Shrimp Survey Results
 Map

Version Date: 8/6/2013

- Survey Area (300ft Buffer)
- Fairy Shrimp Survey Results**
- Fairy Shrimp Not Detected
- Fairy Shrimp Detected
- Client Data**
- Access Roads
- Staging Yard
- Substation**
- Existing
- Proposed
- Transmission Line**
- Corona - Circle City
- Mira Loma - Corona
- Tap - Circle City



For each basin that was surveyed, BBS recorded the basin number, survey date, and air temperature, as well as the maximum depth, width, and length of the basin at the time of that sampling. BBS also recorded the aquatic species observed in each basin. For fairy shrimp observed, BBS noted the reproductive status and approximate numbers of fairy shrimp in each basin and, when possible, identified which species were present. Copies of the original field datasheets are provided as Appendix G to this report. In addition, Appendix D, Basin Conditions by Survey Table, provides a summary for each basin by date and includes information only for dates that the specific basin was sampled. If the basin was dry or not sampled for another reason, the information is included in the Survey Tracking Table (Appendix A) but not in the Basin Conditions by Survey Table.

Once surveys were completed, BBS compiled the data for each of the basins and prepared the Basin Conditions Summary Table (Appendix E). This table provides the basin number, actual maximum depth, estimated maximum depth, actual maximum surface area, and estimated maximum surface area. The table also summarizes the habitat condition, disturbance type, and disturbance level and provides the GPS coordinates for each basin, all of which were collected during the initial visits during the 2012/2013 survey season.

Of the 86 basins surveyed during the 2012/2013 survey season, 51 basins did not support any fairy shrimp and 35 basins supported fairy shrimp. Of the 35 basins that supported fairy shrimp, BBS was able to identify the fairy shrimp as versatile fairy shrimp in 21 of the basins. In 20 of these basins, there were also sampling visits when the fairy shrimp within the basin were too young to identify to genus or species; however, these were likely versatile fairy shrimp, based on the data collected during the 2012/2013 sampling season. In the remaining 14 basins that supported fairy shrimp, the fairy shrimp were never mature enough to identify during the 2012/2013 sampling season; however, these also are likely versatile fairy shrimp, given the unlikely occurrence of the other fairy shrimp species in the proposed project survey area and the prevalence of versatile fairy shrimp in similar basins within the survey area.

SECTION 4.0 – SUMMARY & RECOMMENDATIONS

No sensitive fairy shrimp species were detected during the 2011/2012 or 2012/2013 focused, protocol-level fairy shrimp surveys conducted within the proposed project survey area.

Approximately 111 potential basins were identified within the proposed project survey area during the 2012/2013 wet season surveys. BBS excluded 25 of these basins and sampled 86. BBS did not identify fairy shrimp in 51 basins but observed fairy shrimp in 35 basins. Versatile fairy shrimp were identified in 21 of the 35 basins, 20 of which also had unidentifiable (likely versatile fairy shrimp) fairy shrimp. Unidentifiable fairy shrimp also were identified in 14 of the 35 basins.

The 2012/2103 wet season fairy shrimp survey satisfies a portion of the current USFWS protocol, which requires either two full wet season surveys within 5 years or one full wet season and one dry season sampling during consecutive survey seasons. While Basin 2 though Basin 8 were sampled both during the 2011/2012 and 2012/2013 wet season, the majority of the basins within the proposed project survey area have only been surveyed once during the 2012/2013 wet season, and therefore, require additional sampling to meet the current USFWS protocol requirements.

SECTION 5.0 – SURVEYORS’ CERTIFICATION

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



29 July 2013

Melissa Busby

Date

ESA Permit Number TE-080779-2



29 July 2013

Darin Busby

Date

ESA Permit Number TE-115373-2

SECTION 6.0 – REFERENCES

BonTerra Consulting

- 2012 *90-Day Report for the Wet Season Presence/Absence Survey for Vernal Pool Branchiopods Conducted on the Circle City Substation and Mira Loma- Jefferson Subtransmission Line Project, San Bernardino and Riverside Counties, California.* Prepared for USFWS Carlsbad Fish and Wildlife Office. August 2012.

National Oceanic and Atmospheric Administration (NOAA)

- 2013 National Weather Service Forecast Office, San Diego Weather. <http://www.nws.noaa.gov/climate/index.php?wfo=sgx>.
- 2012 National Weather Service Forecast Office, San Diego Weather. <http://www.nws.noaa.gov/climate/index.php?wfo=sgx>.

U.S. Department of Agriculture, Natural Resources Conservation Service (USDA NRCS).

- 1980 *Soil Survey Geographic (SSURGO) Database for San Bernardino County, Southwestern Part, California.* Fort Worth, TX: USDA, NRCS.
- 1974 *Soil Survey Geographic (SSURGO) Database for Western Riverside Area, California.* Fort Worth, TX: USDA, NRCS.

U.S. Fish and Wildlife Service (USFWS)

- 2012 Endangered and Threatened Wildlife and Plants; Revised Critical Habitat for the Riverside Fairy Shrimp; Final Rule. *Federal Register* 77(233): 72070–72140. Washington, D.C.: USFWS.
- 2005 Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for Four Vernal Pool Crustaceans and Eleven Vernal Pool Plants in California and Southern Oregon; Final Rule. *Federal Register* 70(154): 46923–46999. Washington, D.C.: USFWS.
- 1996 Interim Survey Guidelines to Permittees for Recovery Permits under Section under 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods.
- 1994 Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the Conservancy Fairy Shrimp, Longhorn Fairy Shrimp, and the Vernal Pool Tadpole Shrimp; and Threatened Status for the Vernal Pool Fairy Shrimp. *Federal Register* 59(180): 42136–48153. Washington, D.C.: USFWS.
- 1993 Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for Three Vernal Pool Plants and the Riverside Fairy Shrimp. *Federal Register* 58(147): 41384–41392. Washington, D.C.: USFWS.

U.S. Geological Survey (USGS)

1967a *Corona North Quadrangle 7.5-Minute Topographic Map* (Photorevised 1981).

1967b *Corona South Quadrangle 7.5-Minute Topographic Map* (Photorevised 1988).

1966 *Guasti Quadrangle 7.5-Minute Topographic Map* (Photorevised 1981).

APPENDIX A – SURVEY TRACKING TABLE



APPENDIX A- SURVEY TRACKING TABLE

Basin	10/26/12 (Survey 1)	12/7/12 (Survey 2)	12/20/12 (Survey 3)	12/26/12 (Survey 4a)	12/27/12 (Survey 4b)	1/3/12 (Survey 5)	1/18/13 (Survey 6)	1/31/13 (Survey 7)	2/14/13 (Survey 8)	3/1/13 (Survey 9)	3/15/13 (Survey 10)	3/27/13 (Survey 11)	Identified Fairy Shrimp	Unidentified Fairy Shrimp	Notes
A	D	D	W	SNN	☉	☉	D	D	E	E	E	E	None	None	EXCLUDED- Sampled twice but determined to be inundated from artificial road watering for dust control
Wetland 1	☉	W	W	SNN	W	W	W	W	E	E	E	E	None	None	EXCLUDED- Inundated from urban runoff, not seasonal rainfall, and supported mosquito fish
1	D	D	D	A, I	A, I	A	A	E	E	E	I	D	VFS (A)	N/A	EXCLUDED- Never inundated long enough to sample; same as Basin 27
2	D	D	W	SNN	SNN	SNN	D	I, N	☉	☉	☉	D	None	I, N	
2a.1															
2a.2	D	D	W	☉	SNN	A	D	I, N	☉	D	D	D	VFS (A)	I, N	Basins 2a.1 and 2a.2 separated on 1/3/13
2b	D	D	W	☉	SNN	☉	D	☉	☉	D	I	D	None	I	
2c.1	D	D	W	☉	SNN	☉	D	☉	☉	D	D	D	None	None	
2c.2	D	D	W	☉	SNN	☉	D	☉	☉	D	D	D	None	None	Basins 2c.1 and 2c.2 separated on 1/3/13
2d	D	D	W	☉	SNN	☉	D	☉	☉	D	D	D	None	None	
2e	D	D	W	☉	SNN	☉	D	☉	☉	D	D	D	None	None	
2f	D	D	W	☉	SNN	☉	D	I, N	☉	D	D	D	None	N	
2g	D	D	W	☉	SNN	☉	D	☉	☉	D	I	D	None	I	
2h	D	D	W	☉	SNN	☉	D	☉	☉	D	D	D	None	None	
2i	D	D	W	☉	SNN	☉	D	I, N	☉	D	D	D	VFS (A)	I, N	Likely connects with Basin 2j with adequate rainfall
2j	D	D	D	W	SNN	A	D	I, N	☉	D	D	D	VFS (A)	I, N	Likely connects with Basin 2i with adequate rainfall
2k	D	D	D	W	SNN	A	D	I, N	☉	D	D	D	None	I, N	Likely connects with Basin 2l with adequate rainfall
2l	D	D	D	W	SNN	☉	D	☉	☉	D	D	D	None	None	
2m	D	D	D	W	SNN	☉	D	☉	☉	D	D	D	None	None	
2n	D	D	D	W	SNN	☉	D	☉	☉	D	D	D	None	None	
2o	D	D	D	W	SNN	☉	D	☉	☉	D	D	D	None	None	
2p	D	D	D	W	SNN	☉	D	☉	☉	D	D	D	None	None	
2q	D	D	D	W	SNN	☉	D	☉	☉	D	D	D	None	None	
2r	D	D	D	W	SNN	☉	D	☉	☉	D	D	D	None	None	
2s	D	D	D	W	SNN	☉	D	I	☉	D	D	D	None	I	
2t	D	D	D	W	SNN	☉	D	I	☉	D	D	D	None	I	
2u	D	D	D	W	SNN	☉	D	☉	A	D	D	D	VFS (A)	None	Likely connects with Basin 2v with adequate rainfall
2v	D	D	D	W	SNN	☉	D	☉	☉	D	I	D	None	I	
2w	D	D	D	W	SNN	☉	D	☉	☉	D	D	D	None	None	
2x	D	D	D	W	SNN	☉	D	I, N	☉	D	D	D	None	I, N	
3	D	I	☉	--	--	☉	D	I, N	☉	D	D	D	None	I, N	
3a	D	I	☉	--	--	☉	D	I, N	☉	D	I	D	None	I, N	
3b	D	☉	☉	--	--	A, I	D	D	D	D	D	D	VFS (A)	I	
3c	D	D	I	--	--	I	D	D	D	D	D	D	None	I	
3d	D	D	W	☉	SNN	☉	D	D	D	D	D	D	None	None	
3e	D	D	W	☉	SNN	D	D	D	D	D	D	D	None	None	
4	D	D	D	D	SNN	D	D	E	E	E	E	E	None	N/A	EXCLUDED- Never located
4a	D	☉	☉	--	--	☉	D	☉	☉	D	D	D	None	None	
4b	D	☉	A	--	--	I, N	D	I	A	D	☉	D	VFS (A)	I, N	
4c	D	D	W	☉	SNN	A, I	D	I, N	☉	D	A	D	VFS (A)	I, N	
4d	D	D	W	☉	SNN	D	D	D	D	D	D	D	None	None	
4f	D	D	W	A, I	SNN	A, I	D	☉	☉	D	D	D	VFS (A)	I	
4g	D	D	W	☉	SNN	D	D	I, N	☉	D	I	D	None	I, N	
4h	D	D	D	W	SNN	☉	D	D	D	D	D	D	None	None	
5	D	D	D	W	SNN	I	D	I, N	A, I	A, I	A, I	D	VFS (A)	I, N	
5a	D	I	A	--	--	A	D	I, N	☉	D	A, I	D	VFS (A)	I	Connected with Basin 5a on 12/26/12
5c	D	D	W	W	SNN	A	D	I, N	A	D	A, I	D	VFS (A)	I, N	Connected with Basin 5b on 12/26/12
5d	D	D	W	W	SNN	D	D	D	D	D	D	D	None	None	
6	D	I	I	--	--	A	D	I, N	A, I	A	A, I	D	VFS (A)	I, N	
6a	D	I	A	--	--	A	D	I, N	A, I	A	A, I	D	VFS (A)	I, N	
6b	D	D	W	A, I	SNN	D	D	I	D	D	D	D	VFS (A)	I	
6c	D	D	W	SNN	☉	☉	D	☉	☉	D	☉	D	None	None	

APPENDIX A- SURVEY TRACKING TABLE

Basin	10/26/12 (Survey 1)	12/7/12 (Survey 2)	12/20/12 (Survey 3)	12/26/12 (Survey 4a)	12/27/12 (Survey 4b)	1/3/12 (Survey 5)	1/18/13 (Survey 6)	1/31/13 (Survey 7)	2/14/13 (Survey 8)	3/1/13 (Survey 9)	3/15/13 (Survey 10)	3/27/13 (Survey 11)	Identified Fairy Shrimp	Unidentified Fairy Shrimp	Notes
6d	D	D	W	SNN	☉	☉	D	D	D	D	D	D	None	None	
6e	D	D	W	SNN	☉	☉	D	D	D	D	D	D	None	None	
6f	D	D	W	SNN	☉	☉	D	D	D	D	☉	D	None	None	
6g	D	D	W	SNN	☉	☉	D	☉	☉	D	D	D	None	None	
6h	D	D	W	SNN	☉	☉	D	☉	☉	D	☉	D	None	None	
6i	D	D	W	SNN	☉	☉	D	☉	☉	D	☉	D	None	None	
6j	D	D	D	SNN	☉	☉	D	☉	☉	D	D	D	None	None	
7	D	I, N	I	--	A	A	D	I, N	A, I	☉	I	D	VFS (A)	I, N	
8a	D	I	I, N	--	A	A	D	I, N	A, I	A	I	D	VFS (A)	I, N	
8b	D	D	D	SNN	D	D	D	E	E	E	E	E	N/A	N/A	EXCLUDED - Never inundated long enough to sample
8c	D	D	W	SNN	☉	☉	D	D	D	D	D	D	None	None	
8d	D	D	W	SNN	☉	☉	D	D	D	D	D	D	None	None	
8e	D	D	W	SNN	☉	☉	D	D	D	D	☉	D	None	None	
8f	D	D	W	SNN	☉	☉	D	D	D	D	D	D	None	None	
8g	D	D	D	SNN	☉	☉	D	☉	☉	☉	☉	D	None	None	
8h	D	D	D	SNN	☉	☉	D	☉	☉	☉	D	D	None	None	
8i	D	D	D	SNN	☉	☉	D	☉	☉	D	D	D	None	None	
8j	D	D	D	SNN	☉	☉	D	D	D	D	D	D	None	None	
9	D	D	D	SNN	D	D	D	E	E	E	E	E	N/A	N/A	EXCLUDED - Never inundated long enough to sample
10	D	D	D	SNN	D	D	D	E	E	E	E	E	N/A	N/A	EXCLUDED - Never inundated long enough to sample
11	D	D	W	SNN	☉	☉	D	☉	☉	D	D	D	None	None	
12	D	D	W	SNN	☉	☉	D	D	D	D	D	D	None	None	
13	D	D	D	SNN	☉	☉	D	E	E	E	E	E	None	None	EXCLUDED - Never inundated long enough to sample
14	D	D	D	SNN	☉	☉	D	E	E	E	E	E	N/A	N/A	EXCLUDED - Never inundated long enough to sample
14a	D	D	W	SNN	☉	☉	D	D	D	D	D	D	N/A	N/A	EXCLUDED - Never inundated long enough to sample except on 12/27/12 when it was inaccessible
15	D	D	D	SNN	D	D	D	E	E	E	E	E	N/A	N/A	EXCLUDED - Never inundated long enough to sample
16	D	D	D	SNN	D	D	D	E	E	E	E	E	N/A	N/A	EXCLUDED - Never inundated long enough to sample
17	D	D	D	SNN	D	D	D	E	E	E	E	E	N/A	N/A	EXCLUDED - Never inundated long enough to sample
18	D	D	D	SNN	D	D	D	E	E	E	E	E	N/A	N/A	EXCLUDED - Never inundated long enough to sample
19	D	☉	☉	--	--	☉	D	D	D	D	D	D	None	None	
19a	D	D	W	SNN	☉	☉	D	D	D	D	D	D	None	None	
19b	D	D	W	SNN	☉	☉	D	D	D	D	D	D	None	None	
19c	D	D	W	SNN	☉	☉	D	D	D	D	D	D	None	None	
19d	D	D	W	SNN	☉	☉	D	D	D	D	D	D	None	None	
20	D	I	A, I, N	--	A	A	D	A	A	D	I	D	VFS (A)	I, N	
20a (south)	D	I	D	--	A	A	D	I, N	D	D	I	D	VFS (A)	I, N	
20b	D	D	W	SNN	☉	☉	D	☉	I, N	☉	I	D	None	I, N	
21	E	E	E	E	E	E	D	E	E	E	E	E	N/A	N/A	EXCLUDED - Basin artificially inundated by sprinklers
22	D	D	D	SNN	D	D	D	E	E	E	E	E	N/A	N/A	EXCLUDED - Never inundated long enough to sample
22a	D	D	W	SNN	☉	☉	D	☉	☉	☉	☉	D	None	None	EXCLUDED - Never inundated long enough to sample
23	D	☉	☉	--	--	☉	D	☉	☉	D	D	D	None	None	
23a	D	☉	D	--	--	☉	D	☉	☉	D	D	D	None	None	
24	D	D	D	SNN	D	D	D	E	E	E	E	E	N/A	N/A	EXCLUDED - Never inundated long enough to sample
25	D	D	D	SNN	D	D	D	E	E	E	E	E	N/A	N/A	EXCLUDED - Never inundated long enough to sample
26	D	D	D	SNN	D	D	D	E	E	E	E	E	N/A	N/A	EXCLUDED - Never inundated long enough to sample
27	D	D	D	D	SNN	D	D	E	E	E	E	E	N/A	N/A	EXCLUDED - Never inundated long enough to sample; same as Basin 1.
28	☉	D	D	D	SNN	D	D	E	E	E	E	E	None	None	EXCLUDED - Sampled once but determined to be temporarily inundated from broken irrigation pipe
29	D	☉	☉	--	--	☉	D	☉	☉	D	☉	D	None	None	
29a	D	D	D	W	SNN	☉	D	D	D	D	D	D	None	None	
29b	D	D	M	W	SNN	☉	D	D	D	D	D	D	None	None	
30	D	D	W	I	SNN	A, I	D	N	A, I	D	D	D	VFS (A)	I, N	
30a	D	D	W	☉	SNN	☉	D	N	A	D	I	D	VFS (A)	I, N	
31	D	D	M	W	SNN	☉	D	D	D	D	D	D	None	None	
32	E	E	E	E	E	E	E	E	E	E	E	E	N/A	N/A	EXCLUDED - Within alternate alignment that was never surveyed

APPENDIX A: SURVEY TRACKING TABLE

Basin	10/26/12 (Survey 1)	12/7/12 (Survey 2)	12/20/12 (Survey 3)	12/26/12 (Survey 4a)	12/27/12 (Survey 4b)	1/3/12 (Survey 5)	1/18/13 (Survey 6)	1/31/13 (Survey 7)	2/14/13 (Survey 8)	3/1/13 (Survey 9)	3/15/13 (Survey 10)	3/27/13 (Survey 11)	Identified Fairy Shrimp	Unidentified Fairy Shrimp	Notes
33	E	E	E	E	E	E	E	E	E	E	E	E	N/A	N/A	EXCLUDED - Within alternate alignment that was never surveyed
34	E	E	E	E	E	E	E	E	E	E	E	E	N/A	N/A	EXCLUDED - Within alternate alignment that was never surveyed
35	D	D	D	D	SNN	D	D	D	D	D	D	D	N/A	N/A	EXCLUDED - Never inundated long enough to sample
36	D	D	W	⊙	SNN	⊙	D	D	⊙	D	D	D	None	None	Inundated but not accessible due to locked gate on 1/31/13

Key
A = Adult
D = DRY
E = Excluded
I = Immature
M = Muddy and unable to sample because of substrate
N = Nauplii
N/A = Not Applicable
SNN = Survey Not Necessary
WFS = Versatile Fairy Shrimp (*Branchinecta lindahli*)
W = Wet but not sampled because adequate time had not passed since last inundation
⊙ = Surveyed but no fairy shrimp detected
-- = Not surveyed because adequate time had not passed since last survey

APPENDIX B – USFWS EMAIL NOVEMBER 2, 2012





Darin Busby <busbybiological@gmail.com>

Circle City Fairy Shrimp Surveys

Linette Lina <LLina@chambersgroupinc.com>

Fri, Nov 2, 2012 at 8:48 AM

To: "Adelina.Munoz@sce.com" <Adelina.Munoz@sce.com>, "Susie_Tharratt@fws.gov" <Susie_Tharratt@fws.gov>, "Karin_Cleary-Rose@fws.gov" <Karin_Cleary-Rose@fws.gov>

Cc: Busby Biological Services <darin@busbybiological.com>

Hello all,

Darin Busby and I wrote up a summary of our conversation last Wednesday with Karin Cleary-Rose of USFWS regarding the fairy shrimp survey approach for the Circle City project. Please find the summary below and let me know if you have any comments or concerns.

Thank you,
Linette

On October 31, 2012, Linette Lina of Chambers Group, Inc. organized a conference call with Karin Cleary-Rose of USFWS and Darin Busby and Melissa Busby of Busby Biological Services (subconsultant to Chambers Group, Inc.) to provide an overview of the Circle City project area and discuss the 2012/2013 fairy shrimp survey approach to three types of atypical basins found within the project area that don't appear to be reliant upon seasonal rainfall to remain inundated. These atypical basins within the project area include:

1. Several perennial and semi-perennial manmade, active dairy ponds used for containment of onsite water sources;
2. One semi-perennial to perennial detention basin with riparian vegetation that appears to be filled by offsite water sources such as irrigation;
3. One shallow, inundated area at the base of a roadside, manufactured slope being fed by runoff from a broken irrigation pipe.

It was determined by all parties on the conference call that these atypical basins should not be surveyed for the following reasons:

1. All three of the atypical basins are not reliant upon seasonal rainfall to remain inundated and are not fed by natural watercourses, and therefore, do not experience the typical inundation and drying patterns associated with vernal pools and habitats that supports fairy shrimp;
2. The presence of mosquito fish within the vegetated detention basin confirms that the basins have experienced long term inundation to support fish which can be a predator for any potential fairy shrimp;
3. Many of the active dairy ponds contain very poor water quality, creating potentially unsuitable water chemistry for fairy shrimp and presenting potential health and safety concerns for the surveying biologist.

While these atypical basins are not expected to be included in the 2012/2013 Circle City fairy shrimp

surveys, the surveying biologists will periodically visit these basins throughout the survey season to reassess their conditions and their potential to support fairy shrimp. Should conditions within these basins significantly change to provide more suitable habitat for fairy shrimp during the survey season, the feasibility of initiating surveys will be evaluated and discussed with USFWS.

The biologists will survey pools that are reliant on rainfall and have the hydrological conditions to support fairy shrimp, even though these pools may not otherwise have vernal pool characteristics. Such pools will include road ruts and depressions in dairies and other highly disturbed areas, such as substations.

APPENDIX C – USFWS EMAIL FEBRUARY 11, 2013





Darin Busby <busbybiological@gmail.com>

Circle City Fairy Shrimp Survey Protocol Modification Request

Tharratt, Susie <susie_tharratt@fws.gov>
To: Busby Biological Services <darin@busbybiological.com>

Tue, Feb 12, 2013 at 2:23 PM

Darin and Melissa,

Please consider this email our approval for Busby Biological Services to deviate from the 1996 Interim Survey Guidelines for Listed Vernal Pool Branchiopods at the subject site regarding data parameters for the basins in the high traffic, dirt lot ONLY of the SDGE Circle City vernal pool branchiopods surveys, and pursuant to the terms and conditions found in the recovery permits (TE-080779 and TE-115373). We concur to the following methods and/or deviations:

1. Busby Biological will continue to survey every basin within the dirt lot,
2. Busby Biological will only measure the basin parameters (i.e, GPS location, depth, surface area, temperature, condition, etc.) if fairy shrimp are detected within that basin; and
3. Basins parameters will not be collected in basins without fairy shrimp.

As usual we are looking forward to 90-day survey findings (report).

Regards,
Susie

Susie Tharratt
Recovery Permit Coordinator
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011
760-431-9440, extension 310
susie_tharratt@fws.gov

On Mon, Feb 11, 2013 at 2:43 PM, Busby Biological Services <darin@busbybiological.com> wrote:
Hi Susie,

I have been subcontracted by Chambers Group to conduct fairy shrimp surveys for the Southern California Edison (SCE) Circle City project. I have been conducting these surveys since the basins became inundated in October. I wanted to get your concurrence to slightly modify the survey protocol in one particular location of the project (a high traffic, dirt parking lot) to maximize survey efficiency without compromising the survey integrity. Below is a brief background of the project and the dirt lot where I'd like to modify the protocol. Attached is an overview aerial photo of the dirt lot, a pdf map of the basin locations, and two representative photographs of the basins and dirt lot.

The majority of the project area is along roadways and within substations, dirt lots, and other developed areas; therefore, the majority of the surveys are being conducted within road ruts and other manmade depressions. The majority of these basins have remained relatively unchanged in condition and dimension since surveys were initiated, making the collection of the required data at each of these basins during each survey, as outlined in the USFWS protocol, relatively easy and straightforward.

However, the collection of the data parameters for the basins in the high traffic, dirt lot mentioned above has been fairly complex and dynamic. This highly disturbed dirt lot is surrounded by development in an industrial portion of the City of Corona and currently receives regular vehicular traffic as it is used as a parking lot for many of the adjacent

business. The approximately 15,600 square-foot (~125ft x 125ft) dirt lot currently contains approximately 26 unvegetated basins. Some of these basins connect during large rain events and separate again as the basins begin drying. So far, we have detected *Branchinecta lindahli* in 4 of the 26 basins, and - during the last survey - we detected immature and unidentifiable fairy shrimp in 9 of the 26 basins. Because the dirt lot receives frequent traffic, many of the basins are constantly fluctuating in dimension and depth, and new basins are being formed from vehicles driving through the dirt lot when it is soft and muddy after rain events.

Because of the dynamic and ever-changing nature of the basins in the lot, collecting the data parameters in every basin during every survey takes a lot of time. We understand the intent of the survey guidelines, and we feel that this dirt lot is so disturbed and influenced by human activity, that we would like to propose a modified survey effort for this dirt lot to maximize survey efficiency without compromising the data collected. We propose to modify the protocol as follows:

1. We will continue to survey every basin within the dirt lot
2. We will only measure the basin parameters (i.e, GPS location, depth, surface area, temperature, condition, etc.) if fairy shrimp are detected within that basin
3. Basins parameters will not be collected in basins without fairy shrimp

We would like to receive concurrence for the protocol modification before our next survey. We are scheduled to conduct our next survey this Thursday, February 14. Please let us know if you have any questions.

Thank you,

Darin Busby
858-334-9508

Melissa Busby
858-334-9507

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Busby Biological Services
1452 Vue Du Bay Court
San Diego, CA 92109
Darin's Cell: 858.334.9508
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APPENDIX D – BASIN CONDITIONS BY SURVEY



APPENDIX D: BASIN CONDITIONS BY SURVEY TABLE

Basin	Survey Date	Air Temp (°F)	Basin Conditions						Fairy Shrimp			Other Species
			Water Temp (°F)	Max Depth (in.)	Max Width (ft.)	Max Length (ft.)	Max Surface Area (sq. ft.)	Species	Reproductive Status	Number		
2 Complex	12/26/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	VFS	A	100s	None
	1/3/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Unk	I	100s	None
									VFS	A	10s	None
	1/18/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Unk	I	10s	None
									VFS	A	10s	None
	1/31/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	VFS	A	10s	None
2/14/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Unk	I, N	100s	None	
3/15/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	VFS	A	1000s	None	
3	12/7/2012	73	65	2	1	9	8	8	Unk	I	10s	None
	12/20/2012	58	49	4	5	32.5	120	120	N/A	N/A	N/A	None
	1/3/2013	65	64	2	1.5	12.5	12	12	N/A	N/A	N/A	WF
	1/31/2013	67	67	2	1	10	9	9	Unk	I, N	10s	None
	12/7/2012	73	65	3	1	4	3	3	Unk	I	10s	None
	12/20/2012	58	49	2	1	3	2	2	N/A	N/A	N/A	None
3a	1/31/2013	67	57	4.5	4	21.5	80	80	Unk	I, N	10s	None
	2/14/2013	74	62	4.5	5	24.5	115	115	N/A	N/A	N/A	None
	3/15/2013	63	75	3.5	5	18	85	85	Unk	I	100s	None
	12/7/2012	73	65	3	2	11.5	20	20	N/A	N/A	N/A	None
	12/20/2012	58	49	4	6	16.5	90	90	N/A	N/A	N/A	None
3b	1/3/2013	65	55	2.5	7	21	133	133	VFS	A	1s	None
									Unk	I	1s	
3c	12/20/2012	58	49	4	2	5	8	8	Unk	I	10s	None
	1/3/2013	65	60	4.5	4	31	116	116	Unk	I	100s	DL
3d	12/26/2012	60	64	2.5	2.5	11	25	25	N/A	N/A	N/A	None
	1/3/2013	65	60	1.5	2.5	5	10	10	N/A	N/A	N/A	None
3e	12/26/2012	60	63	3	10	23	210	210	N/A	N/A	N/A	None
	12/7/2012	73	72	2	10	44.5	420	420	N/A	N/A	N/A	None
4a	12/20/2012	58	48	3	7	37	245	245	N/A	N/A	N/A	None
	1/3/2013	65	48	3	6.5	40	228	228	N/A	N/A	N/A	None
	1/31/2013	69	70	3	7	37.5	252	252	N/A	N/A	N/A	None
	2/14/2013	72	74	3	7	23	147	147	N/A	N/A	N/A	None

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Basin	Survey Date	Air Temp (°F)	Basin Conditions						Fairy Shrimp			Other Species
			Water Temp (°F)	Max Depth (in.)	Max Width (ft.)	Max Length (ft.)	Max Surface Area (sq. ft.)	Species	Reproductive Status	Number		
4b	12/7/2012	73	72	3	5	24.5	115	N/A	N/A	N/A	N/A	None
	12/20/2012	58	52	5	8	35	264	VFS	A	10s	10s	None
	1/3/2013	65	64	4	7	32.5	210	VFS	A	10s	10s	WF,SS
	1/31/2013	69	61	4	6	25.5	144	Unk	I, N	10s	10s	None
	2/14/2013	72	73	2.5	6.5	29.5	182	N/A	N/A	N/A	N/A	None
	3/15/2013	63	76	1	2.5	24	55	N/A	N/A	N/A	N/A	None
4c	12/26/2012	60	65	5.5	10	199	1,560	N/A	N/A	N/A	N/A	None
	1/3/2013	65	64	3.5	5	141	556	VFS	A	1,000s	1,000s	WF
	1/31/2013	69	65	4	5	146	572	Unk	I	1,000s	1,000s	None
	2/14/2013	72	69	6	8	334	1,980	N/A	N/A	N/A	N/A	None
	3/15/2013	63	74	3	5.5	130	512	VFS	A	1,000s	1,000s	DL
	12/26/2012	60	65	3.5	9	53	400	N/A	N/A	N/A	N/A	WF
4f	12/26/2012	60	66	2.5	8	51	343	VFS	A	100s	100s	None
	1/3/2013	65	60	2.5	9	53	400	Unk	I	100s	100s	None
	1/31/2013	67	65	2.5	8.5	54	400	VFS	A	100s	100s	None
	2/14/2013	72	68	2	2	18	32	Unk	I	100s	100s	None
	12/26/2012	60	65	2	8	32	210	N/A	N/A	N/A	N/A	None
	1/31/2013	67	67	2	5.5	20	90	N/A	N/A	N/A	N/A	None
4g	2/14/2013	72	69	3.5	10	127.5	1,000	Unk	I, N	10s	10s	None
	3/15/2013	63	79	2	1.5	45	43	N/A	N/A	N/A	N/A	None
	1/3/2013	65	62	1.5	4	31.5	120	Unk	I	1,000s	1,000s	None
	12/26/2012	60	65	5.5	10	199	1,560	N/A	N/A	N/A	N/A	None
	1/3/2013	65	64	3.5	5	141	556	VFS	A	1,000s	1,000s	WF
	1/31/2013	69	65	4	5	146	572	Unk	I	1,000s	1,000s	None
4h	12/26/2012	60	66	2.5	8	51	343	VFS	A	100s	100s	None
	1/3/2013	65	60	2.5	9	53	400	Unk	I	100s	100s	None
	1/31/2013	67	65	2.5	8.5	54	400	VFS	A	100s	100s	None
	2/14/2013	72	68	2	2	18	32	N/A	N/A	N/A	N/A	None
	12/26/2012	60	65	2	8	32	210	N/A	N/A	N/A	N/A	None
	1/31/2013	67	67	2	5.5	20	90	N/A	N/A	N/A	N/A	None

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Basin	Survey Date	Air Temp (°F)	Basin Conditions						Fairy Shrimp			Other Species
			Water Temp (°F)	Max Depth (in.)	Max Width (ft.)	Max Length (ft.)	Max Surface Area (sq. ft.)	Species	Reproductive Status	Number		
5	1/3/2013	65	60	3	19	28.5	432	Unk	I	1,000s	WF	
	1/31/2013	72	72	3	21	33	493	Unk	I, N	100s	None	
	2/14/2013	72	67	5	43	48	1,464	VFS	A	100s	SS	
								Unk	I	100s		
	3/1/2013	60	62	2	25.5	35.5	700	VFS	A	100s	SS,WF	
								Unk	I	100s		
3/15/2013	63	67	4.5	25	34	700	VFS	A	1,000s	SS,WF		
							Unk	I	1,000s			
5a	12/7/2012	73	73	4	40	10	304	Unk	I	10s	None	
	12/20/2012	60	58	4	14	43	480	VFS	A	10S	None	
								VFS	A	1s		
	1/3/2013	65	60	4	12	44	420	Unk	I, N	100s	None	
	1/31/2013	72	73	3	34.5	12.5	308	VFS	A	100s	None	
	2/14/2013	72	70	2	13	47	495	VFS	I	100s	None	
Unk								I	100s			
3/1/2013	60	64	3	8	15	98	VFS	A	10s	SS,WF		
5b	3/15/2013	63	72	2.5	9	29	216	VFS	A	1,000s	WF	
	12/7/2012	73	73	3	28	4	78	Unk	I	10s	None	
								N/A	N/A	N/A		
	12/20/2012	60	59	2	8	27	182	N/A	N/A	N/A	None	
	1/3/2013	72	59	2.5	4	25	69	N/A	N/A	N/A	None	
	1/31/2013	72	74	2	2.5	22.5	42	N/A	N/A	N/A	None	
2/14/2013	72	69	1.5	3	20	36	N/A	N/A	N/A	None		
5c	1/3/2013	65	58	2	9.5	11	81	VFS	A	1s	None	
	1/31/2013	72	73	2	5	3.5	12	Unk	I, N	10s	None	
								VFS	A	100s		
2/14/2013	72	71	4.5	10	12.5	99	Unk	I	100s	None		
3/15/2013	63	68	2	6	6	25	VFS	A	1,000s	None		
							Unk	I	1,000s			

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Basin	Survey Date	Air Temp (°F)	Basin Conditions						Fairy Shrimp			Other Species
			Water Temp (°F)	Max Depth (in.)	Max Width (ft.)	Max Length (ft.)	Max Surface Area (sq. ft.)	Species	Reproductive Status	Number		
6	12/7/2012	72	73	4	16	6	70	Unk	I	1,000s	None	
	12/20/2012	60	55	5	12	29	270	Unk	I	100s	None	
	1/3/2013	74	63	6	10	32	240	VFS	A	1,000s	None	
	1/31/2013	72	65	5	9	29	216	Unk	I, N	100s	None	
	2/14/2013	72	60	5	12	46	484	VFS	A	1,000s	None	
	3/1/2013	60	66	2	1.5	9	8	VFS	A	10s	SS,WF	
6a	3/15/2013	63	65	2.5	7.5	18.5	119	VFS	A	1,000s	None	
	12/7/2012	72	73	3.5	18	7	96	Unk	I	100s	None	
	12/20/2012	60	57	5	12.5	44	462	VFS	A	10s	None	
	1/3/2013	72	62	5.5	9.5	47	414	VFS	A	1,000s	None	
	1/31/2013	72	68	6	9.5	48	414	Unk	I, N	1,000s	None	
	2/14/2013	72	60	5	14.5	59	798	VFS	A	1,000s	None	
6b	3/1/2013	60	64	4	6	14.5	65	VFS	A	10s	SS,WF	
	3/15/2013	63	61	4.5	8	34	224	VFS	A	1,000s	None	
	12/26/2012	60	66	2	5	20	72	VFS	A	100s	WF	
	12/27/2012	50	51	2.5	5	51	192	Unk	I	100s	None	
	1/3/2013	72	65	1	3	26	48	N/A	N/A	N/A	None	
	1/31/2013	72	75	1	4	24	66	N/A	N/A	N/A	None	
6c	2/14/2013	71	68	2	5.5	47	220	N/A	N/A	N/A	None	
	3/15/2013	63	72	1	4	30	84	N/A	N/A	N/A	None	
	12/27/2012	50	50	2.5	6	30.5	140	N/A	N/A	N/A	None	
	1/3/2013	72	65	1	4	5	12	N/A	N/A	N/A	None	
	12/27/2012	57	52	2.5	4.5	22.5	80	N/A	N/A	N/A	None	
	1/3/2013	72	66	1	1	3.5	3	N/A	N/A	N/A	None	

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Basin	Survey Date	Air Temp (°F)	Basin Conditions						Fairy Shrimp			Other Species
			Water Temp (°F)	Max Depth (in.)	Max Width (ft.)	Max Length (ft.)	Max Surface Area (sq. ft.)	Species	Reproductive Status	Number		
6f	12/27/2012	57	51	3.5	5	7.5	24	N/A	N/A	N/A	None	
	1/3/2013	72	62	2.5	4	7	18	N/A	N/A	N/A	None	
	1/31/2013	75	70	2	5.5	4.5	20	N/A	N/A	N/A	None	
	2/14/2013	72	66	2	4.5	5.5	20	N/A	N/A	N/A	None	
	3/15/2013	63	66	2	5	5	16	N/A	N/A	N/A	None	
6g	12/27/2012	57	54	2.5	4	22	60	N/A	N/A	N/A	None	
	1/3/2013	72	64	2.5	4	13	33	N/A	N/A	N/A	None	
	1/31/2013	75	71	2	3.5	12	30	N/A	N/A	N/A	None	
	2/14/2013	72	66	1.5	4	12	30	N/A	N/A	N/A	None	
	12/27/2012	57	50	5	7	21.5	120	N/A	N/A	N/A	None	
6h	1/3/2013	72	63	4	5	20	72	N/A	N/A	N/A	None	
	1/31/2013	75	70	2	4.5	18	64	N/A	N/A	N/A	None	
	2/14/2013	72	68	4	6.5	20	108	N/A	N/A	N/A	None	
	3/15/2013	63	66	1.5	2.5	4	6	N/A	N/A	N/A	None	
	12/27/2012	57	53	2.5	6.5	20	108	N/A	N/A	N/A	None	
6i	1/3/2013	72	65	2	6	19	85	N/A	N/A	N/A	None	
	1/31/2013	75	73	2.5	6	17	80	N/A	N/A	N/A	None	
	2/14/2013	72	64	3	6	18.5	85	N/A	N/A	N/A	None	
	3/15/2013	63	66	1.5	3	12	22	N/A	N/A	N/A	None	
	1/3/2013	72	65	1	3	9	16	N/A	N/A	N/A	None	
6j	1/31/2013	72	76	1	4.5	9	32	N/A	N/A	N/A	None	
	2/14/2013	72	72	1	3.5	7.5	21	N/A	N/A	N/A	None	
	12/7/2012	72	68	4	50	7	288	Unk	I, N	1,000s	None	
	12/20/2012	60	54	5	10	85	664	Unk	I	1,000s	None	
	1/3/2013	72	58	5	11	78	760	VFS	A	100s	None	
7	1/31/2013	72	65	4	11.5	71	690	Unk	I, N	1,000s	None	
	2/14/2013	72	63	7	19	90	1,496	VFS	A	1,000s	None	
	3/1/2013	60	70	2	9	57	385	Unk	I	1,000s	None	
	3/15/2013	63	63	4	12	66	640	Unk	N/A	N/A	None	
									I	1,000s	WF	

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Basin	Survey Date	Air Temp (°F)	Basin Conditions						Fairy Shrimp			Other Species
			Water Temp (°F)	Max Depth (in.)	Max Width (ft.)	Max Length (ft.)	Max Surface Area (sq. ft.)	Species	Reproductive Status	Number		
8a	12/7/2012	75	75	3	7	36	204	Unk	I	1,000s	None	
	12/20/2012	64	59	4	9	74	576	Unk	I, N	10s	SS	
	1/3/2013	65	60	4	9	76	592	VFS	A	1,000s	SS	
	1/31/2013	75	70	5	10	70	544	Unk	I, N	100s	None	
	2/14/2013	72	55	5	11	82.5	800	VFS	A	10,000s	None	
8c	3/1/2013	60	58	2	6.5	29.5	168	VFS	A	10s	SS,WF	
	3/15/2013	63	62	3.5	10	62	480	Unk	I	10s	SS,WB	
	12/27/2012	59	62	3	6.5	64	372	N/A	N/A	N/A	None	
	1/3/2013	65	58	2.5	5	19	68	N/A	N/A	N/A	None	
	12/27/2012	59	62	3	5	64	248	N/A	N/A	N/A	None	
8d	1/3/2013	65	61	2	3	18	34	N/A	N/A	N/A	None	
	1/31/2013	75	70	1.5	5	19	72	N/A	N/A	N/A	None	
	2/14/2013	72	65	2	4	13.5	39	N/A	N/A	N/A	None	
	12/27/2012	58	57	3	11	62.5	540	N/A	N/A	N/A	None	
	1/3/2013	70	64	2.5	9	56	385	N/A	N/A	N/A	None	
8e	1/31/2013	75	72	3	10	52	400	N/A	N/A	N/A	None	
	2/14/2013	72	62	3	8	59	392	N/A	N/A	N/A	None	
	3/15/2013	63	66	2	2	33	62	N/A	N/A	N/A	None	
	12/27/2012	59	60	1.5	2	21	36	N/A	N/A	N/A	None	
	1/3/2013	70	67	1	2	15	26	N/A	N/A	N/A	None	
8g	1/3/2013	65	58	3.5	5	24	88	N/A	N/A	N/A	None	
	1/31/2013	75	74	1.5	1.5	21.5	21	N/A	N/A	N/A	None	
	2/14/2013	72	56	4	4.5	24.5	92	N/A	N/A	N/A	None	
	3/1/2013	60	59	2	2	8	10	N/A	N/A	N/A	None	
	3/15/2013	63	64	1.5	4	16	45	N/A	N/A	N/A	None	
8h	1/3/2013	65	65	2	3	47	90	N/A	N/A	N/A	None	
	1/31/2013	75	77	2	4	63	183	N/A	N/A	N/A	None	
	2/14/2013	72	65	2	4	61	180	N/A	N/A	N/A	None	
	1/3/2013	70	65	2	6	39	148	N/A	N/A	N/A	None	
	1/31/2013	75	76	3	10	52	400	N/A	N/A	N/A	None	
2/14/2013	72	64	2	6.5	36.5	192	N/A	N/A	N/A	None		

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Basin	Survey Date	Air Temp (°F)	Basin Conditions						Fairy Shrimp			Other Species
			Water Temp (°F)	Max Depth (in.)	Max Width (ft.)	Max Length (ft.)	Max Surface Area (sq. ft.)	Species	Reproductive Status	Number		
8j	1/3/2013	70	67	1.5	9	56	378	N/A	N/A	N/A	None	
11	12/27/2012	50	45	3	15	28	338	N/A	N/A	N/A	None	
	1/3/2013	61	43	1.5	8	12	60	N/A	N/A	N/A	None	
12	2/14/2013	55	45	0.5	8	11	60	N/A	N/A	N/A	None	
	12/27/2012	50	44	2	7	20	108	N/A	N/A	N/A	None	
19	12/7/2012	75	74	0.5	10	2	16	N/A	N/A	N/A	SS	
	12/20/2012	50	43	1.5	7	36	170	N/A	N/A	N/A	None	
19a	1/3/2013	61	44	1	7	21	95	N/A	N/A	N/A	None	
	12/27/2012	50	42	2	3	12	27	N/A	N/A	N/A	None	
19b	12/27/2012	50	44	1	9	9	56	N/A	N/A	N/A	None	
19c	12/27/2012	50	44	1	6.5	8	42	N/A	N/A	N/A	None	
19d	12/27/2012	50	45	2	12	72	560	N/A	N/A	N/A	None	
	12/7/2012	68	60	1.5	44	54	2,000	Unk	I	1,000s	None	
20	12/20/2012	60	44	4	68	120	7,475	VFS	A	1,000s	FE	
	1/3/2013	61	49	3	51	63	2,700	VFS	A	1,000s	None	
20a	1/31/2013	77	75	4	74	56	3,710	Unk	I, N	1,000s	None	
	2/14/2013	55	46	2	40	54	1,750	VFS	A	1,000s	None	
20b	3/15/2013	63	58	3	50	67	2,880	Unk	I	10,000s	None	
	12/7/2012	68	65	0.5	44	54	2,000	Unk	I	1,000s	WB	
20a	1/3/2013	61	52	2	29	90	2,125	VFS	A	1,000s	None	
	1/31/2013	77	76	3	42	102	3,724	Unk	I, N	1,000s	None	
20b	3/15/2013	63	59	2	35	91	2,610	Unk	I	10,000s	None	
	12/27/2012	50	51	2	3.5	12	30	N/A	N/A	N/A	S	
20b	1/3/2013	62	50	2.5	3	12	30	N/A	N/A	N/A	S	
	1/18/2013	63	45	3	3.5	16.5	45	N/A	N/A	N/A	None	
20b	1/31/2013	77	72	2.5	4	12.5	38	N/A	N/A	N/A	None	
	2/14/2013	56	48	2	4.5	15	52	Unk	I, N	100s	None	
20b	3/1/2013	60	54	3	5.5	17	72	N/A	N/A	N/A	None	
	3/15/2013	63	62	3.5	6	17	75	Unk	I	1s	None	

APPENDIX D: BASIN CONDITIONS BY SURVEY TABLE

Basin	Survey Date	Air Temp (°F)	Basin Conditions						Fairy Shrimp			Other Species
			Water Temp (°F)	Max Depth (in.)	Max Width (ft.)	Max Length (ft.)	Max Surface Area (sq. ft.)	Species	Reproductive Status	Number		
22a	12/27/2012	59	57	4	18	58	825	N/A	N/A	N/A	None	
	1/3/2013	64	54	3	9	54	350	N/A	N/A	N/A	None	
	1/31/2013	75	75	1	5.5	12	50	N/A	N/A	N/A	None	
	2/14/2013	56	54	4	23.5	57	1,080	N/A	N/A	N/A	None	
	3/1/2013	60	N/A	<.5	0.5	0.5	0.25	N/A	N/A	N/A	None	
	3/15/2013	63	60	1.5	2	44	80	N/A	N/A	N/A	None	
23	12/7/2012	75	75	0.5	9	12	88	N/A	N/A	N/A	None	
	12/20/2012	64	58	1	6	13	60	N/A	N/A	N/A	None	
	1/3/2013	64	58	2	10	12	99	N/A	N/A	N/A	WB	
	1/31/2013	75	70	3.5	9	54	400	N/A	N/A	N/A	None	
	2/14/2013	56	59	0.5	0.5	0.5	0.25	N/A	N/A	N/A	None	
	12/7/2012	75	75	1	3	8	14	N/A	N/A	N/A	None	
23a	1/3/2013	65	60	1	3	7.5	13	N/A	N/A	N/A	None	
	2/14/2013	58	57	1	4	12	33	N/A	N/A	N/A	None	
29	12/7/2012	73	65	3	4	5	15	N/A	N/A	N/A	None	
	12/20/2012	57	44	2.5	7.5	29.5	196	N/A	N/A	N/A	None	
	1/3/2013	57	41	3.5	6	22.5	100	N/A	N/A	N/A	None	
	1/31/2013	52	47	3	6.5	5.5	30	N/A	N/A	N/A	None	
	2/14/2013	77	71	2	3.5	4.5	12	N/A	N/A	N/A	None	
	3/15/2013	77	78	1.5	3	3	6	N/A	N/A	N/A	None	
29a	1/3/2013	57	N/A	<.5	1	1.5	1.5	N/A	N/A	N/A	None	
29b	1/3/2013	58	N/A	<.5	2	3	5	N/A	N/A	N/A	None	
	12/26/2012	59	60	6	21	100	1,710	Unk	I	10s	None	
30	1/3/2013	59	44	5	14	86	996	VFS	A	1,000s	None	
	1/31/2013	54	48	5.5	24	90.5	1,806	Unk	I	1,000s	None	
	2/14/2013	74	73	2.5	15	85	1,053	VFS	A	1,000s	None	
								Unk	I	1,000s	None	

APPENDIX D: BASIN CONDITIONS BY SURVEY TABLE

Basin	Survey Date	Air Temp (°F)	Basin Conditions					Fairy Shrimp			Other Species
			Water Temp (°F)	Max Depth (in.)	Max Width (ft.)	Max Length (ft.)	Max Surface Area (sq. ft.)	Species	Reproductive Status	Number	
30a	12/26/2012	59	60	3	8	19	108	N/A	N/A	N/A	None
	1/3/2013	59	46	2.5	6	11.5	50	N/A	N/A	N/A	None
	1/31/2013	54	48	2.5	7.5	16.5	105	Unk	N	100s	None
	2/14/2013	74	76	2	4	10.5	27	VFS	A	<100	None
	3/15/2013	77	78	4	11	41	380	Unk	I	100s	None
31	1/3/2013	59	46	1.5	4.5	7.5	24	N/A	N/A	N/A	None
36	12/26/2012	57	54	3.5	7	16	84	N/A	N/A	N/A	None
	1/3/2013	57	43	2	6	12	50	N/A	N/A	N/A	DL
	2/14/2013	77	74	1	4	5	16	N/A	N/A	N/A	None

Key

- A = Adult
- DL = Dragonfly/Damselfly Larva (Order Odonata)
- °F = degrees Fahrenheit
- FE = Frog Egg
- ft. = feet
- I = Immature
- in. = inches
- N = Nauplii
- N/A = Not Applicable
- S = Scud (Order Amphipoda)
- SS = Seed Shrimp (Class Ostracoda)
- sq. ft. = square feet
- Unk = Unknown Species
- VFS = Versatile Fairy Shrimp (*Branchinecta lindahli*)
- WB = Water Boatman (Family Corixidae)
- WF = Water Flea (Order Cladocera)

APPENDIX E – BASIN CONDITIONS SUMMARY



APPENDIX E: BASIN CONDITIONS SUMMARY TABLE

Basin	Basin Dimensions				Basin Conditions				GPS Coordinate Latitude	GPS Coordinate Longitude
	Actual Maximum Depth (in.)	Estimated Maximum Depth (in.)	Actual Maximum Surface Area (sq. ft.)	Estimated Maximum Surface Area (sq. ft.)	Habitat Condition	Disturbance Type	Disturbance Level			
2 Complex	N/A	N/A	N/A	N/A	D	RR	H	33.883107	-117.562973	
3	4	6	120	120	D	RD	H	33.932210	-117.604262	
3a	4.5	6	115	115	D	RD	H	33.93194	-117.604350	
3b	4	6	133	133	D	RR	H	33.931720	-117.604440	
3c	4.5	6	116	116	D	RD	H	33.932001	-117.604269	
3d	2.5	4	25	25	D	RR	H	33.931761	-117.604353	
3e	3	4	210	210	D	MD	H	33.931585	-117.604191	
4a	3	6	420	420	D	RR	H	33.93180	-117.606800	
4b	5	6	264	264	D	RR	H	33.93177	-117.606770	
4c	6	8	1980	1980	D	RD	H	33.931889	-117.606346	
4d	3.5	4	400	400	D	RR	H	33.931772	-117.606231	
4f	2.5	4	400	400	D	RR	H	33.931767	-117.605503	
4g	3.5	4	1000	1000	D	RR	H	33.931761	-117.605742	
4h	1.5	5	120	120	D	RR	H	33.93185	-117.607050	
5	5	6	1464	1464	D	RR	H	33.93202	-117.610820	
5a	4	12	495	495	D	RR	H	33.931856	-117.610813	
5b	3	8	182	182	D	RR	H	33.931712	-117.610817	
5c	4.5	6	99	99	D	RR	H	33.93188	-117.610730	
5d	4	12	495	495	D	RR	H	33.931710	-117.610756	
6	6	12	484	484	D	RR	H	33.932063	-117.611020	
6a	6	12	798	798	D	RR	H	33.931900	-117.611036	
6b	2	4	72	72	D	RR	H	33.931769	-117.611046	
6c	2.5	4	220	220	D	RR	H	33.936951	-117.611058	
6d	2.5	4	140	140	D	RR	H	33.937151	-117.611058	
6e	2.5	4	80	80	D	RR	H	33.940388	-117.611062	
6f	3.5	6	24	24	D	RR	H	33.940581	-117.611063	
6g	2.5	4	60	60	D	RR	H	33.940637	-117.611056	
6h	5	8	120	120	D	RR	H	33.940677	-117.611041	
6i	3	5	108	108	D	RR	H	33.940762	-117.611051	
6j	1	4	32	32	D	RR	H	33.932968	-117.611050	

APPENDIX E: BASIN CONDITIONS SUMMARY TABLE

Basin	Basin Dimensions			Basin Conditions				GPS Coordinate Latitude	GPS Coordinate Longitude
	Actual Maximum Depth (in.)	Estimated Maximum Depth (in.)	Actual Maximum Surface Area (sq. ft.)	Estimated Maximum Surface Area (sq. ft.)	Habitat Condition	Disturbance Type	Disturbance Level		
7	7	12	1496	1496	D	RD	H	33.931485	-117.611112
8a	5	8	800	800	D	RD	H	33.945886	-117.611249
8c	3	6	372	372	D	RR	H	33.945357	-117.611048
8d	3	6	248	248	D	RR	H	33.944264	-117.611049
8e	3	4	540	540	D	RR	H	33.942566	-117.611072
8f	1.5	4	36	36	D	RD	H	33.942755	-117.611090
8g	4	5	92	92	D	RR	H	33.945661	-117.611053
8h	2	4	183	183	D	RR	H	33.944326	-117.611064
8i	3	4	400	400	D	RR	H	33.942993	-117.611064
8j	1.5	4	378	378	D	RD	H	33.942501	-117.611078
11	3	4	338	338	D	RR	H	34.011756	-117.559350
12	2	3	108	108	D	RR	H	34.011807	-117.560403
19	1.5	4	170	170	D	MD	H	34.004656	-117.566233
19a	2	4	27	27	D	MD	H	34.006055	-117.566546
19b	1	2	56	56	D	MD	H	34.004787	-117.566104
19c	1	2	42	42	D	MD	H	34.004688	-117.566094
19d	2	3	560	560	D	MD	H	34.004608	-117.562166
20	4	12	7475	7475	D	MD	H	34.004747	-117.560540
20a	3	12	3724	3724	D	MD	H	34.004635	-117.560584
20b	3.5	4	75	75	D	RR	H	34.004428	-117.558638
22a	4	5	1080	1080	D	RR	H	33.975598	-117.588040
23	3.5	4	400	400	D	RR	H	33.975013	-117.588049
23a	1	6	33	33	D	RR	H	33.97448	-117.588890
29	3.5	6	196	196	D	RR	H	33.868402	-117.538077
29a	<.5	3	1.5	1.5	D	RR	H	33.86826	-117.538430
29b	<.5	3	5	5	D	RR	H	33.86826	-117.538430
30	6	8	1806	1806	D	RR	H	33.874429	-117.543661
30a	4	6	380	380	D	RR	H	33.87450	-117.543880
31	1.5	4	24	24	D	RR	H	33.87450	-117.543880
36	3.5	4	84	84	D	MD	H	33.872045	-117.530442

Key

D = Disturbed
H = High
in. = inches
MD = Manmade Ditch
RD = Roadside Ditch
RR = Road Rut
sq. ft. = square feet

APPENDIX F – SITE PHOTOGRAPHS



APPENDIX F – SITE PHOTOGRAPHS



Photo 1:
Basin 2, Road Rut, Facing East



Photo 2:
Basin 4G, Road Rut, Facing West



Photo 3:
Basin 4C, Roadside Ditch,
Facing West

APPENDIX F – SITE PHOTOGRAPHS



Photo 4:
Basin 8J, Roadside Ditch,
Facing South



Photo 5:
Basin 36, Manmade Depression,
Facing North



Photo 6:
Basin 20, Manmade Depression,
Facing West

APPENDIX F – SITE PHOTOGRAPHS



Photo 7:
Basin 20A, Fairy Shrimp

APPENDIX G – FIELD DATA FORMS



Date: 12/7/12

Surveyors:

D. Busby
J. Kaulund
H. Franklin

Survey Type:

F.S. Survey - Circle City (Survey #Z)

Pool #	Temperature (F)		Depth (in)		Width (ft)		Length (ft)		Habitat Condition (See Below)	Disturbance Type (See Below)	Grazed Type (See Below)	Disturbance Amount (See Below)	Notes
	Air	Water	Act.	Est.	Act.	Est.	Act.	Est.					
4A	73	72	2"	6"	10	11	56.4	58	D	OHV, Gar		H	
4B	73	72	3"	6"	5.1	10.4	24.5	34	D	OHV, Gar		H	
3	73	69	2"	6"	1.0	8.4	9.2	21.0	D	Gar		H	
3A	73	65	3"	10.5"	1.3	8.4	4.0	21.0	D	Gar		H	
3B	73	68	3"	4"	2.0	5.0	11.5	14	D	OHV, Gar		H	
29	73	68	3"	10"	4	4	5	7	D	OHV, Gar		H	
23	75	75	3/2"	4"	9	15	12	7.0	D	OHV, Gar		H	
23A	75	75	3/4"	6"	3	2.0	8	15	D	OHV, Gar		H	
20	68	60	6.5"	12"	44	100	54	75	D	OHV, Gar		H	
20a	68	65	5"	13"	44	100	54	75	D	OHV		H	Connects w/ 20a
19	75	74	5"	4"	10	2	2	2	D	OHV		H	Connects w/ 20
8a	75	75	3"	8"	7	14	36	72	D	OHV, Gar		H	
7	72	68	4"	7"	50	55	7	10.5	D	OHV, Gar		H	
6	72	73	4"	12"	1.6	9.1	6	13	D	OHV, Gar		H	
6a	72	73	3.5"	12"	1.8	9.1	7	12	D	OHV, Gar		H	
5a	73	73	4"	12"	40	45	10	22	D	OHV, Gar		H	
5b	73	73	3"	8"	28	44	4	10.5	D	OHV, Gar		H	

Habitat Condition: Undisturbed (UD); Disturbed (D); Ungrazed (UG); Grazed (G)

Disturbance Type: OHV; Garbage (Gar); Plowing (P)

Grazed Type: Cattle (C); Horse (H)

Disturbance Amount: Light (L); Moderate (M); Heavy (H)

Date: 12/20/13 Surveyors: DB/JK Survey Type: FS (Survey #3)

Pool #	Temperature (F)		Depth (in)		Width (ft)		Length (ft)		Habitat Condition (See Below)	Disturbance Type (See Below)	Grazed Type (See Below)	Disturbance Amount (See Below)	Notes
	Air	Water	Act.	Est.	Act.	Est.	Act.	Est.					
19	50	43	1.5		7		36						Measurements were taken in pond
20	60	44	4		60		120						
23	64	58	1		6		13						
89	64	59	4		9		74						
Habitat Condition: Undisturbed (UD); Disturbed (D); Ungrazed (UG); Grazed (G)													
Disturbance Type: OHV; Garbage (Gar); Plowing (P)													
Grazed Type: Cattle (C); Horse (H)													
Disturbance Amount: Light (L); Moderate (M); Heavy (H)													

Date: 12/20/12

Surveyors: MB / HF

Survey Type: FS (Survey #3)

Pool #	Temperature (F)		Depth (in)		Width (ft)		Length (ft)		Habitat Condition (See Below)	Disturbance Type (See Below)	Grazed Type (See Below)	Disturbance Amount (See Below)	Notes
	Air	Water	Act.	Est.	Act.	Est.	Act.	Est.					
29	57	44	2.5		7.5		29.5		D	rd rut	n/a	H	man made, on asphalt
3	58	44	4		5		32.5		D	rd side drain			rd side w/ nonnatives
39	58	49	2		1		3		D	"			"
3C	58	49	4		2	5	5	10	D	"			"
3b	58	49	4		6	5	16.5		D	rd rut			rd side, drainage
49	58	40	3		7		37		D	ditch			in dirt turnout
4b	58	52	5		8		35		D	"			adj to asphalt
59	60	58	4		14		43		D	rd rut			"
5b	60	59	2		8		27		D	"			"
69	60	57	5		12.5		44		D	"			"
6	60	55	5		12		29		D	"			"
7	60	54	5		10		85		D	"			"

Habitat Condition: Undisturbed (UD); Disturbed (D); Ungrazed (UG); Grazed (G)

Disturbance Type: OHV; Garbage (Gar); Plowing (P)

Grazed Type: Cattle (C); Horse (H)

Disturbance Amount: Light (L); Moderate (M); Heavy (H)

Date: 12/20/12
Survey Type: FS (Survey #3)

Surveyors: MB/HF

Pool #	Anostracan Present				Notes
	Species	Reproductive Status	Numbers	Accessioned (#/Type)	
29	None				
3	None				
3c	Unk	1m	103	None	
3a	None				
3b	None				
4a	None				
4b	VFS	Mature	103	None	
5a	VFS	Mature	103	None	
5b	None				
6a	VFS	Mature	105	None	
6	None	1m	100s	None	
7	None	1m	100s	None	

Other Species Observed

NONE



Date: 12/10/12

Surveyors: D, M

Survey Type: protocol FS #4a Circle City

Pool #	Temperature (F)		Depth (in)		Width (ft)		Length (ft)		Habitat Condition (See Below)	Disturbance Type (See Below)	Grazed Type (See Below)	Disturbance Amount (See Below)	Notes
	Air	Water	Act.	Est.	Act.	Est.	Act.	Est.					
26	57	54	3.5	-	7	-	16	-	D	Ed side pool	-	H	
30	59	60	6	-	21	-	100	-	D	road on side	-	H	algae mats in both
30a	59	60	3	-	8	-	14	-	D	pool out	-	H	30+30a
2	60	59	4	-	14	-	32	-	D	Art lat	-	H	115044739 3749324
2a	60	63	2	-	16	-	21	-	D	al lols	-	H	115044745 3749325
2b	60	65	2.5	-	4	-	7	-	D	at ed mts/	-	H	115044748 3749329
2c	60	58	4	-	5	-	16	-	D	ponding	-	H	115044746 3749331
2d	60	65	2	-	13"	-	3.5	-	D	sampled	-	H	115044744 3749330
2e	61	65	1.5	-	2.5	-	3	-	D	Ed side of	-	H	115044745 3749329
2f	61	64	2	-	10	-	10.5	-	D	topped out	-	H	115044744 3749335
2g	61	54	3	-	4	-	10	-	D	wood pole	-	H	115044739 3749328
2h	61	51	3.5	-	5	-	6	-	D	ed side	-	H	115044746 3749341
3d	60	64	2.5'	-	2.5	-	11	-	D	disturbance	-	H	115044744 3749354
3e	60	63	3	-	10	-	23	-	D	disturbance	-	H	115044759 3754735
3c	N/A												
4f	60	60	2.5	-	8	-	51	-	D	Ed side rd out	-	H	115044752 3754781
4g	60	65	2	-	8	-	32	-	D	Ed side rd out	-	H	115044733 3754755
4d	60	65	3.5	-	9	-	53	-	D	Ed side rd out	-	H	115044717 2794755
4e	60	65	5.5	-	10	-	199	-	D	ed side rd out	-	H	115044897 2784754
5c													
5d													
6a	60	60	2	-	5	-	20	-	D	Ed side rd out	-	H	115044820 3754772

Habitat Condition: Undisturbed (UD); Disturbed (D); Ungrazed (UG); Grazed (G)

Disturbance Type: OHV; Garbage (Gar); Plowing (P)

Grazed Type: Cattle (C); Horse (H)

Disturbance Amount: Light (L); Moderate (M); Heavy (H)

Date:

12/26/12

Surveyors: D Busby / M Busby

Survey Type:

Survey #49

Pool #	Species	Anostracan Present				Other Species Observed	Notes
		Reproductive Status	Numbers	Accessioned (#/Type)			
3g	—	—	—	—	none	imm, did not collect	
3h	FS	imm	10's	—	none		
3i	—	—	—	—	none		
2	FS, B. lindahli	Ad/imm	100's	—	none		
2a	—	—	—	—	none		
2b	—	—	—	—	none		
2c	—	—	—	—	none		
2d	—	—	—	—	none		
2e	—	—	—	—	none		
2f	—	—	—	—	none		
2g	—	—	—	—	none		
2h	—	—	—	—	none		
3d	—	—	—	—	none		
3e	—	—	—	—	none		
4f	FS, B. lindahli	Ad/imm	100's	—	none	imm, did not collect	
4g	—	—	—	—	—		
4d	—	—	—	—	—		
4c	—	—	—	—	gladicea		
6b	FS, B. lindahli	Ad/imm	100's	—	cladocera	Ad/imm, did not collect	

Date: 12/22/12 Surveyors: Melissa, John Survey Type: Protocol (Survey # 46) Circle City

Pool #	Temperature (F)		Depth (in)		Width (ft)		Length (ft)		Habitat Condition (See Below)	Disturbance Type (See Below)	Grazed Type (See Below)	Disturbance Amount (See Below)	Notes
	Air	Water	Act.	Est.	Act.	Est.	Act.	Est.					
6c	50	51	2.5	-	5	-	51	-	D	on side rd cut	UG	H	150443528 150443528 3755333
6d	50	50	2.5	-	6	-	30.5	-	D	"	"	"	150443529 3755356
6e	57	52	2.5	-	4.5	-	22.5	-	↓	↓	↓	↓	150443530 3755714
6f	57	51	3.5	-	5	-	7.5	-	↓	↓	↓	↓	150443530 3755736
6g	57	54	2.5	-	4	-	2.2	-	↓	↓	↓	↓	150443530 3755742
6h	57	50	5	-	7	-	24.5	-	↓	↓	↓	↓	150443533 3755746
6i	57	55	2.5	-	6.5	-	20	-	↓	↓	↓	↓	150443531 3755756
6j	58	57	3	-	11	-	62.5	-	"	"	"	"	150443530 3755956
6k	59	60	1.5	-	2	-	21	-	D	on side rd cut	"	H	150443529 3755977
6l	59	62	3	-	5	-	64	-	D	on side rd cut	"	H	150443534 3756144
6m	59	62	3	-	6.5	-	64	-	D	"	"	H	150443534 3756265

Habitat Condition: Undisturbed (UD); Disturbed (D); Ungrazed (UG); Grazed (G)

Disturbance Type: OHV; Garbage (Gar); Plowing (P)

Grazed Type: Cattle (C); Horse (H)

Disturbance Amount: Light (L); Moderate (M); Heavy (H)

Date: 12/27/12

Surveyors: D. Busby, K. Alvarez

Survey Type: *Shrimp*

WAT 500 S.O.R. #4 Circle City (Survey #46)

Pool #	Temperature (F)		Depth (in)		Width (ft)		Length (ft)		Habitat Condition (See Below)	Disturbance Type (See Below)	Grazed Type (See Below)	Disturbance Amount (See Below)	Notes
	Air	Water	Act.	Est.	Act.	Est.	Act.	Est.					
19-A	50.1	42	2	4	3	5	12	15	D	Developed	N/A	H	located in existing culvert in back of street
19-B	50.1	44	1.25	1.5	9	10	9	10	D	Developed	N/A	H	"
19-C	50.1	44	1.25	2	6.5	11	8	12	D	Developed	N/A	H	"
19-D	50	45	2.25	3	12	15	72	88	D	Developed	N/A	H	"
11	50	45	3	4	15	17	28	30	D	Developed	N/A	H	Maintained with brush, debris around site. Substrate used 10/10-11-5 water
12	50	44	2	3	7	9	20	24	D	Developed	N/A	H	"
14a													Could not access. Maybe underground dirt A.R.?
20-B	50	51	2	4	3.5	10	12	21	D	OHV (GAR)	N/A	H	no dirt pits, no grass, no small-leaves, no outside etc, possible for not necessary to pore and dairy fence
A	50	52	2	4	14	20	14	31	D	OHV (GAR)	N/A	H	"
22-A	59	57	4	5	18	20	56	65	D	OHV (GAR)	N/A	H	"

Habitat Condition: Undisturbed (UD); Disturbed (D); Ungrazed (UG); Grazed (G)

Disturbance Type: OHV; Garbage (Gar); Plowing (P)

Grazed Type: Cattle (C); Horse (H)

Disturbance Amount: Light (L); Moderate (M); Heavy (H)

Date: 01/08/13

Surveyors: R. Alvarez, D. Barby

Survey Type: wet seeps

(Survey #5)

Pool #	Temperature (F)		Depth (in)		Width (ft)		Length (ft)		Habitat Condition (See Below)	Disturbance Type (See Below)	Grazed Type (See Below)	Disturbance Amount (See Below)	Notes
	Air	Water	Act.	Est.	Act.	Est.	Act.	Est.					
19	61	49	1	NA	7	NA	21	NA	D	Developed	NA	H	algae
11	61	43	1.5	NA	9	NA	12	NA	D	Developed	NA	H	buddy
20	61	49	3	NA	51	NA	63	NA	D	Developed	NA	H	clear, 100% shrimp
20A	61	52	2	NA	29	NA	90	NA	D	Developed	NA	H	clear, algae, 100% shrimp
20B	62	50	2.5	NA	3	NA	12	NA	D	DHV, GAR	NA	H	filled by street runoff; leaf litter
22	69	58	1.75	NA	10	NA	12	NA	D	DHV, GAR	NA	H	clear, algae
22A	64	54	3	NA	9	NA	57	NA	D	DHV, GAR	NA	H	muddy, murky
23A	65	60	0.75	NA	3	NA	7.5	NA	D	DHV, GAR	NA	H	muddy - algae
87	65	58	3.5	5	5	7	84	40	D	DHV, GAR	NA	H	off Hellman just N of B.C.S. of Hellman
86	65	58	2.5	NA	5	NA	19	NA	D	DHV, GAR	NA	H	almost clear water
8A	65	60	4	NA	9	NA	76	NA	D	DHV, GAR	NA	H	Shrimp; murky water, algae
8D	65	61	1.75	NA	3	NA	18	NA	D	DHV, GAR	NA	H	- leaf litter, murky H ₂ O
8H	65	65	1.75	4	3	5	47	60	D	DHV, GAR	NA	H	- murky H ₂ O, leaf litter, N of 8D
8I	70	65	2	9	6	8	37	79	D	DHV, GAR	NA	H	murky H ₂ O, leaf litter, S of 8D
8E	70	64	2.5	NA	9	NA	58	NA	D	DHV, GAR	NA	H	murky H ₂ O; leaf litter
8J	70	67	1.5	4	9	10	56	90	D	GAR	NA	L	9 of 8E: blue-green algae, green algae
8F	71	64	1.25	NA	2	NA	15	NA	D	GAR	NA	H	grassy area, murky H ₂ O
8J	72	65	2	NA	6	NA	19	NA	D	GAR, OHV	NA	H	leaf litter, murky H ₂ O, algae
8H	72	63	4	NA	5	NA	20	NA	D	GAR, OHV	NA	H	leaf litter, murky H ₂ O, algae
6G	72	64	2.5	NA	4	NA	13	NA	D	GAR, OHV	NA	H	leaf litter, murky H ₂ O, algae
6A	72	62	2.5	NA	4	NA	7	NA	D	GAR, OHV	NA	H	leaf litter, murky H ₂ O, algae
6E	72	66	0.75	NA	1	NA	3.5	NA	D	GAR, OHV	NA	H	leaf litter, murky H ₂ O, algae
8D	72	65	1.25	NA	4	NA	5	NA	D	GAR, OHV	NA	H	leaf litter, murky H ₂ O, algae
6C	72	65	1.25	NA	3	NA	26	NA	D	GAR, OHV	NA	H	full of garbage, leaf litter, algae
6J	72	65	1	NA	3	5	9	23	D	GAR, OHV	NA	H	9 of 6C; N of 6B photo no. 15
6I	74	65	6	NA	10	NA	32	NA	D	GAR, OHV	NA	H	Shrimp; murky H ₂ O; leaf litter
6B	74	62	5.5	NA	9.5	NA	47	NA	D	GAR, OHV	NA	H	Shrimp; murky; leaf litter; algae
7	74	58	5	NA	11	NA	78	NA	D	GAR, OHV	NA	H	Shrimp; murky; muddied leaf litter
5D	74	59	5.5	NA	4	NA	25	NA	D	GAR, OHV	NA	H	leaf litter, murky, muddied

Habitat Condition: Undisturbed (UD); Disturbed (D); Ungrazed (UG); Grazed (G)

Disturbance Type: OHV; Garbage (Gar); Plowing (P)

Grazed Type: Cattle (C); Horse (H)

Disturbance Amount: Light (L); Moderate (M); Heavy (H)

Pool 6 - 115 044 05 28 375 4791

Date: 01/03/13
 Surveyors: R. Alvarez, D. Busby
 Fairy Shrimp
 Survey Type: notacion # 5 - Circle City

Pool #	Species	Anostracan Present				Other Species Observed	Notes
		Reproductive Status	Numbers	Accessioned (#/Type)			
19	NA	NA	NA	NA	-	NA	
11	NA	NA	NA	NA		NA	
20	B. lindahli?	gravid (M)	1,000's +	NA		1,000's + ; 100's of Tronaturens	
20A	B. lindahli	gravid (M)	1,000's +	NA		1,000's + algae; 100's of immatures	
20B	NA	NA	NA	NA	empty pod	clear, leaf litter	
23	NA	NA	NA	NA	water bucket	NA	
22A	NA	NA	NA	NA	NA	NA	
23A	NA	NA	NA	NA	NA	NA	
24	NA	NA	NA	NA	NA	NA	
24	NA	NA	NA	NA	NA	110 0443535 3750297 photo Sp M	
25	NA	NA	NA	NA	NA	grass cuttings in water	
26	B. lindahli	M (gravid)	1,000's +	NA	weed shrimp	1,000's + ; 100's immatures	
27	NA	NA	NA	NA	NA	NA	
28	NA	NA	NA	NA	NA	115 0443532 3750151 photo Sp M	
29	NA	NA	NA	NA	NA	115 0443532 3750003 photo Sp M	
30	NA	NA	NA	NA	NA	NA	
31	NA	NA	NA	NA	NA	115 0443530 3755949 photo Sp M	
32	NA	NA	NA	NA	NA	NA	
33	NA	NA	NA	NA	NA	NA	
34	NA	NA	NA	NA	NA	NA	
35	NA	NA	NA	NA	NA	NA	
36	NA	NA	NA	NA	NA	NA	
37	NA	NA	NA	NA	NA	NA	
38	NA	NA	NA	NA	NA	NA	
39	NA	NA	NA	NA	NA	NA	
40	NA	NA	NA	NA	NA	NA	
41	NA	NA	NA	NA	NA	NA	
42	NA	NA	NA	NA	NA	NA	
43	NA	NA	NA	NA	NA	NA	
44	NA	NA	NA	NA	NA	NA	
45	NA	NA	NA	NA	NA	NA	
46	NA	NA	NA	NA	NA	NA	
47	NA	NA	NA	NA	NA	NA	
48	NA	NA	NA	NA	NA	NA	
49	NA	NA	NA	NA	NA	NA	
50	NA	NA	NA	NA	NA	NA	
51	NA	NA	NA	NA	NA	NA	
52	NA	NA	NA	NA	NA	NA	
53	NA	NA	NA	NA	NA	NA	
54	B. lindahli	gravid (M)	1,000's +	NA		115 0443524 3754872 leaf litter container	
55	B. lindahli	gravid (M)	1,000's +	NA		1,000's + M; 100's + Tronaturens; algae	
56	B. lindahli	gravid (M)	1,000's +	NA		1,000's + (M); 100's + Tronaturens; algae	
57	B. lindahli	gravid (M)	1,000's +	NA		1,000's + (M); 100's + (M); 115 0443519 3754321	
58	NA	NA	NA	NA		- same (M) leaf litter sampling 115 0443517 3754322	

Date: 1/3/13

Surveyors: Melissa, John

Survey Type: FS #5

Circle City (Sheet 1 of 2)

Pool #	Temperature (F)		Depth (in)		Width (ft)		Length (ft)		Habitat Condition (See Below)	Disturbance Type (See Below)	Grazed Type (See Below)	Disturbance Amount (See Below)	Notes
	Air	Water	Act.	Est.	Act.	Est.	Act.	Est.					
36	57	43	2	5	6	-	12	-					same - same hills into as first walk
27	57	41	3.5	-	6	-	22.5	3					same
29a	58	40	4.5	3	1	4	1.5	5	D	UG	H		1150450200 3747080
29b	58	40	4.5	3	1.75	4	3	10	D	UG	H		1150450200 3747080
30	59	44	5	-	14	-	86	-					small no gce
30a	59	46	2.5	-	6	-	11.5	-					
31	59	46	1.5	-	4.5	9	7.5	12	D	UG	H		1150447900 3748374
2	61	48	3.5	-	12	-	30	-	D	UG	H		1150447900 3748374
20a	61	43	1.5	-	15	-	10	-					
20a2	61	51	2	-	6.5	-	6.5	-					
21	61	52	1.5	-	4.5	-	5	-					
26.1	61	42	3	-	4.5	-	10.5	-					
26.2	61	41	2	-	5	-	5.5	-					
27d	61	41	1	-	2.5	-	3	-					
28	61	50	.5	-	2.5	-	2.5	-					
28	61	49	2	-	8	-	10.5	-					
29	61	46	2.5	-	4	-	5.5	-					
29	61	42	2	-	1.5	-	6.5	-					
21	62	54	1.6	3	2.5	6	5	12.9	D				1150447931 3749325
21	62	54	1	3	2.5	10	2.5	12.5					1150447932 3749327
21	62	54	.5	3	1.5	7	2	10.5					1150447931 3749327
21	62	54	1	3	4	7	7.5	10.5					1150447930 3749345
20	62	55	.5	1.5	1.6	2.5	2	4					1150447934 3749247
20	62	55	1	3	2.5	3.5	3	4					1150447925 3749341
20	62	54	1.5	3.5	2.5	7	2.5	4.5					1150447926 3749327
20	62	54	1.5	3.5	2	7	2	4.5					1150447927 3749337
29	62	56	.5	1.5	2.5	7	3	4					1150447927 3749335
29	62	56	1.5	4.5	1	7	1	4					1150447926 3749327
25	62	56	.5	5	1.5	7.5	1.5	20					1150447927 3749335
25	62	53	3	5	5.5	7.5	15.5	20					1150447926 3749322
21a	62	54	1.5	4	5	12.5	3.5	10					1150447924 3749324

Habitat Condition: Undisturbed (UD); Disturbed (D); Ungrazed (UG); Grazed (G)

Disturbance Type: OHV; Garbage (Gar); Plowing (P)

Grazed Type: Cattle (C); Horse (H)

Disturbance Amount: Light (L); Moderate (M); Heavy (H)

31 pools

Date: 1/3/13

Surveyors: M. Russo, John

Survey Type: FS #5

Circle City (Sheet 2 of 2)

Pool #	Temperature (F)		Depth (in)		Width (ft)		Length (ft)		Habitat Condition (See Below)	Disturbance Type (See Below)	Grazed Type (See Below)	Disturbance Amount (See Below)	Notes
	Air	Water	Act.	Est.	Act.	Est.	Act.	Est.					
1V	62	53	2	4	9	12.5	5.5	10	D				150447925 3741382
2W	62	58	1.5	7	3.5	9	2	4.5					150447922 3749335
3	65	64	2	-	1.5	-	12.5	-					
3c	65	60	4.5	-	4	-	31	-					
3d	65	60	1.5	-	2.5	-	5	-					
3b	65	55	2.5	-	7	-	21	-					
4f	65	60	1.5	-	9	-	53	-					measured within 0.5m water
4c	65	64	3.5	-	5	-	141	-					
4b	65	64	4	-	7	-	32.5	-					
4a	65	48	3	-	6.5	-	40	-					
4h	65	67	1.5	5	4	8	21.5	36	D	no water in pit	UG	H	150443895 3754766
5	65	67	3	6	19	24.5	28.5	41	D	grass side, rock in bottom	UG	H	150443547 3754786
5a	65	60	4	-	12	-	44	-					
5c	65	58	2	-	9.5	11	11	11					150443555 3754771

Habitat Condition: Undisturbed (UD); Disturbed (D); Ungrazed (UG); Grazed (G)

Disturbance Type: OHV; Garbage (Gar); Plowing (P)

Grazed Type: Cattle (C); Horse (H)

Disturbance Amount: Light (L); Moderate (M); Heavy (H)

14 pools

Circle City
Survey Type: FS #6

Date: 18 Jan 13
Surveyors: Melina, Laurie

Pool #	Temperature (F)		Depth (in)		Width (ft)		Length (ft)		Habitat Condition (See Below)	Disturbance Type (See Below)	Grazed Type (See Below)	Disturbance Amount (See Below)	Notes
	Air	Water	Act.	Est.	Act.	Est.	Act.	Est.					
2	late	50 (110)	<.5	-	1.5	-	1.5	-					almost dry

Habitat Condition: Undisturbed (UD); Disturbed (D); Ungrazed (UG); Grazed (G)
 Disturbance Type: OHV; Garbage (Gar); Flowing (P)
 Grazed Type: Cattle (C); Horse (H)
 Disturbance Amount: Light (L); Moderate (M); Heavy (H)

CIRCLE CITY

PROTOCOL SURVEY (#6)

DARIN BUSBY, MAYA MAZON

Surveyors:

Date: 1/18/13

Survey Type:

Pool #	Temperature (F)		Depth (in)		Width (ft)		Length (ft)		Habitat Condition (See Below)	Disturbance Type (See Below)	Grazed Type (See Below)	Disturbance Amount (See Below)	Notes
	Air	Water	Act.	Est.	Act.	Est.	Act.	Est.					
200	63	45	3 inches	N/A	3.5	N/A	16.5	N/A	SAME	SAME	SAME		Clear water Soil moist, no standing water
2A	N/A	N/A											

Habitat Condition: Undisturbed (UD); Disturbed (D); Ungrazed (UG); Grazed (G)
 Disturbance Type: OHV; Garbage (Gar); Plowing (P)
 Grazed Type: Cattle (C); Horse (H)
 Disturbance Amount: Light (L); Moderate (M); Heavy (H)

2
940

2612-856

Date: 1/31/13

Surveyors: Melissa Conroy, Travis

Survey Type: FS #7

CIRCLE CANY

(Pg 1/2)

Pool #	Temperature (F)		Depth (in)		Width (ft)		Length (ft)		Habitat Condition (See Below)	Disturbance Type (See Below)	Grazed Type (See Below)	Disturbance Amount (See Below)	Notes
	Air	Water	Act.	Est.	Act.	Est.	Act.	Est.					
29	52	47	3	-	6.5	-	5.5	-					
30	54	40	5.5	-	2.4	-	40.5	-					
3000	54	40	2.5	-	7.5	-	14.5	-					
2	56	51	3	-	12	-	30.5	-					
2A	56	54	5	-	1	-	-	-					
2B	56	53	1.5	-	14	-	17	-					
2C	56	48	2	-	10	-	10	-					
2D	56	46	1	-	3	-	3.5	-					
2E	56	55	1.5	-	13	-	2.5	-					out of 2.1
2F	56	52	2	-	5	-	13	-					1.5
2G	56	60	5.5	-	1	-	1.5	-					10.5
2I	56	58	1.5	-	2.5	-	4	-					
3	67	67	2	-	1	-	10	-					
29	67	57	4.5	-	4	-	21.5	-					
4F	67	65	2.5	-	8.5	-	5.4	-					
4G	67	67	2	-	5.5	-	20	-					
4A	69	70	3	-	7	-	37.5	-					
4B	69	61	4	-	6	-	25.5	-					
4C	69	62	4	-	5	-	14.6	-					
5	72	72	3	-	21	-	33	-					
5A.1	72	68	3	-	34.5	-	12.5	-					
5A.2	72	73	1.5	-	7	-	7	-					
5C	72	73	2	-	5	-	3.5	-					
5B	72	74	2	-	2.5	-	22.5	-					
6	72	65	5	-	9	-	2.9	-					
6A	72	68	6	-	9.5	-	4.8	-					
7	72	65	4	-	11.5	-	71	-					
6D	72	76	1	-	14.5	-	9	-					
6E	72	75	1	-	4	-	2.4	-					
6F	75	70	2	-	3.5	-	4.3	-					
6G	75	71	2	-	3.5	-	12	-					

Habitat Condition: Undisturbed (UD); Disturbed (D); Ungrazed (UG); Grazed (G)

Disturbance Type: OHV; Garbage (Gar); Flooding (P)

Grazed Type: Cattle (C); Horse (H)

Disturbance Amount: Light (L); Moderate (M); Heavy (H)

87

3 x 13 = 44

7.4 x 3 = 25

7

Date: 1/31/13 Surveyors: M, C, T Survey Type: FS #7 (Pg 1/2)

Pool #	Species	Anostracan Present			Accessioned (#/Type)	Other Species Observed	Notes
		Reproductive Status	Numbers				
29	-	-	-	-	none	-	
30	UNK	NAUP	1000's	-			
30a	UNK	NAUP	100's	-			
2	UNK	NAUP	100's	-			
2a	UNK	NAUP/1m	100's	-			
2a	UNK	NAUP/1m	10's	-			
2f.1	UNK	NAUP/1m	10's	-			
2f.2	UNK	NAUP/1m	1's	-			
2s	UNK	1m	1's	-			
2f	UNK	1m	10's	-			
2i	UNK	NAUP/1m	1's	-			
2c	UNK	NAUP/1m	10's	-			
3	UNK	NAUP/1m	10's	-			
3a	UNK	NAUP/1m	10's	-			
4f	-	-	-	-			
4g	UNK	NAUP/1m	10's	-			
4A	-	-	-	-			
4B	UNK	NAUP/1m	10's	-			
4C	UNK	NAUP/1m	1000's	-			
5	UNK	NAUP/1m	100's	-			
5A.1	UNK	NAUP/1m	100's	-			
5A.2	-	-	-	-			
5C	UNK	NAUP/1m	10's	-			
5B	-	-	-	-			
6	UNK	NAUP/1m	100's	-			
6A	UNK	NAUP/1m	1000's	-			
7	UNK	NAUP/1m	1000's+	-			
6j	-	-	-	-			
6c	-	-	-	-			
6f	-	-	-	-			
6g	-	-	-	-			

Date: 1/31/13

Surveyors: Melissa, Corey, Travis

Survey Type:

CIPCLE COY
FS #17

(Pg 2/2)

Pool #	Temperature (F)		Depth (in)		Width (ft)		Length (ft)		Habitat Condition (See Below)	Disturbance Type (See Below)	Grazed Type (See Below)	Disturbance Amount (See Below)	Notes
	Air	Water	Act.	Est.	Act.	Est.	Act.	Est.					
6h	75	70	2		4.5		18						
6L	75	73	2.5		6		17						
8e	75	72	3		10		52						
8i	75	76	1.5		5.5		32						
8P	75	70	1.5		5		19						
8H	75	77	2		4		63						
8g	75	74	1.5		1.5		21.5						
8a	75	70	5		10		70						
22a	75	79	1		5.5		12						
23	75	70	3.5		9		54				GPS		
20	77	75	4		7.4		86						
20g	77	76	3		4.2		102						
20b	77	72	2.5		4		12.5						

Habitat Condition: Undisturbed (UD); Disturbed (D); Ungrazed (UG); Grazed (G)

Disturbance Type: OHV; Grubbage (Gar); Plowing (P)

Grazed Type: Cattle (C); Horse (H)

Disturbance Amount: Light (L); Moderate (M); Heavy (H)

Date: 2.15.13

Surveyors: D. Busby, J. Maxwell, H. Hill

Survey Type:

FS # 8

Circle City Page 1/2

Pool #	Temperature (F)		Depth (in)		Width (ft)		Length (ft)		Habitat Condition (See Below)	Disturbance Type (See Below)	Grazed Type (See Below)	Disturbance Amount (See Below)	Notes
	Air	Water	Act.	Est.	Act.	Est.	Act.	Est.					
11	55	55	0.5		2		11						Murky, slight algae, some silt
20	55	49	2		4.0		54		New GS				N 24, 00488, W 17, 5080
20b	56	48	2		4.5		15		Area				34, 00488, 117, 5080
22a	54	54	4		2.5								Algae, muddy, foam
23	50	59	0.5		0.5		0.5						Algae, muddy, foam
23a	58	57	1		4		12						Algae, muddy, foam
24	72	55	5		11		57.5		25, 04592, 117, 61123				Dirty, debris, no bio food
25	72	56	4		4.5		24.5						biogel, debris, debris
26	72	65	2		4		60						Leaves of algae, turbid
27	72	65	1.75		4		60						Dirty, pond, some algae
28	72	64	2		4		13.5						Trouble, algae, some silt
29	72	64	2		6.5		36.5						chunky algae, turbid
30	72	64	3		8		59						chunky algae, turbid
31	72	64	3		6		18.5						chunky algae, turbid
32	72	68	4		6.5		70						chunky algae, turbid
33	72	66	1.5		4		12						Dirty, slinky, muddy
34	72	66	2		4.5		5.5						Algae, muddy
35	72	68	1.75		5.5		47						Algae, film, X-ray lenses
36	72	71	1		2.5		7.5						Algae, dirty
37	72	60	5		12		40						New, murky, consistent to 50
38	72	60	5		14.5		59						connected to G
39	72	63	7		14		90						Murky - r
40	72	67	5		43		48						Murky, some algae
41	70	70	2		13		47						Murky, algae
42	71	71	4.5		10		12.5						Murky, silt
43	69	69	1.2		3		2.5						Murky, green, algae, silt
44	73	73	2.5		6.5		29.5						Trouble, algae, foam
45	74	74	2.75		7		23						Greenish, silt, shrimp
46	69	69	1.8		8		224						Turbid
47	69	69	3.5		10		127.5						Turbid
48	107	107	2		2		14						Turbid

Habitat Condition: Undisturbed (UD); Disturbed (D); Ungrazed (UG); Grazed (G)

Disturbance Type: OHV; Garbage (Gar); Plowing (P)

Grazed Type: Cattle (C); Horse (H)

Disturbance Amount: Light (L); Moderate (M); Heavy (H)

Date: 2/14/13

Surveyors: DB, I.M., AH

Survey Type: FS #8

(Pg 1/2)

Pool #	Species	Anostracan Present			Accessioned (#/Type)	Other Species Observed	Notes
		Reproductive Status	Numbers				
1					N/A		
20	<i>B. lindahli</i>	Adult	1000s			fighting tanks	
20b	<i>Undulabutha</i>	immature	1000s				
22a							
23							
23a							
5a	<i>B. lindahli</i>	Pop. 1500	1000s			Big individuals	
6a							
6b							
6c							
6d							
6e							
6f							
6g							
6h							
6i							
6j							
6k	<i>B. lindahli</i>	Small, 20% of the population	1000s				
6a	<i>B. lindahli</i>	Adults, immature	1000s				
7	<i>B. lindahli</i>	adults, immatures	1000s				
5	"	"	1000s		Small shrimp		
5a	"	"	1000s				
5c	"						
6b							
4b							
4a							
4c							
4d							
4e							
7	<i>B. lindahli</i>	adults	1000s				
2a	<i>B. lindahli</i>	adults	1000s				
30c	<i>B. lindahli</i>	adults	1000s				
30	<i>B. lindahli</i>	adults, immatures	1000s			many dead or dying	
3a							
29							
3a							

Date: 2.14.13

Surveyors: D. Berry / A. Hill / I. M. Mung

Survey Type: FS

8 Circle City

Page 2/2

Pool #	Temperature (F)		Depth (in)		Width (ft)		Length (ft)		Habitat Condition (See Below)	Disturbance Type (See Below)	Disturbance Amount (See Below)	Notes
	Air	Water	Act.	Est.	Act.	Est.	Act.	Est.				
30	74	62	4.5		5		24.6				Along fence line. Vegetation	
2	71	72	3		11.5		36.0				Mix of cattails & blue flag	
24	71	72	2		3.5		9				Mud & silt	
20	71	71	2		4		10.5				Clear silt	
34	77	73	2.5		15		8.5				Two blue flag cattails	
29	77	74	1		4		9				Great blue	
	77	71	1.75		3.5		9.5				Trassy debris film	

Habitat Condition: Undisturbed (UD); Disturbed (D); Ungrazed (UG); Grazed (G)

Disturbance Type: OHV; Garbage (Gari); Plowing (P)

Grazed Type: Cattle (C); Horse (H)

Disturbance Amount: Light (L); Moderate (M); Heavy (H)

Date: 3/1/13

Surveyors: Melissa, Seth

Survey Type:

FS Survey #9 Circle City

Pool #	Temperature (F)		Depth (in)		Width (ft)		Length (ft)		Habitat Condition (See Below)	Disturbance Type (See Below)	Grazed Type (See Below)	Disturbance Amount (See Below)	Notes
	Air	Water	Act.	Est.	Act.	Est.	Act.	Est.					
200	60	54	3	-	5.5	-	17	-					
220		NA	1.5	-	1.5	-	15	-					Shallow, almost always muddy
300		50	2	-	4.5	-	29.5	-					
309		59	2	-	4.2	-	8	-					
57		62	2	-	25.5	-	35.5	-					
50		64	2	-	8	-	15	-					
10		66	2	-	1.5	-	9	-					
100		64	5	-	6	-	14.5	-					
7		70	2	-	9	-	57	-					

Habitat Condition: Undisturbed (UD); Disturbed (D); Ungrazed (UG); Grazed (G)

Disturbance Type: OHV; Garbage (Gar); Plowing (P)

Grazed Type: Cattle (C); Horse (H)

Disturbance Amount: Light (L); Moderate (M); Heavy (H)

Date: 15 Nov 2013

Surveyors: D. Estey, L. Marshall

Survey Type: 5m x 4m

Circle City #10

0850 water
2:30p in
2013.1.26

Pool #	Temperature (F)		Depth (in)		Width (ft)		Length (ft)		Habitat Condition (See Below)	Disturbance Type (See Below)	Grazed Type (See Below)	Disturbance Amount (See Below)	Notes
	Air	Water	Act.	Est.	Act.	Est.	Act.	Est.					
20	62	58	3		20		57						Mid deep, green algae, water 50
20A	63	59	2		25		91						Mid deep, green algae, water 50
20B	62	57	3.5		6		17						Mid deep, green algae, water 50
22A	60	60	1.5		2		44						Mid deep, green algae, water 50
2A	62	62	3.5		10		62						Mid deep, green algae, water 50
3G	64	64	1.5		4		16						Mid deep, green algae, water 50
8E	66	66	2		2		33						Mid deep, green algae, water 50
6F	66	66	2		5		5						Mid deep, green algae, water 50
6H	66	66	1.5		2.5		4						Mid deep, green algae, water 50
6I	66	66	1.5		3		12						Mid deep, green algae, water 50
6C	72	72	1		4		20						Mid deep, green algae, water 50
6	65	65	2.5		7.5		18.5						Mid deep, green algae, water 50
6A	61	61	4.5		8		24						Mid deep, green algae, water 50
7	62	62	4		12		66						Mid deep, green algae, water 50
5	67	67	4.5		15		24						Mid deep, green algae, water 50
5a	72	72	2.5		9		29						Mid deep, green algae, water 50
5c	68	68	2		6		6						Mid deep, green algae, water 50
4B	76	76	1		2.5		24						Mid deep, green algae, water 50
4C	74	74	3		5.5		130						Mid deep, green algae, water 50
4G	74	74	2		1.5		45						Mid deep, green algae, water 50
3A	75	75	3.5		5		14						Mid deep, green algae, water 50

Habitat Condition: Undisturbed (UD); Disturbed (D); Ungrazed (UG); Grazed (G)
 Disturbance Type: OHV; Garbage (Gar); Plowing (P)
 Grazed Type: Cattle (C); Horse (H)
 Disturbance Amount: Light (L); Moderate (M); Heavy (H)

Date: 3/15/13

Surveyors: HELISSA BERRY, MARY MASON

Survey Type: FS # 10 Circle City

Pool #	Temperature (F)		Depth (in)		Width (ft)		Length (ft)		Habitat Condition (See Below)	Disturbance Type (See Below)	Grazed Type (See Below)	Disturbance Amount (See Below)	Notes
	Air	Water	Act.	Est.	Act.	Est.	Act.	Est.					
29	77	78	1.5		3		3		SEE PREVIOUS PAGE				
30a	77	78	4		11		41						
2v		NA	N/A		NA		NA						P.K. HAS INSTALLED DRAINAGE
2t		N/A	<0.5		0.5		0.5						
2		82	2		9		20						
2b		N/A	0.5		1		1.5						
2g		N/A	0.5		3		3.5						

Habitat Condition: Undisturbed (UD); Disturbed (D); Ungrazed (UG); Grazed (G)

Disturbance Type: OHV; Garbage (Gar); Plowing (P)

Grazed Type: Cattle (C); Horse (H)

Disturbance Amount: Light (L); Moderate (M); Heavy (H)

ATTACHMENT 4.4-E: JURISDICTIONAL DELINEATION REPORT



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BERKELEY
CARLSBAD
FRESNO

IRVINE
PALM SPRINGS
PT. RICHMOND

ROCKLIN
SAN LUIS OBISPO

MEMORANDUM

DATE: June 26, 2015

TO: Jason Lambert, Southern California Edison

FROM: Claudia Bauer, Senior Biologist, LSA Associates, Inc.

SUBJECT: Jurisdictional Delineation for SCE Circle City (Horsetown) 66/12 kV Substation Project, Riverside and San Bernardino Counties, California (LSA Project No. SCE1303-000826)

This memorandum has been prepared by LSA Associates, Inc. (LSA) for use by Southern California Edison (SCE) for project planning.

INTRODUCTION

The Circle City Substation Project is located in the Cities of Corona, Chino, Eastvale, and Ontario, California. SCE proposed activities include the construction of a new 66/12 kilovolt (kV) distribution substation (Circle City Substation) and associated infrastructure. The substation will be located east of Interstate 15 (I-15), along the north side of All American Way, in the City of Corona, Riverside County. The project will include the construction of four new 66 kV subtransmission source lines, six new 12 kV distribution circuit getaways, and a new 66 kV subtransmission line (Mira Loma-Jefferson 66 kV Subtransmission Line). Additionally, the project also includes upgrading the existing Mira Loma Substation; relocating approximately 1.9 miles of an existing overhead 33 kV subtransmission line to an underground position; and installing a new fiber optic cable and communication equipment to connect the proposed Circle City Substation to SCE's existing telecommunication system.

The purpose of the proposed project is to serve current and projected demand for electricity, and to maintain electric system reliability in the Electrical Needs Area.

METHODS

The fieldwork for this evaluation was conducted on June 3, 4, and 18, 2015, by LSA biologists Sarah Barrera and Claudia Bauer. Prior to conducting fieldwork, topographic maps and current aerial photographs were reviewed to identify potential waters of the U.S. or streambeds subject to California Department of Fish and Wildlife (CDFW) jurisdiction. Those areas identified on topographic maps and current aerial photographs as potential waters of the U.S. or CDFW streambeds were examined in the field for evidence of jurisdiction (i.e., wetland parameters, ordinary high water mark [OHWM], streambed and bank, and/or riparian habitat). The edges of the active floodplain were determined based on changes in sediment texture, elevation, and vegetation (Lichvar et al. 2008) and confirmed by observations of vegetation patterns on aerial photographs (Google Earth aerial photographs dated 1994 through 2015 and historicaerials.com dated 1966, 1967, 1980, 1995, 2002, 2005, and 2012).

(11/5/2015) C:\Users\krizekak\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Outlook\61AC91LN\LSA_CircleCity_JD_06252015_CB_revised_08122015_FairyShrimp Edits2.docx

Areas supporting species of plant life potentially indicative of wetlands, exhibiting a bed and bank, and/or having an OHWM were evaluated according to routine wetland delineation procedures described in CDFW guidelines and elsewhere (U.S. Army Corps of Engineers [USACE] 1987, 2008; Lichvar et al.). The entire project study area was surveyed on foot for potential wetland and non-wetland jurisdictional waters as well as for streambed and riparian resources. General site characteristics were also noted. The on-site examination for jurisdictional wetlands was conducted according to the USACE three-parameter (vegetation, soils, and hydrology) method of wetland delineation (USACE 1987).

Potential CDFW jurisdictional areas were determined based on the presence of a bed and banks, which defines the jurisdictional streambed and any associated riparian habitat. The streambed is defined as the physical features of the channel invert and the channel banks and is measured from the highest point at which water flows, and typically has shelving, changes in the character of soil, or an absence of upland terrestrial vegetation. The CDFW, through provisions of the California Fish and Game Code (Sec. 1600 et seq.), is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks and at least an intermittent flow of water. The CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by the CDFW.

The Regional Water Quality Control Boards (RWQCBs) are responsible for the administration of Section 401 of the CWA. Typically, the areas subject to RWQCB jurisdiction coincide with those of the USACE (i.e., waters of the U.S., including any wetlands). The RWQCB also asserts authority over waters of the State under waste discharge requirements pursuant to the Porter-Cologne Act.

The OHWM, streambed, and bank were mapped using a MobileMapper 6 handheld Global Positioning System (GPS) unit, which has sub-meter accuracy following post-processing. Areas with clear jurisdictional limits were recorded on a 1 inch = 200 feet scale aerial photograph and subsequently transferred to LSA's geographic information system (GIS). Representative sample plots were examined in the field in areas where hydrophytic vegetation, indicators of hydrology, or other wetland indicators were observed, as discussed in the Results section, below.

RESULTS AND DISCUSSION

Existing Setting

The study area assessed in this Jurisdictional Delineation is approximately 15.5 linear miles and includes the proposed Circle City Substation site, areas to the north of the substation along multiple routes following the subtransmission source line and fiber-optic cable route, eventually terminating at the Mira Loma Substation (see Attachment A, Figures 1 and 2). The study area includes the proposed Circle City substation boundaries, laydown yards, the route, and the associated SCE right-of-way along the route.

The study area is located on the U.S. Geological Survey (USGS) *Guasti, Corona North, and Corona South, California 7.5-minute series* topographical quadrangles and passes through mostly urban settings consisting of residential, industrialized warehouse, agriculture, and commercial business uses that run along the existing utility facilities.

The Santa Ana River, which conveys flows into the Pacific Ocean, bisects the study area along River Road in the City of Corona. Several drainages within the study are tributary to the Santa Ana River and are a mixture of man-made channels with natural earthen bottoms, concrete v-ditches, and concrete-lined channels. In addition, there are numerous roadside drainage ditches within the study area that are not believed to convey flows at the present time or are not tributary to the Santa Ana River.

The Santa Ana River channel contains several sections where sufficient sediment has accumulated to support potential wetland waters of the U.S. Other potential wetland waters of the U.S. occur within man-made wetland areas associated with sediment accumulation in riprap-lined drainages.

Jurisdictional Areas

Drainage Feature 25. Collectively, Drainage Features 25A through 25D are one unified feature identified as Drainage Feature 25. However, various segments of the drainage have different hydrologic conditions, substrates, and vegetation types, which can most easily be discussed as individual segments. Because of the varying conditions found along the drainage, each unique section of Drainage 25 is discussed separately, below. Ultimately, the Drainage Feature 25 connects to Temescal Wash, which provides a nexus to the Santa Ana River, a water of the U.S. under USACE jurisdiction. Since a nexus or connection exists with a jurisdictional water, the drainage comes under the jurisdiction of the USACE.

- **Drainage Feature 25A.** Drainage Feature 25A is located west of I-15 along Compton Avenue, extending north and south of Old Temescal Road in Corona. It is a concrete trapezoidal channel that has been constructed to collect urban runoff, which is evidenced by multiple rectangular inlets conveying water into the channel. The channel conveys flows north, and has been routed underground where it turns east under I-15 and connects to Drainage Feature 25B where it changes from a concrete trapezoidal channel to a riprap-lined channel.
- **Drainage Feature 25B.** Drainage Feature 25B is located just east of I-15. It is north of Bel Air Street and conveys flows to the east. It is a riprap-lined channel that over time has collected sediment, which has allowed vegetation to establish along the perimeter of the channel. Approximately 72 inches of sediment has collected to create 'bank-like' conditions. The drainage is fed by urban runoff via the culvert under I-15. Pooled water in this drainage has collected immediately east of culvert, most likely due to the accumulated sediment and established vegetation. The vegetation consists of mule fat (*Baccharis salicifolia*), mature willows (*Salix* sp.), and cattails (*Typha* sp.), as well as several herbaceous riparian species. A wetland sample plot (LSA Sample Pit 1) was excavated along the edge of the pool to determine the extent of wetlands present in this area. Based on the presence of an OHWM and the presence of all three USACE wetland indicators, it is LSA's opinion that some portions of Drainage Feature 25B within the study area support jurisdictional wetland and nonwetland areas of the U.S. and function as a CDFW jurisdictional stream. Drainage Feature 25B conveys flows east and transitions into Drainage Feature 25C, where hydrologic conditions change as the feature approaches Sherborn Street.
- **Drainage Feature 25C.** Drainage Feature 25C is the eastern length of Drainage 25 as it approaches Sherborn Street. This section of the drainage is constructed with grouted riprap with approximately 4 inches of sediment at the bottom of the channel. Riparian vegetation, including

willows and cattails, was observed in the channel. A dense root layer is holding the soil together along this area of the channel. Water was observed in the area with vegetation, covering the sediment/root layer. A wetland sample plot (LSA Sample Pit 2) was excavated to determine the extent of wetlands present in this area. Despite the presence of all three USACE wetland indicators in some portions of Drainage Feature 25C, it is LSA's opinion that the portion of the study area that falls within Drainage 25C is a constructed channel with an impermeable substrate. The minimal layer of sediment may support some hydrophytic vegetation on a temporal basis, but is subject to scour and would not necessarily provide any substrate for hydrophytic vegetation when not covered with a thin layer of sediment and therefore is a nonwetland water of the U.S. Drainage Feature 25C conveys flows east under Sherborn Street and transitions into Drainage Feature 25D, where hydrologic conditions change at the Sherborn Street overcrossing and eastward as the feature approaches Temescal Wash.

- **Drainage Feature 25D.** Drainage Feature 25D is a trapezoidal channel with an earthen bottom and ungrouted riprap banks. It conveys flows under Sherborn Street. The channel conveys flows into Drainage Feature 24, just north of an unnamed manmade lake and south of All American Way. The channel is unvegetated except for occasional shortpod mustard (*Hirschfeldia incana*) plants. The OHWM was determined by the presence of concrete staining. Due to presence if an OHWM, the proximity to Temescal Wash, the lack of hydrophytic vegetation, this area was classified as a nonwetland water of the U.S.

Drainage Feature 24. Drainage Feature 24 is located just south of All American Way and north of an unnamed manmade lake, which was a remnant of a quarry. It lies within an artificially made spillway basin at the junction of Drainage Feature 25D and Temescal Wash. This area is inaccessible due to a chain-link fence perimeter. Vegetation in this basin includes a mix of upland and riparian species, primarily mule-fat. No sample plots were excavated in Drainage Feature 24 due to the lack of accessibility. The limits of wetland and non-wetland area were determined based on the presence, or lack of, hydrophytic vegetation within the study area. Presently, a bermed road exists at the north end of the lake, creating an upland feature between the spillway and the lake. Overflow from this area, if a large enough storm event were to occur to produce overflow, would be conveyed into the Temescal Wash at the north end of the basin. Review of historical aerials shows a culvert connecting the north end of the lake to the spillway basin. If the culvert still exists, it is not visible due to vegetation growth at the north end of the lake. It is LSA's opinion that Drainage Feature 24 would be considered jurisdictional by the USACE under Section 404 of the CWA. Although the basin does not have a visible OHWM, the area would be considered jurisdictional due to a hydrologic connection to the Santa Ana River by way of Temescal Wash.

Drainage Feature 27. Drainage Feature 27 is a roadside concrete v-ditch that conveys runoff flows from the cul-de-sac at the northern terminus of Bel Air Street north into Drainage Feature 27. The manmade ditch is unvegetated and no OHWM was observed. According to the current state and historical aerial imagery, this drainage does not appear to be a historically occurring drainage and occurs in an upland area. Due to the lack of riparian vegetation and presence of concrete lining, this area was not classified as a wetland. Because the USACE typically does not assert jurisdiction over non-tidal drainage and irrigation ditches that are excavated on dry land and drain adjacent upland areas, it is LSA's opinion that this drainage would not be considered jurisdictional by the USACE.

Temescal Wash. Temescal Wash (Drainage Feature 17) crosses the study area multiple times: Once at E. 6th Street, again at Quarry Street, and a third time along Cota Street, all in the city of Corona. Temescal Wash is a concrete rectangular flood control channel that was devoid of water, vegetation, and sediment at the time of survey. The OHWM was determined by the presence of water staining on the concrete surface. Temescal Wash would be considered a jurisdictional nonwetland water of the U.S. due to a hydrologic connection to the Santa Ana River by way of Prado Basin.

Drainage Feature 20. Drainage Feature 20 is an earthen, roadside basin receiving flows from a corrugated metal pipe that conveys road runoff into the feature. No OHWM was present. Upland vegetation was observed throughout, specifically California buckwheat (*Eriogonum fasciculatum*). Based on the lack of connectivity to any downstream features and lack of OHWM or drainage patterns, it is LSA's opinion that Drainage Feature 20 is not subject to the jurisdiction of the USACE.

Drainage Feature 19. Drainage Feature 19 is an unnamed flood control channel that crosses the study area at Cota Street and Public Safety Way. East of Cota Street, Drainage Feature 19 is an earthen drainage with ornamental vegetation, specifically Peruvian pepper trees (*Schinus molle*) along the bank. A 24-inch diameter culvert outlet channels surface street runoff from Cota Street into the drainage. Once the drainage passes under Cota Street, the west end of Drainage 5 becomes a rectangular concrete channel that connects to Temescal Wash. The OHWM was determined by the presence of water staining. Due to the presence of an OHWM and the connectivity of the drainage to Temescal Wash, it is LSA's opinion that this drainage would be considered a jurisdictional nonwetland water of the U.S.

Drainage Feature 18. Drainage Feature 18 is an earthen trapezoidal drainage on the east side of Cota Street at Malloy Court in the city of Corona. Two 36-inch diameter pipes secured in a concrete box culvert direct water flows into the channel. Vegetation within Drainage Feature 18 is primarily Johnsongrass (*Sorghum halepense*). Review of historic aerial photographs reveals the channel was undergrounded sometime between 1980 and 1994; however, prior to 1980, the channel was a naturally occurring feature with connectivity to Temescal Wash. Although the channel does not have an obvious OHWM, due to the historic connectivity of the drainage to Temescal Wash and historical potential as a natural drainage feature, it is the LSA's opinion that this drainage would be considered a jurisdictional nonwetland water of the U.S.

Drainage Feature 15. Drainage Feature 15 is an unnamed flood control channel that crosses the study area at River Road and Country Club Lane in the city of Corona. West of River Road, Drainage Feature 15 is a rectangular, concrete-lined channel that conveys flows into Prado Basin, and ultimately the Santa Ana River. However, east of River Road, Drainage 15 goes underground. The OHWM was determined by the presence of concrete staining and water. Due to the presence of an OHWM and the connectivity of the drainage to the Santa Ana River, it is LSA's opinion that this drainage would be considered a jurisdictional nonwetland water of the U.S.

Santa Ana River. As discussed above, the Santa Ana River (Drainage Feature 12) bisects the study area under River Road and flows south into the adjacent Prado Basin before continuing to the Pacific

Ocean. The Santa Ana River and the Pacific Ocean are recognized by the USACE as traditional navigable waters (TNWs) and thus fall under USACE jurisdiction, as do all tributaries of the Santa Ana River. A wetland sample plot (LSA Sample Pit 3) was analyzed in the general area of a previous sample plot (Bonterra Sample Pit 3) in order to confirm similar hydrologic conditions still exist on site. Wetland vegetation and hydrology indicators were present at this location as they were during the 2012 Bonterra JD; however, the difference in soil matrix color analysis between LSA's sample pit and Bonterra's sample pit were not discernable enough to refute Bonterra's determination of wetlands at this site. It is LSA's opinion that this area should remain classified as potentially jurisdictional wetland waters of the US.

Mill Creek. Mill Creek (Drainage Feature 11) is an earthen channel within a broad floodplain that crosses the study area under Hellman Avenue in the city of Eastvale by way of a 36-inch diameter corrugated metal pipe. A mac drain directs surface water runoff from the west side of Hellman Avenue into Mill Creek. The low-flow channel is vegetated by stinging nettle (*Urtica dioica*), curlytop knotweed (*Polygonum lapathifolium*), kochia (*Kochia scoparia*), and peppergrass (*Lepidium latifolium*), while shortpod mustard and London rocket (*Sisymbrium irio*) dominate the remainder of the floodplain. Mill Creek bears evidence of disturbance due to historical vegetation removal activities and channel contouring. The OHWM was determined by the presence of the low-flow channel. Mill Creek would be considered a jurisdictional nonwetland water of the U.S. due to a hydrologic connection to the Santa Ana River by way of Prado Basin.

Drainage Feature 10. Drainage Feature 10 is an unnamed earthen trapezoidal flood control channel that crosses the study area at Hellman Avenue, north of Chandler Street in the city of Chino. Drainage Feature 10 conveys flows into Prado Basin, and ultimately the Santa Ana River. It is devoid of vegetation east of River Road; however, the west side of the channel is vegetated with riparian vegetation. The OHWM was determined based on water staining. A sampling plot (Bonterra Sample Pit 2) from the previous jurisdictional delineation determined that saturated soils conditions do not exist on site. Since conditions have not changed at this drainage, and soils are not saturated, this feature does not meet Federal wetland criteria. Due to the connectivity of the drainage to the Santa Ana River, it is LSA's opinion that this drainage would be considered a jurisdictional nonwetland water of the U.S.

Cucamonga Creek. Cucamonga Creek (Drainage Feature 8) crosses the study area twice; once at Hellman Avenue, north of Chandler Street, and once north of Schleisman Road, in the cities of Chino and Eastvale, respectively. Cucamonga Creek is a concrete trapezoidal channel that is devoid of vegetation and sediment. The OHWM was determined by the presence of waters staining and existing flowing water. Cucamonga Creek would be considered a jurisdictional nonwetland water of the U.S. due to a hydrologic connection to the Santa Ana River by way of Prado Basin.

Drainage Features L-29 and L-30. Drainage Features L-29 and L-30 are roadside agriculture ditches that convey runoff flows from fields on the south and north side of Hereford Drive, respectively. The ditches are unvegetated and no OHWM was observed. According to the current State and historical aerial imagery, the drainages do not appear to be historically occurring drainages and occur in upland areas. Because the USACE typically does not assert jurisdiction over non-tidal

drainages and irrigation ditches that are excavated on dry land and drain adjacent upland areas, it is LSA's opinion that these two drainages should not be considered jurisdictional waters of the U.S. Note: the prefix 'L' associated with these two drainages because they were only included in the LSA JD, and not in the Bonterra JD.

Drainage Feature 7. Drainage Feature 7 is a concrete trapezoidal flood control channel along the perimeter of James C. Huber Park in the city of Eastvale. The Park contains a detention basin with Drainage Feature 30 at the top of the northern perimeter wall of the basin. The feature terminates in a large drop structure at Archibald Avenue, west of the park. The channel contains deposited sediment and extensive riparian vegetation, specifically willows and mule fat. The OHWM was determined based on water staining. Due to the impermeable substrate, and connectivity of the drainage to the Santa Ana River, it is LSA's opinion that this drainage would be considered a jurisdictional nonwetland water of the U.S.

Drainage Feature 6. Drainage Feature 6 is an unnamed flood control channel that crosses the study area along Remington Avenue in the city of Corona. It is a rectangular, concrete channel that is devoid of vegetation. The OHWM was determined by the presence of water staining, water flows and algae. It conveys flows southeast into Cucamonga Creek and ultimately into the Santa Ana River by way of the Prado Basin. Due to the impermeable substrate, presence of an OHWM and the connectivity of the drainage to the Santa Ana River, it is LSA's opinion that this drainage would be considered a jurisdictional nonwetland water of the U.S.

Drainage Feature 5. Drainage Feature 5 is a roadside ditch that conveys runoff flows from fields just south of Mira Loma Substation. The ditch is a concrete v-ditch that is parallel to the southern perimeter of the substation and appears to collect runoff from the substation in this area. The drainage feature continues outside of the substation and becomes an earthen v-ditch south at the southwestern corner of the substation. It terminates at Cantu-Galleano Ranch Road, where it is directed into an underground storm drain. The drainage is vegetated with Russian thistle (*Salsola tragus*). There are no signs indicating that this feature conveys flows. According to the current State and historical aerial imagery, the drainage does not appear to be a historically occurring drainage and occurs in upland areas. Because the USACE typically does not assert jurisdiction over non-tidal drainages and irrigation ditches that are excavated on dry land and drain adjacent upland areas, it is LSA's opinion that this drainage would not be considered jurisdictional by the USACE.

CONCLUSIONS AND DISCUSSION

The study area contains 17 potential drainage features, of which 12 were identified as potentially subject to the jurisdiction of the USACE, CDFW and/or Regional Water Quality Control Board (RWQCB). These twelve channelized storm water and drainage features from the proposed project eventually discharge into Temescal Wash, Cucamonga Creek or Mill Creek; all of which are tributaries to the Santa Ana River (Figure 2). The Santa Ana River connects directly to the Pacific Ocean (a navigable water of the United States), thereby establishing a nexus to navigable waters, as defined by USACE guidance. As shown in Table A, a total of 13.08 non-wetland acres and 2.31

wetland acres potentially subject to USACE jurisdiction, associated with these eleven potentially jurisdictional drainages, including the Santa Ana River, were identified within the study area.

All of the areas satisfying the USACE jurisdictional criteria for waters of the U.S. and adjacent wetlands, as described above, are also subject to CDFW jurisdiction pursuant to Section 1602 of the California Fish and Game Code. In addition, streambed banks extending beyond the limits of USACE jurisdiction are considered subject to CDFW jurisdiction. As shown in Table A, the total acreage of potential CDFW jurisdiction within the study area is 21.31 acres.

The remaining five drainage features—27, 20, 30, 29, and 5—either do not exhibit signs of hydrology or are isolated, and are therefore likely not subject to USACE jurisdiction. Drainages believed to be not jurisdictional by the USACE and that lack riparian vegetation, show an absence of any aquatic or terrestrial wildlife, and do not function as a river, lake, or stream are also not likely to be considered jurisdictional by the CDFW.

Since there is no public guidance on determining RWQCB jurisdictional areas, jurisdiction was determined based on the Federal definition of wetlands (three-parameter) and other waters of the U.S. (OHWM). Since there are areas within the study area subject to USACE and CDFW jurisdiction, RWQCB jurisdiction in this case is coincident with USACE jurisdiction for purposes of Section 401 certification.

Because regulations are rather lacking for addressing jurisdiction of detention type basins under Porter-Cologne, the impoundments found within the study area were excluded because typically local regional water boards do not assert jurisdiction over offline, isolated treatment basins with no connectivity to downstream resources or basins that do not support resources themselves (such as wetlands). The Bonterra JD identified 22.95 acres of dairy and agriculture basins found within the study area would fall into this category. However, it is understood that the local water boards can elect to take such features as jurisdictional on a case by case basis, especially if the project involves disruption of such isolated basins to the point of creating a downstream water quality issue.

Tables A and B provide the length and area measurements of each drainage feature within the study area.

Table A: Potentially Jurisdictional Drainage Feature Length and Area Measurements

Drainage Feature	Average USACE Width (feet)	Average CDFW Width (feet)	Potential Jurisdictional USACE Area (acres)		Potential Jurisdictional CDFW Area (acres)
			Nonwetland	Wetland	
25	13.00	35.50	0.69	0.01	2.23
24	40.00	40.00	0.06	N/A	0.85
17	61.33	104.66	0.91	N/A	1.44
19	25.00	28.00	0.08	N/A	0.10
18	11.00	16.00	0.01	N/A	0.01
15	6.00	32.00	0.00	N/A	0.00
12	69.00	3118.00	10.30	2.30	12.89

Drainage Feature	Average USACE Width (feet)	Average CDFW Width (feet)	Potential Jurisdictional USACE Area (acres)		Potential Jurisdictional CDFW Area (acres)
			Nonwetland	Wetland	
11	3.00	6.00	0.01	N/A	0.03
10	206.50	222.50	0.20	N/A	0.98
8	26.00	149.00	0.39	N/A	2.19
7	8.00	16.00	0.22	N/A	0.38
6	16.00	16.00	0.21	N/A	0.21
Total Potential Jurisdictional Areas			13.08	2.31	21.31

USACE = United States Army Corps of Engineers CDFW = California Department of Fish and Game

Table B: Potentially Non-jurisdictional Drainage Feature Length and Area Measurements

Drainage Feature	Average USACE Width (feet)	Average CDFW Width (feet)	Potential Non-jurisdictional USACE Area (acres)		Potential Non-jurisdictional CDFW Area (acres)
			Nonwetland	Wetland	
27	1.5	6	0.006	N/A	0.03
20	No OHWM	N/A	N/A	N/A	N/A
L-30	1	2	0.01	N/A	0.02
L-29	1	6	0.005	N/A	0.04
5	6.60	11.80	0.36	N/A	0.91
Total Potential Non-jurisdictional Areas			0.381		1.0

All existing SCE light-weight steel poles currently found along the riprap banks on either side of River Road are within areas mapped as potentially jurisdictional as part of this delineation. More specifically, the guy wires associated with some of these poles are located within the Santa Ana River channel.

Hydrological depressions previously identified as “Fairy Shrimp Ponds Points” in the Circle City Biological Studies Fairy Shrimp Survey Area (Chambers Group, 2015) were evaluated for potential USACE jurisdiction. As previously discussed, waters of the U.S. include lakes, streams, and their tributaries and adjacent wetlands. Under Section 404, wetland waters of the U.S. are defined as areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support vegetation typically adapted to life in saturated soil conditions under normal circumstances with a nexus to a traditional navigable water. None of the depressions within the project study area sufficiently met these characteristics, and are not considered to be jurisdictional at the time of the survey. Hydrological depressions by nature are typically isolated and not subject to regulation under the CWA.

Additionally, hydrological depressions identified within the project study area found in western Riverside County were further subjected to analysis based on the Western Riverside County Multiple

Species Habitat Conservation Plan (MSHCP) vernal pool classification. The MSHCP (2004) defines vernal pools as “seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season. Evidence concerning the persistence of an area’s wetness can be obtained from its history, vegetation, soils, and drainage characteristics, uses to which it has been subjected, and weather and hydrologic records” (AECOM 2009). The depressions found within the Riverside County portion of the project area did not sufficiently meet these characteristics, and are not considered to be jurisdictional at the time of the survey.

The findings and conclusions presented in this report, including the location and extent of wetlands and other waters subject to regulatory jurisdiction, represent the professional opinion of the consultant biologists. These findings and conclusions should be considered preliminary until verified by the USACE, CDFW, and RWQCB.

REFERENCES

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- Bonterra Consulting. 2012. Jurisdictional Delineation Report – Circle City Substation and Mira Loma Subtransmission Line Project, Riverside and San Bernardino Counties, California.
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- County of Riverside. 2004. *Western Riverside County Multiple Species Habitat Conservation Plan*, Section 6.1.2 Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools; Volume 1; Section 6.
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- Lichvar, Robert et al. Cold Regions Research and Engineering Laboratory. August 2008. *A Field Guide to the Identification of the Ordinary High Water Mark in the Arid West Region of the Western United States*. United States Army Corps of Engineers Research and Development Center. Hanover, NH.
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Attachments: A: Figures 1 through 4

B: Arid West Wetland Determination Data Forms

ATTACHMENT A

FIGURES 1 THROUGH 4

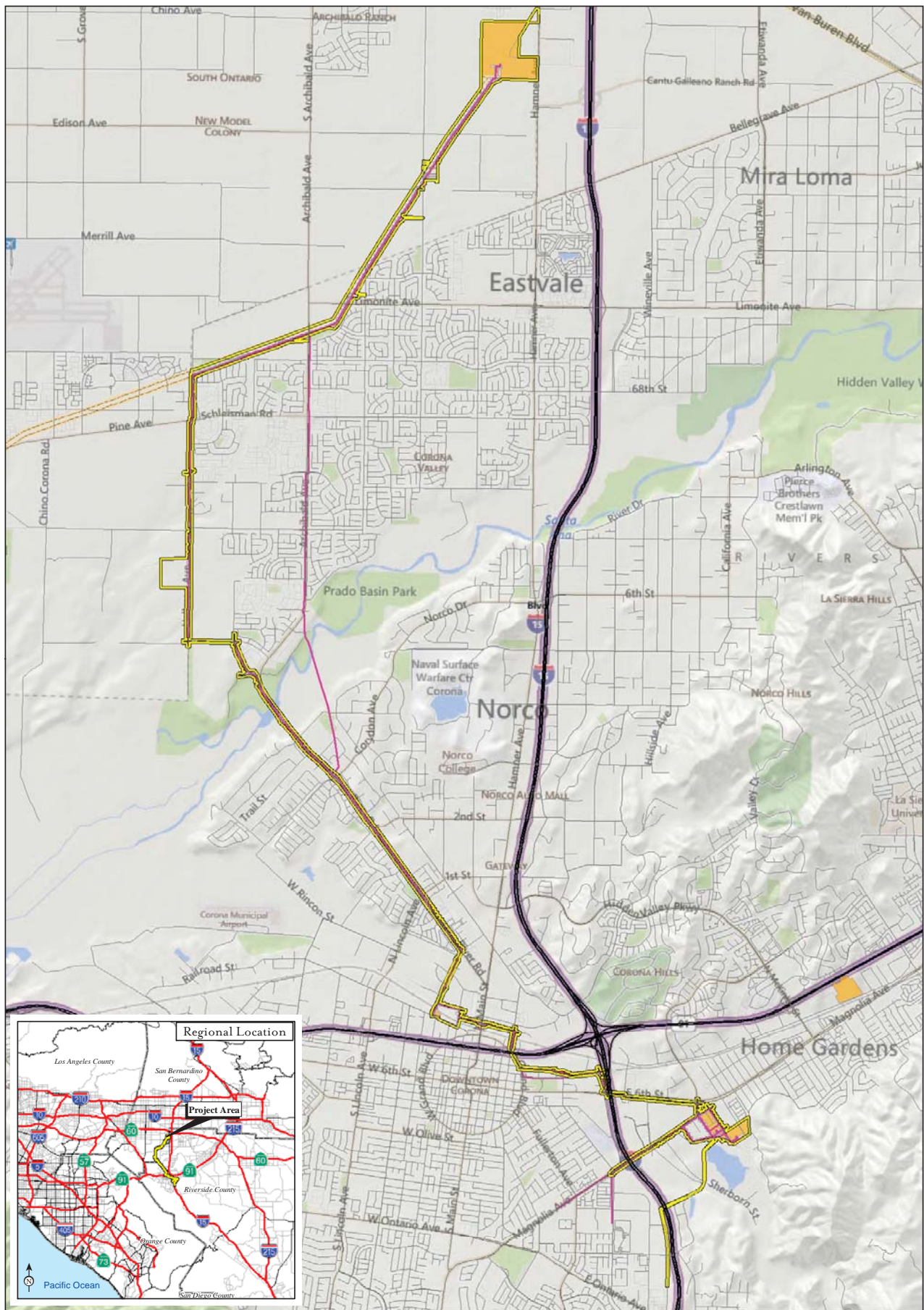
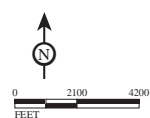


FIGURE 1

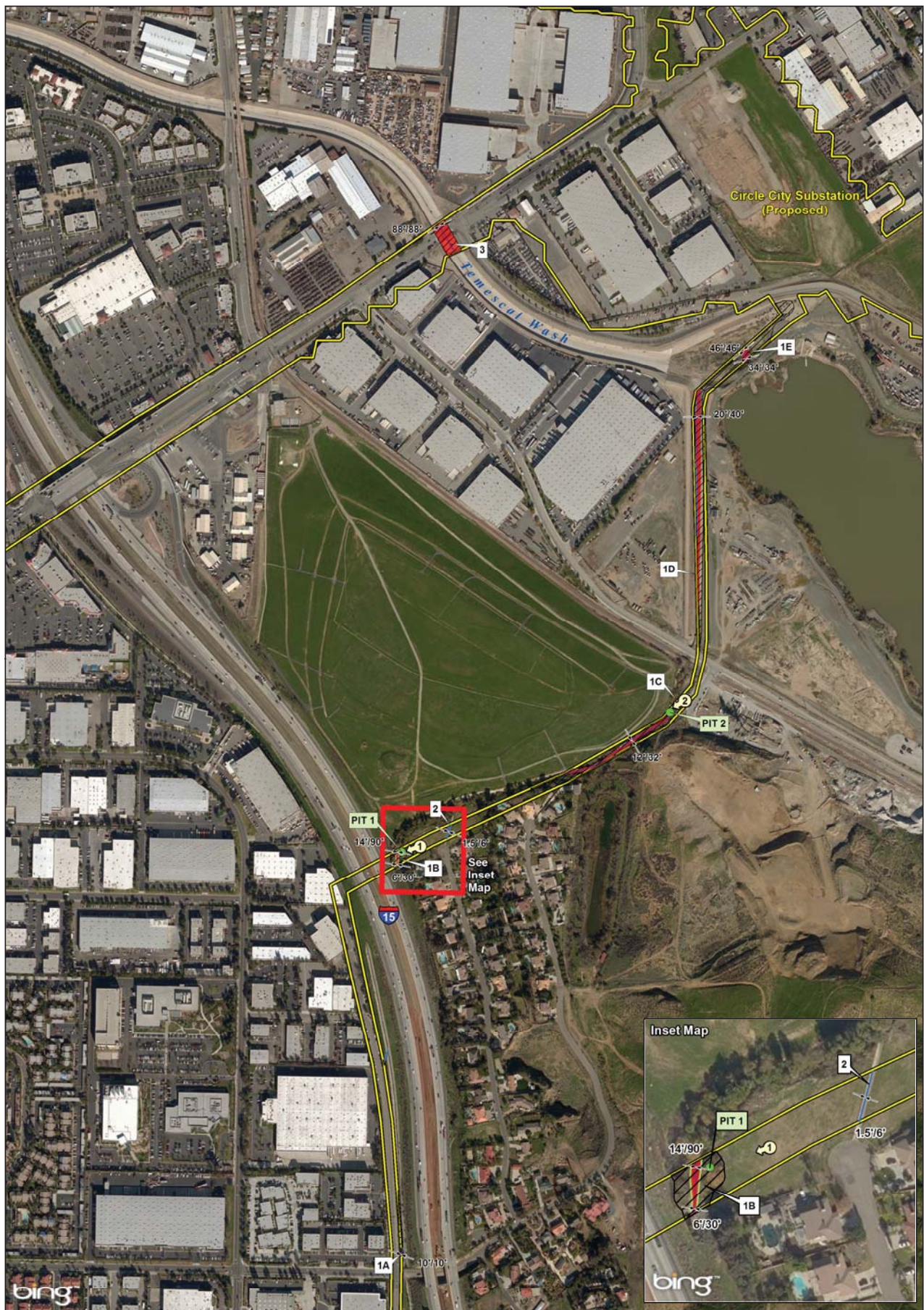
LSA



LEGEND

- Study Area Boundary
- SCE Lines
- Access and Spur Roads
- Construction Areas
- Construction Areas for Access Roads
- Right of Way
- Substation Area

SOURCE: USGS 7.5' Quads: _____ (yr), CA; ESRI Streetmap, 2013/Riverside County, 2015.
 F:\SCE1303\CWA000826\Reports\JurDel\fig1_RegLoc.mxd (6/16/2015)



LSA



SOURCE: Bing Aerial, 2015; ESRI Streetmap, 2013.
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- Study Area Boundary
- Sample Pit (LSA 2015)
- Sample Pit (Bonterra 2012)
- ↔ Drainage Width (ACOE/CDFW)

- Potential Jurisdictional Waters/Non-jurisdictional**
- Non-jurisdictional Waters
 - ⋯ Underground
 - CDFW Potential Jurisdictional Waters
 - ACOE Potential Jurisdictional Wetland Waters
 - ACOE Potential Jurisdictional Non-wetland Waters

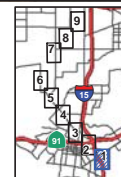


FIGURE 2
 Sheet 1 of 9

Circle City
 Jurisdictional Delineation
 Jurisdictional Delineation



LSA



SOURCE: Bing Aerial, 2015; ESRI Streetmap, 2013.
 I:\SCE1303\CWA826\GIS\fig2_JuriDel.mxd (6/26/2015)

- Study Area Boundary
- Sample Pit (LSA 2015)
- Sample Pit (Bonterra 2012)
- 4/12 Drainage Width (ACOE/CDFW)

- Potential Jurisdictional Waters/Non-jurisdictional**
- Non-jurisdictional Waters
 - ⋯ Underground
 - CDFW Potential Jurisdictional Waters
 - ACOE Potential Jurisdictional Wetland Waters
 - ACOE Potential Jurisdictional Non-wetland Waters

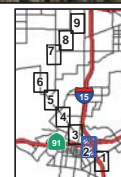


FIGURE 2
 Sheet 2 of 9

Circle City
 Jurisdictional Delineation
 Jurisdictional Delineation



LSA



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FEET

SOURCE: Bing Aerial, 2015; ESRI Streetmap, 2013.
I:\SCE1303\CWA826\GIS\fig2_JuriDel.mxd (6/26/2015)

- Study Area Boundary
- Sample Pit (LSA 2015)
- Sample Pit (Bonterra 2012)
- 4712' Drainage Width (ACOE/CDFW)

- Potential Jurisdictional Waters/Non-jurisdictional**
- Non-jurisdictional Waters
 - ⋯ Underground
 - CDFW Potential Jurisdictional Waters
 - ACOE Potential Jurisdictional Wetland Waters
 - ACOE Potential Jurisdictional Non-wetland Waters

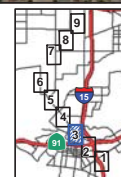
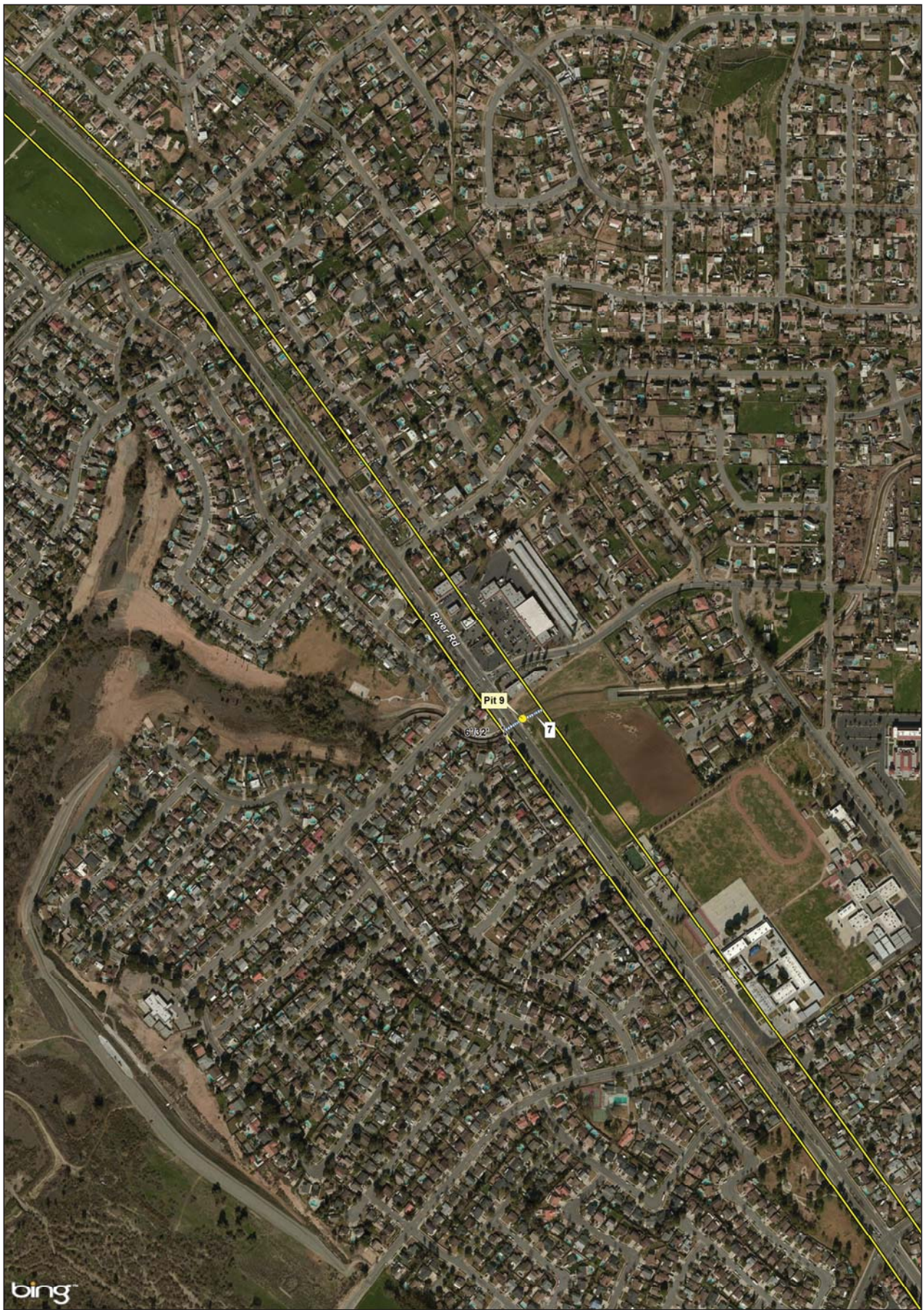


FIGURE 2
Sheet 3 of 9

Circle City
Jurisdictional Delineation
Jurisdictional Delineation



LSA



SOURCE: Bing Aerial, 2015; ESRI Streetmap, 2013.
 I:\SCE1303\CWA826\GIS\fig2_JuriDel.mxd (6/26/2015)

- Study Area Boundary
- Sample Pit (LSA 2015)
- Sample Pit (Bonterra 2012)
- Drainage Width (ACOE/CDFW)

- Potential Jurisdictional Waters/Non-jurisdictional**
- Non-jurisdictional Waters
 - Underground
 - CDFW Potential Jurisdictional Waters
 - ACOE Potential Jurisdictional Wetland Waters
 - ACOE Potential Jurisdictional Non-wetland Waters

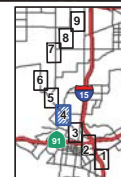


FIGURE 2
 Sheet 4 of 9

Circle City
 Jurisdictional Delineation
 Jurisdictional Delineation



LSA



SOURCE: Bing Aerial, 2015; ESRI Streetmap, 2013.
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- Study Area Boundary
- Sample Pit (LSA 2015)
- Sample Pit (Bonterra 2012)
- Drainage Width (ACOE/CDFW)

- Potential Jurisdictional Waters/Non-jurisdictional**
- Non-jurisdictional Waters
 - Underground
 - CDFW Potential Jurisdictional Waters
 - ACOE Potential Jurisdictional Wetland Waters
 - ACOE Potential Jurisdictional Non-wetland Waters

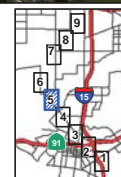


FIGURE 2
 Sheet 5 of 9

Circle City
 Jurisdictional Delineation
 Jurisdictional Delineation



LSA



SOURCE: Bing Aerial, 2015; ESRI Streetmap, 2013.
 I:\SCE1303\CWA826\GIS\fig2_JuriDel.mxd (6/26/2015)

- Study Area Boundary
- Sample Pit (LSA 2015)
- Sample Pit (Bonterra 2012)
- ↔ 47'12" Drainage Width (ACOE/CDFW)

- Potential Jurisdictional Waters/Non-jurisdictional**
- Non-jurisdictional Waters
 - Underground
 - CDFW Potential Jurisdictional Waters
 - ACOE Potential Jurisdictional Wetland Waters
 - ACOE Potential Jurisdictional Non-wetland Waters

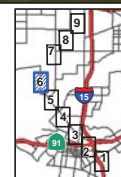
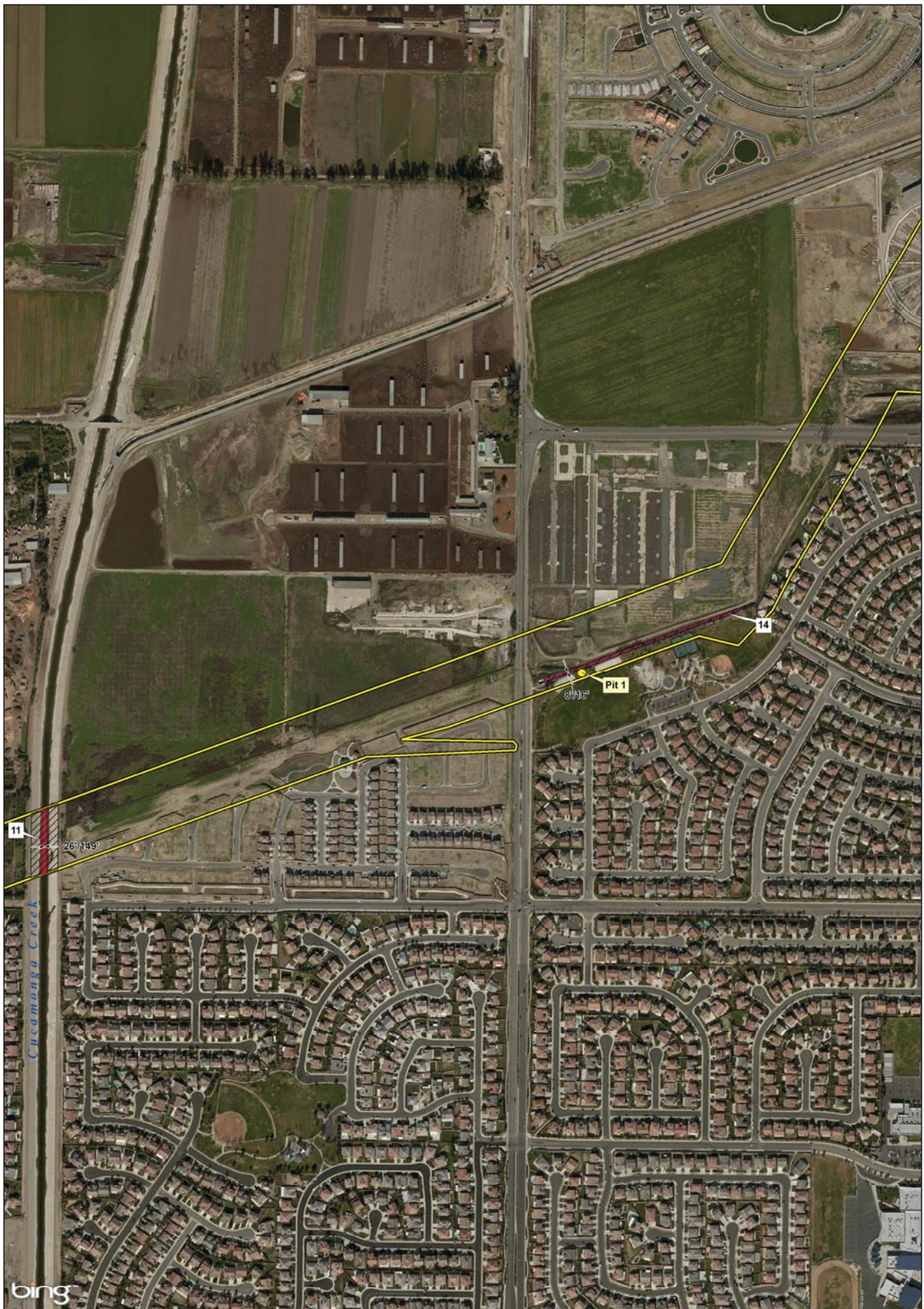


FIGURE 2
 Sheet 6 of 9

Circle City
 Jurisdictional Delineation
 Jurisdictional Delineation



LSA



SOURCE: Bing Aerial, 2015; ESRI Streetmap, 2013.
 I:\SCE1303\CWA826\GIS\fig2_JuriDel.mxd (6/26/2015)

- Study Area Boundary
- Sample Pit (LSA 2015)
- Sample Pit (Bonterra 2012)
- ↖ Drainage Width (ACOE/CDFW)

- Potential Jurisdictional Waters/Non-jurisdictional**
- Non-jurisdictional Waters
 - ⋯ Underground
 - CDFW Potential Jurisdictional Waters
 - ACOE Potential Jurisdictional Wetland Waters
 - ACOE Potential Jurisdictional Non-wetland Waters

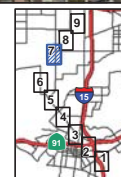


FIGURE 2
 Sheet 7 of 9

Circle City
 Jurisdictional Delineation
 Jurisdictional Delineation



LSA



0 250 500
FEET

SOURCE: Bing Aerial, 2015; ESRI Streetmap, 2013.
I:\SCE1303\CWA826\GIS\fig2_JuriDel.mxd (6/26/2015)

- Study Area Boundary
- Sample Pit (LSA 2015)
- Sample Pit (Bonterra 2012)
- Drainage Width (ACOE/CDFW) 4712'

- Potential Jurisdictional Waters/Non-jurisdictional**
- Non-jurisdictional Waters
 - Underground
 - CDFW Potential Jurisdictional Waters
 - ACOE Potential Jurisdictional Wetland Waters
 - ACOE Potential Jurisdictional Non-wetland Waters

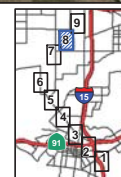
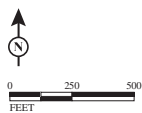


FIGURE 2
Sheet 8 of 9

Circle City
Jurisdictional Delineation
Jurisdictional Delineation



LSA



SOURCE: Bing Aerial, 2015; ESRI Streetmap, 2013.
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- Study Area Boundary
- Sample Pit (LSA 2015)
- Sample Pit (Bonterra 2012)
- ↖ 4712' Drainage Width (ACOE/CDFW)

- Potential Jurisdictional Waters/Non-jurisdictional**
- Non-jurisdictional Waters
 - ⋯ Underground
 - CDFW Potential Jurisdictional Waters
 - ACOE Potential Jurisdictional Wetland Waters
 - ACOE Potential Jurisdictional Non-wetland Waters

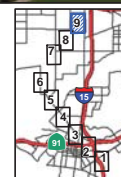


FIGURE 2
 Sheet 9 of 9

Circle City
 Jurisdictional Delineation
 Jurisdictional Delineation



LSA

Study Area Boundary

Soils

- AIC: Arbuckle gravelly loam, 2-8% slopes
- CoA: Cortina sandy loam, 0-2% slopes
- CpA: Cortina gravelly sandy loam, 0-2% slopes
- GdA: Garretson gravelly very fine sandy loam, 0-2% slopes

- GdC: Garretson gravelly very fine sandy loam, 2-8% slopes
- PID: Placentia fine sandy loam, 5-15% slopes
- RuF: Rough broken land
- W: Water
- Cb: Chino Silt Loam
- CKA: Chualar Clay Loam, 0-2% Slopes
- CKC: Chualar Clay Loam, 2-9% Slopes

- Db: Delhi Fine Sand
- Gr: Grangeville Fine Sandy Loam
- Hr: Hilmar Loamy Fine Sand
- RmC: Ramona Sandy Loam, 2-9% Slopes

FIGURE 3
Sheet 1 of 11

Circle City
Jurisdictional
Delineation
Soil Types



LSA

Study Area Boundary

Soils

- AIC: Ar buckle gravelly loam, 2-8% slopes
- CoA: Cortina sandy loam, 0-2% slopes
- CpA: Cortina gravelly sandy loam, 0-2% slopes
- GdA: Garretson gravelly very fine sandy loam, 0-2% slopes

- HcC: Hanford coarse sandy loam, 2-8% slopes
- PID: Placentia fine sandy loam, 5-15% slopes
- RuF: Rough broken land
- W: Water
- Cb: Chino Silt Loam
- CkA: Chualar Clay Loam, 0-2% Slopes
- CkC: Chualar Clay Loam, 2-9% Slopes

- Db: Delhi Fine Sand
- Gr: Grangeville Fine Sandy Loam
- Hr: Hilmar Loamy Fine Sand
- RmC: Ramona Sandy Loam, 2-9% Slopes

FIGURE 3
Sheet 2 of 11

Circle City
Jurisdictional
Delineation
Soil Types

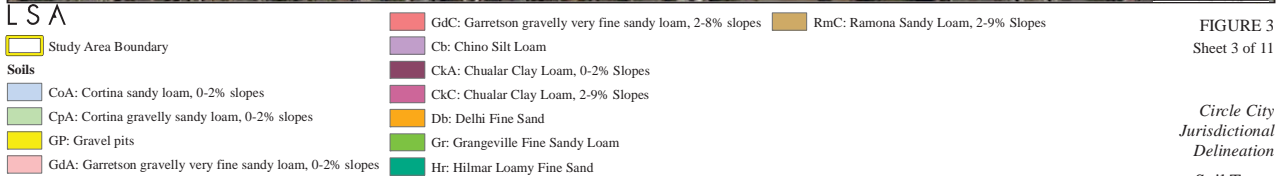
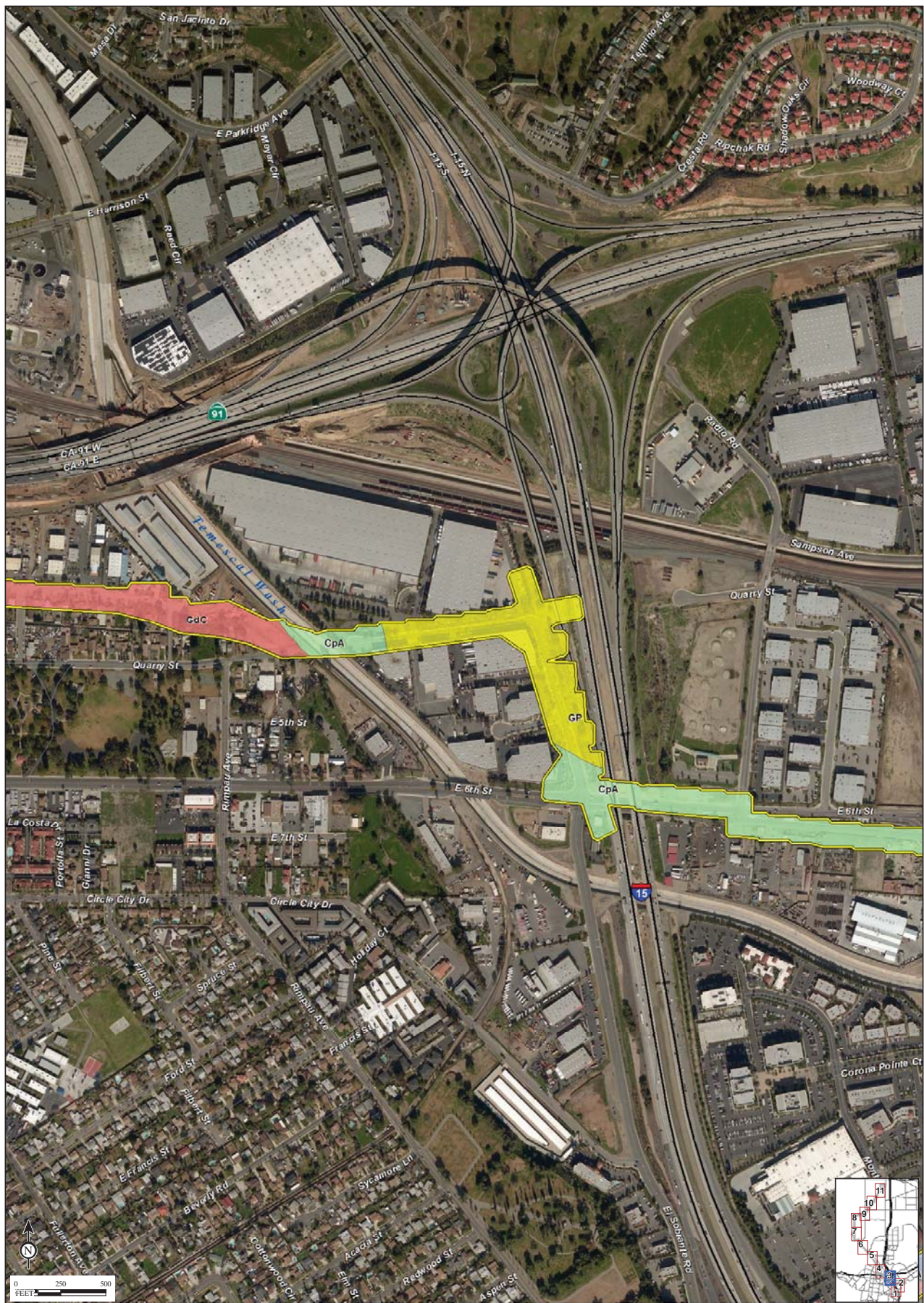


FIGURE 3
Sheet 3 of 11

Circle City
Jurisdictional
Delineation
Soil Types



LSA

Study Area Boundary

Soils

CoA: Cortina sandy loam, 0-2% slopes

GdC: Garretson gravelly very fine sandy loam, 2-8% slopes

MgB: Metz loamy fine sand, gravelly sand substratum, 0-5% slopes

PIB: Placentia fine sandy loam, 0-5% slopes

RaA: Ramona sandy loam, 0-2% slopes

SeA: San Emigdio fine sandy loam, 0-2% slopes

SgA: San Emigdio loam, 0-2% slopes

TeG: Terrace escarpments

Cb: Chino Silt Loam

CkA: Chualar Clay Loam, 0-2% Slopes

CkC: Chualar Clay Loam, 2-9% Slopes

Db: Delhi Fine Sand

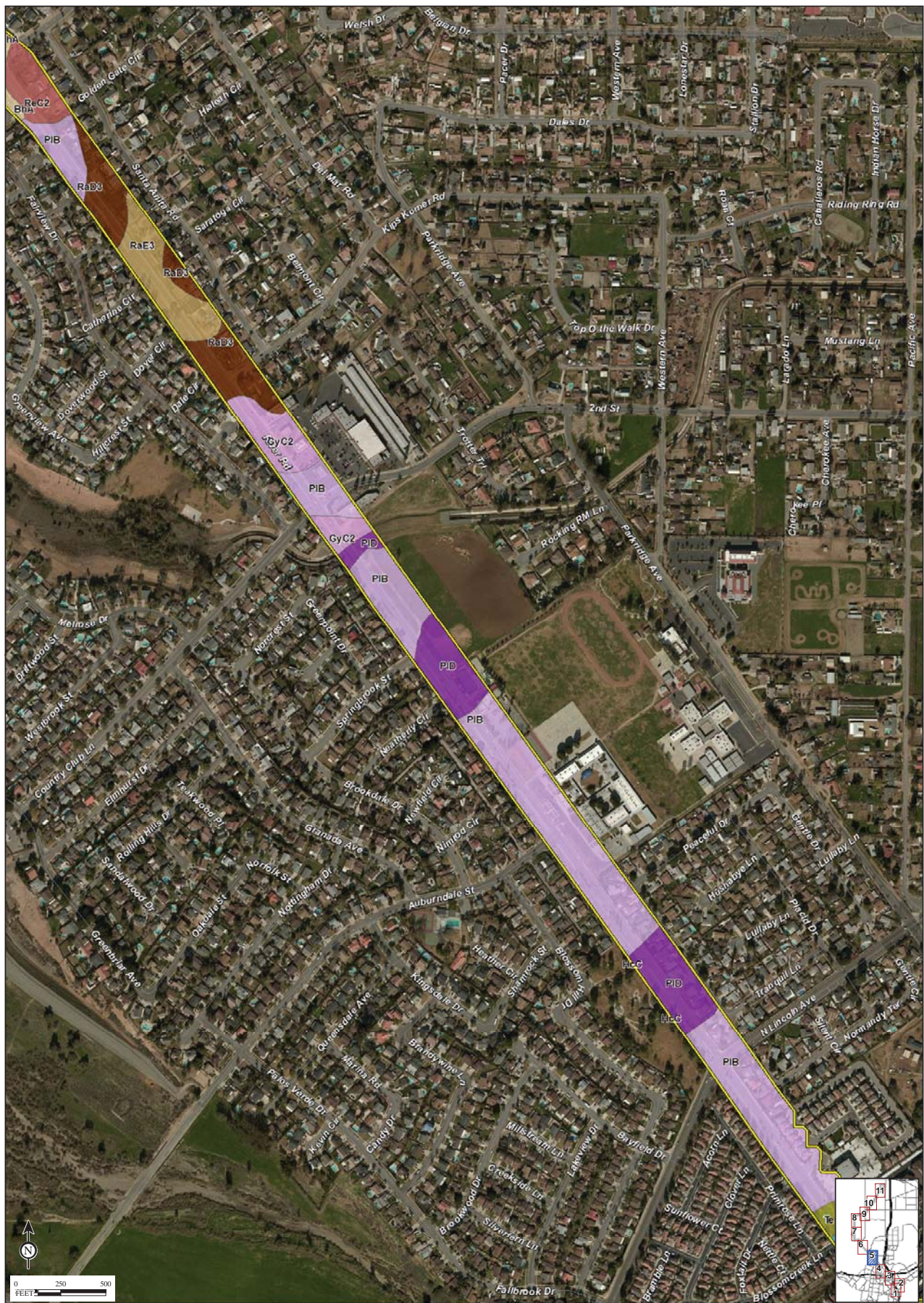
Gr: Grangeville Fine Sandy Loam

Hr: Hilmar Loamy Fine Sand

RmC: Ramona Sandy Loam, 2-9% Slopes

FIGURE 3
Sheet 4 of 11

Circle City
Jurisdictional
Delineation
Soil Types



LSA

Study Area Boundary

Soils

- BhA: Buchenau loam, slightly saline-alkali, 0-2% slopes
- GyC2: Greenfield sandy loam, 2-8% slopes, eroded
- HcC: Hanford coarse sandy loam, 2-8% slopes
- PIB: Placentia fine sandy loam, 0-5% slopes

- PID: Placentia fine sandy loam, 5-15% slopes
- RaD3: Ramona sandy loam, 8-15% slopes, severely eroded
- RaE3: Ramona sandy loam, 15-25% slopes, severely eroded
- ReC2: Ramona very fine sandy loam, 0-8% slopes, eroded
- SgA: San Emigdio loam, 0-2% slopes
- TeG: Terrace escarpments
- PIB: Placentia fine sandy loam, 0-5% slopes

- CKA: Chualar Clay Loam, 0-2% Slopes
- CKC: Chualar Clay Loam, 2-9% Slopes
- Db: Delhi Fine Sand
- Gr: Grangeville Fine Sandy Loam
- Hr: Hilmar Loamy Fine Sand
- RmC: Ramona Sandy Loam, 2-9% Slopes
- Ch: Chino Silt Loam

FIGURE 3
Sheet 5 of 11

Circle City
Jurisdictional
Delineation
Soil Types



- LSA**
- Study Area Boundary
- Soils**
- BhA: Buchenau loam, slightly saline-alkali, 0-2%t slopes
 - DmA: Dello loamy sand, poorly drained, 0-2% slopes
 - Dra: Dello loamy fine sand, gravelly substratum, 0-2% slopes
 - GoB: Grangeville loamy fine sand, drained, 0-5% slopes

- GsB: Grangeville sandy loam, sandy substratum, drained, saline-alkali
- GuB: Grangeville fine sandy loam, poorly drained, saline-alkali, 0-5% slope
- PIB: Placentia fine sandy loam, 0-5% slopes
- RaC3: Ramona sandy loam, 5-8% slopes, severely eroded
- ReC2: Ramona very fine sandy loam, 0-8% slopes, eroded
- TeG: Terrace escarpments
- W: Water

- Cb: Chino Silt Loam
- CkA: Chualar Clay Loam, 0-2% Slopes
- CkC: Chualar Clay Loam, 2-9% Slopes
- Db: Delhi Fine Sand
- Gr: Grangeville Fine Sandy Loam
- Hr: Hilmar Loamy Fine Sand
- RmC: Ramona Sandy Loam, 2-9% Slopes

FIGURE 3
Sheet 6 of 11

Circle City
Jurisdictional
Delineation
Soil Types



LSA

Study Area Boundary

Soils

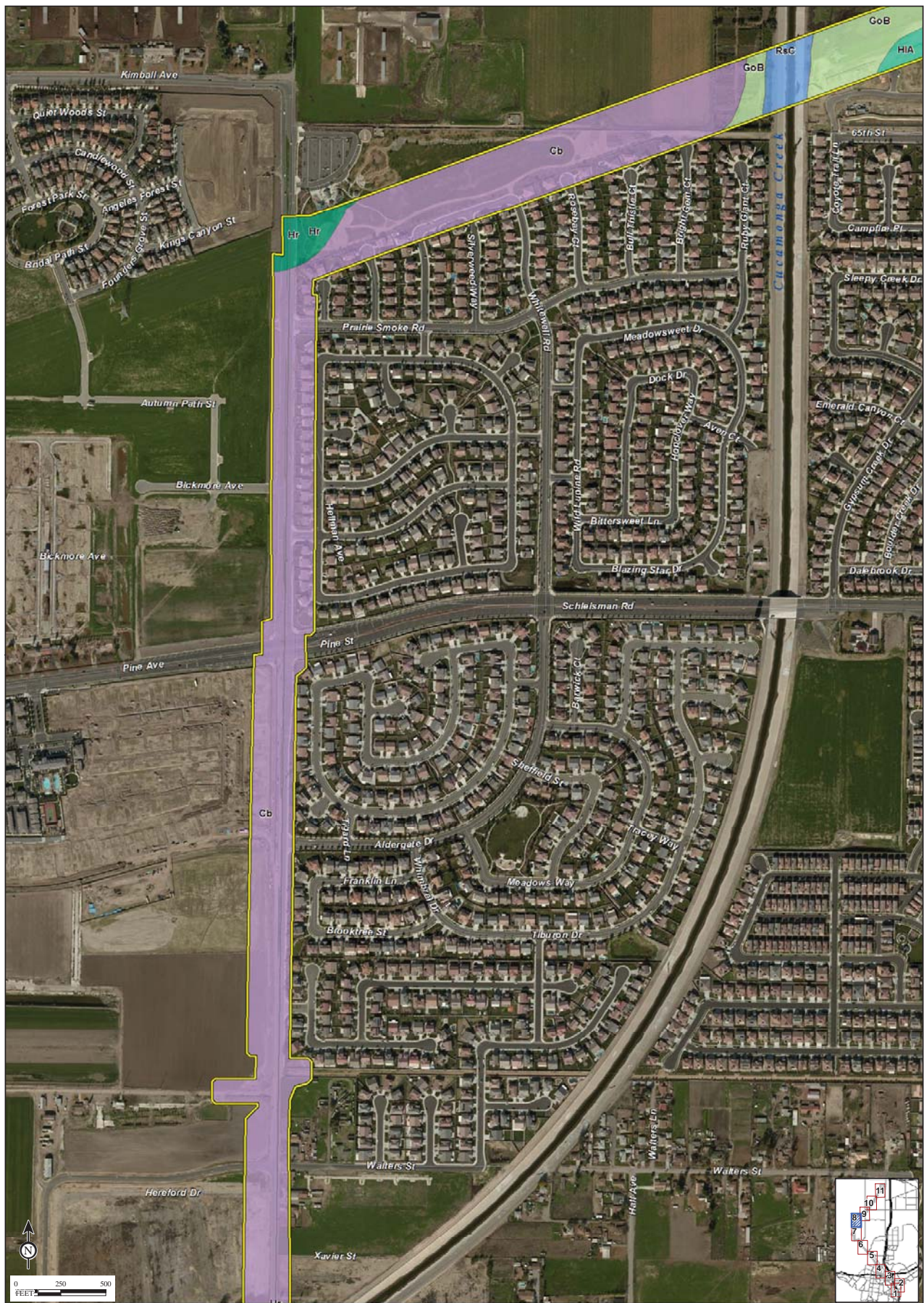
- Cb: Chino silt loam
- CkA: Chualar clay loam, 0-2% slopes
- Gr: Grangeville fine sandy loam
- Hr: Hilmar loamy fine sand

- RaA: Ramona sandy loam, 0-2% slopes
- RaB2: Ramona sandy loam, 2-5% slopes, eroded
- RaB3: Ramona sandy loam, 0-5% slopes, severely eroded
- RaC3: Ramona sandy loam, 5-8% slopes, severely eroded
- ReC2: Ramona very fine sandy loam, 0-8% slopes, eroded
- Cb: Chino Silt Loam
- CkA: Chualar Clay Loam, 0-2% Slopes

- Db: Delhi Fine Sand
- Gr: Grangeville Fine Sandy Loam
- Hr: Hilmar Loamy Fine Sand
- RmC: Ramona Sandy Loam, 2-9% Slopes

FIGURE 3
Sheet 7 of 11

*Circle City
Jurisdictional
Delineation
Soil Types*



L S A

Study Area Boundary

Soils

- Cb: Chino silt loam
- GoB: Grangeville loamy fine sand, drained, 0-5% slopes
- HIA: Hilmar loamy very fine sand, 0-2% slopes
- Hr: Hilmar loamy fine sand

- RsC: Riverwash
- Cb: Chino Silt Loam
- CkA: Chualar Clay Loam, 0-2% Slopes
- CkC: Chualar Clay Loam, 2-9% Slopes
- Db: Delhi Fine Sand
- Gr: Grangeville Fine Sandy Loam
- Hr: Hilmar Loamy Fine Sand
- RmC: Ramona Sandy Loam, 2-9% Slopes

FIGURE 3
Sheet 8 of 11

*Circle City
Jurisdictional
Delineation
Soil Types*

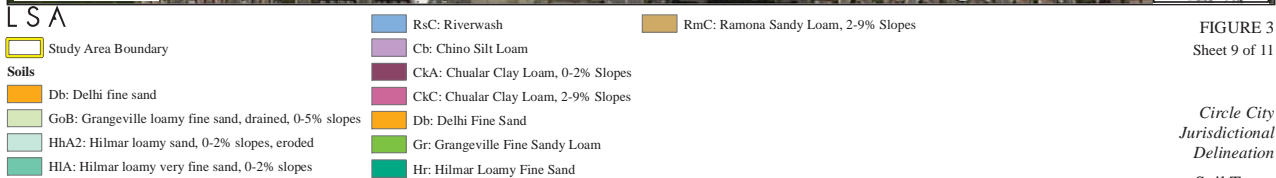
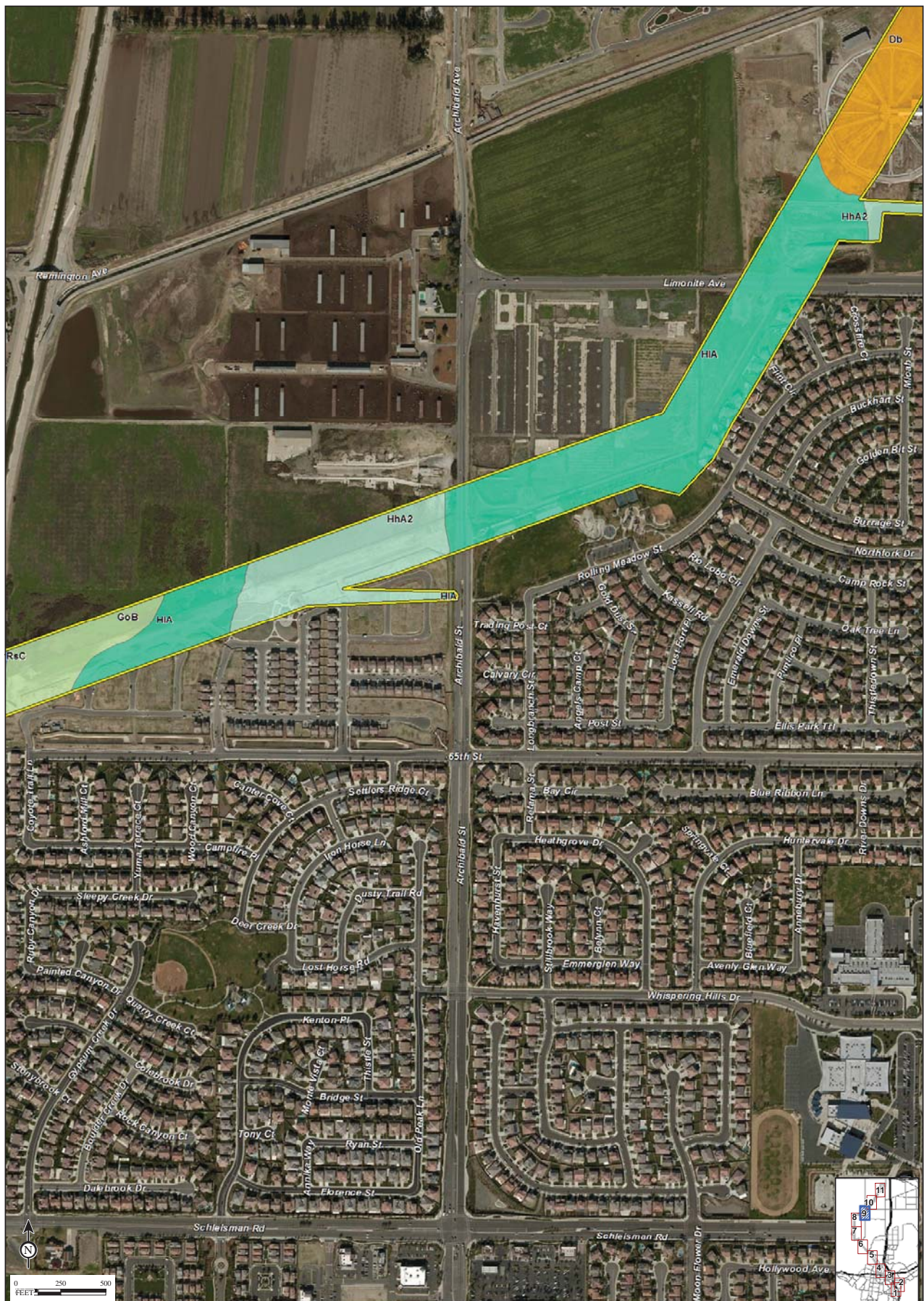
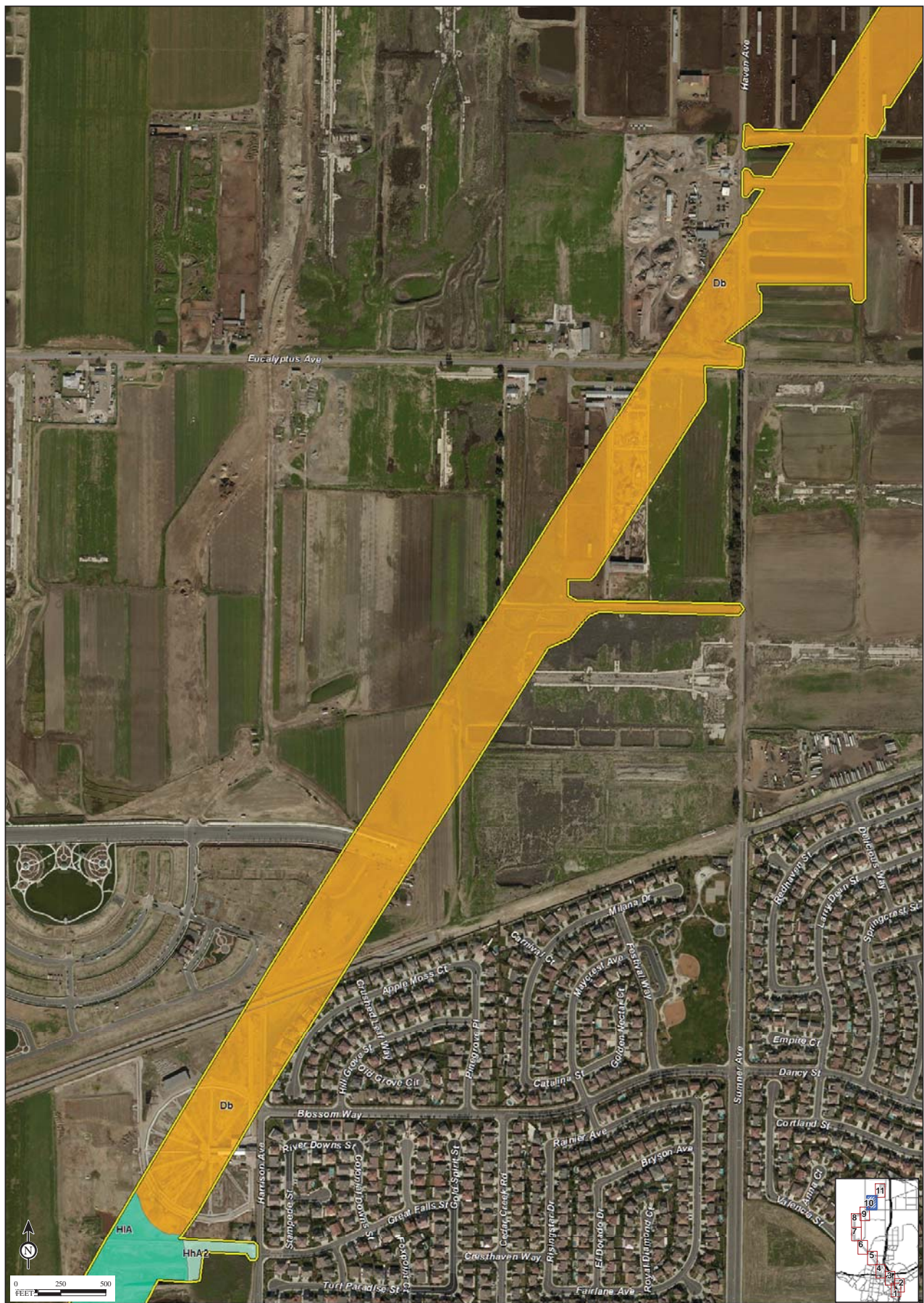


FIGURE 3
Sheet 9 of 11

Circle City
Jurisdictional
Delineation
Soil Types



LSA

- Study Area Boundary
- Soils**
- Db: Delhi fine sand
- HhA2: Hilmar loamy sand, 0-2% slopes, eroded
- HhA: Hilmar loamy very fine sand, 0-2% slopes
- Cb: Chino Silt Loam

- CkA: Chualar Clay Loam, 0-2% Slopes
- CkC: Chualar Clay Loam, 2-9% Slopes
- Db: Delhi Fine Sand
- Gr: Grangeville Fine Sandy Loam
- Hr: Hilmar Loamy Fine Sand
- RmC: Ramona Sandy Loam, 2-9% Slopes

FIGURE 3
Sheet 10 of 11

*Circle City
Jurisdictional
Delineation
Soil Types*



LSA

Study Area Boundary

Soils

- Db: Delhi fine sand
- Cb: Chino Silt Loam
- CkA: Chualar Clay Loam, 0-2% Slopes
- CkC: Chualar Clay Loam, 2-9% Slopes

- Db: Delhi Fine Sand
- Gr: Grangeville Fine Sandy Loam
- Hr: Hilmar Loamy Fine Sand
- RmC: Ramona Sandy Loam, 2-9% Slopes

FIGURE 3
Sheet 11 of 11

*Circle City
Jurisdictional
Delineation
Soil Types*



PHOTOGRAPH 1: *View facing west. Culvert beneath I-15 freeway is visible in the background.*



PHOTOGRAPH 2: *View of Pit #2.*



PHOTOGRAPH 3: *View facing north of poles situated on the west side of River Road. Guy wires to these poles are situated in the Santa Ana River."*



PHOTOGRAPH 4: *View of Pit #3.*

LSA

FIGURE 4

*Circle City
Jurisdictional Delineation*

Site Photographs

ATTACHMENT B

ARID WEST WESTLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SCE 1303 CWA 826 City/County: Corona, Riverside County Sampling Date: 6/3/15
 Applicant/Owner: Southern California Edison State: CA Sampling Point: 1
 Investigators: C. Bauer and S. Barrera Section, Township, Range: Land Grant: El Sobrante De San Jacinto
 Landform (hillslope, terrace, etc.): Rip-rap bank/ channel Local relief (concave, convex, none): None Slope (%): -2%
 Subregion (LRR): C- California Lat: 450404.69 Long: 3746794.85 Datum: UTM 11 S
 Soil Map Unit Name: Arbuckle gravelly loam, 2-8% slopes NWI classification: _____
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____ Soil _____ or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____ Soil _____ or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic vegetation present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No _____
Hydric soil present? Yes <input checked="" type="checkbox"/> No _____		
Wetland Hydrology present? Yes <input checked="" type="checkbox"/> No _____		

Remarks:
 Perennial drainage fed by urban runoff via culvert under I-15. Deep water with willow canopy. Rip-rap channel with deposited sediment. Vegetation mostly growing on banks. Drainage I.D. 1B

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 20' rad from mid channel)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percentage of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. Goodings willow (<i>Salix gooddingii</i>)	70%	Yes	FACW	
2. Tree tobacco (<i>Nicotiana glauca</i>)	10%	No	FAC	
3. Mexican fan palm (<i>Washingtonia robusta</i>)	2%	No	FACW	
4. _____				Prevalence index worksheet Total % Cover of: _____ Multiply by: _____ OBL species _____ × 1 = _____ FACW species <u>72</u> × 2 = <u>144</u> FAC species <u>10</u> × 3 = <u>30</u> FACU species _____ × 4 = _____ UPL species _____ × 5 = _____ Column Totals: <u>82</u> (A) <u>174</u> (B) Prevalence Index = B/A = <u>2.12</u>
Total Cover: <u>82%</u>				
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
Total Cover: _____				
<u>Herb Stratum</u> (Plot size: 20' radius)				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is > 50% <input checked="" type="checkbox"/> Prevalence Test is ≤ 3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
1. Cattail	30%	Yes	OBL	
2. _____				
3. _____				
4. _____				
Total Cover: _____				
<u>Woody Vine Stratum</u>				
1. _____				
2. _____				
Total Cover: _____				
% Bare Ground in Herb Stratum: _____		% Cover of Biotic Crust _____		

Remarks:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
N/A								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils:³	
_____ Histosol (A1)	_____ Sandy Redox (S5)	_____ 1 cm Muck (A9) (LRR C)	
_____ Histic Epipedon (A2)	_____ Stripped Matrix (S6)	_____ 2 cm Muck (A10) (LRR B)	
_____ Black Histic (A3)	_____ Loamy Mucky Mineral (F1)	_____ Reduced Vertic (F18)	
<u> x </u> Hydrogen Sulfide (A4)	_____ Loamy Gleyed Matrix (F2)	_____ Red Parent Material (TF2)	
_____ Stratified Layers (A5) (LRR C)	_____ Depleted Matrix (F3)	_____ Other (Explain in Remarks)	
_____ 1 cm Muck (A9) (LRR D)	_____ Redox Dark Surface (F6)		
_____ Depleted Below Dark Surface (A11)	_____ Depleted Dark Surface (F7)		
_____ Thick Dark Surface (A12)	_____ Redox Depressions (F8)		
_____ Sandy Mucky Mineral (S1)	_____ Vernal Pools (F9)		
_____ Sandy Gleyed Matrix (S4)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <u> x </u> No _____
---	---

Remarks:
No pit due to hydrogen sulfide detected with initial shovel touch.

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)	
Primary Indicators (any one indicator is sufficient)			
<u> x </u> Surface Water (A1)	_____ Salt Crust (B11)	<u> X </u> Water Marks (B1) (Riverine)	
_____ High Water Table (A2)	_____ Biotic Crust (B12)	<u> x </u> Sediment Deposits (B2) (Riverine)	
_____ Saturation (A3)	_____ Aquatic Invertebrates (B13)	_____ Drift Deposits (B3) (Riverine)	
_____ Water Marks (B1) (Nonriverine)	<u> x </u> Hydrogen Sulfide Odor (C1)	_____ Drainage Patterns (B10)	
_____ Sediment Deposits (B2) (Nonriverine)	_____ Oxidized Rhizospheres along Living Roots (C3)	_____ Dry-Season Water Table (C2)	
_____ Drift Deposits (B3) (Nonriverine)	_____ Presence of Reduced Iron (C4)	_____ Thin Muck Surface (C7)	
_____ Surface Soil Cracks (B6)	_____ Recent Iron Reduction in Tilled Soils (C6)	_____ Crayfish Burrows (C8)	
_____ Inundation Visible on Aerial Imagery (B7)	_____ Thin Muck Surface (C7)	_____ Saturation Visible on Aerial Imagery (C9)	
<u> x </u> Water-Stained Leaves (B9)	_____ Other (Explain in Remarks)	_____ Shallow Aquatard (D3)	
		_____ FAC-Neutral Test (D5)	

Field Observations:	
Surface Water Present? Yes <u> x </u> No _____ Depth (inches): <u> 18-24" </u>	Wetland Hydrology Present? Yes <u> x </u> No _____
Water Table Present? Yes _____ No _____ Depth (inches): _____	
Saturation Present? Yes _____ No _____ Depth (inches): _____	
(includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SCE 1303 CWA826 City/County: Corona, Riverside County Sampling Date 6/3/15
 Applicant/Owner: Southern California Edison State CA Sampling Point: 2
 Investigators: C. Bauer and S. Barrera Section, Township, Range: Land Grant: El Sobrante De San Jacinto
 Landform (hillslope, terrace, etc.): Rip rap channel Local relief (concave, convex, none): none Slope (%): -2%
 Subregion (LRR): C- California Lat: 450856.541 Long: 3747034.131 Datum: UTM 11 S
 Soil Map Unit Name: Arbuckle gravelly loam, 2-8% slopes NWI classification: _____
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation _____ Soil _____ or Hydrology x significantly disturbed? Are "Normal Circumstances" present? Yes x No _____
 Are Vegetation _____ Soil _____ or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic vegetation present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric soil present? Yes <u>X</u> No _____	
Wetland Hydrology present? Yes <u>X</u> No _____	

Remarks:
 Grouted rip-rap with ~4" sediment. Dense roots, exposed root zone. No water in channel ~40' east of sample pit (SP). Drainage 1C

Despite the presence of all three USACE wetland indicators in some portions of Drainage Feature 1C, the portion of the study area that falls within Drainage 1C is a constructed channel with an impermeable substrate (grouted rip rap). The minimal layer of sediment may support some hydrophytic vegetation on a temporal basis, but is subject to scour and would not necessarily provide any substrate for hydrophytic vegetation when not covered with a thin layer of sediment.

VEGETATION – Use scientific names of plants

<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Tree Stratum (Plot size: 10')</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr> <td>1. Red willow (<i>Salix laevigata</i>)</td> <td style="text-align: center;">75%</td> <td style="text-align: center;">Y</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>2. Goodings willow (<i>Salix gooddingii</i>)</td> <td style="text-align: center;">20%</td> <td style="text-align: center;">N</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>3.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4.</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="4" style="text-align: right;">Total Cover: <u>95%</u></td> </tr> <tr> <th style="text-align: left;">Sapling/Shrub Stratum (Plot size: 10')</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr> <td>1. Mexican fan palm (<i>Washingtonia robusta</i>)</td> <td style="text-align: center;">5%</td> <td style="text-align: center;">Y</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>2.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3.</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="4" style="text-align: right;">Total Cover: <u>5%</u></td> </tr> <tr> <th style="text-align: left;">Herb Stratum (Plot size: 10')</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr> <td>1. Bulrush (<i>Scirpus maritimus</i>)</td> <td style="text-align: center;">5%</td> <td style="text-align: center;">Y</td> <td style="text-align: center;">OBL</td> </tr> <tr> <td>2. Cattail (<i>Typha</i> sp.)</td> <td style="text-align: center;">2%</td> <td style="text-align: center;">N</td> <td style="text-align: center;">OBL</td> </tr> <tr> <td>3.</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="4" style="text-align: right;">Total Cover: <u>7%</u></td> </tr> <tr> <th style="text-align: left;">Woody Vine Stratum</th> <td></td> <td></td> <td></td> </tr> <tr> <td>1.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2.</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="4" style="text-align: right;">Total Cover: _____</td> </tr> <tr> <td colspan="2">% Bare Ground in Herb Stratum: _____</td> <td colspan="2">% Cover of Biotic Crust: _____</td> </tr> </table>	Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status	1. Red willow (<i>Salix laevigata</i>)	75%	Y	FACW	2. Goodings willow (<i>Salix gooddingii</i>)	20%	N	FACW	3.				4.				Total Cover: <u>95%</u>				Sapling/Shrub Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status	1. Mexican fan palm (<i>Washingtonia robusta</i>)	5%	Y	FACW	2.				3.				Total Cover: <u>5%</u>				Herb Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status	1. Bulrush (<i>Scirpus maritimus</i>)	5%	Y	OBL	2. Cattail (<i>Typha</i> sp.)	2%	N	OBL	3.				Total Cover: <u>7%</u>				Woody Vine Stratum				1.				2.				Total Cover: _____				% Bare Ground in Herb Stratum: _____		% Cover of Biotic Crust: _____		<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>3</u> (B)</p> <p>Percentage of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)</p> <p>Prevalence index worksheet</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species <u>7</u></td> <td>× 1 = <u>7</u></td> </tr> <tr> <td>FACW species <u>100</u></td> <td>× 2 = <u>200</u></td> </tr> <tr> <td>FAC species _____</td> <td>× 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>× 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>× 5 = _____</td> </tr> <tr> <td>Column Totals: <u>107</u> (A)</td> <td><u>207</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>0.52</u></td> </tr> </table> <p>Hydrophytic Vegetation Indicators:</p> <p><u>X</u> Dominance Test is > 50%</p> <p><u>X</u> Prevalence Test is ≤ 3.0¹</p> <p>____ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p>____ Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p> <p>Hydrophytic Vegetation Present? Yes <u>X</u> No _____</p>	Total % Cover of:	Multiply by:	OBL species <u>7</u>	× 1 = <u>7</u>	FACW species <u>100</u>	× 2 = <u>200</u>	FAC species _____	× 3 = _____	FACU species _____	× 4 = _____	UPL species _____	× 5 = _____	Column Totals: <u>107</u> (A)	<u>207</u> (B)	Prevalence Index = B/A = <u>0.52</u>	
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Remarks:																																																																																																					

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SCE1303 CWA 826 City/County: Corona/ Riverside Co. Sampling Date 6/18/15
 Applicant/Owner: Southern California Edison State CA Sampling Point: 3
 Investigators: S. Barrera and C. Bauer Section, Township, Range: 10, T3S, R7W
 Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): ~3%
 Subregion (LRR): C- California Lat: 443513.2 Long: 3755029.7 Datum: UTM 11 N
 Soil Map Unit Name: Dello loamy fine sand, gravelly substratum, 0-2% slopes NWI classification: Riverine
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic vegetation present?	Yes <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No <u> </u>
Hydric soil present?	Yes <u>X</u>	No <u> </u>			
Wetland Hydrology present?	Yes <u>X</u>	No <u> </u>			

Remarks:
 Wetland vegetation and hydrology indicators were present at this location as they were during the 2012 Bonterra JD; however, the difference in soil matrix color analysis between LSA's sample pit and Bonterra's sample pit were not discernable enough to refute Bonterra's determination of wetlands at this site. It is LSA's opinion that this area should remain classified as potentially jurisdictional wetland waters of the US.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 15')	Absolute % Cover	Dominant Species?	Indicator Status				
1. Arroyo Willow (<i>Salix lasiolepis</i>)	5%	Y	FACW	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percentage of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)			
2.							
3.							
4.							
Total Cover: <u>5%</u>				Prevalence index worksheet Total % Cover of: _____ Multiply by: _____ OBL species _____ × 1 = _____ FACW species <u>9</u> × 2 = <u>18</u> FAC species <u>70</u> × 3 = <u>210</u> FACU species <u>2</u> × 4 = <u>8</u> UPL species _____ × 5 = _____ Column Totals: <u>81</u> (A) <u>236</u> (B) Prevalence Index = B/A = <u>2.9%</u>			
Sapling/Shrub Stratum (Plot size: 15')						Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is > 50% <input checked="" type="checkbox"/> Prevalence Test is ≤ 3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
1. mule fat (<i>Baccharis salicifolia</i>)	60%	Y	FAC				
2.							
3.							
4.							
Total Cover: <u>60%</u>				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>			
Herb Stratum (Plot size: 15')							
1. Salt Heliotrope (<i>Heliotropium curassavicum</i>)	2%	N	FACU				
2. Spiny rush (<i>juncus acutus</i>)	4%	N	FACW				
3. Broadleaved pepperweed (<i>Lepidium latifolium</i>)	10%	Y	FAC				
Total Cover: <u>16%</u>				Remarks: 			
Woody Vine Stratum							
1.							
2.							
Total Cover: _____							
% Bare Ground in Herb Stratum: <u>84</u> %		% Cover of Biotic Crust _____					

Remarks:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-5	2.5Y 4/2	99					Loamy sand	1% organic debris
5-12	2.5Y 2.5/1	100					Loamy sand	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils:³
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

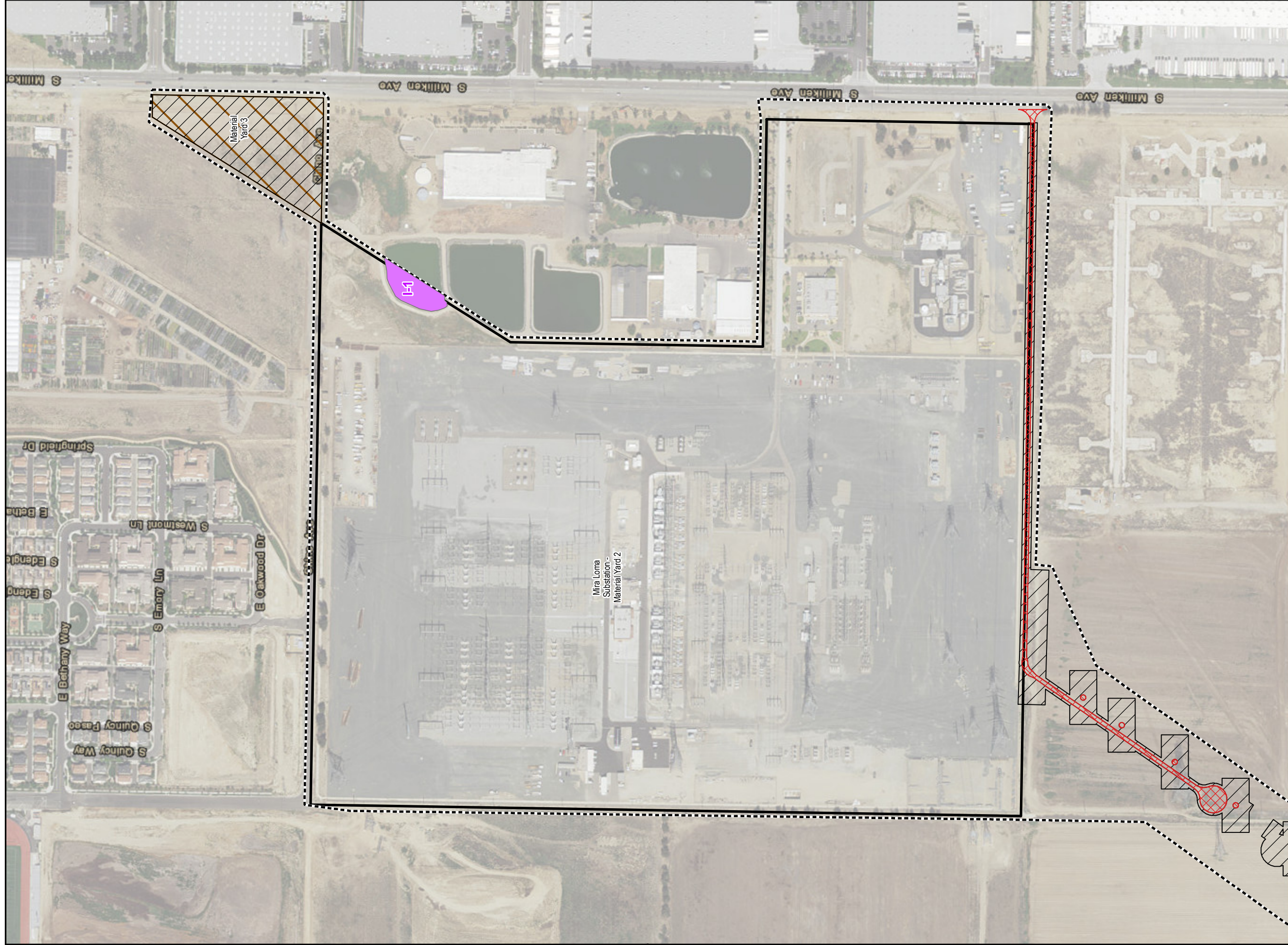
Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <u> X* </u> No _____
---	--

Remarks:
Soil profile could have arguably been evaluated to be in accordance with Bonterra's 2012 findings (10Y 4/1).

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (2 or more required)</u>
<u>Primary Indicators (any one indicator is sufficient)</u>		<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input checked="" type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquatard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <u> X </u> No _____	
Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____		
Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____		
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

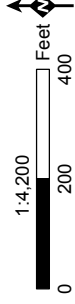
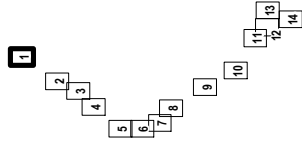
ATTACHMENT 4.4-F: JURISDICTIONAL RESOURCES MAP



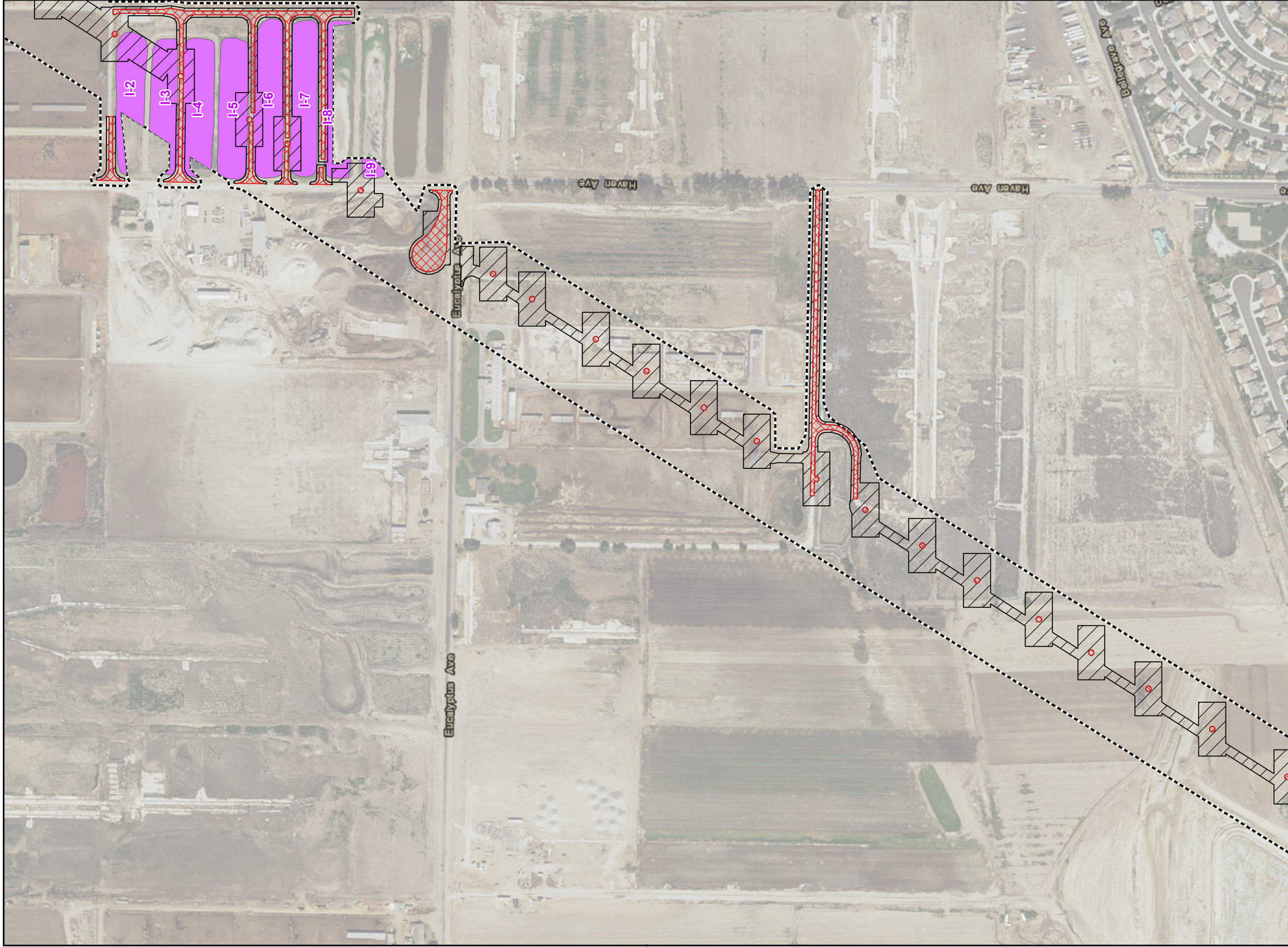
Attachment 4.4-F: Jurisdictional Resources Map 1 of 14

Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project

- Permanent Impact
- Temporary Impact
- Substation
- Survey Area
- Material Yard
- CDFW-Jurisdictional Waters
- Waters of the U.S./State
- Wetland
- Other Waters of the U.S.
- Waters of the State
- Isolated Waters of the State (Impoundment)



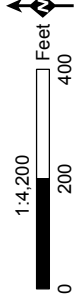
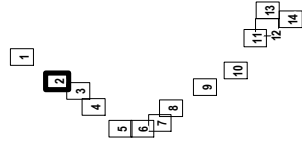
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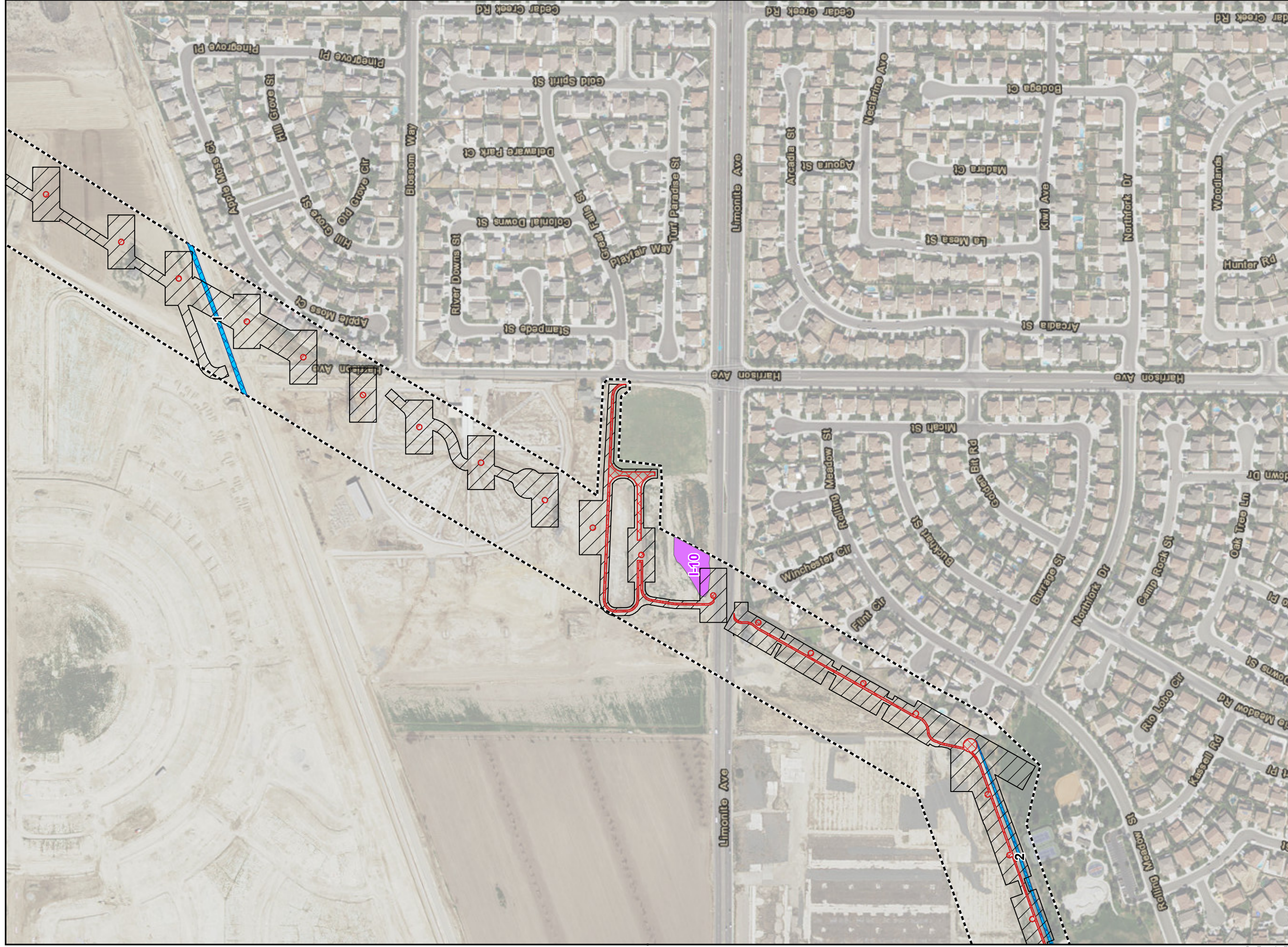


Attachment 4.4-F: Jurisdictional Resources Map 2 of 14

Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project

- | | | | |
|--|------------------|--|--|
| | Permanent Impact | | CDFW-Jurisdictional Waters |
| | Temporary Impact | | Waters of the U.S./State |
| | Substation | | Wetland |
| | Survey Area | | Other Waters of the U.S. |
| | Material Yard | | Waters of the State |
| | | | Isolated Waters of the State (Impoundment) |



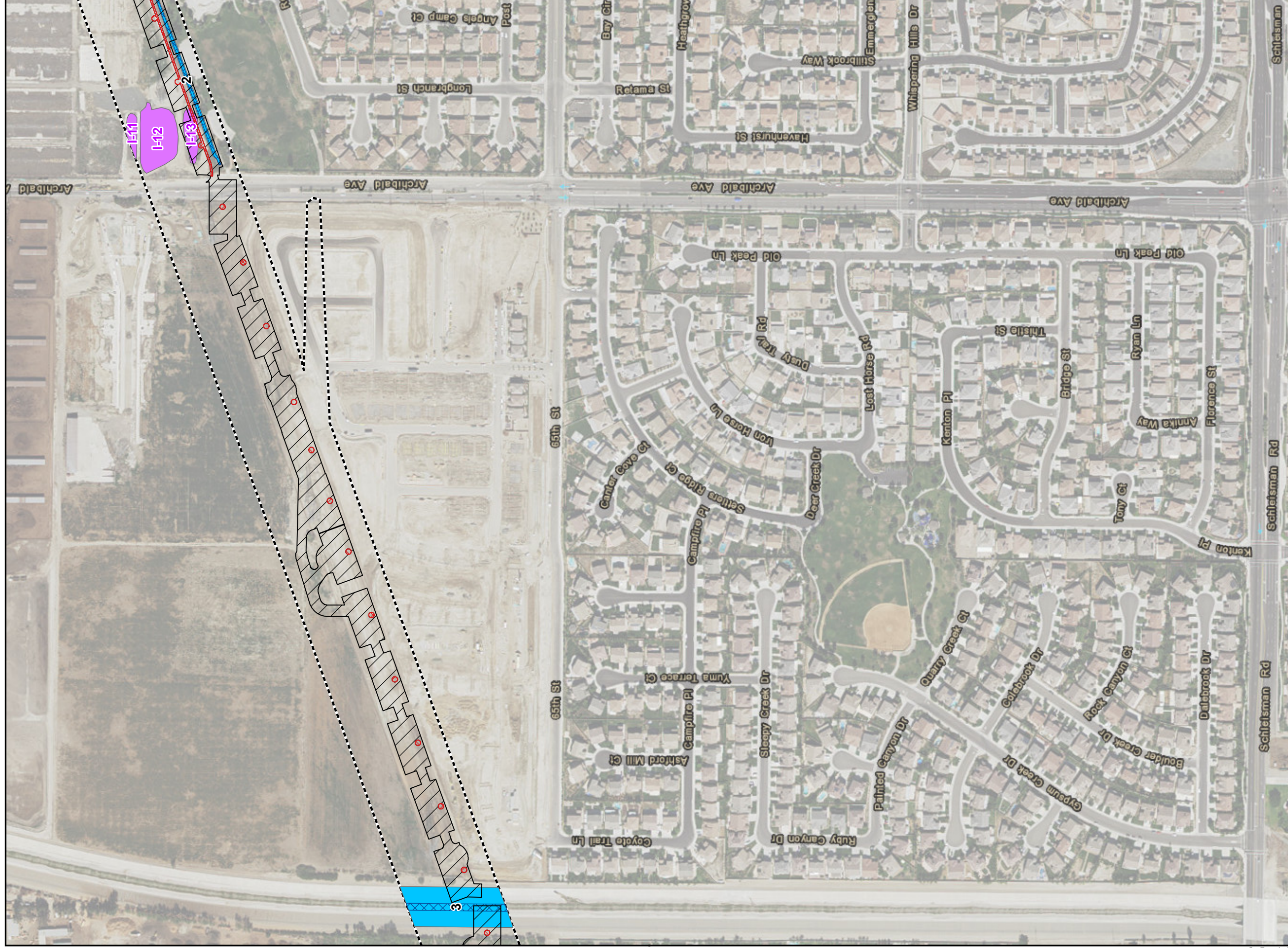


Attachment 4.4-F: Jurisdictional Resources Map 3 of 14

Circle City Substation and Mira Loma-Jefferson
Subtransmission Line Project

- Permanent Impact
- Temporary Impact
- Substation
- Survey Area
- Material Yard
- CDFW-Jurisdictional Waters
- Waters of the U.S./State
- Wetland
- Other Waters of the U.S.
- Waters of the State
- Isolated Waters of the State (Impoundment)



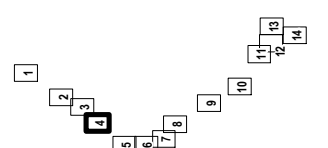
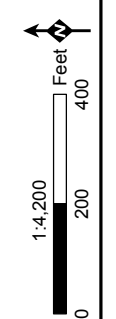


**Circle City Substation and Mira Loma-Jefferson
Subtransmission Line Project**

Attachment 4.4-F: Jurisdictional Resources Map 4 of 14

- Permanent Impact
- Temporary Impact
- Substation
- Survey Area
- Material Yard
- CDFW-Jurisdictional Waters
- Waters of the U.S./State
- Waters of the State
- Isolated Waters of the State (Impoundment)
- Wetland
- Other Waters of the U.S.

SOUTHERN CALIFORNIA EDISON
 AN EDISON INTERNATIONAL COMPANY
 INSIGNIA ENVIRONMENTAL



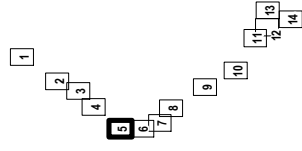
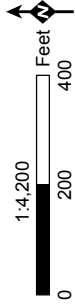
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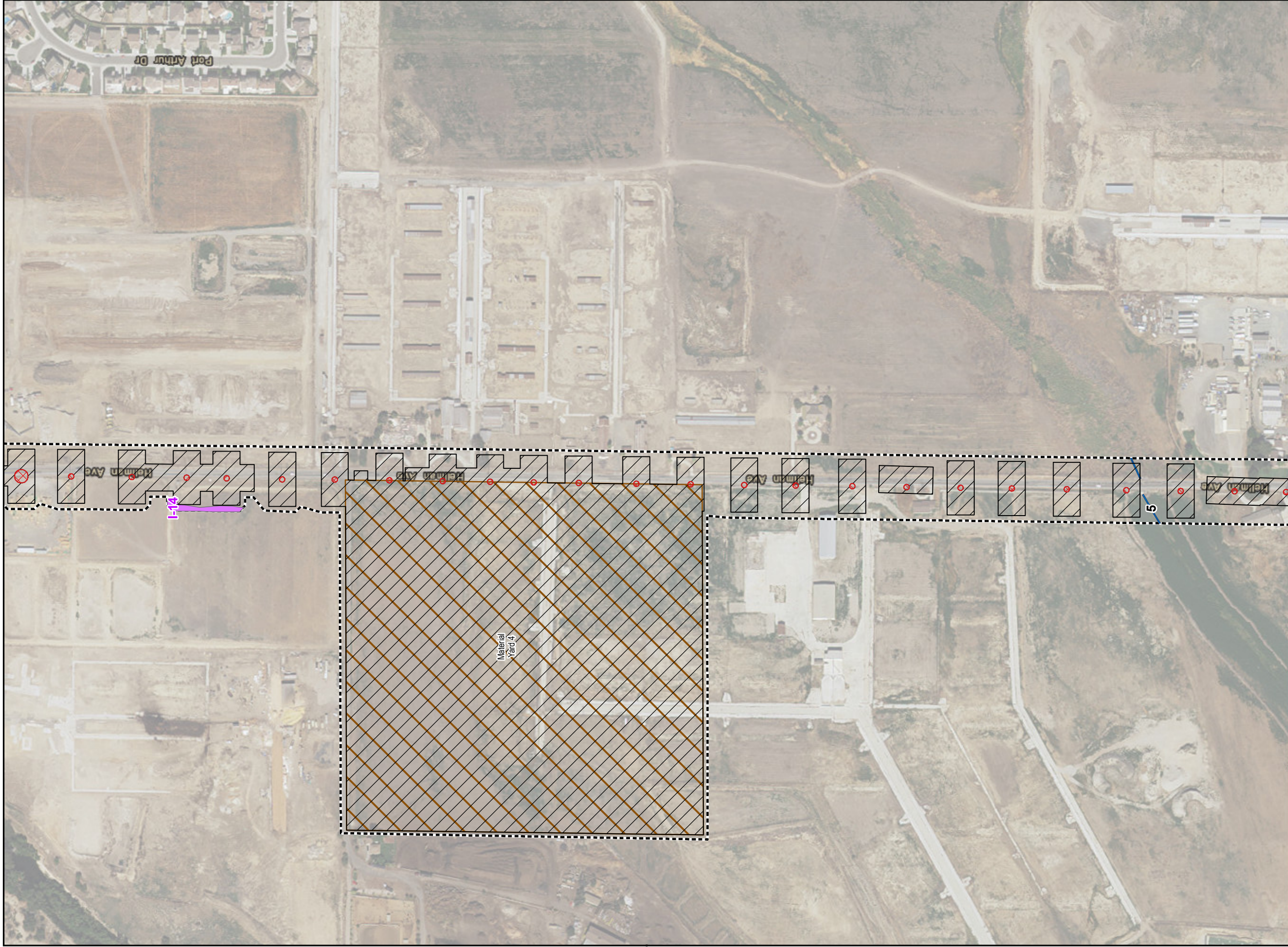


Attachment 4.4-F: Jurisdictional Resources Map 5 of 14

Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project

- Permanent Impact
- Temporary Impact
- Substation
- Survey Area
- Material Yard
- CDFW-Jurisdictional Waters
- Waters of the U.S./State
- Wetland
- Other Waters of the U.S.
- Waters of the State
- Isolated Waters of the State (Impoundment)

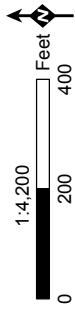
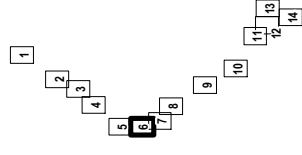




Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project

Attachment 4.4-F: Jurisdictional Resources Map 6 of 14

- Permanent Impact
- Temporary Impact
- Substation
- Survey Area
- Material Yard
- CDFW-Jurisdictional Waters
- Waters of the U.S./State
- Wetland
- Other Waters of the U.S.
- Waters of the State
- Isolated Waters of the State (Impoundment)

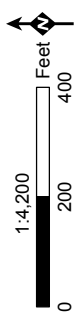
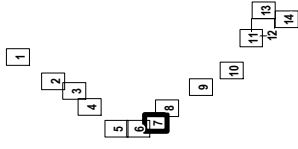


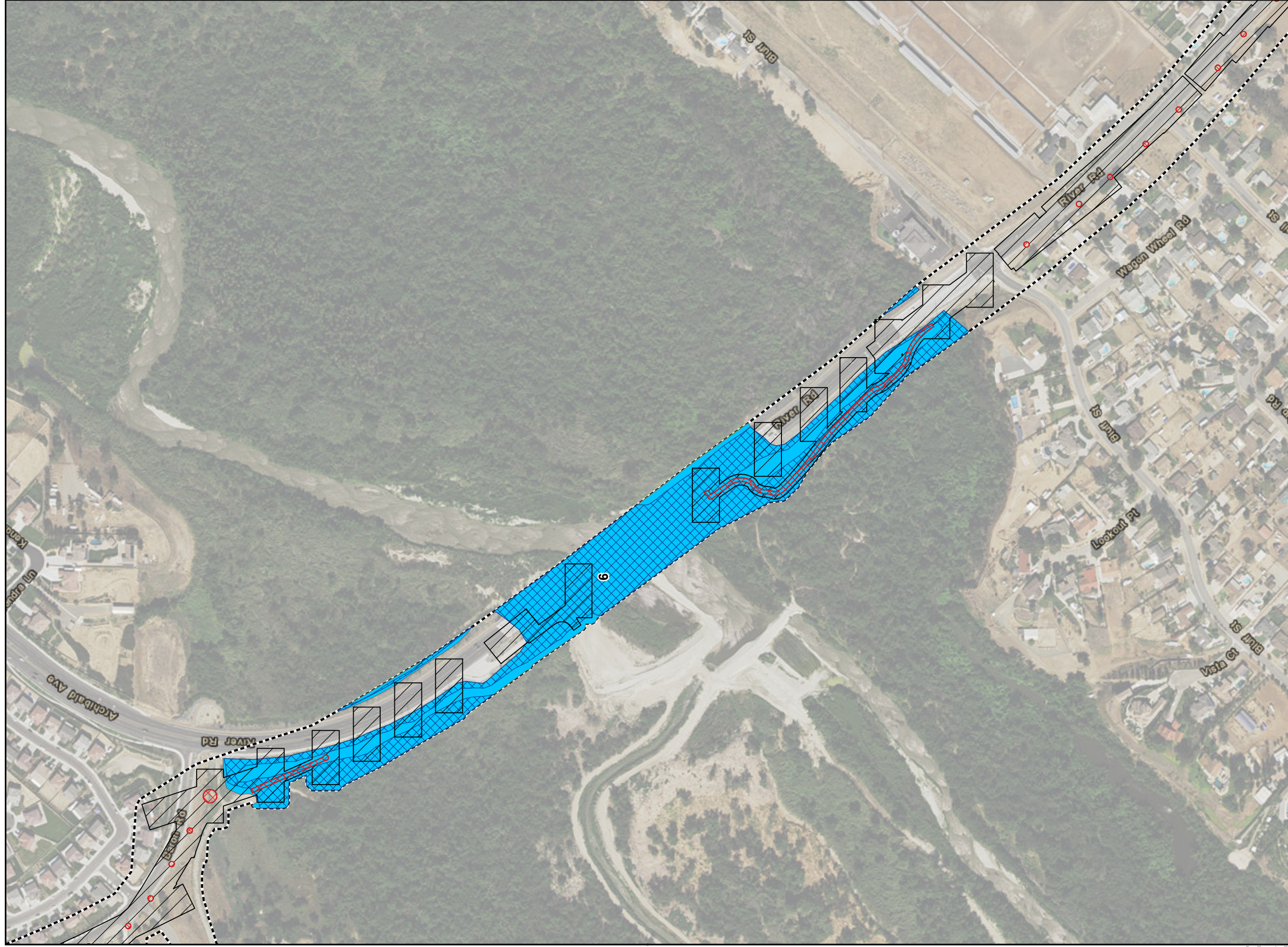


Attachment 4.4-F: Jurisdictional Resources Map 7 of 14

Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project

- | | | | |
|--|------------------|--|--|
| | Permanent Impact | | CDFW-Jurisdictional Waters |
| | Temporary Impact | | Waters of the U.S./State |
| | Substation | | Wetland |
| | Survey Area | | Other Waters of the U.S. |
| | Material Yard | | Waters of the State |
| | | | Isolated Waters of the State (Impoundment) |

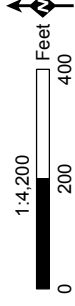
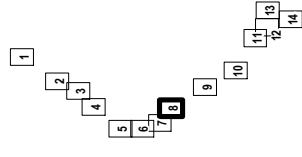


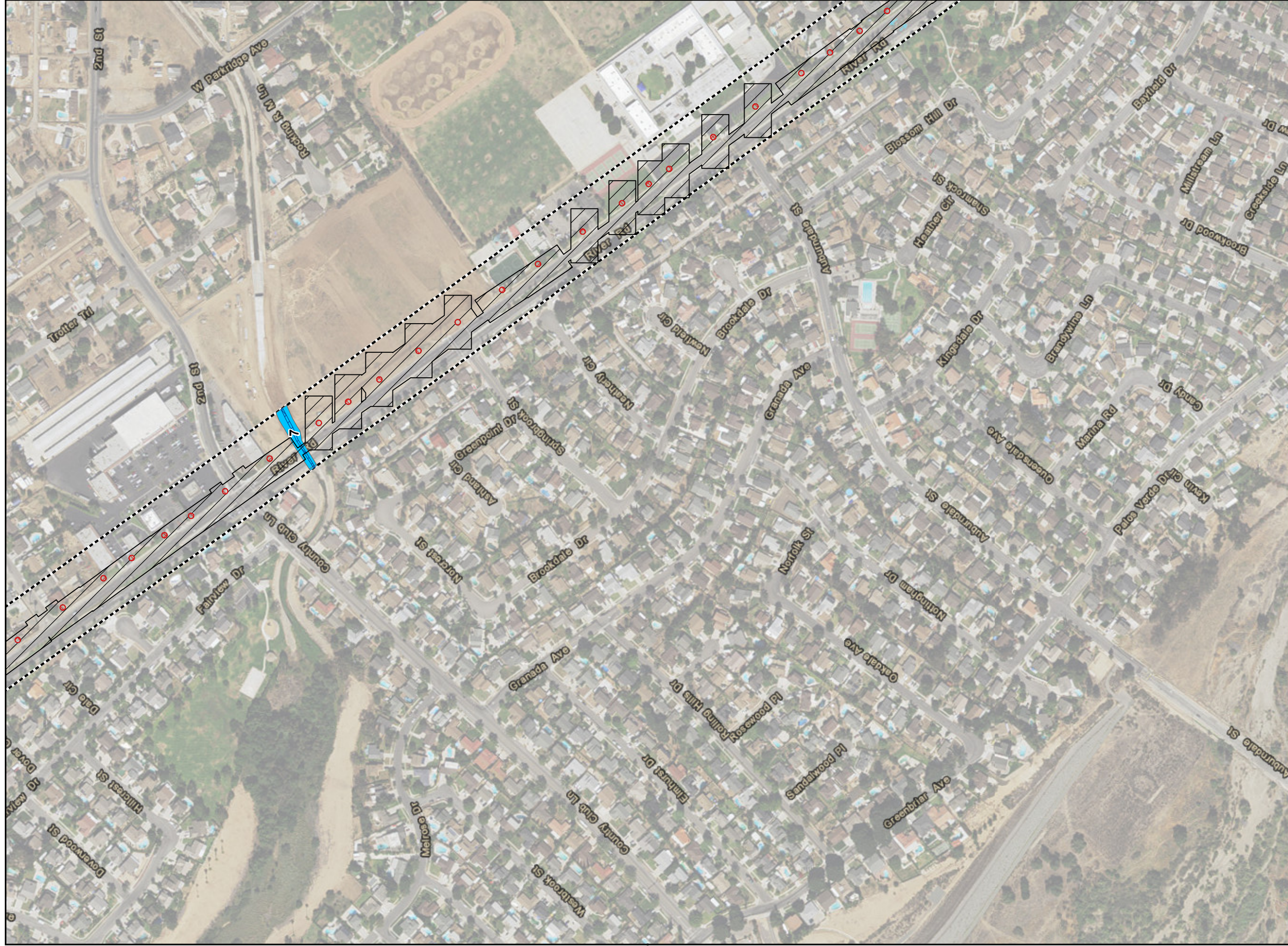


Attachment 4.4-F: Jurisdictional Resources Map 8 of 14

Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project

- Permanent Impact
- CDFW-Jurisdictional Waters
- Waters of the U.S./State
- Temporary Impact
- Wetland
- Other Waters of the U.S.
- Substation
- Waters of the State
- Survey Area
- Isolated Waters of the State (Impoundment)
- Material Yard

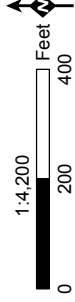
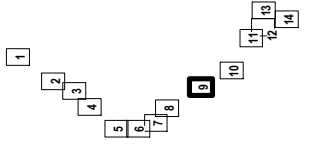




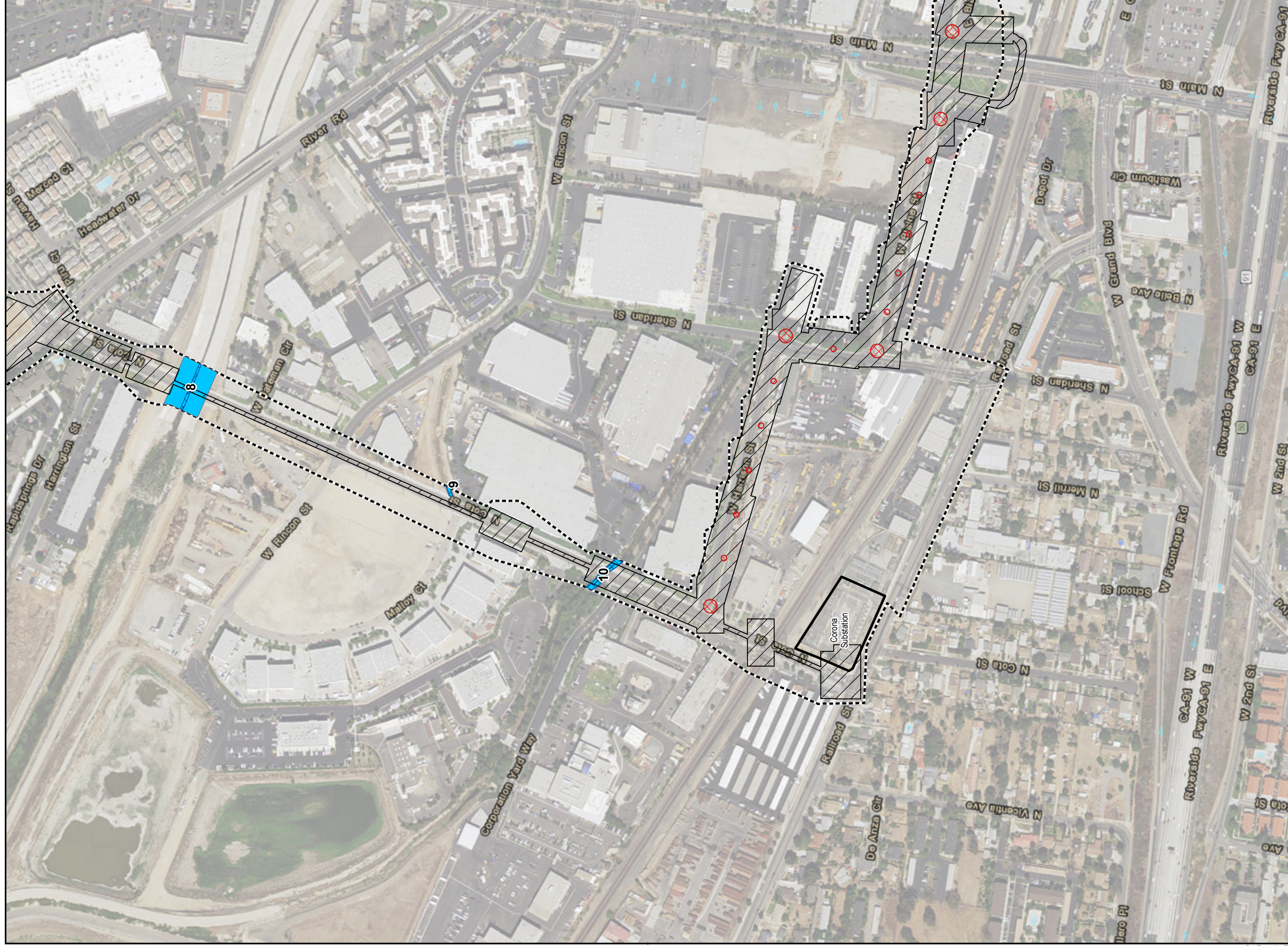
Attachment 4.4-F: Jurisdictional Resources Map 9 of 14

Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project

- Permanent Impact
- Temporary Impact
- Substation
- Survey Area
- Material Yard
- CDFW-Jurisdictional Waters
- Waters of the U.S./State
 - Wetland
 - Other Waters of the U.S.
- Waters of the State
 - Isolated Waters of the State (Impoundment)



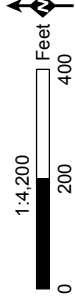
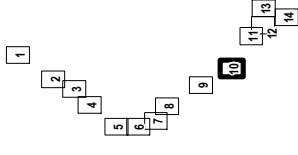
Sources: Insignia, 2015; SCE, 2015

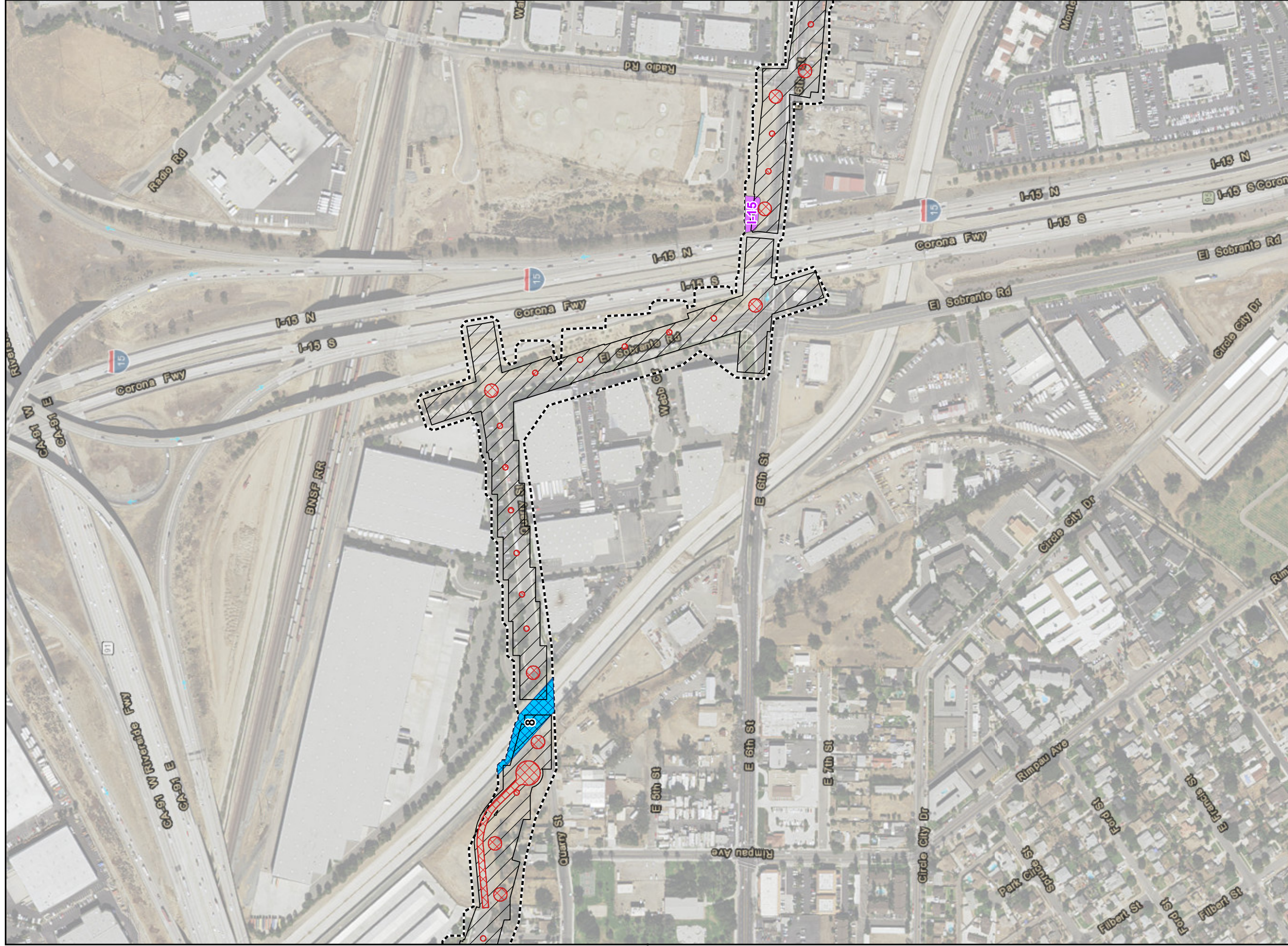


Attachment 4.4-F: Jurisdictional Resources Map 10 of 14

Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project

- Permanent Impact
- Temporary Impact
- Substation
- Survey Area
- Material Yard
- CDFW-Jurisdictional Waters
- Waters of the U.S./State
- Wetland
- Other Waters of the U.S.
- Waters of the State
- Isolated Waters of the State (Impoundment)





Attachment 4.4-F: Jurisdictional Resources Map 11 of 14

Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project

- Permanent Impact
- Temporary Impact
- Substation
- Survey Area
- Material Yard
- CDFW-Jurisdictional Waters
- Waters of the U.S./State
- Wetland
- Other Waters of the U.S.
- Waters of the State
- Isolated Waters of the State (Impoundment)

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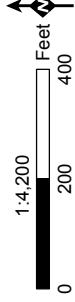
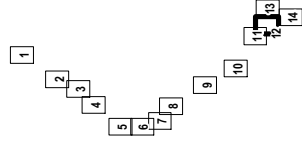
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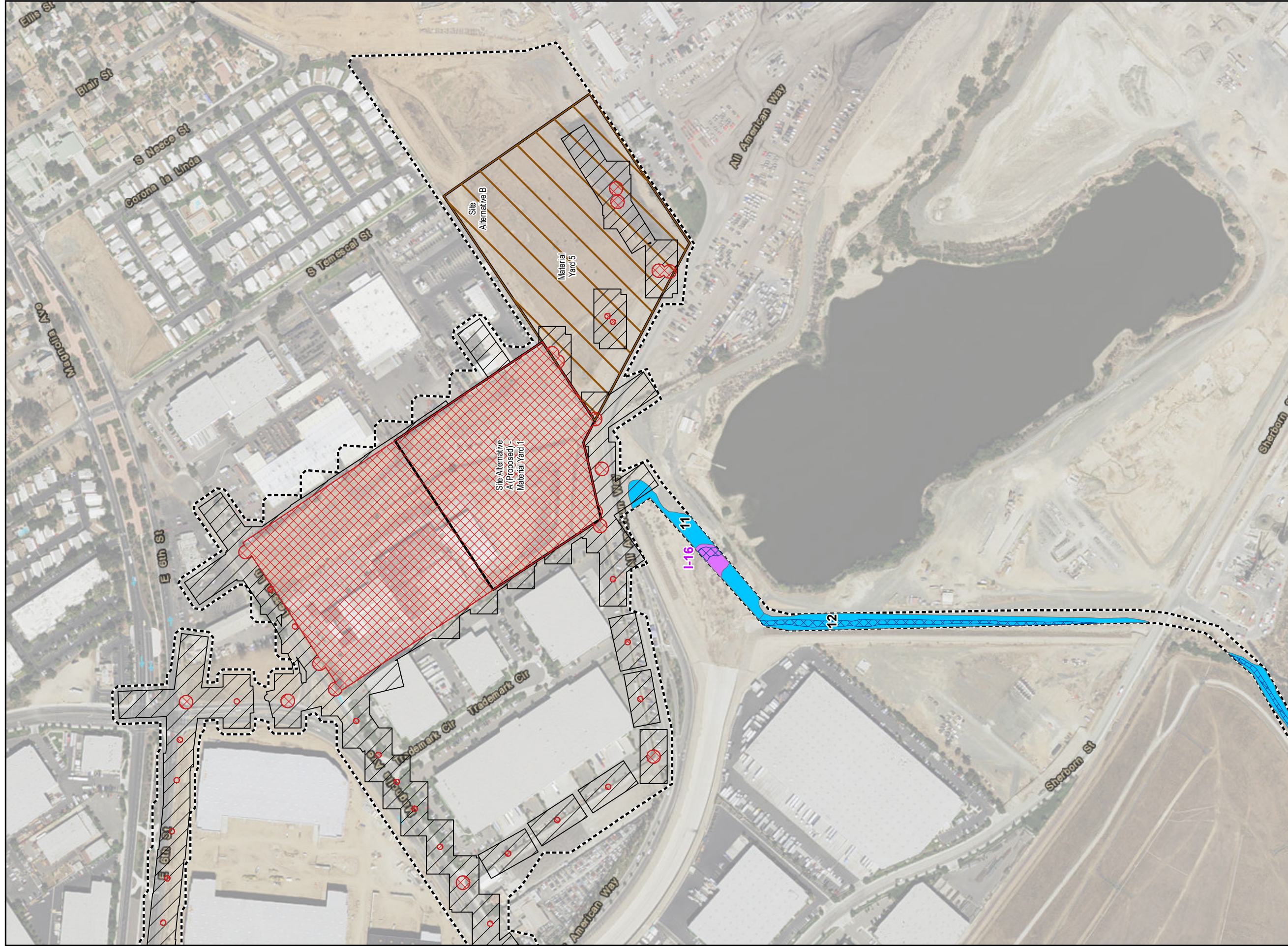


Attachment 4.4-F: Jurisdictional Resources Map 12 of 14

Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project












- | | | | |
|--|------------------|--|--|
| | Permanent Impact | | CDFW-Jurisdictional Waters |
| | Temporary Impact | | Waters of the U.S./State |
| | Substation | | Wetland |
| | Survey Area | | Other Waters of the U.S. |
| | Material Yard | | Waters of the State |
| | | | Isolated Waters of the State (Impoundment) |

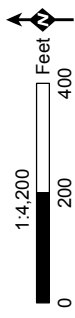
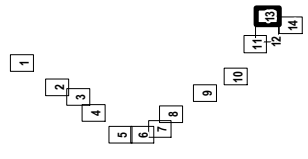




Attachment 4.4-F: Jurisdictional Resources Map 13 of 14

Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project

-  Permanent Impact
-  Temporary Impact
-  Substation
-  Survey Area
-  Material Yard
-  CDFW-Jurisdictional Waters
-  Waters of the U.S./State
-  Wetland
-  Other Waters of the U.S.
-  Waters of the State
-  Isolated Waters of the State (Impoundment)

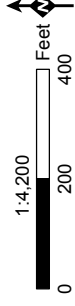
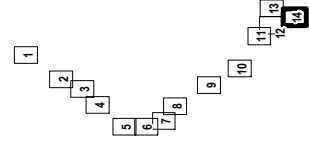


Sources: Insignia, 2015; SCE, 2015



Attachment 4.4-F: Jurisdictional Resources Map 14 of 14
Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project

- Permanent Impact
- Temporary Impact
- Substation
- Survey Area
- Material Yard
- CDFW-Jurisdictional Waters
- Waters of the U.S./State
- Wetland
- Other Waters of the U.S.
- Waters of the State
- Isolated Waters of the State (Impoundment)



**ATTACHMENT 4.4-G: SPECIAL-STATUS PLANT SPECIES POTENTIALLY
OCCURRING IN THE PROPOSED PROJECT VICINITY**

ATTACHMENT 4.4-G: SPECIAL-STATUS PLANT SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT VICINITY

Species	Status ¹		MSHCP Coverage	Habitat	Potential to Occur	Survey Results
	USFWS	CDFW				
Chaparral sand-verbena (<i>Abronia villosa</i> var. <i>aurita</i>)	--	--	Not Covered	Sandy places in coastal sage scrub and chaparral, alluvial washes, and river benches; between sea level and 5,250 feet above mean sea level (amsl)	Low potential to occur along the alternative source line route	Not observed during focused surveys
Munz's onion (<i>Allium munzii</i>)	FE	ST	Covered ^a	Grassy openings in coastal sage scrub; heavy clay soils; 985 to 2,950 feet amsl	Low potential to occur along the alternative source line route	Not observed during focused surveys
San Diego ambrosia (<i>Ambrosia pumila</i>)	FE	--	Covered ^b	Low, seasonally wet areas with alkaline soils and disturbed sites; 165 to 1,970 feet amsl	Moderate potential to occur throughout the study area	Not observed during focused surveys

-- = Not Applicable

¹ Explanation of state and federal listing codes:

United States Fish and Wildlife Service (USFWS) listing codes:
 California Department of Fish and Wildlife (CDFW) listing codes:

-FE: Federally Endangered Species

-FT: Federally Threatened Species

-FC: Federal Candidate Species

-CE: State-listed as Endangered

California Rare Plant Rank (CRPR) listing codes:

-1B.1: Rare, threatened or endangered in California and elsewhere; seriously threatened in California

-1B.2: Rare, threatened or endangered in California and elsewhere; fairly threatened in California

-2.1: Rare, threatened or endangered in California, but more common elsewhere; seriously threatened in California

-2.2: Rare, threatened, or endangered in California only; fairly threatened in California

-2.3: Rare, threatened, or endangered in California only; not very threatened in California

-4.2: Uncommon in California; fairly threatened in California

ATTACHMENT 4.4-G: SPECIAL-STATUS PLANT SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT VICINITY

Species	Status ¹			MSHCP Coverage	Habitat	Potential to Occur	Survey Results
	USFWS	CDFW	CRPR				
Marsh sandwort (<i>Arenaria paludicola</i>)	FE	SE	1B.1	Not Covered	Wet meadows and marshes; between sea level and 985 feet amsl	Moderate potential to occur along the alternative source line route and the proposed and alternative Mira Loma-Jefferson 66 Kilovolt (kV) Subtransmission Line routes	Not observed during focused surveys
Coulter's saltbush (<i>Atriplex coulteri</i>)	--	--	1B.2	Not Covered	Alkaline soils or clay barrens in open areas of perennial grasslands, coastal sage scrub, and coastal bluff scrub; between sea level and 1,640 feet amsl	Low potential to occur along the alternative source line route	Not observed during focused surveys
Round-leaved filaree (<i>California macrophylla</i>)	--	--	1B.1	Covered ^c	Clay soils; open sites in grasslands and scrublands; between sea level and 3,940 feet amsl	Not expected to occur	Not observed during focused surveys
Lucky morning glory (<i>Calystegia felix</i>)	--	--	3.1	Not Covered	Wetland and marshy habitats, as well as drier habitats; alkaline meadows and seeps; alluvial riparian scrub; between 100 and 800 feet amsl	Low potential to occur throughout the study area	Not observed during focused surveys
Plummer's mariposa lily (<i>Calochortus plummerae</i>)	--	--	1B.2	Covered ^d	Coastal sage scrub; dry, rocky chaparral; yellow-pine forest; between sea level and 5,580 feet amsl	Low potential to occur along the alternative source line route	Not observed during focused surveys
Intermediate mariposa lily (<i>Calochortus weedii</i> var. <i>intermedius</i>)	--	--	1B.2	Covered ^d	Dry, rocky, open slopes of coastal sage scrub and chaparral; between sea level and 2,230 feet amsl	Low potential to occur along the alternative source line route	Not observed during focused surveys

ATTACHMENT 4.4-G: SPECIAL-STATUS PLANT SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT VICINITY

Species	Status ¹			MSHCP Coverage	Habitat	Potential to Occur	Survey Results
	USFWS	CDFW	CRPR				
Payson's jewel-flower (<i>Caulanthus simulans</i>)	--	--	4.2	Covered ^d	Chaparral, scrub, pinyon/juniper woodland; 1,310 to 7,220 feet amsl	Not expected to occur	Not observed during focused surveys
Smooth tarplant (<i>Centromadia pungens</i> ssp. <i>laevis</i>)	--	--	1B.1	Covered ^e	Disturbed sites; grasslands; open, poorly drained flats, depressions, and waterways; 295 to 1,640 feet amsl	Moderate potential to occur throughout the study area	Not observed during focused surveys
Salt marsh bird's-beak (<i>Chloropyron maritimum</i> ssp. <i>maritimum</i> [<i>Cordylanthus maritimus</i> ssp. <i>Maritimus</i>])	FE	SE	1B.2	Not Covered	Coastal salt marsh; between sea level and 33 feet amsl	Not expected to occur	Not observed during focused surveys
Parry's spineflower (<i>Chorizanthe parryi</i> var. <i>parryi</i>)	--	--	1B.1	Covered ^d	Open, sandy sites often on gravelly slopes; 295 to 2,625 feet amsl	Low potential to occur along the alternative source line route	Not observed during focused surveys
Long-spined spineflower (<i>Chorizanthe polygonoides</i> var. <i>longispina</i>)	--	--	1B.2	Covered ^d	Clay soils, especially derived from Gabbro; 100 to 4,920 feet amsl	Low potential to occur along the alternative source line route	Not observed during focused surveys
White-bracted spineflower (<i>Chorizanthe xanti</i> var. <i>leucotheca</i>)	--	--	1B.2	Not Covered	Sandy or gravelly soils; 1,315 to 4,265 feet amsl	Not expected to occur	Not observed during focused surveys

ATTACHMENT 4.4-G: SPECIAL-STATUS PLANT SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT VICINITY

Species	Status ¹			MSHCP Coverage	Habitat	Potential to Occur	Survey Results
	USFWS	CDFW	CRPR				
California saw-grass (<i>Cladium californicum</i>)	--	--	2.2	Not Covered	Alkaline marshes and swamps; between sea level and 7,055 feet amsl	Moderate potential to occur along the alternative source line route and the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	Not observed during focused surveys
Slender-horned spineflower (<i>Dodecahema leptoceras</i>)	FE	SE	1B.1	Covered ^a	Sandy or gravelly areas; 655 to 2,295 feet amsl	Moderate potential to occur along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	Not observed during focused surveys
Many-stemmed dudleya (<i>Dudleya multicaulis</i>)	--	--	1B.2	Covered ^a	Heavy, often clayey soils in coastal sage scrub and native grasslands on coastal plains and sandstone outcrops; between sea level and 1,970 feet amsl	Low potential to occur along the alternative source line route	Not observed during focused surveys
Santa Ana River woollystar (<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>)	FE	SE	1B.1	Covered ^d	Washes, floodplains, and dry river beds; between sea level and 1,640 feet amsl	Moderate potential to occur along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	Not observed during focused surveys
Palmer's grapplinghook (<i>Harpagonella palmeri</i>)	--	--	4.2	Covered ^d	Dry, semi-barren sites in chaparral, coastal sage scrub, and grasslands; between sea level and 3,280 feet amsl	Low potential to occur along the alternative source line route	Not observed during focused surveys
Tecate cypress (<i>Hesperocyparis (Callitropsis) forbesii</i>)	--	--	1B.1	Not Covered	Chaparral; 1,475 to 4,920 feet amsl	Not expected to occur	Not observed during focused surveys

ATTACHMENT 4.4-G: SPECIAL-STATUS PLANT SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT VICINITY

Species	Status ¹			MSHCP Coverage	Habitat	Potential to Occur	Survey Results
	USFWS	CDFW	CRPR				
Mesa horkelia (<i>Horkelia cuneata</i> ssp. <i>puberula</i>)	--	--	1B.1	Not Covered	Dry, sandy coastal chaparral and openings in oak woodlands; 230 to 2,855 feet amsl	Not expected to occur	Not observed during focused surveys
Coulter's goldfields (<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>)	--	--	1B.1	Covered ^c	Seasonally flooded vernal alkali plains, wetlands, and vernal pools; between sea level and 3,280 feet amsl	Not expected to occur	Not observed during focused surveys
Heart-leaved pitcher sage (<i>Lepechinia cardiophylla</i>)	--	--	1B.2	Covered ^c	Chaparral ridgelines; 1,970 to 3,940 feet amsl	Not expected to occur	Not observed during focused surveys
Robinson's pepper-grass (<i>Lepidium virginicum</i> var. <i>robinsonii</i>)	--	--	1B.2	Not Covered	Dry sandy or thin soils in coastal sage scrub and chaparral; between sea level and 1,640 feet amsl	Low potential to occur along the alternative source line routes	Not observed during focused surveys
Parish's desert-thorn (<i>Lycium parishii</i>)	--	--	2.3	Not Covered	Sandy to rocky slopes and canyons; between sea level and 3,280 feet amsl	Not expected to occur	Not observed during focused surveys
Pringle's monardella (<i>Monardella pringlei</i>)	--	--	1A	Not Covered	Interior sand dunes and sandy soils; 985 to 1,315 feet amsl	Not expected to occur	Not observed during focused surveys
California muhly (<i>Muhlenbergia californica</i>)	--	--	4.3	Covered ^d	Streambanks and canyons; 330 to 6,560 feet amsl	Moderate potential to occur along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	Not observed during focused surveys

ATTACHMENT 4.4-G: SPECIAL-STATUS PLANT SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT VICINITY

Species	Status ¹			MSHCP Coverage	Habitat	Potential to Occur	Survey Results
	USFWS	CDFW	CRPR				
Prostrate vernal pool navarretia (<i>Navarretia prostrata</i>)	--	--	1B.1	Covered ^c	Alkaline floodplains and vernal pools; between sea level and 2,300 feet amsl	Not expected to occur	Not observed during focused surveys
Peninsular nolina (<i>Nolina cismontane</i>)	--	--	1B.2	Not Covered	Dry chaparral of coastal mountains; 655 to 4,265 feet amsl	Not expected to occur	Not observed during focused surveys
Santiago Peak phacelia (<i>Phacelia keckii</i>)	--	--	1B.3	Not Covered	Open chaparral; 3,280 to 5,250 feet amsl	Not expected to occur	Not observed during focused surveys
Brand's star phacelia (<i>Phacelia stellaris</i>)	FC	--	1B.1	Covered ^b	Open areas of coastal sage scrub; between sea level and 1,315 feet amsl	Low potential to occur along alternative source line route	Not observed during focused surveys
White rabbit-tobacco (<i>Pseudognaphalium leucocephalum</i>)	--	--	2.2	Not Covered	Sandy or gravelly benches, dry stream bottoms, and canyon bottoms; between sea level and 1,640 feet amsl	Moderate potential to occur along proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	Not observed during focused surveys
San Miguel savory (<i>Satureja chandleri</i>)	--	--	1B.2	Covered ^b	Rocky slopes in chaparral and oak woodlands; 1,705 to 2,265 feet amsl	Not expected to occur	Not observed during focused surveys
Chaparral ragwort (<i>Senecio aphanactis</i>)	--	--	2.2	Not Covered	Alkaline flats and dry, open rocky areas of coastal bluff scrub and coastal sage scrub; 30 to 1,805 feet amsl	Not expected to occur	Not observed during focused surveys

ATTACHMENT 4.4-G: SPECIAL-STATUS PLANT SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT VICINITY

Species	Status ¹			MSHCP Coverage	Habitat	Potential to Occur	Survey Results
	USFWS	CDFW	CRPR				
Salt spring checkerbloom (<i>Sidalcea neomexicana</i>)	--	--	2.2	Not Covered	Alkaline seeps, springs, and marshes; between sea level and 4,920 feet amsl	Moderate potential to occur along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	Not observed during focused surveys
San Bernardino aster (<i>Symphotrichum defoliatum</i>)	--	--	1B.2	Not Covered	Grasslands, seasonal or perennial wetlands, and disturbed places; between sea level and 6,725 feet amsl	Low potential to occur along alternative source line route	Not observed during focused surveys

Notes:

- ^aThese narrow endemic plant species are covered by the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), but the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (Proposed Project) is outside of the specific survey area for these particular species (Figure 6-1 of the MSHCP).
- ^bThese narrow endemic plant species are covered by the MSHCP and the Proposed Project is within the specific survey area for these particular species (Figure 6-1 of MSHCP). Mitigation is required in accordance with the procedures described within Section 6.1.3 of the MSHCP.
- ^cCriteria Area plant species are covered by the MSHCP, but the Proposed Project is outside of the Additional Survey Needs area for the particular species (Figure 6-2 of the MSHCP).
- ^dThese species are covered by the MSHCP, and no additional mitigation is required.

**ATTACHMENT 4.4-H: SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY
OCCURRING IN THE PROPOSED PROJECT VICINITY**

ATTACHMENT 4.4-H: SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT VICINITY

Species	Status ¹		MSHCP Coverage	Habitat	Potential to Occur	Survey Results
	USFWS	CDFW				
Invertebrates						
Vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	FT	--	Covered ^a	Ephemeral ponds	Moderate potential to occur along the proposed Mira Loma-Jefferson 66 Kilovolt (kV) Subtransmission Line Route and Alternative 3	Not observed during the 2014/2015 focused surveys
Riverside fairy shrimp (<i>Streptocephalus woottoni</i>)	FE	--	Covered ^a	Ephemeral ponds	Moderate potential to occur along the proposed Mira Loma-Jefferson 66 kV Subtransmission Line Route and Alternative 3	Not observed during the 2014/2015 focused surveys
Delhi Sands flower-loving fly (<i>Rhaphiomidas terminatus abdominalis</i>)	FE	--	Covered ^b	Delhi fine sand	Moderate potential to occur at the existing Mira Loma Substation and along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	Not observed during the 2010, 2011, 2012, 2013, or 2014 focused surveys

-- = Not Applicable

¹ Explanation of federal and state listing codes:

United States Fish and Wildlife Service (USFWS) listing codes:

- FE: Federally Endangered Species
- FT: Federally Threatened Species

California Department of Fish and Wildlife (CDFW) listing codes:

- CT: State-listed as Threatened
- CE: State-listed as Endangered
- CC: State Candidate Threatened
- FP: Fully Protected Species
- SSC: Species of Special Concern

ATTACHMENT 4.4-H: SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT VICINITY

Species	Status ¹		MSHCP Coverage	Habitat	Potential to Occur	Survey Results
	USFWS	CDFW				
Fish						
Arroyo chub (<i>Gila orcuttii</i>)	--	SSC	Covered ^c	Coastal freshwater streams and rivers with a steady current and emergent vegetation	Low potential to occur along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	Not Applicable (NA) ^d
Santa Ana speckled dace (<i>Rhinichthys osculus</i> ssp. 3)	--	SSC	Not Covered	Streams and rivers with rocky bottoms	Not expected to occur	NA ^d
Santa Ana sucker (<i>Catostomus santaanae</i>)	FT	SSC	Covered ^c	Perennial streams with coarse substrates	High potential to occur along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d
Amphibians						
Western spadefoot (<i>Spea (Scaphiopus) hammondi</i>)	--	SSC	Covered ^c	Streams, vernal pools, and temporary ponds	Moderate potential to occur along the alternative source line route and the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d
Arroyo toad (<i>Anaxyrus californicus</i> [<i>Bufo microscaphus californicus</i>])	FE	SSC	Covered ^c	Washes or intermittent streams with breeding pools and sandy shorelines	Not expected to occur	NA ^d
Northern leopard frog (native populations only) (<i>Lithobates [Rana] pipiens</i>)	--	SSC	Not Covered	Native to Modoc and Lassen counties	Not expected to occur as a native population	NA ^d

ATTACHMENT 4.4-H: SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT VICINITY

Species	Status ¹		MSHCP Coverage	Habitat	Potential to Occur	Survey Results
	USFWS	CDFW				
Coast Range newt (<i>Taricha torosa torosa</i>)	--	SSC	Covered	Occurs along the coast and coast mountain ranges from Monterey to south San Diego County in wet forests, oak forests, chaparral, and grasslands; breeds in ponds, reservoirs, and streams	Low potential to occur along the alternative source line route and the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d
Reptiles						
Western pond turtle (<i>Emys marmorata</i>)	--	SSC	Covered ^c	Ponds, lakes, marshes, rivers, streams, and ditches	Moderate potential to occur along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d
Coast horned lizard (<i>Phrynosoma blainvillii</i>)	--	SSC	Covered ^c	Scrubland, grassland, coniferous forest, and woodland with loose, friable soil	Low potential to occur along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d
Orangethroat whiptail (<i>Aspidoscelis hyperythra</i> [<i>Cnemidophorus hyperythrus beldingi</i>])	--	SSC	Covered ^c	Washes and open areas of sage scrub and chaparral with gravelly soils	Low potential to occur along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d
California mountain kingsnake (San Diego population) (<i>Lampropeltis zonata</i> [<i>L. z. pulchra</i>])	--	SSC	Covered ^c	Mixed woods, including coniferous forest, woodland, and chaparral	Not expected to occur	NA ^d

ATTACHMENT 4.4-H: SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT VICINITY

Species	Status ¹		MSHCP Coverage	Habitat	Potential to Occur	Survey Results
	USFWS	CDFW				
Two-striped garter snake (<i>Thamnophis hammondi</i>)	--	SSC	Not Covered	Perennial or intermittent freshwater streams with rocky beds and adjacent dense vegetation	High potential to occur along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d
South coast garter snake (<i>Thamnophis sirtalis</i> ssp.)	--	SSC	Not Covered	Waterbodies in grassland, woodland, scrub, chaparral, and forest	High potential to occur along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d
Red-diamond rattlesnake (<i>Crotalus ruber</i>)	--	SSC	Covered ^c	Open scrub, chaparral, woodland, and grassland	Not expected to occur	NA ^d
Birds						
Redhead (nesting) (<i>Aythya americana</i>)	--	SSC	Not Covered	Open marshes and ponds	Not expected to occur for breeding; foraging potential along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d
Fulvous whistling duck (nesting) (<i>Dendrocygna bicolor</i>)	--	SSC	Not Covered	Freshwater and coastal marshes	Not expected to occur; marsh habitat very minimal	NA ^d
American white pelican (nesting colony) (<i>Pelecanus erythrorhynchos</i>)	--	SSC	Not Covered	Large freshwater or saltwater lakes	Not expected to occur for breeding; foraging potential along the alternative source line route	NA ^d
Least bittern (<i>Ixobrychus exilis</i>)	--	SSC	Not Covered	Freshwater and brackish marshes with dense, tall growth of aquatic vegetation	Not expected to occur; marsh habitat very minimal	NA ^d

ATTACHMENT 4.4-H: SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT VICINITY

Species	Status ¹		MSHCP Coverage	Habitat	Potential to Occur	Survey Results
	USFWS	CDFW				
Golden eagle (nesting and nonbreeding/wintering) (<i>Aquila chrysaetos</i>)	--	FP	Covered ^c	Variety of open and semi-open habitats; nests in large trees or on cliffs	Not expected to occur for nesting; foraging potential at the proposed Circle City Substation site and Substation Site Alternative B, as well as along the alternative source line route and the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d
Swainson's hawk (nesting) (<i>Buteo swainsoni</i>)	--	ST	Covered ^c	Grassland and ruderal vegetation	Not expected to occur for nesting; potential foraging habitat for migrants	NA ^d
Northern harrier (nesting) (<i>Circus cyaneus</i>)	--	SSC	Covered ^c	Open habitats; nests in dense vegetation	Low potential to occur for nesting; foraging potential at the proposed Circle City Substation site and Substation Site Alternative B, as well as along the alternative source line route and the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d
White-tailed kite (nesting) (<i>Elanus leucurus</i>)	--	FP	Covered ^c	Grassland, agriculture, wetlands, oak woodlands, savannahs, and riparian habitat	Moderate potential to occur for nesting; foraging potential along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes; foraging potential at the proposed Circle City Substation site, Substation Site Alternative B, and along the alternative source line route	NA ^d
Bald eagle (nesting and nonbreeding/wintering) (<i>Haliaeetus leucocephalus</i>)	Delisted	SE, FP	Covered ^c	Large waterbodies or free-flowing rivers with adjacent snags or perches	Not expected to occur	NA ^d

ATTACHMENT 4.4-H: SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT VICINITY

Species	Status ¹		MSHCP Coverage	Habitat	Potential to Occur	Survey Results
	USFWS	CDFW				
American peregrine falcon (nesting) (<i>Falco peregrinus anatum</i>)	Delisted	Delisted/ FP	Covered ^c	Nests in cliffs, high building ledges, bridges, or other such structures; forages in a variety of habitats, especially wetlands and coastal areas	Not expected to occur for nesting; foraging potential at the proposed Circle City Substation site and Substation Site Alternative B, as well as along the alternative source line route and the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d ; has been incidentally observed
Mountain plover (nonbreeding/ wintering) (<i>Charadrius montanus</i>)	PT	SSC	Covered ^c	Short-grass prairie or similar habitats with little vegetation	Not expected to occur for nesting; limited foraging potential along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d
Western yellow-billed cuckoo (nesting) (<i>Coccyzus americanus occidentalis</i>)	FT	CE	Covered ^a	Dense, old-growth riparian habitats	Low potential to occur for nesting; foraging potential along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	Not observed during least Bell's vireo/ southwestern willow flycatcher surveys
Long-eared owl (nesting) (<i>Asio otus</i>)	- -	SSC	Not Covered	Grasslands and open habitats; nests in dense oaks and willows	High foraging/nesting potential along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d
Burrowing owl (burrow sites; wintering in northern counties) (<i>Athene cucularia</i>)	- -	SSC	Covered ^e	Variety of habitats with sparse vegetation and suitable mammal burrows	High foraging/nesting potential at Mira Loma Substation, proposed Circle City Substation site, and Substation Site Alternative B, as well as along the alternative source line route and the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	Observed at the northern portion of the proposed Mira Loma-Jefferson 66 kV Subtransmission Line Route during focused surveys

ATTACHMENT 4.4-H: SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT VICINITY

Species	Status ¹		MSHCP Coverage	Habitat	Potential to Occur	Survey Results
	USFWS	CDFW				
Southwestern willow flycatcher (nesting) (<i>Empidonax traillii extimus</i>)	FE	SE	Covered ^a	Dense riparian habitat with willows and mule fat	Moderate nesting potential along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes; foraging potential along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	Not observed during focused surveys
Vermilion flycatcher (nesting) (<i>Pyrocephalus rubinus</i>)	--	SSC	Not Covered	Mixture of trees, open fields, and open water	Moderate foraging/nesting potential along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes; foraging potential along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d
Loggerhead shrike (nesting) (<i>Lanius ludovicianus</i>)	--	SSC	Covered ^c	Pastures, agricultural fields, riparian areas, and open woodlands	May forage throughout the study area; moderate nesting potential along the alternative source line route and the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d ; incidentally observed during other surveys
Least Bell's vireo (nesting) (<i>Vireo bellii pusillus</i>)	FE	SE	Covered ^a	Willow riparian habitats with dense understory vegetation	High foraging/nesting potential along the alternative source line route and the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	Observed in Prado Basin and along the alternative source line route during focused surveys

ATTACHMENT 4.4-H: SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT VICINITY

Species	Status ¹		MSHCP Coverage	Habitat	Potential to Occur	Survey Results
	USFWS	CDFW				
Coastal cactus wren (San Diego and Orange Counties only) (<i>Campylorhynchus brunneicapillus sandiegensis</i>)	--	SSC ²	Covered ^c	Coastal sage scrub and alluvial sage scrub with prickly pear cactus or cholla	Not expected to occur	NA ^d
Clark's marsh wren (<i>Cistothorus palustris clarkae</i>)	--	SSC	Not Covered	Freshwater or brackish marsh dominated by bulrushes or cattails	Not expected to occur; marsh habitat very minimal	NA ^d
Coastal California gnatcatcher (<i>Poliopitila californica californica</i>)	FT	SSC	Covered ^c	Coastal sage scrub	Not expected to occur	NA ^d
Yellow warbler (nesting) (<i>Dendroica petechia brewsteri</i>)	--	SSC	Covered ^c	Riparian areas with willows and cottonwoods	High foraging/nesting potential along the alternative source line route and the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d ; incidentally observed in Prado Basin and along the alternative source line route
Yellow-breasted chat (nesting) (<i>Icteria virens</i>)	--	SSC	Covered ^c	Streams, creeks, and rivers with dense thickets	High foraging/nesting potential along the alternative source line route and the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d ; incidentally observed in Prado Basin
Grasshopper sparrow (nesting) (<i>Ammodramus savannarum</i>)	--	SSC	Covered ^c	Dense, dry, or well-drained grassland	High foraging/nesting potential along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d

² The coastal cactus wren is restricted to San Diego and Orange counties; however, the taxonomy is not yet settled, and all coastal populations of cactus wren appear to be declining.

ATTACHMENT 4.4-H: SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT VICINITY

Species	Status ¹		MSHCP Coverage	Habitat	Potential to Occur	Survey Results
	USFWS	CDFW				
Oregon vesper sparrow (nonbreeding/wintering) (<i>Pooecetes gramineus affinis</i>)	--	SSC	Not Covered	Open fields and grasslands with short vegetation	Not expected to occur for nesting; foraging potential at the proposed Circle City Substation site and Substation Site Alternative B, as well as along the alternative source line route and the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d
Tricolored blackbird (nesting colony) (<i>Agelaius tricolor</i>)	--	SSC	Covered ^c	Marsh vegetation of bulrushes and cattails	Low potential to occur for nesting; foraging potential at the proposed Circle City Substation site and Substation Site Alternative B, as well as along the alternative source line route and the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d
Yellow-headed blackbird (nesting) (<i>Xanthocephalus xanthocephalus</i>)	--	SSC	Not Covered	Marshes with tall emergent vegetation adjacent to open water	Low potential to occur for nesting; limited foraging potential along the alternative source line route and the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d
Mammals						
Pallid bat (<i>Antrozous pallidus</i>)	--	SSC	Not Covered	Open habitats with rocky areas for roosting; roosts in caves, crevices, mines, and occasionally hollow trees and buildings	Low potential to forage at the proposed Circle City Substation site and Substation Site Alternative B, as well as along the alternative source line route and the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d

ATTACHMENT 4.4-H: SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT VICINITY

Species	Status ¹		MSHCP Coverage	Habitat	Potential to Occur	Survey Results
	USFWS	CDFW				
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	--	SSC, CC	Not Covered	Oak woodlands, deserts, grasslands, forests, and meadows; roosts in mine tunnels, limestone caves, lava tubes, buildings, and other man-made structures	Low potential to forage at the proposed Circle City Substation site and Substation Site Alternative B, as well as along the alternative source line route and the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d
Western yellow bat (<i>Lasius xanthinus</i>)	--	SSC	Not Covered	Dry, thorny vegetation; roosts in leafy vegetation	Low potential to roost along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes; potential to forage along the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d
Western mastiff bat (<i>Eumops perotis californicus</i>)	--	SSC	Not Covered	Conifer and deciduous woodlands, coastal scrub, grasslands, palm oases, chaparral, desert scrub, and urban areas; roosts on cliff faces	Low potential to forage at the proposed Circle City Substation site and Substation Site Alternative B, as well as along the alternative source line route and the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d
San Diego black-tailed jackrabbit (<i>Lepus californicus bennettii</i>)	--	SSC	Covered ^c	Herbaceous and desert shrub areas and early stages of forest and chaparral	Moderate potential to occur along the alternative source line route and the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d

ATTACHMENT 4.4-H: SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT VICINITY

Species	Status ¹		MSHCP Coverage	Habitat	Potential to Occur	Survey Results
	USFWS	CDFW				
Northwestern San Diego pocket mouse (<i>Chaetodipus fallax fallax</i>)	--	SSC	Covered ^c	Chaparral, coastal sage scrub, and grassland	Low potential to occur at the proposed Circle City Substation site and Substation Site Alternative B, as well as along the alternative source line route and the proposed and alternative Mira Loma-Jefferson 66 kV Subtransmission Line routes	NA ^d
San Bernardino kangaroo rat (<i>Dipodomys merriami parvus</i>)	FE	SSC	Covered ^c	Sandy and sandy loam soils with alluvial scrub vegetation	Not expected to occur	NA ^d
Stephens' kangaroo rat (<i>Dipodomys stephensi</i>)	FE	CT	Covered ^c	Grasslands and coastal sage scrub with sparse cover	Not expected to occur	NA ^d
Los Angeles pocket mouse (<i>Perognathus longimembris brevinasus</i>)	--	SSC	Covered ^c	Grasslands and coastal sage scrub with sandy soils	Not expected to occur	NA ^d
San Diego desert woodrat (<i>Neotoma lepida intermedia</i>)	--	SSC	Covered ^c	Desert habitats such as Joshua tree woodland, pinyon-juniper, chaparral, and sagebrush	Not expected to occur	NA ^d
American badger (<i>Taxidea taxus</i>)	--	SSC	Not Covered	Shrub, forest, and herbaceous habitats with friable soil	Not expected to occur	NA ^d

Notes:

^a These species are associated with riparian/riverine areas or vernal pools; there are additional survey and mitigation requirements per Section 6.1.2 of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

^b These species are covered by the MSHCP (Riverside County) but may have additional survey and/or mitigation requirements. Mitigation is required in San Bernardino County.

ATTACHMENT 4.4-H: SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT VICINITY

^c Surveys are not required, either because the MSHCP does not require surveys for this species or because the Proposed Project is outside of the Additional Survey Needs area or other specific survey area (Refer to Section 6.1.2 and/or 6.3.2 of the MSHCP). No additional mitigation required.

^d Special focused surveys were not required; the results are included if the species was incidentally observed during other focused or general surveys.

^e These species were within the Additional Survey Needs area (see Figure 6-4 of the MSHCP). Additional mitigation is required in accordance with procedures described within Section 6.3.2 and Table 9-2 of the MSHCP.

4.5 Cultural Resources

This section describes the cultural resources in the area of the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (Proposed Project). Potential impacts to cultural (i.e., archaeological, historical, and tribal resources) and paleontological resources are discussed. As described in this section, there would be no impact or less-than-significant impacts to cultural and paleontological resources associated with construction and operation of the Proposed Project with implementation of the applicant-proposed measure (APM) described in Section 4.5.8 Applicant-Proposed Measures and the best management practices (BMPs) described in Section 3.9 Environmental Surveys in Chapter 3 – Project Description.

A cultural resource is defined as any object or specific location of past human activity, occupation, or use that is identifiable through historical documentation, inventory, or oral evidence. Cultural resources can be separated into four categories: archaeological, building and structural, traditional cultural resources, and tribal cultural resources.

Archaeological resources include both historic-era and prehistoric remains of human activity. Historic-era resources can consist of structures (e.g., cement foundations), historic objects (e.g., bottles and cans), and sites (e.g., trash deposits or scatters). Prehistoric resources can include lithic scatters, ceramic scatters, quarries, habitation sites, temporary camps/rock rings, ceremonial sites, and trails. Historic-era resources are typically those that are 50 years or older.

Building and structural sites (hereafter referred to as “built environment”) can vary from historic buildings to canals, historic roads and trails, bridges, cemeteries, and electrical infrastructure, such as transmission lines, substations, and generating facilities.

A traditional cultural resource or traditional cultural property can include traditional resources and sites or ethnic communities that are important for maintaining the cultural traditions of any group.

Tribal cultural resources, as defined in California Public Resources Code (PRC) Section 21074(a)(1), include sites, features, places, cultural landscapes, sacred places, or objects that are of cultural value to a California Native American tribe.

Paleontology is the study of life in past geologic time based on fossil plants and animals, and includes phylogeny; the relationships to existing plants, animals, and environments; and the chronology of the earth’s history. A paleontological resource is a locality containing vertebrate, invertebrate, or plant fossils (e.g., fossil location, fossil-bearing formation, or a formation with the potential to bear fossils). Paleontological resources are considered a fragile and non-renewable scientific record of the history of life on earth and, therefore, they represent an important and critical component of the natural heritage of the United States (U.S.).

4.5.1 Cultural Resources Environmental Setting

The majority of the Proposed Project area is located within Riverside County, though the northern portion is situated within San Bernardino County. The northern portion of the Proposed Project is situated in the Chino Basin, while the southern portion is located in the Prado Basin.

4.5 CULTURAL RESOURCES

The Chino Basin consists of a large, flat bowl between the Santa Ana River and, to its north, Chino Creek. The Prado Basin is a lowland area formed by the confluences of Mill Creek, Temescal Wash, and the Santa Ana River. The Prado Basin is bordered on the south by the Santa Ana Mountains, on the west by the Chino Hills, on the north by low hills south of the San Gabriel Mountains, and on the east by the Jurupa Hills. The Proposed Project is within the Peninsular Range zone, characterized by elongated mountain ranges and intervening basins and valleys oriented in a northwest-southeast direction. The southeastern portion of the Proposed Project area is located within the Temescal Wash. Elevations in the Proposed Project area range from 160 to 250 meters above mean sea level.

4.5.1.1 Cultural Setting

Prehistoric Setting

It appears likely that humans first arrived in Southern California approximately 12,000 years before present (BP) (Moratto 2004). Occupation of the Proposed Project vicinity appears to have begun approximately 9,000 years ago, based on dates derived from excavations at sites near Lake Perris (Perris Reservoir), located approximately 20 miles east of the Proposed Project area; and in Diamond Valley Lake (Eastside Reservoir), approximately 20 miles southeast of the southern end of the Proposed Project area. The prehistoric cultural chronology of inland coastal Southern California is composed of the following five periods:

- Paleoindian Period (circa [ca.] 12,000-7,000 BP),
- Pinto Period (ca. 7,000-4,000 BP),
- Gypsum Period (ca. 4,000-1,500 BP),
- Saratoga Springs Period (ca. 1,500-650 BP [Anno Domini (A.D.) 500-A.D. 1200]), and
- Proto-Historic or Shoshonean Period (ca. 650-150 BP [ca. A.D. 1200 to the 1800s]) (Moratto 2002; Warren 2004; Wilke 1974).

These periods represent a general trend of change over time in climatic conditions (from wetter to drier conditions), settlement patterns (from small mobile groups to larger, more sedentary groups), technology (from fewer tools focused on hunting to a variety of tools focused on plant use), and cultural elaboration (increasingly specialized tools, ornamental items, and the development of trade networks). Distinct ethnographic groups appear to have developed during the Proto-Historic Period, when Patayan populations appear to have entered inland coastal California from the Lake Cahuilla area. Subsequently, Spanish exploration and the establishment of the mission system during the late 1700s mark the end of prehistoric life ways.

Ethnographic Setting

The Proposed Project lies in an area traditionally occupied by the Gabrielino Indians (also known as the Tongva) after the establishment of Mission San Gabriel Arcángel in 1771 (Bean and Smith 1978; Kroeber 1976), but may also have been occupied by the Luiseño/Juaneño people as a result of population shifts over time (Kroeber 1976; Vane 2000). Both are considered Shoshonean peoples with similar languages (Bean and Smith 1978). Their settlement patterns included seasonally based, permanent base camps with associated task-oriented sites (True et al. 1974; True and Waugh 1981; Bean and Smith 1978). Acorns from a variety of oak species were

one of the most heavily used plant foods (Bean and Saubel 1972), while a variety of waterfowl, fish, mollusks, and mammals were also exploited (Kroeber 1976).

Technology was based on flaked stone projectile points, scrapers, choppers, and drills, as well as bedrock mortars, groundstone milling stones, handstones, mortars, and pestles (Bean and Shipek 1978; Bean and Smith 1978; Kroeber 1976). Other major tools included the bow and arrow, wooden throwing sticks, traps, nets, burden baskets, carrying nets, and a small number of ceramic forms that were mostly undecorated. The Gabrielino/Tongva manufactured and traded soapstone items (Bean and Smith 1978; Bean and Shipek 1978; Kroeber 1976).

Historic Setting

Spanish missionaries settled Riverside and San Bernardino counties in the early 19th century and colonized local native populations. In 1776, and again in 1778, Spanish army Captain Juan Bautista de Anza led an overland expedition through the region on an approximately 1,200-mile route from Nogales, Arizona, to San Francisco, California. He traversed the area along the historic route now designated as the Juan Bautista de Anza Historic Trail. During the late 18th century, the Spanish mission fathers of the San Gabriel Arcángel, San Juan Capistrano, and San Luis Rey missions began colonizing the lands of the Native Americans, utilizing the interior valley of western Riverside County for raising grain and cattle. Mission San Gabriel Arcángel claimed lands in the present-day cities of Jurupa Valley, Riverside, and San Jacinto, and the San Gorgonio Pass; meanwhile, Mission San Luis Rey claimed land around present-day Lake Elsinore and the cities of Temecula and Murrieta. These lands were used for grazing large herds of mission-owned cattle and transporting sheep to market along mission trails (Smith and Trafzer 2006; e-ReferenceDesk 2011).

After California joined the U.S., agriculture expanded as a growing number of Americans settled in the region. Introduced to the area in the late 19th century, the citrus industry grew dramatically during the late 19th and early 20th centuries and became the area's most important agricultural product (Ingersoll 1904; Brown and Boyd 1922). Other area industries of the late 19th and early 20th centuries included cattle ranching, sugar beet cultivation, and viticulture and enology. Historically, dairy farming has been integral to the culture and economy of the region, and the area's dairy industry began in Chino in 1895 with the establishment of a dairy and creamery by cattle ranchers Vail and Bates. Access to the plentiful beet pulp from the area's incipient sugar beet industry, along with readily available grazing lands, provided ideal conditions for raising dairy cattle. The local dairy industry expanded and flourished during the 20th century, particularly around the northern portion of the Proposed Project area in eastern Chino and southern Ontario (Ingersoll 1904; Galvin and Associates 2004).

Around the turn of the century, Robert B. Taylor and Adolph Rimpau launched the development of Corona in the southern portion of the Proposed Project area. Named for the circular Grand Boulevard, which outlines the city's original core, Corona became known for citrus and other food processing. Industrial, commercial, and residential investment and development markedly increased in the region after World War II. The former agricultural area west and southwest of the famed Norconian Club Resort and Hotel, which was built in 1929, was developed after World War II into an equestrian-friendly suburbia named Norco. Improved transportation networks have linked the area and its residents to the economies of the Los Angeles Basin and

4.5 CULTURAL RESOURCES

Southern California as a whole (Brown and Boyd 1922; Mermilliod 2011; Myra L. Frank & Associates and Offenhauser/Mekeel Architects 1996).

Cultural Resources Records Search and Survey Methods and Results

The following methods were used to analyze the Proposed Project:

- reviewing records regarding mapped resources known to exist in the area,
- analyzing Proposed Project maps, engineering drawings, and technical data,
- obtaining aerial and ground-level photographs, and
- conducting site visits.

Records Searches

Records searches were conducted for the Proposed Project vicinity at the Eastern Information Center at the University of California, Riverside; the San Bernardino Archaeological Information Center at the San Bernardino County Museum; and the South Central Coastal Information Center at California State University, Fullerton (Crawford 2015; Hoffman et al. 2012; ICF International [ICF] 2015; Williams 2015). A total of 112 cultural resources studies have been previously conducted within a 0.5-mile radius of the Proposed Project area that would require ground-disturbing activities or that would otherwise alter the existing setting. Ninety-eight of these previous studies have been conducted within the Proposed Project area. A total of 224 cultural resources have been previously documented within 0.5 mile of the Proposed Project area. Of these, 12 are prehistoric resources and 212 are historic-era resources. One previously recorded prehistoric resource, CA-RIV-675, is documented within the Proposed Project area. The following 13 previously recorded historic-era resources were documented within the Proposed Project area:

- the Grand Boulevard Historic District (NPS-11000432/P-33-6444);
- Atchison, Topeka, and Santa Fe Railroad grade and associated features (CA-RIV-3832H);
- Fuqua ditch (CA-RIV-16681H/CA-SBR-12573H/P-36-13412);
- Southern Sierras “O-Line” power line right-of-way (ROW) and towers (CA-SBR-12613H/P-33-16681/P-36-013627/P-30-179857);
- Chino-Mira Loma No. 1 220 kV Transmission Line (P-36-25440); and
- eight recorded structures, and all but one—a commercial building (P-33-006457)—have been destroyed.

The portion of the Chino-Mira Loma No. 1 220 kV Transmission Line (P-36-25440) within the Proposed Project area was determined ineligible for the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR); therefore, it is not discussed further (Donaldson 2010).

Historical Research

Research on historic-period themes was conducted at local libraries, on the Internet, and in ICF’s internal library of Southern California history sources. Research on specific architectural

resources in the Proposed Project area included use of historic aerial photographs, historic topographic maps, Sanborn maps, local inventories of historical resources, TRW/Experian, and the parcel inquiry websites of the Riverside County assessor and the San Bernardino County assessor.

Contact with Interested Parties

In 2010, Southern California Edison (SCE) contacted 18 individuals or groups that were identified by the Native American Heritage Commission (NAHC) as having interest in or knowledge of the Proposed Project area. As a result of the 2010 outreach, two responses noting interest in the Proposed Project were received—one from the Soboba Band of Luiseño Indians (Soboba) and one from the Pechanga Band of Luiseño Indians (Pechanga). At Pechanga's request, a Native American Monitor was present for the archaeological survey. The Pechanga Native American Monitor made one field visit and determined that there was minimal potential for encountering intact archaeological deposits due to the heavily disturbed nature of the majority of the Proposed Project area. As a result, the Pechanga Native American Monitor declined to participate in further archaeological surveys of the Proposed Project area.

In 2015, SCE requested an updated contact list from the NAHC to further its outreach efforts. In May and June 2015, SCE contacted 31 individuals or groups that were identified by the NAHC as having interest in or knowledge of the Proposed Project area. As a result of the 2015 outreach, responses from nine individuals or groups have been received as of July 20, 2015. Documentation of the 2010 and 2015 Native American outreach correspondence is provided in Attachment 4.5-A: Native American Correspondence.

ICF researchers contacted the Corona Historic Preservation Society, the Chino Valley Historical Society, the Corona Heritage Foundation, and the Norco Historical Society to inquire if they had information pertinent to the history of the study area or concerns about the Proposed Project. The architectural historian from ICF discussed the Proposed Project with the Treasurer of the Corona Historic Preservation Society.

Cultural Resources Inventories

ICF was retained by SCE to conduct archaeological and built-environment surveys of the Proposed Project area in 2011, 2012, and 2015 (Hoffman et al. 2012; ICF 2015; Crawford 2015). The surveys included a 100-foot buffer around all Proposed Project components. The survey was conducted in 5-meter or 15-meter transects where possible; paved, developed, and landscaped areas were not surveyed in 15-meter transects, but were visually inspected for cultural resources.

Reconnaissance surveys of the architectural study area were conducted in 2011 and 2012 (Hoffman et al. 2012; ICF 2015). The architectural study area included a 100-foot buffer around all Proposed Project components, as well as the parcels that transect the boundaries of the archaeological study area. ICF recorded buildings within the architectural study area known to be 45 years old or older, or suspected of being 45 years old or older. During these field efforts, ICF also assessed the potential for indirect visual impacts to historical resources within 0.5 mile from the centerline of the Proposed Project's alignment.

Results

Archaeological Resources

Archaeologists attempted to relocate one prehistoric and two historic-era previously recorded resources located within the Proposed Project area. The prehistoric resource, CA-RIV-675, was confirmed to be destroyed by paving, building construction, and landscaping associated with modern urban development in the area. The two previously recorded historic-era resources included CA-RIV-3832H (Atchison, Topeka, and Santa Fe Railroad grade and associated features) and CA-RIV-16681H/CA-SBR-12573H/P-36-13412 (Fuqua Ditch segment).

The 1996 site record for CA-RIV-3832H (Atchison, Topeka, and Santa Fe Railroad grade and associated features), indicates the presence of an identifiable segment of the railroad alignment for the portion of the Source Line Route Alternative 2 and Source Line Route Alternative 3 alignments located along Sherborn Street. Upon inspection, however, no evidence of this portion of the alignment was observed. It appears that the modern railroad and adjacent construction activities have destroyed this portion of the alignment beyond recognition. CA-RIV-3823H was previously determined to be not eligible for the NRHP and has not been evaluated for the CRHR.

The location of resource CA-RIV-16681H/CA-SBR-12573H/P-36-13412 (Fuqua Ditch segment) was visited and the site record was determined to be accurate. The portion of the ditch located within the Proposed Project area was virtually unidentifiable and has been destroyed by off-road vehicle use. CA-RIV-16681H/CA-SBR-12573H/P-36-13412 has not been previously evaluated for the CRHR or NRHP.

P-33-024245 (ICF-CC-01) is a newly recorded historic-era archaeological resource located between Quarry Street and East 3rd Street that was identified during surveys for the Proposed Project. The resource consists of structural remains and associated refuse. Two structures are represented by the remains—a building and an apparent well pad/house. Refuse and rubble is found throughout the parcel and consists of a large amount of cinderblock fragments, mortared brick, milled wood, green-painted concrete wall and stair fragments, metal strapping, and terracotta pipe fragments. Also present is a small amount of brown-glazed floral tile fragments and clay tile fragments. The resource is recommended ineligible for the CRHR and NRHP.

Preliminary Outreach: Tribal Cultural Resources

As part of SCE's 2015 outreach to the Native American community, it was asked whether any of the interested parties were aware of tribal cultural resources in the Proposed Project area. Based on responses received, no tribal cultural resources pursuant to PRC Section 21074(a) have been identified within the Proposed Project area. The responses are provided in Attachment 4.5-A: Native American Correspondence.

Built Environment Resources

The segment of previously recorded CA-SBR-12613H/P-33-16681/P-36-013627/P-30-179857 (Southern Sierras "O-Line" power line ROW and towers) documented within the Proposed Project area was visited. The field inspection determined the power line structures have been removed and the segment of the Southern Sierras "O-Line" power line is no longer extant within

the Proposed Project area. CA-SBR-12613H/P-33-16681/P-36-013627/P-30-179857 has not been evaluated for the CRHR or NRHP.

A total of 107 architectural resources 45 years of age or older were identified and documented within the Proposed Project area, including 102 resources in Riverside County and five resources in San Bernardino County. Historic aerials show that one additional property—Riverside County assessor's parcel number (APN) 119-190-011 (688 North Cota Street)—could not be recorded due to restricted access and has at least one building over 45 years old on the premises.

Previously recorded architectural resource P-33-006457 (Corona Citrus Association Packing House; Riverside County APN 119-290-050) was relocated within the Proposed Project area. The irregular-plan building, constructed in 1947, is sided in more recent stucco and topped by two parallel barrel-roof formations in its main mass, each with ventilating monitors. Various square or rectangular wings with shed or flat roofs project to the north and west from the building's barrel-roofed masses. These are also sided in stucco and feature both clerestory windows and large rectangular windows with what appear to have aluminum frames. P-33-006457 is recommended eligible for local listing. The Proposed Project would not result in demolition or alterations to the building; therefore, P-33-006457 was not evaluated for the NRHP or CRHR.

A portion of the Grand Boulevard Historic District (NPS-11000432/P-33-6444) is located within the Proposed Project area. The Grand Boulevard Historic District is listed in the NRHP and is therefore automatically considered eligible for the CRHR. The district is also a locally designated City of Corona Historic Landmark. The period of significance for the historic district is considered between 1886 and 1928. The portion of the district within the Proposed Project area consists of the Grand Boulevard streetscape extending from the intersection of Grand Boulevard and North Joy Street to the south, crossing underneath the State Route 91 overcrossing, and extending approximately 100 feet south of the intersection of Grand Boulevard and East 3rd Street. Within the Proposed Project area, features that definitely contribute to the Grand Boulevard Historic District are limited to 10 concrete streetlights and luminaries, the boulevard's roadway width and alignment, and the alignments of the boulevard's intersections with East 2nd Street and East 3rd Street. There are 12 Mexican palm, Peruvian pepper, eucalyptus, and carob trees that match the species types of contributing trees listed in the district's nomination form. Within the Proposed Project area, potential contributors to the district also include sidewalk segments along the inner-circle side of the boulevard from the south corner of East 2nd Street and Grand Boulevard to approximately 100 feet south of the intersection of Grand Boulevard and East 3rd Street, and along the outer-circle side of the boulevard from the southeast corner of East 3rd Street and Grand Boulevard to approximately 100 feet south of the intersection of Grand Boulevard and East 3rd Street.

One Corona property inventoried as a result of the study for the Proposed Project includes Riverside County APNs 107-060-008 and 107-060-009 (1620 Magnolia Avenue) documented at the location of the proposed Circle City Substation site. The property was documented to contain two buildings developed by San Vallé Tile Kilns, Inc. in the mid-1960s. The San Vallé Tile Kilns, Inc. property was recommended ineligible for the CRHR. Since its documentation in 2011, the structures on APNs 107-060-008 and 107-060-009 have been demolished.

For the remaining 104 properties documented as a result of the study, there is no proposed demolition or alteration of buildings that are 45 years of age or older as a result of the Proposed Project; therefore, the properties were not evaluated for the CRHR or NRHP.

4.5.2 Cultural Resources Regulatory Setting

4.5.2.1 Federal

There are no proposed ground-disturbing activities located on federal lands for the Proposed Project. However, the Proposed Project would require federal permitting; therefore, the following federal regulations for cultural resources may apply to the Proposed Project.

National Historic Preservation Act

Section 106 of the National Historic Preservation Act requires federal agencies to consult with the Advisory Council on Historic Preservation to take into account the effects of their undertakings on historic properties, and the procedures in Title 36, Part 800 of the Code of Federal Regulations (CFR) define how federal agencies must meet these responsibilities. As defined in Title 36, Section 800.16(y) of the CFR, a federal undertaking is a project, activity, or program either funded, permitted, licensed, or approved by a federal agency. Per Title 36, Section 800.3(a) of the CFR, the federal agency would determine whether a proposed federal action is an undertaking.

Title 36, Section 800.5(a) of the CFR describes procedures for evaluating a project's adverse effects on cultural resources. An adverse effect is found when a federal undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Examples of adverse effects are provided in Title 36, Part 800(a)(2) of the CFR and include, but are not limited to, the following:

- Physical destruction of or damage to all or part of the property.
- Alteration of a property—including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access—that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR Part 68) and applicable guidelines.
- Removal of the property from its historic location.
- Change of the character of the property's use, or of physical features within the property's setting, that contribute to its historic significance.
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features.
- Neglect of a property that causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to a Native American tribe or native Hawaiian organization.

- Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure the long-term preservation of the property's historic significance.

National Register of Historic Places Eligibility Criteria

The National Park Service (NPS) regulation provided in Title 36, Part 60 of the CFR is the primary reference for determining the historical significance of a cultural resource. The regulation defines the criteria by which a property is determined to be eligible for listing in the NRHP as follows:

“The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and

(A) that are associated with events that have made a significant contribution to the broad patterns of our history; or

(B) that are associated with the lives of persons significant in our past; or

(C) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant distinguishable entity whose components may lack individual distinction; or

(D) that have yielded or may be likely to yield information important in history or prehistory.”

4.5.2.2 State

State regulations affecting cultural resources include California PRC Sections 21083.2 and 21084.1, 21084.2, 21084.3, and California Environmental Quality Act (CEQA) Guidelines Section 15064.5, and Appendix G.

Cultural resources, as defined in CEQA, include prehistoric- and historic-era archaeological sites, districts, and objects; historic buildings, structures, objects, and districts; and traditional/cultural sites or the locations of important historic events. CEQA Guidelines Section 15064.5 states that a project may have a significant environmental effect if it causes a substantial adverse change in the significance of a historical resource. PRC Section 21084.2 states that a project may have a significant environmental effect if it causes a substantial adverse change in the significance of a tribal cultural resource. Additionally, the lead agency must consider properties eligible for listing on the CRHR that are defined as a unique archaeological resource in PRC Section 21083.2, or that are defined as a tribal cultural resource in PRC Section 21074.

California Register of Historical Resources

Cultural resources include archaeological and historic objects, sites, and districts; historic buildings and structures; and sites and resources of concern to local Native Americans and other ethnic groups. Cultural resources that meet the criteria of eligibility to the CRHR are termed “historical resources.” Archaeological resources that do not meet CRHR criteria also may be

4.5 CULTURAL RESOURCES

evaluated as “unique”; impacts to such resources could be considered significant, as described below.

A site meets the criteria for inclusion on the CRHR if:

- a) It is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
- b) It is associated with the life or lives of a person or people important to California’s past.
- c) It embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.
- d) It has yielded, or may be likely to yield, information important to prehistory or history.

A resource eligible for the CRHR must meet one of these criteria of significance and retain enough of its historic character or appearance (i.e., integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historical resource may not retain sufficient integrity to meet the criteria for listing in the NRHP, but it may still be eligible for listing in the CRHR.

The CRHR automatically includes the following:

- California properties listed in the NRHP and those formally Determined Eligible for the NRHP,
- California Registered Historical Landmarks from No. 770 onward, and
- those California Points of Historical Interest that have been evaluated by the Office of Historic Preservation (OHP) and have been recommended to the State Historical Commission for inclusion in the CRHR.

Other resources that may be nominated to the CRHR include:

- historical resources with a significance rating of Category 3 through 5;
- individual historical resources;
- historical resources contributing to historic districts; and
- historical resources designated or listed as local landmarks, or designated under any local ordinance, such as a historic preservation overlay zone

Impacts to “unique archaeological resources” also are considered under CEQA, as described under PRC Section 21083.2. A unique archaeological resource means an archaeological artifact,

object, or site about which it can be clearly demonstrated that—without merely adding to the current body of knowledge—there is a high probability that it meets one of the following criteria:

- It contains information needed to answer important scientific questions and there is a demonstrable public interest in that information.
- It has a special and particular quality, such as being the oldest of its type or the best available example of its type.
- It is directly associated with a scientifically recognized important prehistoric or historic event or person.
- A non-unique resource is one that does not fit the previous criteria.

Impacts to tribal cultural resources also are considered under CEQA, as described under PRC Section 21084.2. PRC Section 21074(a) defines a tribal cultural resource as any of the following:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - included or determined to be eligible for inclusion in the CRHR; or
 - included in a local register of historical resources, as defined in PRC Section 5020.1(k).
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying these criteria, the lead agency would consider the significance of the resource to a California Native American tribe.

4.5.2.3 Local

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order (G.O.) 131-D, Section XIV.B, “Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC’s jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters.” Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties and cities’ regulations are not applicable as the counties and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local regulations is provided for informational purposes only.

The general plans and municipal codes were reviewed for relevant local policies pertaining to cultural resources for the cities of Chino, Corona, Eastvale, Norco, and Ontario; for all specific plan areas that would be crossed by the Proposed Project; and for Riverside County and San Bernardino County. No relevant policies pertaining to cultural resources were identified in the following:

- City of Eastvale General Plan
- City of Ontario Policy Plan

4.5 CULTURAL RESOURCES

- The Preserve Specific Plan
- Temescal Canyon Area Plan
- San Bernardino County General Plan
- North Main Street District Specific Plan (SP-99-1)
- Corona Magnolia Specific Plan (SP-01-2)
- The Township in Corona Specific Plan (SP-82-1)
- Rich-Haven Specific Plan
- Subarea 29 Specific Plan
- Edenglen Specific Plan
- Riverside County Municipal Code
- San Bernardino County Municipal Code
- City of Chino Municipal Code
- City of Corona Municipal Code
- City of Eastvale Municipal Code
- City of Ontario Municipal Code

The following local policies regarding cultural resources may apply to the Proposed Project.

Riverside County General Plan

The Riverside County General Plan Multipurpose Open Space Element contains the following policies pertaining to cultural resources:

- Policy OS 19.2. Review all proposed development for the possibility of archaeological sensitivity.
- Policy OS 19.4. Require a Native American Statement as part of the environmental review process on development projects with identified cultural resources.

City of Chino General Plan

The City of Chino General Plan Open Space and Conservation Element contains the following policies pertaining to cultural resources:

- Policy P1. The City shall ensure that identified cultural and historic landmarks and buildings are preserved, unless the City finds that such preservation is economically infeasible.
- Policy P4. If Native American artifacts are discovered on a site, the City shall consult representatives of the Native American community to ensure the respectful treatment of Native American sacred places.
- Policy P5. Where applicable, any human remains discovered during implementation of public and private projects within the Planning Area should be treated with respect and dignity and should fully comply with the California Native American Graves Protection and Repatriation Act and other appropriate laws.

City of Corona General Plan

The City of Corona General Plan Historic Resources Element contains the following policies pertaining to cultural resources:

- Policy 4.3.3. Archaeological resources found prior to or during construction shall be evaluated by a qualified archaeologist, and appropriate mitigation measures applied, pursuant to Section 21083.2 of CEQA, before the resumption of development activities. Any measures applied shall include the preparation of a report meeting professional standards, which shall be submitted to the appropriate CHRIS information center.
- Policy 4.3.4. Any project that involves earth-disturbing activities within previously undisturbed soils in an area determined to be archaeologically or culturally sensitive, shall require evaluation of the site by a qualified archaeologist retained by the project applicant. The applicant shall implement the recommendations of the archaeologist, subject to the approval of the City Planning Department.
- Policy 4.3.5. Any project that involves earth-disturbing activities in previously undisturbed soils that have been determined to be archaeologically or culturally sensitive shall require consultation by the applicant with interested federally recognized American Indian Tribe(s) that have a traditional cultural affiliation with the project area and/or the resources affected by the project, for the purposes of determining archaeological and cultural resources impacts and creating appropriate mitigation to address such impacts. The applicant shall also arrange for monitoring of earth-disturbing activities by interested federally recognized American Indian Tribe(s) that have a traditional cultural affiliation with the project area and/or the resources affected by the project, if requested.
- Policy 4.3.8. In the event of the discovery of a burial, human bone, or suspected human bone, all excavation or grading in the vicinity of the find shall halt immediately and the area of the find shall be protected and the project applicant immediately shall notify the Riverside County Coroner of the find and comply with the provisions of the California Health and Safety Code Section 7050.5, including P.R.C. Section 5097.98, if applicable. In the event that human remains are determined to be Native American human remains the applicant shall consult with the Most Likely Descendent (MLD) to determine the appropriate treatment for the Native American human remains.

City of Corona Downtown Revitalization Specific Plan

The City of Corona Downtown Revitalization Specific Plan contains the following policy pertaining to cultural resources:

- Policy 3.B.3 Preserve historic buildings and structures in the Specific Plan area.

City of Norco General Plan

The Land Use Element of the City of Norco General Plan contains the following policies pertaining to cultural resources:

- Policy 2.7.1a. Sites of significant historical, archaeological, and cultural value shall be preserved and/or incorporated into proposed new development with mitigation measures established through the environmental review process.
- Policy 2.7.2b. New development requiring discretionary approval from the Planning Commission shall be approved with a condition that requires any construction activity to stop upon discovery of archaeological resources until such time as a qualified archaeologist, retained by the property owner or developer, has investigated the site and made recommendations regarding the disposition of any items. Human remains shall not be moved until the Riverside County's Coroner's Office has been notified.

City of Norco Municipal Code

Chapter 2.26 Historic Preservation Commission of the City of Norco Municipal Code defines the Historic Preservation Commission, which consists of five members. The municipal code describes the Historic Preservation Commission's responsibilities, such as the responsibility to make recommendations to the City Council about the designation of cultural resources.

4.5.3 Cultural Resources Significance Criteria

The significance criteria for assessing the impacts to cultural resources derived from the CEQA Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it would:

- Cause a substantial adverse change in the significance of a historical resource, as defined in Section 15064.5 of the CEQA Guidelines
- Cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5 of the CEQA Guidelines
- Disturb any human remains, including those interred outside of formal cemeteries
- Cause a substantial adverse change in the significance of a tribal cultural resource pursuant to PRC Section 21084.2.

4.5.4 Cultural Resources Impact Analysis

4.5.4.1 Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

Construction – No Impact

The portion of CA-SBR-12613H/P-33-16681/P-36-013627/P-30-179857 (Southern Sierras "O-Line" power line ROW and towers) previously documented within the Proposed Project area was determined to no longer be extant; therefore, there would be no impact to this resource from overhead installation of the proposed Source Line Route.

The proposed Source Line Route would be installed in an underground configuration within Grand Boulevard between North Joy Street and East 3rd Street in a portion of the Grand Boulevard Historic District (NPS-11000432/P-33-6444). The Grand Boulevard Historic District is listed in the NRHP and is therefore automatically considered eligible for the CRHR; the district is a locally designated City of Corona Historic Landmark. Installation of the proposed underground Source Line Route would not alter or destroy elements that contribute to the district, including the 10 concrete streetlights and luminaries, the boulevard's roadway width, and the alignments of the boulevard's intersections with East 2nd Street and East 3rd Street. Additionally, installation of the proposed underground Source Line Route would not alter or destroy elements that appear likely to contribute to the district, including 12 trees (i.e., nine Mexican fan palms, one Peruvian pepper tree, one eucalyptus tree, and one carob tree) that match the species types of contributing trees listed in the district's nomination form, or sidewalk segments extending along the inner-circle side of the boulevard from the south corner of East 2nd Street and Grand Boulevard to approximately 100 feet south of the intersection of Grand Boulevard and East 3rd Street, and along the outer-circle side of the boulevard from the southeast corner of East 3rd Street and Grand Boulevard to approximately 100 feet south of the intersection. Therefore, underground installation of the proposed Source Line Route would not cause a substantial adverse change in the significance of the Grand Boulevard Historic District.

The historic-era buildings developed by San Vallé Tile Kilns, Inc. (Riverside County APNs 107-060-008 and 107-060-009; 1620 Magnolia Avenue) were recommended ineligible for the CRHR and have been demolished since their documentation in 2011. Therefore, there would be no impact to this resource from the construction of the proposed Circle City Substation site.

The Proposed Project currently does not propose to demolish or alter buildings that are 45 years of age or older on any of the remaining 105 architectural properties that were identified within the Proposed Project area, including previously recorded P-33-006457 (Corona Citrus Association Packing House; Riverside County APN 119-290-050).

Though not anticipated or planned as part of the Proposed Project, if finalized engineering designs entail demolition or alteration within the Proposed Project area of any historic-era buildings or contributing elements to the Grand Boulevard Historic District, or if new resources are discovered during construction, BMPs would be implemented as appropriate and as described in Section 3.9 Environmental Surveys and Section 3.10 Worker Environmental Awareness Training in Chapter 3 – Project Description. These BMPs include reviewing all areas within the Proposed Project study area for cultural resources prior to construction, evaluating all cultural resources potentially affected by construction for eligibility for listing in the CRHR and/or NRHP (should a change in scope trigger a federal nexus requiring evaluation under the NRHP), and avoiding or preserving eligible CRHR or NRHP resources if feasible or implementing appropriate treatment to address Proposed Project impacts/effects.

Operation – No Impact

The Proposed Project's potential for operation impacts is limited to the question of indirect visual impacts to historical resources or potential historical resources. Because the Proposed Project would construct the Mira Loma-Jefferson 66 kV Subtransmission Line and Source Line Route in an existing utility corridor and construct a substation in an existing industrial area, the

operation of the Proposed Project would not result in a significant alteration of a historical resource within or in the vicinity of the Proposed Project. Therefore, there would be no operation impacts to the Proposed Project.

4.5.4.2 Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Construction – No Impact

No prehistoric archaeological resources were identified within the Proposed Project area. A previously documented prehistoric site, CA-RIV-675, was determined to have been destroyed by modern urban development.

The segment of previously documented resource CA-RIV-16681H/CA-SBR-12573H/P-36-13412 (Fuqua Ditch segment) would be adjacent to the proposed Source Line Route, but was determined to no longer be extant within the proposed Project Area. Therefore, no impacts would occur to this resource from construction.

P-33-024245 (ICF-CC-01), consisting of historic-era structural remains and associated refuse, is recommended ineligible for the CRHR and NRHP and is not considered a unique archaeological resource (PRC § 21083.2) due to the resource's lack of historical integrity of association, location, feeling, setting, design, materials, and workmanship. Therefore, construction of the proposed Source Line Route would not result in impacts to this resource.

If changes to the Proposed Project area occur based on final engineering or if new resources are discovered during construction, BMPs would be implemented as appropriate and as described in Section 3.9 Environmental Surveys and Section 3.10 Worker Environmental Awareness Training in Chapter 3 – Project Description. These BMPs include reviewing all areas within the Proposed Project study area for cultural resources prior to construction, evaluating all cultural resources potentially affected by construction for eligibility for listing in the CRHR and/or NRHP (should a change in scope trigger a federal nexus requiring evaluation under the NRHP), and avoiding or preserving eligible CRHR or NRHP resources if feasible or implementing appropriate treatment to address Proposed Project impacts/effects.

Operation – No Impact

No impacts to potential CRHR-eligible archaeological resources are anticipated during operation of the Proposed Project, and operation would not cause a significant adverse change to archaeological resources after the Proposed Project is complete. Ground disturbance during operation and maintenance activities would occur in previously disturbed or potentially undisturbed, but previously surveyed areas. Additionally, a record of culturally sensitive areas is maintained by SCE staff archaeologists and would be consulted to prevent operation impacts through avoidance procedures. As a result, no impacts to archaeological resources are anticipated.

4.5.4.3 Would the project disturb any human remains, including those interred outside of formal cemeteries?

Construction – No Impact

The Proposed Project does not contain any known formal cemetery or burial features. Additionally, records search data and cultural resources inventories did not identify any human remains or any resources that have the potential to encounter human remains in the Proposed Project area. The Proposed Project would not disturb any human remains, including those interred outside of formal cemeteries; therefore, there would be no impact.

Regardless, as described in Section 3.10 Worker Environmental Awareness Training in Chapter 3 – Project Description, SCE would implement the Worker Environmental Awareness Plan (WEAP) as a BMP to train workers and establish procedures for treating previously unidentified finds. In the event of an unanticipated discovery, implementation of the procedures outlined in Section 3.9 Environmental Surveys in Chapter 3 – Project Description would ensure that human remains would be treated in accordance with the following:

- Section 15064.5(d) and (e) of the CEQA Guidelines,
- Section 7050.5 of the California Health and Safety Code, and
- Sections 5097.98 and 5097.94(k) of the PRC.

These procedures include creation of an Unanticipated Discovery Plan prior to construction that would detail processes/procedures for managing unanticipated discoveries.

Operation – No Impact

Because operation of the Proposed Project would include only occasional ground-disturbing activities (e.g., pole replacement), these activities would have a very low potential to encounter human remains, if any are present. Additionally, ground disturbance during operation and maintenance activities would occur in previously disturbed or potentially undisturbed, but previously surveyed areas. If human remains were discovered during operation of the Proposed Project, work would stop and the procedures outlined in Section 3.9 Environmental Surveys in Chapter 3 – Project Description would be implemented, and the remains would be treated in accordance with the following:

- Section 15064.5(d) and (e) of the CEQA Guidelines,
- Section 7050.5 of the California Health and Safety Code, and
- Sections 5097.98 and 5097.94(k) of the PRC.

These procedures include not allowing construction activities within 100-foot radius of the discovery, securing and protecting the area to ensure that no additional disturbance occurs, and notifying the SCE Proposed Project Archaeologist and Riverside or San Bernardino county coroner. Therefore, no impacts are anticipated.

4.5.4.4 Would the project cause a substantial adverse change in the significance of a tribal cultural resource pursuant to PRC Section 21084.2?

Construction – No Impact

Although SCE is not the CEQA lead agency responsible for tribal consultation per PRC Section 21080.3.1, SCE invited the Native American community to share information regarding cultural resources during the 2010 and 2015 Native American outreach efforts, including tribal cultural resources as defined by PRC Section 21074. Based on responses received and information available to SCE as of July 20, 2015, no tribal cultural resources have been identified within the Proposed Project area. Additionally, no resources of Native American origin were identified during surveys for the Proposed Project. Further, the Proposed Project would be constructed in a previously developed area. For example, the Mira Loma-Jefferson 66 kV Subtransmission Line would be constructed in an existing utility corridor, the Source Line Route would be constructed adjacent to existing roadways, and construction of the Circle City Substation is located in an existing industrial area.

As stated in Chapter 3 – Project Description, SCE intends to develop an Unanticipated Discovery Plan prior to construction. The Unanticipated Discovery Plan would include processes/procedures for stakeholder involvement in the event of an unanticipated discovery during construction, including participation of Native American stakeholders identified for the Proposed Project.

If changes to the Proposed Project area occur based on final engineering or if new resources are discovered during construction, other BMPs would be implemented as appropriate and as described in Section 3.9 Environmental Surveys and Section 3.10 Worker Environmental Awareness Training in Chapter 3 – Project Description. These BMPs would include reviewing all areas within the Proposed Project study area for cultural resources prior to construction, evaluating all cultural resources potentially affected by construction for eligibility for listing in the CRHR and/or NRHP (should a change in scope trigger a federal nexus requiring evaluation under the NRHP), and avoiding or preserving eligible CRHR or NRHP resources if feasible or implementing appropriate treatment to address Proposed Project impacts/effects.

Operation – No Impact

No impacts to tribal cultural resources are anticipated during operation of the Proposed Project, and operation would not cause a significant adverse change to tribal cultural resources after the Proposed Project is complete. Ground disturbance during operation and maintenance activities would occur in previously disturbed or potentially undisturbed, but previously surveyed areas. Additionally, a record of culturally sensitive areas is maintained by SCE staff archaeologists and would be consulted to prevent operational impacts through avoidance procedures. As a result, no impacts to tribal cultural resources are anticipated.

4.5.5 Paleontological Resources Environmental Setting

The Proposed Project area is located within the Chino and Prado basins. The Chino Basin consists of a large, flat bowl between the Santa Ana River and, to its north, Chino Creek. The Prado Basin is a lowland area formed by the confluences of Mill Creek, Temescal Wash, and the Santa Ana River. The Chino and Prado basins are generally situated in Holocene and late

Pleistocene gradual fan and/or channel deposits associated with nearby hills and mountains. North of the Santa Ana River, alluvial deposits are dominated by the distal portions of alluvial fans emanating from the San Gabriel Mountains north of the quadrangle. A thin layer of windblown sand covers widespread areas of the fan deposits. Alluvial deposits in the area between the Santa Ana River and Temescal Wash vary, but consist principally of locally derived, older alluvial fan deposits. These deposits rest on remnants of early Quaternary- to late Tertiary-age, non-marine sedimentary deposits derived from local sources, and more distant sources in the San Bernardino Mountains. These deposits were left in part by an ancestral Santa Ana River. Temescal Wash is composed of Holocene and late Pleistocene gradual alluvial channel deposits (California Geological Survey [CGS] 2010). These deposits consist of silty, sandy, and gravelly loams (U.S. Department of Agriculture [USDA] 2011).

Paleontological Resources Records and Maps Search and Survey Results

The following methods were used to analyze the Proposed Project:

- reviewing records regarding mapped resources known to exist in the area;
- analyzing Proposed Project maps, engineering drawings, and technical data; and
- conducting a pedestrian survey of the Proposed Project area.

Record searches were conducted at the Natural History Museum of Los Angeles County and San Bernardino County Museum, which included a review of mapped resources known to exist in the Proposed Project area. The potential for paleontological resources to occur within the Proposed Project was determined on the basis of a paleontological review of the Proposed Project vicinity, mapped geological units that underlie the Proposed Project area, and a field survey (Paleo Services 2010; SWCA Environmental Consultants [SWCA] 2015). The Proposed Project alignment and alternatives were considered in light of this information to assess potential impacts of the Proposed Project to paleontological resources.

Results

No fossil localities have been previously documented within the Proposed Project area based on records searches conducted at the Natural History Museum of Los Angeles County and San Bernardino County Museum. According to the geologic maps of the Corona North and Corona South quadrangles, the study area contains mapped geologic units that range in age from late Pliocene to recent (U.S. Geological Survey [USGS] 2012a, 2012b). The following are geologic units within the Proposed Project area:

- artificial fill (Qaf), modern river deposits (Qw), metamorphic and igneous basement (Kv), young fans (Qf), young alluvial wash (Qyw), alluvial fan (Qyf), channel deposits (Qya), and young eolian (Qye) have no paleontological sensitivity; and
- older sandstone (Qss), older alluvial fan (Qof, Qvof), older alluvium (Qoa), old alluvial wash (Qow), older alluvium (Qvoa), coarser Tertiary units (Tss), and finer Tertiary units (Tsh) have moderate to high paleontological sensitivity.

A pedestrian survey of the Proposed Project area was conducted on July 14 and 15, 2015. The survey included an examination of the surface of the Proposed Project area for: fossils, exposures

of potentially fossiliferous rock, and areas in which fossiliferous rock would be exposed or otherwise impacted during construction. No fossil localities were discovered during the field survey.

4.5.6 Paleontological Resources Regulatory Setting

4.5.6.1 Federal

There are no proposed ground-disturbing activities located on federal lands for the Proposed Project; therefore, there are no federal regulations for paleontological resources that apply to the Proposed Project.

4.5.6.2 State

The significance criterion for assessing the impacts to paleontological resources comes from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

Appendix G (part V) of the CEQA Environmental Guidelines provides guidance relative to significant impacts on paleontological resources, which states, “a project will normally result in a significant impact on the environment if it will ... disrupt or adversely affect a paleontological resource or site or unique geologic feature, except as part of a scientific study.” PRC Section 5097.5 specifies that any unauthorized removal of paleontological remains is a misdemeanor.

4.5.6.3 Local

As previously described, the CPUC has sole and exclusive state jurisdiction over the siting and design of the Proposed Project; therefore, the following discussion of local regulations is provided for informational purposes only. The general plans and municipal codes were reviewed for relevant local policies pertaining to paleontological resources for the cities of Chino, Corona, Eastvale, Norco, and Ontario; for all specific plan areas that would be crossed by the Proposed Project; and for Riverside County and San Bernardino County. No relevant policies pertaining to paleontological resources were identified in the following:

- San Bernardino County General Plan
- City of Eastvale General Plan
- City of Norco General Plan
- City of Ontario Policy Plan
- The Preserve Specific Plan
- Temescal Canyon Area Plan
- North Main Street District Specific Plan (SP-99-1)
- Corona Magnolia Specific Plan (SP-01-2)
- The Township in Corona Specific Plan (SP-82-1)
- Rich-Haven Specific Plan
- Subarea 29 Specific Plan

- Edenglen Specific Plan
- Downtown Revitalization Specific Plan
- Riverside County Municipal Code
- San Bernardino County Municipal Code
- City of Chino Municipal Code
- City of Corona Municipal Code
- City of Eastvale Municipal Code
- City of Norco Municipal Code
- City of Ontario Municipal Code

The following local policies regarding paleontological resources may apply to the Proposed Project.

Riverside County General Plan

The Riverside County General Plan Multipurpose Open Space Element contains the following policies pertaining to paleontological resources:

- OS 19.8 Whenever existing information indicates that a site proposed for development may contain biological, paleontological, or other scientific resources, a report shall be filed stating the extent and potential significance of the resources that may exist within the proposed development and appropriate measures through which the impacts of development may be mitigated.
- OS 19.9 This policy requires that when existing information indicates that a site proposed for development may contain paleontological resources, a paleontologist shall monitor site grading activities, with the authority to halt grading to collect uncovered paleontological resources, curate any resources collected with an appropriate repository, and file a report with the Planning Department documenting any paleontological resources that are found during the course of site grading.

City of Chino General Plan

The City of Chino General Plan Open Space and Conservation Element contains the following policy pertaining to paleontological resources:

- Policy P3. In the event that unknown archaeological or paleontological resources are discovered during construction, the Planning Division shall be notified immediately. All construction shall stop and an archaeologist meeting the Secretary of the Interiors Professional Qualifications Standards in prehistoric or historic archaeology should be retained to evaluate the discovered resources and recommend appropriate action.

City of Corona General Plan

The City of Corona General Plan Historic Resources Element contains the following policies pertaining to paleontological resources:

- Policy 4.3.6. Any project that involves earth-disturbing activities in soil or rock units known or reasonably suspected to be fossil-bearing shall require monitoring by a qualified paleontologist retained by the project applicant for the duration of excavation or trenching.
- Policy 4.3.7. Paleontological resources found prior to or during construction shall be evaluated by a qualified paleontologist, and appropriate mitigation measures applied, pursuant to Section 21083.2 of CEQA, before the resumption of development activities. Any measures applied shall include the preparation of a report meeting professional standards, which shall be submitted to the Riverside County Museum of Natural History.

4.5.7 Paleontological Resources Impact Analysis

4.5.7.1 Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

Construction – Less-than-Significant Impact

Based on an analysis of data from a paleontological review and USGS geologic maps, there are mapped geological units of moderate to high paleontological sensitivity within the Proposed Project vicinity. Construction of the Proposed Project has the potential to impact paleontological resources in these areas.

Impacts to potentially unique paleontological resources or unique geologic features resulting from construction of the Proposed Project would be reduced to a less-than-significant level through the implementation of APM-PAL-01, which requires preparation and implementation of a Paleontological Resources Management Plan. Additionally, as a standard BMP and as described in Section 3.10 Worker Environmental Awareness Training in Chapter 3 – Project Description, a WEAP would provide training to workers and establish procedures for treating previously unidentified paleontological resources or geological features. Thus, any impacts to paleontological resources resulting from construction of the Proposed Project would be less than significant.

Operation – Less-than-Significant Impact

Operation and maintenance activities have a low potential to impact paleontological resources. The only potential for impacting resources would be during the occasional replacement of poles or road improvement and grading activities. Operation and maintenance activities are governed by standard BMPs similar to those described in Section 3.9 Environmental Surveys and Section 3.10 Worker Environmental Awareness Training in Chapter 3 – Project Description. These BMPs include reviewing all areas within the Proposed Project study area for paleontological resources prior to construction. Implementation of these BMPs would guide the protection of potentially significant paleontological resources after construction.

4.5.8 Applicant-Proposed Measures

No APMs are proposed for cultural resources; however, SCE would implement its standard BMPs related to the protection of cultural resources, as described in Section 3.9 Environmental Surveys and Section 3.10 Worker Environmental Awareness Training in Chapter 3 – Project Description.

SCE proposes the following APM to minimize potential impacts to paleontological resources:

- **APM-PAL-01:** A Paleontological Resources Management Plan would be developed for construction within areas that have been identified as having a moderate and high sensitivity for paleontological resources, and would identify monitoring and treatment requirements for sensitive paleontological resources of significance. The Paleontological Resources Management Plan would be prepared by a professional paleontologist in accordance with the recommendations of the Society of Vertebrate Paleontology.

4.5.9 Alternative Substation Site

Substation Site Alternative B is located immediately southeast of the proposed Circle City Substation site (i.e., Substation Site Alternative A) on a vacant lot north of All American Way. No previously documented cultural resources were identified on the site during the cultural resources records search. Substation Site Alternative B was inventoried during the pedestrian survey, and no historic, archaeological, tribal cultural, or paleontological resources were identified. Both substation sites are located within similar geological units. Therefore, construction of Substation Site Alternative B would result in a similar impact level to paleontological resources as that of the proposed Circle City Substation site.

4.5.10 Alternative Source Line Routes

Source Line Route Alternative 2 and Source Line Route Alternative 4 would differ from the proposed Source Line Route by traveling along Quarry Street, parallel to and south of the preferred route on 3rd Street. The segment of previously documented CA-RIV-3832H (Atchison, Topeka, and Santa Fe Railroad grade and associated features) is reported to be within the Source Line Route Alternatives 2 alignment. It was determined the portion of CA-RIV-3832H within the Source Line Route Alternative 2 alignment has been destroyed. Additionally, there is no proposed demolition or alteration to buildings that are 45 years of age or older located along the Source Line Route Alternative 2 and Source Line Route Alternative 4 alignments. Analysis from the paleontological review indicated that similar geological units exist within the alternative routes. Therefore, construction of Source Line Route Alternative 2 and Source Line Route Alternative 4 would result in similar impacts to archaeological, historical, tribal, and paleontological resources as the proposed Source Line Route.

Source Line Route Alternative 2 and Source Line Route Alternative 3 would differ from the proposed Source Line Route by traveling south from the substation site, crossing Sherborn Street and Interstate 15, and continuing south on Compton Avenue to Old Temescal Road. CA-RIV-3832H was reported to be within the Source Line Route Alternative 3, but was determined to have been destroyed. Additionally, there is no proposed demolition or alteration to buildings that are 45 years of age or older located along the Source Line Route Alternative 2 and Source Line

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Route Alternative 3 alignments. Analysis from the paleontological review indicated that similar geological formations exist along Source Line Route Alternative 2, Source Line Route Alternative 3, and the proposed Source Line Route. Therefore, the construction of Source Line Route Alternative 2 and Source Line Route Alternative 3 would be expected to result in similar impacts to archaeological, historical, tribal, and paleontological resources as the proposed Source Line Route.

4.5.11 Alternative Mira Loma-Jefferson 66 kV Subtransmission Line Routes

Mira Loma-Jefferson 66 kV Subtransmission Line Route Alternative 2 would follow the same alignment as the proposed Mira Loma-Jefferson 66 kV Subtransmission Line Route, but would include an approximately 0.4-mile-long underground section that would be installed along Hellman Avenue, north of Schleisman Road. Because Alternative 2 would be constructed along the same route as the proposed Mira Loma-Jefferson 66 kV Subtransmission Line, construction of Alternative 2 would result in a similar level of impact to archaeological, historical, tribal, and paleontological resources.

Mira Loma-Jefferson 66 kV Subtransmission Line Route Alternative 3 would diverge from the proposed Mira Loma-Jefferson 66 kV Subtransmission Line Route where the alignment would travel south along Archibald Avenue; instead, Alternative 3 would cross the Santa Ana River and rejoin the proposed Mira Loma-Jefferson 66 kV Subtransmission Line Route at East River Road in the City of Norco. Based on the similarity of the two route alignments and the results of the cultural resources records search and the inventory during the pedestrian survey, the construction of Alternative 3 would result in a similar level of impact to archaeological, historical, tribal, and paleontological resources.

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ATTACHMENT 4.5-A: NATIVE AMERICAN CORRESPONDENCE

**Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project
(formerly Horsetown Substation Project)**

**Correspondence Log and Documentation on Southern California Edison's (SCE) Coordination with the
Native American Heritage Commission and Native American Community**

Date	Description
December 9, 2009	Request from Natasha Tabares (SCE) to Dave Singleton (Native American Heritage Commission) for Sacred Lands file search and Native American contact list for the Project (formerly known as the Horsetown Substation Project).
December 22, 2009	Letter from Dave Singleton (Native American Heritage Commission) to Natasha Tabares with the results of a sacred lands file search and list of Native American contacts for the Project (formerly known as the Horsetown Substation Project).
January 13, 2010	Letter from Natasha Tabares (SCE) to Luther Salgado Jr. (Cahuilla Band of Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
January 13, 2010	Letter from Natasha Tabares (SCE) to Sam Dunlap (Gabrielino Tongva Nation) introducing the Project and requesting any information, questions, or concerns regarding the Project (formerly known as the Horsetown Substation Project).
January 13, 2010	Letter from Natasha Tabares (SCE) to Shasta Gaughen (Kupa Cultural Center, Pala Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project (formerly known as the Horsetown Substation Project).
January 13, 2010	Letter from Natasha Tabares (SCE) to Francine Kupsch (Los Coyotes Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project (formerly known as the Horsetown Substation Project).
January 13, 2010	Letter from Natasha Tabares (SCE) to Willie Pink (Luiseno) introducing the Project and requesting any information, questions, or concerns regarding the Project (formerly known as the Horsetown Substation Project).
January 13, 2010	Letter from Natasha Tabares (SCE) to Michael Contreras (Morongo Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project (formerly known as the Horsetown Substation Project).
January 13, 2010	Letter from Natasha Tabares (SCE) to Paul Macarro (Pechanga Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project (formerly known as the Horsetown Substation Project).
January 13, 2010	Letter from Natasha Tabares (SCE) to Anna Hoover (Pechanga Cultural Resources Department) introducing the Project and requesting any information, questions, or concerns regarding the Project (formerly known as the Horsetown Substation Project).
January 13, 2010	Letter from Natasha Tabares (SCE) to Joseph Hamilton (Ramona Band of Cahuilla Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project (formerly known as

Date	Description
	the Horsetown Substation Project).
January 13, 2010	Letter from Natasha Tabares (SCE) to Anthony Morales (San Gabriel Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project (formerly known as the Horsetown Substation Project).
January 13, 2010	Letter from Natasha Tabares (SCE) to John Marcus (Santa Rosa Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project (formerly known as the Horsetown Substation Project).
January 13, 2010	Letter from Natasha Tabares (SCE) to Joseph Ontiveros (Soboba Band of Luiseno Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project (formerly known as the Horsetown Substation Project).
January 29, 2010	Voice message from Anna Hoover (Pechanga Cultural Resources Department) to Natasha Tabares (SCE) regarding the Project.
February 1, 2010	Phone conversation between Anna Hoover (Pechanga Cultural Resources Department) and Natasha Tabares (SCE) regarding the Project.
February 3, 2010	Letter from Joseph Ontiveros (Soboba Band of Mission Indians) to Natasha Tabares (SCE) regarding interest in the Project.
February 4, 2010	Letter from Shasta Gaughen (Kupa Cultural Center, Pala Band of Mission Indians) to Natasha Tabares (SCE) indicated the Project is outside of the tribe's Traditional Use Area.
May 17, 2010	Letter from Dave Singleton (Native American Heritage Commission) to Natasha Tabares with the results of a sacred lands file search and list of Native American contacts for the Project.
June 3, 2010	Letter from Natasha Tabares (SCE) to Paul Macarro (Pechanga Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
June 3, 2010	Letter from Natasha Tabares (SCE) to Joseph Hamilton (Ramona Band of Cahuilla Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
June 3, 2010	Letter from Natasha Tabares (SCE) to James Ramos (San Manuel Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
June 3, 2010	Letter from Natasha Tabares (SCE) to Cindi Alvitre (Ti'At Society) introducing the Project and requesting any information, questions, or concerns regarding the Project.
June 3, 2010	Letter from Natasha Tabares (SCE) to Anthony Morales (San Gabriel Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
June 3, 2010	Letter from Natasha Tabares (SCE) to John Marcus (Santa Rosa Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
June 3, 2010	Letter from Natasha Tabares (SCE) to Sam Dunlap (Gabrielino Tongva Nation) introducing the Project and requesting any information, questions, or concerns regarding the Project.

Date	Description
June 3, 2010	Letter from Natasha Tabares (SCE) to Michael Contreras (Morongo Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
June 3, 2010	Letter from Natasha Tabares (SCE) to Ann Brierty (San Manuel Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
June 3, 2010	Letter from Natasha Tabares (SCE) to Alfred Cruz (Juaneno Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
June 3, 2010	Letter from Natasha Tabares (SCE) to Shasta Gaughen (Kupa Cultural Center, Pala Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
June 3, 2010	Letter from Natasha Tabares (SCE) to Mark Macarro (Pechanga Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
June 3, 2010	Letter from Natasha Tabares (SCE) to Willie Pink (Luiseno) introducing the Project and requesting any information, questions, or concerns regarding the Project.
June 3, 2010	Letter from Natasha Tabares (SCE) to Goldie Walker (Serrano Nation of Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
June 3, 2010	Letter from Natasha Tabares (SCE) to Luther Salgado Jr. (Cahuilla Band of Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
June 3, 2010	Letter from Natasha Tabares (SCE) to Anna Hoover (Pechanga Cultural Resources Department) introducing the Project and requesting any information, questions, or concerns regarding the Project.
June 3, 2010	Letter from Natasha Tabares (SCE) to Joseph Ontiveros (Soboba Band of Luiseno Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
June 14, 2010	Letter from Joseph Ontiveros (Soboba Band of Mission Indians) to Natasha Tabares (SCE) regarding interest in the Project.
June 15, 2010	Letter from Shasta Gaughen (Kupa Cultural Center, Pala Band of Mission Indians) to Natasha Tabares (SCE) indicated the Project is outside of the tribe's Traditional Use Area.
September 12, 2011	Professional Tribal Monitoring at the Circle City Substation Project Site (Survey) Work Order document signed by Mark Macarro (Pechanga Band of Mission Indians) and Chris Doolittle (SCE).
September 12, 2011	Robin Hoffman (ICF International) met with Emily Lopez (Pechanga monitor) in the field to discuss the field survey schedule and coordination efforts. Lopez did not make any further site visits, explaining that she perceived only a very minimal potential for encountering intact archaeological deposits for the Project due to the heavily disturbed nature of the majority of the Project area. Results of field meeting documented in ICF report prepared by Hoffman, R., T. Yates, K. Crawford (2012), <i>Cultural Resources Inventory Report for the Proposed Circle City Substation and Mira Loma-Jefferson Subtransmission Line</i>

Date	Description
	<i>Project, Riverside and San Bernardino Counties, California.</i>
March 9, 2015	Request from Amanda Cannon (SCE) to the Native American Heritage Commission for a sacred lands file search and Native American contact list for the Project.
April 6, 2015	Letter from Katy Sanchez (Native American Heritage Commission) to Amanda Cannon (SCE) with the results of a sacred lands file search and list of Native American contacts for the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Bennae Calac (Pauma Valley Band of Luiseno Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to To Whom it May Concern (Juaneno Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Cultural Department (San Luis Rey Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Charles Devers (Pauma and Yuima Reservation) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Sam Dunlap (Gabrielino/Tongva Nation) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Anita Espinoza (Juaneno Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Shasta Gaughen (Pala Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Sandonne Goad (Gabrielino/Tongva Nation) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Anna Hoover (Pechanga Cultural Resources Department) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Sonia Johnston (Juaneno Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Paul Macarro (Pechanga Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Randall Majel (Pauma & Yuima Reservation) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Mark Macarro (Pechanga Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.

Date	Description
May 22, 2015	Letter from Amanda Cannon (SCE) to Robert Martin (Morongo Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Bo Mazzetti (Rincon Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Anthony Morales (Gabrieleno/Tongva San Gabriel Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Rosemary Morillo (Soboba Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Joseph Ontiveros (Soboba Band of Luiseno Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to To Whom it May Concern (Pauma & Yuima) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Lavonne Peck (La Jolla Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to William Pink (Luiseno) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Teresa Romero (Juaneno Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Andrew Salas (Gabrieleno Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Luther Salgado (Cahuilla Band of Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Adolph Sepulveda (Juaneno Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Ernest Silva (Morongo Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Robert Smith (Pala Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Denisa Torres (Morongo Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to To Whom it May Concern (San Luis Rey

Date	Description
	Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
May 22, 2015	Letter from Amanda Cannon (SCE) to Vincent Whipple (Rincon Band of Mission Indians) introducing the Project and requesting any information, questions, or concerns regarding the Project.
June 1, 2015	Email from Amanda Cannon (SCE) to John Tommy Rosas (Tongva Ancestral Territorial Tribe Nation) introducing the Project and requesting any information, questions, or concerns regarding the Project.
June 1, 2015	Email from John Tommy Rosas (Tongva Ancestral Territorial Tribe Nation) to Amanda Cannon (SCE) requesting monitoring of excavations.
June 1, 2015	Email from Andrew Salas (Gabrieleno Band of Mission Indians) to Tommy Rosas (Tongva Ancestral Territorial Tribe Nation) with CC to Amanda Cannon (SCE) regarding Mr. Rosa's request to use Mr. Salas' group for monitoring.
June 1, 2015	Letter from Rose Duro (Rincon Band of Luiseno Indians) to Amanda Cannon (SCE) indicating Project is not within the Rincon's Historic boundaries.
June 1, 2015	Email from Andrew Salas (Gabrieleno Band of Mission Indians) to Amanda Cannon (SCE) requesting monitoring of ground disturbing activities.
June 5, 2015	Email from Alexis Wallick sent on behalf of Shasta Gaughen (Pala Band of Mission Indians) to Amanda Cannon (SCE) with two attached letters (dated June 5, 2015 and February 27, 2015) indicating the Project is beyond the tribe's Traditional Use Area and providing tribal contact information.
June 10, 2015	Email from Amanda Cannon to John Tommy Rosas (Tongva Ancestral Territorial Tribe Nation) in response to his June 1, 2015 email.
June 10, 2015	Email from John Tommy Rosas (Tongva Ancestral Territorial Tribe Nation) to Amanda Cannon (SCE) in response to her June 10, 2015 email.
June 10, 2015	Email from Amanda Cannon to Andrew Salas (Gabrieleno Band of Mission Indians) in response to his June 1, 2015 email.
June 12, 2015	Email from Andrew Salas (Gabrieleno Band of Mission Indians) to Amanda Cannon (SCE) in response to her June 10, 2015 email.
June 10, 2015	Letter from Joseph Ontiveros (Soboba Band of Luiseno Indians) to Amanda Cannon (SCE) indicating interest in the Project.
June 11, 2015	Letter from Yvonne L. Markle (Cahuilla Band of Indians) to Amanda Cannon (SCE) indicating SCE letter was forwarded to a new address and notifying of an address change.
June 12, 2015	Email from Andrew Salas (Gabrieleno Band of Mission Indians) to Amanda Cannon (SCE) in response to her June 10, 2015 email.
June 15, 2015	Email from Chris Devers (Pauma Band of Luiseno Indians) to Amanda Cannon (SCE) indicating unaware of any cultural resources within the Project area and recommending use of monitors for ground disturbance.
June 16, 2015	Email from Amanda Cannon (SCE) to Chris Devers (Pauma Band of Luiseno Indians) in response to his June 15, 2015 email.
June 30, 2015	Email and Letter from Raymond Huaute (Morongo Band of Mission Indians) to Amanda Cannon (SCE) indicating interest in the Project.
July 6, 2015	Phone conversation between Anna Hoover (Pechanga Cultural Resources Department) and Amanda Cannon (SCE) indicating interest in the Project and additional information to be provided to SCE.

Date	Description
July 9, 2015	Email from Amanda Cannon (SCE) to Joseph Ontiveros (Soboba Band of Luiseno Indians) in response to his June 10, 2015 letter.
July 9, 2015	Email from Amanda Cannon (SCE) to Raymond Huaute (Morongo Band of Mission Indians) in response to his June 30, 2015 letter.
July 16, 2015	Email from Joseph Ontiveros (Soboba Band of Luiseno Indians) to Amanda Cannon (SCE) in response to her July 9, 2015 email.



Mr. Dave Singleton
Program Analyst
Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, CA 95814

December 9, 2009

SUBJECT: Sacred Lands File Search Request for the Proposed Horsetown Substation Project (IO 306687), Riverside County, California

Dear Mr. Singleton:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kv) substation (Horsetown Substation) in order to meet projected electrical demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will require the construction of additional 66 kv lines to serve the substation. The tentative locations of the substation and potential routes for the transmission lines are located within the project boundary (Maps 1 and 2). SCE requests a review of the Sacred Lands File for the proposed Horsetown Project in Riverside County, California.

The project area is located on portions of Sections 16, 17, 18, 19, 20, 21, 28, 29, 30, 31, 32 and 33 Township 3 South, Range 6 West, Mount Diablo Base Meridian (MDBM) as depicted in the Corona North and Corona South USGS 7.5 Minute Series Topographic Quadrangle. The southern extent of the project area is located in a portion of Section 5, Township 4 South, Range 6 West, Mount Diablo Base Meridian (MDBM) as depicted in the Corona South USGS 7.5 Minute Series Topographic Quadrangle. The project area is crossed by the intersection of Highways 15 and 91.

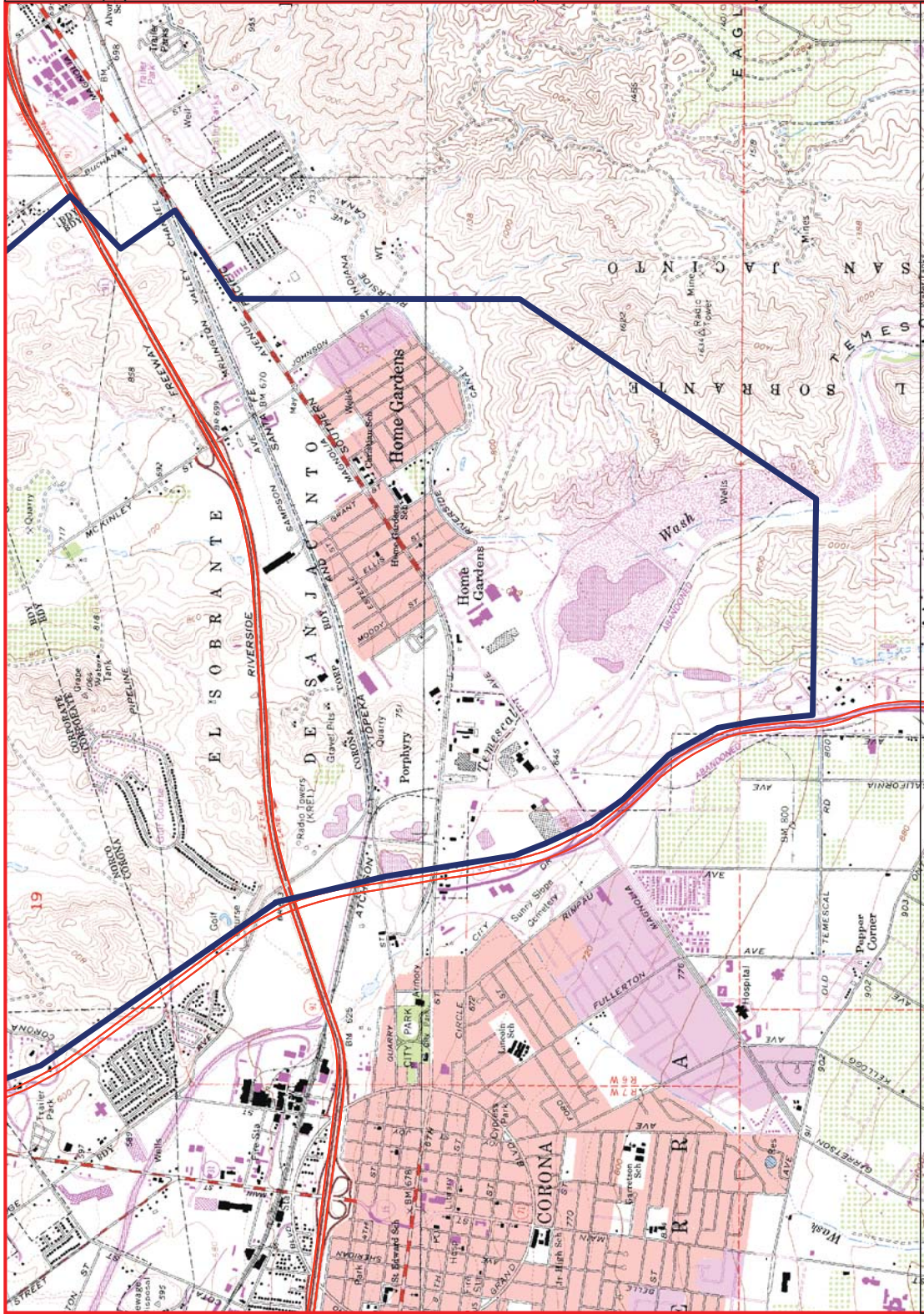
SCE would appreciate any information you may have regarding Native American cultural resources located in or near the proposed project location that could be affected by the proposed project. Any information concerning the identity, location, character, and traditional use of cultural places identified during consultation will be considered confidential.

Please submit the results of this search via email to natasha.tabares@sce.com or regular mail to my attention at the address below. Thank you for your assistance and participation in this project.

Sincerely,

Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Maps 1 and 2



Legend

- Project Boundary
- Freeway
- Highway

USGS 7.5 minute topographic Quadrangle:
Corona North and Corona South, California

Map 2 of 2
Issued for: Native American
Heritage Commission
Project: Horseshoe
Date: December 8, 2009
Original Scale: 1:24,000
Project Number: 305922

Index Map

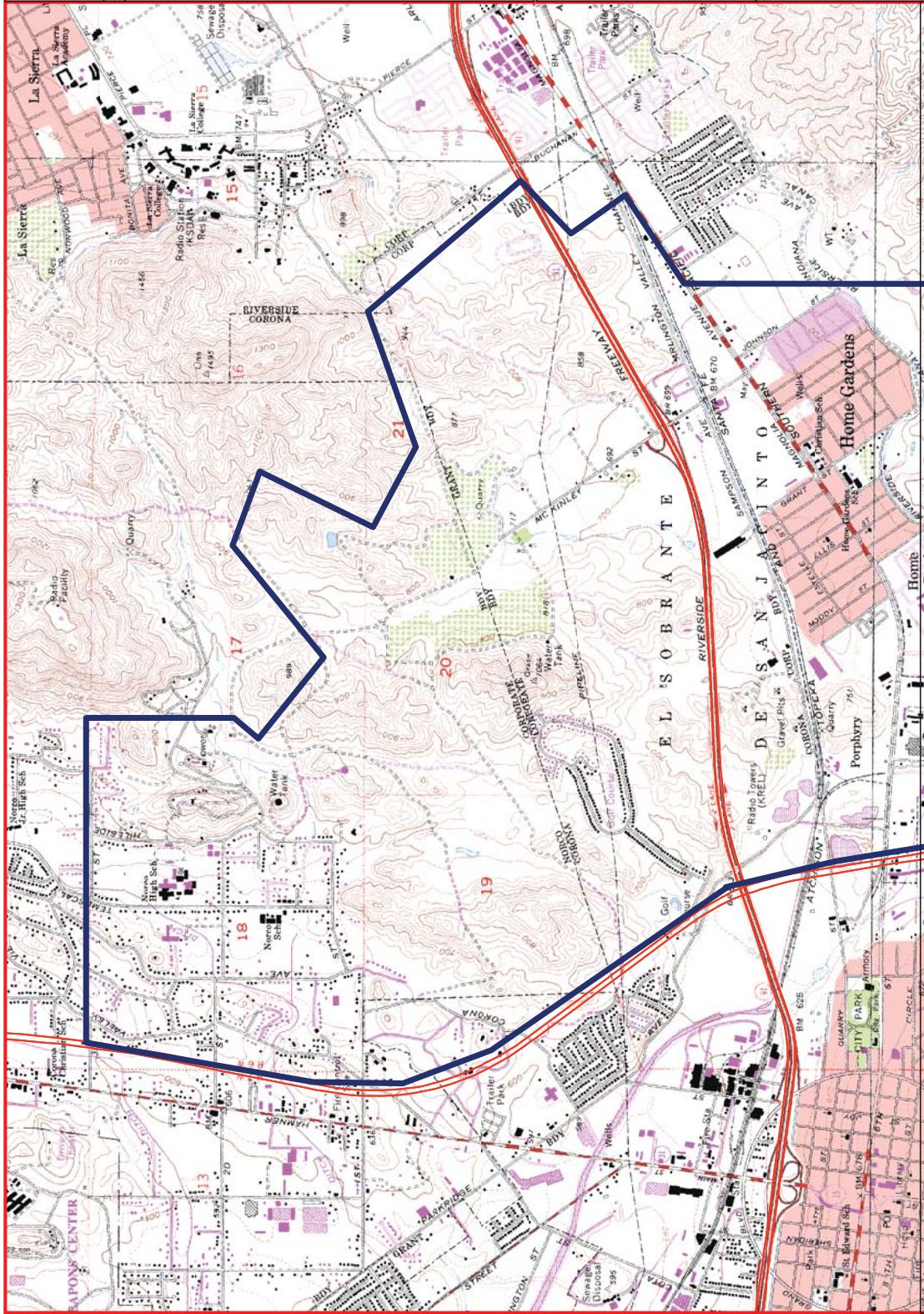


Contains Transmission
Information
limited to FERC
Standards of Conduct
CONFIDENTIAL
Complete Liability
Insurance Information
If any questions contact
Corporate Security (27875)
for handling/storage
requirements.

Projection: NAD 83 UTM Zone 11

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SOUTHERN CALIFORNIA EDISON
AN EDISON INTERNATIONAL COMPANY



Legend

-  Project Boundary
-  Freeway
-  Highway

USGS 7.5 minute topographic Quadrangle:
Corona North and Corona South, California

Map 1 of 2
 Issued for: Native American
 Heritage Commission
 Project: Horseshoe
 Date: December 8, 2009
 Original Scale: 1:24,000
 Project Number: 305922

Index Map



Contains Transmission
 Information
 limited to FERC
 Standards of Conduct
 CONFIDENTIAL
 Contains
 Infrastructure Information
 If any questions contact
 Corporate Security (27875)
 for handling/storage
 requirements.

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NATIVE AMERICAN HERITAGE COMMISSION

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ds_nahc@pacbell.net



December 22, 2009

Ms. Natasha Tabares, RPA; Archaeologist

SOUTHERN CALIFORNIA EDISON

2244 Walnut Grove Avenue
Rosemead, CA 91770

Sent by U.S. Postal Service
Number of pages: 4

Re: Request for a Sacred Lands File Search and Native American Contacts List for a Proposed "Horsetown Substation Project (IO 306687)"; located between the cities of Corona and Norco; Riverside County, California

Dear Ms. Tabares:

The Native American Heritage Commission (NAHC), the State of California 'Trustee Agency' for the protection and preservation of Native American cultural resources (c.f. CA Public Resources Code §21070; also c.f. *Environmental Protection Information Center v. Johnson* (1985) 170 Cal App. 3rd 604), was able to perform a record search of its Sacred Lands File (SLF) for the affected project area (APE) requested. The California Environmental Quality Act (CEQA; CA Public Resources Code Section 21000 – 21177) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the California Code of Regulations §15064.5(b)(c)(f) CEQA guidelines). Section 15382 of the 2007 CEQA Guidelines defines a significant impact on the environment as "a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ... objects of historic or aesthetic significance." The NAHC SLF search **did not indicate** the presence of Native American cultural resources within one-half - mile radius of the proposed project (APE). However, there are Native American cultural resources in close proximity to the APE.

This letter includes state and federal statutes relating to Native American historic properties of religious and cultural significance to American Indian tribes and individuals as 'consulting parties' under both state and federal law.

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Enclosed are the names of the nearest tribes and interested Native American individuals that the NAHC recommends as 'consulting parties,' for this purpose, that may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). We recommend that you contact persons on the attached list of Native American contacts. Furthermore we suggest that you contact the California Historic Resources Information System (CHRIS) at the Office of Historic Preservation Coordinator's office (at (916) 653-7278, for referral to the nearest Information Center of which there are 10.

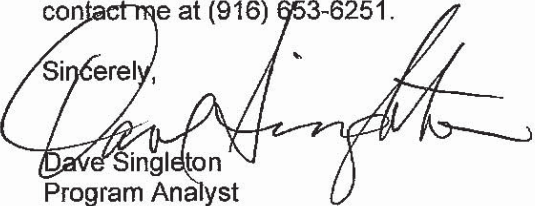
Consultation with tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA (42 U.S.C. 4321-43351) and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 [f] *et seq*), 36 CFR Part 800.3, the President's Council on Environmental Quality (CSQ; 42 U.S.C. 4371 *et seq*) and NAGPRA (25 U.S.C. 3001-3013), as appropriate. .

Lead agencies should consider avoidance, as defined in Section 15370 of the California Environmental Quality Act (CEQA) when significant cultural resources could be affected by a project. Also, Public Resources Code Section 5097.98 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery. Discussion of these should be included in your environmental documents, as appropriate.

The response to this search for Native American cultural resources is conducted in the NAHC Sacred Lands Inventory, established by the California Legislature (CA Public Resources Code §5097.94(a) and is exempt from the CA Public Records Act (c.f. California Government Code §6254.10) although Native Americans on the attached contact list may wish to reveal the nature of identified cultural resources/historic properties. Confidentiality of 'historic properties of religious and cultural significance' may also be protected the under Section 304 of the NHPA or at the Secretary of the Interior' discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C, 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APE and possibly threatened by proposed project activity.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,


Dave Singleton
Program Analyst

Attachment: Native American Contacts List (NOTE: we further recommend that other forms of 'proof of mailing or proof of contact be utilized instead of 'Return Receipt Requested' Certified or Registered Mail.) Further, we suggest a follow-up telephone call to the contacts if the replies are not received or need clarification.

Native American Contact
Riverside County
December 22, 2009

Willie Pink
48310 Pechanga Road Luiseno
Temecula , CA 92592
wjpink@hotmail.com
(909) 936-1216
Prefers e-mail contact

Soboba Band of Luiseno Indians
Joseph Ontiveros, Cultural Resources Manager
P.O. Box 487 Luiseno
San Jacinto , CA 92581
jontiveros@soboba-nsn.gov
(951) 654-2765
FAX: (951) 654-4198

Cahuilla Band of Indians
Luther Salgado, Sr.
PO Box 391760 Cahuilla
Anza , CA 92539
tribalcouncil@cahuilla.net
915-763-5549

Anna Hoover, Cultural Analyst
Pechanga Cultural Resources Department
P.O. Box 2183 Luiseño
Temecula , CA 92593
(951-770-8104
(951) 694-0446 - FAX
ahoover@pechanga-nsn.gov

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code. Also, federal National Environmental Policy Act (NEPA), National Historic Preservation Act, Section 106, and federal NAGPRA.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Horsetown Substation Project (IO 306687) located in Riverside County, California for which a Sacred Lands File search and Native American Contacts list were requested.

Native American Contact

Riverside County
December 22, 2009

Los Coyotes Band of Mission Indians
Francine Kupsch, Spokesperson
P.O. Box 189 Cahuilla
Warner , CA 92086
loscoyotes@earthlink.net
(760) 782-0711
(760) 782-2701 - FAX

Santa Rosa Band of Mission Indians
John Marcus, Chairman
P.O. Box 609 Cahuilla
Hemet , CA 92546
srtribaloffice@aol.com
(951) 658-5311
(951) 658-6733 Fax

Pechanga Band of Mission Indians
Paul Macarro, Cultural Resource Center
P.O. Box 1477 Luiseno
Temecula , CA 92593
pmacarro@pechanga-nsn.
(951) 308-9295 Ext 8106
(951) 676-2768
(951) 506-9491 Fax

Gabrielino Tongva Nation
Sam Dunlap, Tribal Secretary
P.O. Box 86908 Gabrielino Tongva
Los Angeles , CA 90086
samdunlap@earthlink.net

(909) 262-9351 - cell

Ramona Band of Cahuilla Mission Indians
Joseph Hamilton, Chairman
P.O. Box 391670 Cahuilla
Anza , CA 92539
admin@ramonatribe.com
(951) 763-4105
(951) 763-4325 Fax

Morongo Band of Mission Indians
Michael Contreras, Cultural Heritage Prog.
12700 Pumarra Road Cahuilla
Banning , CA 92220 Serrano
mcontreras@monongo-nsn.
(951) 755-5025
(951)201-1866 - cell
(951) 922-0105 Fax

Gabrieleno/Tongva San Gabriel Band of Mission
Anthony Morales, Chairperson
PO Box 693 Gabrielino Tongva
San Gabriel , CA 91778
(626) 286-1262 -FAX
(626) 286-1632
(626) 286-1758 - Home
(626) 286-1262 Fax

Kupa Cultural Center (Pala Band)
Shasta Gaughen, Assistant Director
35008 Pala-Temecula Rd.PMB Box Luiseno
Pala , CA 92059
cupa@palatribe.com
(760) 891-3590
(760) 742-4543 - FAX

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code. Also, federal National Environmental Policy Act (NEPA), National Historic Preservation Act, Section 106, and federal NAGPRA.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Horsetown Substation Project (IO 306687) located in Riverside County, California for which a Sacred Lands File search and Native American Contacts list were requested.



Mr. Luther Salgado, Sr.
Cahuilla Band of Indians
P.O. Box 391760
Anza, CA 92539

January 13, 2010

SUBJECT: Native American Consultation Regarding the Proposed Horsetown Substation Project, Riverside County, California.

Dear Mr. Salgado:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kv) substation (Horsetown Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kv lines to serve the substation. The tentative locations of the substation and the potential routes for the transmission lines are located within the project boundary (Figure 1). At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

The project area is located on portions of Sections 16, 17, 18, 19, 20, 21, 28, 29, 30, 31, 32 and 33 Township 3 South, Range 6 West, San Bernardino Base Meridian as depicted in the Corona North and Corona South USGS 7.5 Minute Series Topographic Quadrangles. The southern extent of the project area is located on portions of Section 5, Township 4 South, Range 6 West, San Bernardino Base Meridian as depicted in the Corona South USGS 7.5 Minute Series Topographic Quadrangle. The project area is crossed by the intersection of Highways 15 and 91.

SCE would appreciate any information you may have regarding Native American cultural resources located in or near the proposed project location that could be affected by the proposed project. Any information concerning the location, identity, character and traditional use of cultural places identified during consultation will be considered confidential.

We encourage you to participate in this process. The potential impacts that this project may have on cultural resources important to the Native American community cannot be evaluated unless we are aware that the resource(s) exist. If possible, for project planning purposes we would like to receive any questions or concerns regarding this project within the next two weeks. If we have not heard from you within 30 days of the receipt of this letter, we will assume that you do not wish to participate in further consultation.

If you have any questions, please feel free to call me at (626) 302-5548, or via email at natasha.tabares@sce.com. Thank you for your assistance and participation in this project.

Sincerely,

Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Mr. Sam Dunlap
Gabrielino Tongva Nation
P.O. Box 86908
Los Angeles, CA 90086

January 13, 2010

SUBJECT: Native American Consultation Regarding the Proposed Horsetown Substation Project, Riverside County, California.

Dear Mr. Dunlap:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kv) substation (Horsetown Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kv lines to serve the substation. The tentative locations of the substation and the potential routes for the transmission lines are located within the project boundary (Figure 1). At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

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Sincerely,

Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Ms. Shasta Gaughen
Kupa Cultural Center
35008 Pala-Temecula Road
Pala, CA 92059

January 13, 2010

SUBJECT: Native American Consultation Regarding the Proposed Horsetown Substation Project, Riverside County, California.

Dear Ms. Gaughen:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kv) substation (Horsetown Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kv lines to serve the substation. The tentative locations of the substation and the potential routes for the transmission lines are located within the project boundary (Figure 1). At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

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Sincerely,

Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Ms. Francine Kupsch
Los Coyotes Band of Mission Indians
P.O. Box 189
Warner, CA 92086

January 13, 2010

SUBJECT: Native American Consultation Regarding the Proposed Horsetown Substation Project, Riverside County, California.

Dear Ms. Kupsch:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kv) substation (Horsetown Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kv lines to serve the substation. The tentative locations of the substation and the potential routes for the transmission lines are located within the project boundary (Figure 1). At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

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Sincerely,

Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Mr. Willie Pink
48310 Pechanga Road
Temecula, CA 92592

January 13, 2010

SUBJECT: Native American Consultation Regarding the Proposed Horsetown Substation Project, Riverside County, California.

Dear Mr. Pink:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kv) substation (Horsetown Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kv lines to serve the substation. The tentative locations of the substation and the potential routes for the transmission lines are located within the project boundary (Figure 1). At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

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Sincerely,

Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Mr. Michael Contreras
Morongo Band of Mission Indians
12700 Pumarra Road
Banning, CA 92220

January 13, 2010

SUBJECT: Native American Consultation Regarding the Proposed Horsetown Substation Project, Riverside County, California.

Dear Mr. Contreras:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kv) substation (Horsetown Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kv lines to serve the substation. The tentative locations of the substation and the potential routes for the transmission lines are located within the project boundary (Figure 1). At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

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Sincerely,

Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Mr. Paul Macarro
Pechanga Band of Mission Indians
P.O. Box 1477
Temecula, CA 92593

January 13, 2010

SUBJECT: Native American Consultation Regarding the Proposed Horsetown Substation Project, Riverside County, California.

Dear Mr. Macarro:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kv) substation (Horsetown Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kv lines to serve the substation. The tentative locations of the substation and the potential routes for the transmission lines are located within the project boundary (Figure 1). At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

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Sincerely,

Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Ms. Anna Hoover
Pechanga Cultural Resources Department
P.O. Box 2183
Temecula, CA 92593

January 13, 2010

SUBJECT: Native American Consultation Regarding the Proposed Horsetown Substation Project, Riverside County, California.

Dear Ms. Hoover:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kv) substation (Horsetown Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kv lines to serve the substation. The tentative locations of the substation and the potential routes for the transmission lines are located within the project boundary (Figure 1). At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

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Sincerely,

Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Mr. Joseph Hamilton
Ramona Band of Cahuilla Mission Indians
P.O. Box 391670
Anza, CA 92539

January 13, 2010

SUBJECT: Native American Consultation Regarding the Proposed Horsetown Substation Project, Riverside County, California.

Dear Mr. Hamilton:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kv) substation (Horsetown Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kv lines to serve the substation. The tentative locations of the substation and the potential routes for the transmission lines are located within the project boundary (Figure 1). At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

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Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Mr. Anthony Morales
San Gabriel Band of Mission Indians
P.O. Box 693
San Gabriel, CA 91778

January 13, 2010

SUBJECT: Native American Consultation Regarding the Proposed Horsetown Substation Project, Riverside County, California.

Dear Mr. Morales:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kv) substation (Horsetown Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kv lines to serve the substation. The tentative locations of the substation and the potential routes for the transmission lines are located within the project boundary (Figure 1). At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

The project area is located on portions of Sections 16, 17, 18, 19, 20, 21, 28, 29, 30, 31, 32 and 33 Township 3 South, Range 6 West, San Bernardino Base Meridian as depicted in the Corona North and Corona South USGS 7.5 Minute Series Topographic Quadrangles. The southern extent of the project area is located on portions of Section 5, Township 4 South, Range 6 West, San Bernardino Base Meridian as depicted in the Corona South USGS 7.5 Minute Series Topographic Quadrangle. The project area is crossed by the intersection of Highways 15 and 91.

SCE would appreciate any information you may have regarding Native American cultural resources located in or near the proposed project location that could be affected by the proposed project. Any information concerning the location, identity, character and traditional use of cultural places identified during consultation will be considered confidential.

We encourage you to participate in this process. The potential impacts that this project may have on cultural resources important to the Native American community cannot be evaluated unless we are aware that the resource(s) exist. If possible, for project planning purposes we would like to receive any questions or concerns regarding this project within the next two weeks. If we have not heard from you within 30 days of the receipt of this letter, we will assume that you do not wish to participate in further consultation.

If you have any questions, please feel free to call me at (626) 302-5548, or via email at natasha.tabares@sce.com. Thank you for your assistance and participation in this project.

Sincerely,

Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Mr. John Marcus
Santa Rosa Band of Mission Indians
P.O. Box 609
Hemet, CA 92546

January 13, 2010

SUBJECT: Native American Consultation Regarding the Proposed Horsetown Substation Project, Riverside County, California.

Dear Mr. Marcus:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kv) substation (Horsetown Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kv lines to serve the substation. The tentative locations of the substation and the potential routes for the transmission lines are located within the project boundary (Figure 1). At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

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We encourage you to participate in this process. The potential impacts that this project may have on cultural resources important to the Native American community cannot be evaluated unless we are aware that the resource(s) exist. If possible, for project planning purposes we would like to receive any questions or concerns regarding this project within the next two weeks. If we have not heard from you within 30 days of the receipt of this letter, we will assume that you do not wish to participate in further consultation.

If you have any questions, please feel free to call me at (626) 302-5548, or via email at natasha.tabares@sce.com. Thank you for your assistance and participation in this project.

Sincerely,

Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Mr. Joseph Ontiveros
Soboba Band of Luiseno Indians
P.O. Box 487
San Jacinto, CA 92581

January 13, 2010

SUBJECT: Native American Consultation Regarding the Proposed Horsetown Substation Project, Riverside County, California.

Dear Mr. Ontiveros:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kv) substation (Horsetown Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kv lines to serve the substation. The tentative locations of the substation and the potential routes for the transmission lines are located within the project boundary (Figure 1). At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

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SCE would appreciate any information you may have regarding Native American cultural resources located in or near the proposed project location that could be affected by the proposed project. Any information concerning the location, identity, character and traditional use of cultural places identified during consultation will be considered confidential.

We encourage you to participate in this process. The potential impacts that this project may have on cultural resources important to the Native American community cannot be evaluated unless we are aware that the resource(s) exist. If possible, for project planning purposes we would like to receive any questions or concerns regarding this project within the next two weeks. If we have not heard from you within 30 days of the receipt of this letter, we will assume that you do not wish to participate in further consultation.

If you have any questions, please feel free to call me at (626) 302-5548, or via email at natasha.tabares@sce.com. Thank you for your assistance and participation in this project.

Sincerely,

Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770

**Horsetown Substation Project
(IO#306687)**

Legend

-  Project Boundary
-  Freeway
-  Highway

USGS 7.5 minute topographic Quadrangle:
Corona North and Corona South, California

Map 1 of 1

Date: January 13, 2010

Original Scale: 1:40,000

Index Map



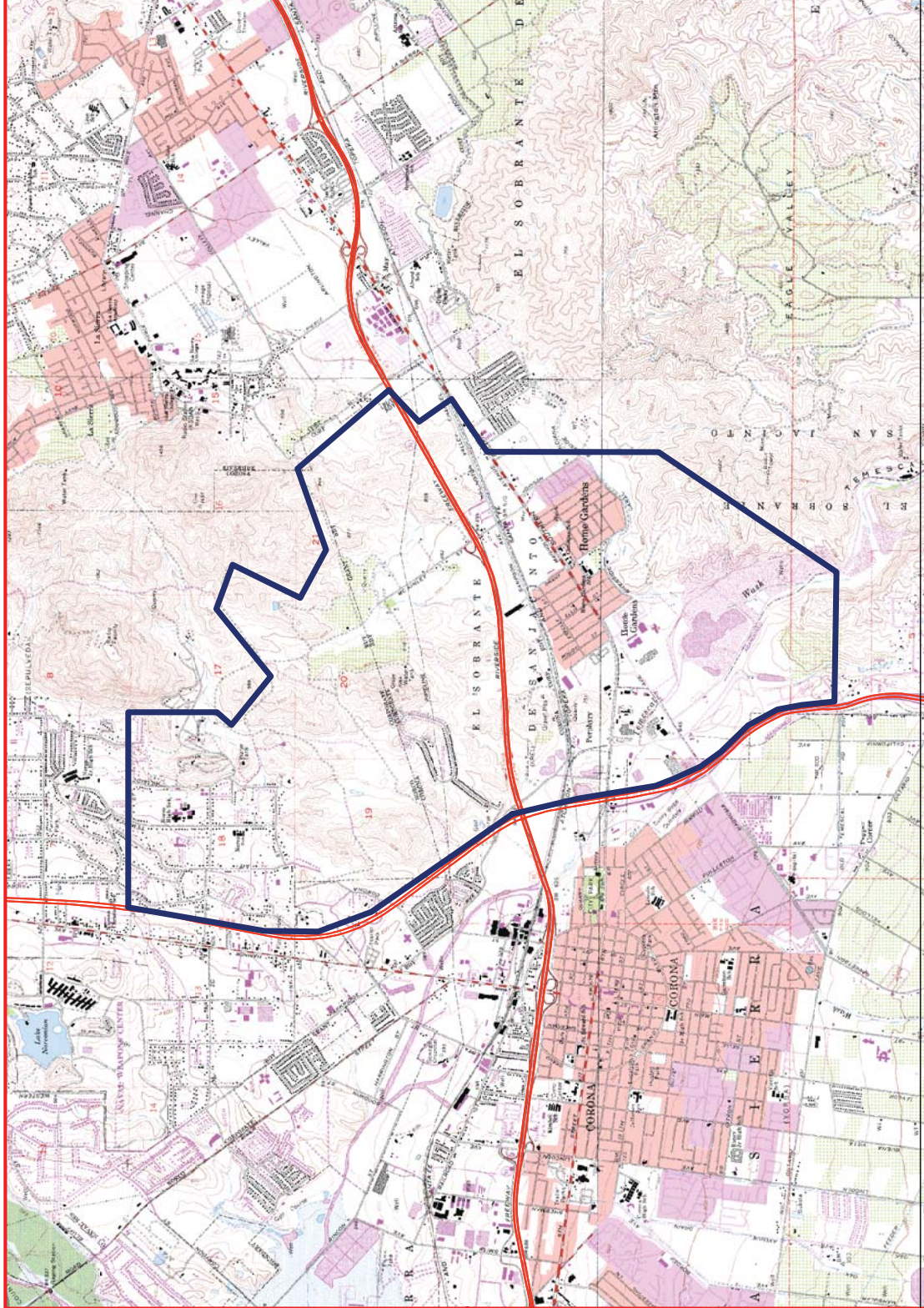
Contains Transmission
Information
limited to FERC
Standards of Conduct

CONFIDENTIAL
Contains
Infrastructure Information
If any questions contact
Corporate Security (27875)
for handling/storage
requirements.

Projection: NAD 83 UTM Zone 11



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**Horsetown Substation Project
Record of Correspondence**

Date: January 29, 2010

Recorder: Natasha Tabares (SCE)

Contact: Anna Hoover (Pechanga Cultural Resources Department)

Subject: Horsetown Substation Project

Correspondence Format: Voice Message

Summary of Correspondence:

Anna Hoover (Pechanga Cultural Resources Department) left a phone message regarding the project.

**Horsetown Substation Project
Record of Correspondence**

Date: February 1, 2010

Recorder: Natasha Tabares (SCE)

Contact: Anna Hoover (Pechanga Cultural Resources Department)

Subject: Horsetown Substation Project

Correspondence Format: Phone Conversation

Summary of Correspondence:

Natasha Tabares (SCE) called Anna Hoover (Pechanga Cultural Resources Department) in response to a phone message left by her on Friday January 29, 2010 regarding the Horsetown Project. She indicated that there are areas that have high sensitivity for cultural resources and would potentially like to have a face to face meeting. She indicated that she would be sending a letter within the next two weeks.

February 3, 2010

Attn: Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environmental, Health and Safety, GO1, QUAD 3 A
P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770

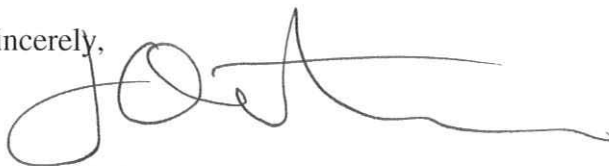
Re: Proposed Horsetown Substation Project

The Soboba Band of Luiseño Indians appreciates your observance of Tribal Cultural Resources and their preservation in your project. The information provided to us on said project has been assessed through our Cultural Resource Department, where it was concluded that although it is outside the existing reservation, the project area does fall within the bounds of our Tribal Traditional Use Areas. This project location is in close proximity to known village sites and is a shared use area that was used in ongoing trade between the Luiseno and Cahuilla tribes. Therefore it is regarded as highly sensitive to the people of Soboba.

Soboba Band of Luiseño Indians is requesting the following:

1. To initiate a consultation with the Project Developer and Land owner.
2. The transfer of information to the Soboba Band of Luiseno Indians regarding the progress of this project should be done as soon as new developments occur.
3. Soboba Band of Luiseño Indians continues to act as a consulting tribal entity for this project.
4. Working in and around traditional use areas intensifies the possibility of encountering cultural resources during the construction/excavation phase. For this reason the Soboba Band of Luiseño Indians requests that Native American Monitor(s) from the Soboba Band of Luiseño Indians Cultural Resource Department to be present during any ground disturbing proceedings. Including surveys and archaeological testing.
5. Request that proper procedures be taken and requests of the tribe be honored (Please see the attachment)

Sincerely,



Joseph Ontiveros
Soboba Cultural Resource Department
P.O. Box 487
San Jacinto, CA 92581
Phone (951) 654-5544 ext. 4137
Cell (951) 663-5279
jontiveros@soboba-nsn.gov

Cultural Items (Artifacts). Ceremonial items and items of cultural patrimony reflect traditional religious beliefs and practices of the Soboba Band. The Developer should agree to return all Native American ceremonial items and items of cultural patrimony that may be found on the project site to the Soboba Band for appropriate treatment. In addition, the Soboba Band requests the return of all other cultural items (artifacts) that are recovered during the course of archaeological investigations. When appropriate and agreed upon in advance, the Developer's archeologist may conduct analyses of certain artifact classes if required by CEQA, Section 106 of NHPA, the mitigation measures or conditions of approval for the Project. This may include but is not limited or restricted to include shell, bone, ceramic, stone or other artifacts.

The Developer should waive any and all claims to ownership of Native American ceremonial and cultural artifacts that may be found on the Project site. Upon completion of authorized and mandatory archeological analysis, the Developer should return said artifacts to the Soboba Band within a reasonable time period agreed to by the Parties and not to exceed (30) days from the initial recovery of the items.

Treatment and Disposition of Remains.

A. The Soboba Band shall be allowed, under California Public Resources Code § 5097.98 (a), to (1) inspect the site of the discovery and (2) make determinations as to how the human remains and grave goods shall be treated and disposed of with appropriate dignity.

B. The Soboba Band, as MLD, shall complete its inspection within twenty-four (24) hours of receiving notification from either the Developer or the NAHC, as required by California Public Resources Code § 5097.98 (a). The Parties agree to discuss in good faith what constitutes "appropriate dignity" as that term is used in the applicable statutes.

C. Reburial of human remains shall be accomplished in compliance with the California Public Resources Code § 5097.98 (a) and (b). The Soboba Band, as the MLD in consultation with the Developer, shall make the final discretionary determination regarding the appropriate disposition and treatment of human remains.

D. All parties are aware that the Soboba Band may wish to rebury the human remains and associated ceremonial and cultural items (artifacts) on or near, the site of their discovery, in an area that shall not be subject to future subsurface

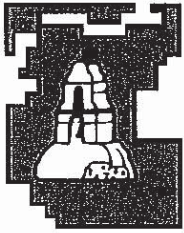
disturbances. The Developer should accommodate on-site reburial in a location mutually agreed upon by the Parties.

E. The term "human remains" encompasses more than human bones because the Soboba Band's traditions periodically necessitated the ceremonial burning of human remains. Grave goods are those artifacts associated with any human remains. These items, and other funerary remnants and their ashes are to be treated in the same manner as human bone fragments or bones that remain intact.

Coordination with County Coroner's Office. The Lead Agencies and the Developer should immediately contact both the Coroner and the Soboba Band in the event that any human remains are discovered during implementation of the Project. If the Coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, the Coroner shall ensure that notification is provided to the NAHC within twenty-four (24) hours of the determination, as required by California Health and Safety Code § 7050.5 (c).

Non-Disclosure of Location Reburials. It is understood by all parties that unless otherwise required by law, the site of any reburial of Native American human remains or cultural artifacts shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, parties, and Lead Agencies, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code § 6254 (r).

Ceremonial items and items of cultural patrimony reflect traditional religious beliefs and practices of the Soboba Band. The Developer agrees to return all Native American ceremonial items and items of cultural patrimony that may be found on the project site to the Soboba Band for appropriate treatment. In addition, the Soboba Band requests the return of all other cultural items (artifacts) that are recovered during the course of archaeological investigations. Where appropriate and agreed upon in advance, Developer's archeologist may conduct analyses of certain artifact classes if required by CEQA, Section 106 of NHPA, the mitigation measures or conditions of approval for the Project. This may include but is not limited or restricted to include shell, bone, ceramic, stone or other artifacts.



PALA BAND OF MISSION INDIANS

Tribal Historic Preservation Office
35008 Pala Temecula Rd. PMB 445
Pala, CA 92059

Ph: (760) 891-3591
Fax: (760) 742-4543

February 4, 2010

Natasha Tabares, RPA
Southern California Edison, Corporate Environmental, Health Safety
2244 Walnut Grove Ave.
Rosemead, CA 91770

Re: Proposed Horsetown Substation Project, Riverside County, CA

Dear Mrs. Tabares:

The Pala Band of Mission Indians Tribal Historic Preservation Office has received your notification of the project referenced above. This letter constitutes our response on behalf of Robert Smith, Tribal Chairman.

We have consulted our maps and determined that the project as described is not within the boundaries of the recognized Pala Indian Reservation. The project is also beyond the boundaries of the territory that the tribe considers its Traditional Use Area (TUA). Therefore, we have no objection to the continuation of project activities as currently planned and we defer to the wishes of Tribes in closer proximity to the project area.

We appreciate involvement with your initiative and look forward to working with you on future efforts. If you have questions or need additional information, please do not hesitate to contact me by telephone at 760-891-3591 or by e-mail at sgaughen@palatribe.com.

Sincerely,

Shasta C. Gaughen, MA
Tribal Historic Preservation Officer
Pala Band of Mission Indians

ATTENTION: THE PALA TRIBAL HISTORIC PRESERVATION OFFICE IS RESPONSIBLE FOR ALL REQUESTS FOR CONSULTATION. PLEASE ADDRESS CORRESPONDENCE TO **SHASTA C. GAUGHEN** AT THE ABOVE ADDRESS. IT IS NOT NECESSARY TO ALSO SEND NOTICES TO PALA TRIBAL CHAIRMAN ROBERT SMITH. PLEASE ALSO NOTE THAT JOE NIXON NO LONGER WORKS FOR THE PALA THPO.

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net



May 17, 2010

Ms. Natasha, Tabares, RPA, Archaeologist

SOUTHERN CALIFORNIA EDISON

2244 Walnut Grove avenue
Rosemead, CA 91770

Re: Request for a Sacred Lands File Search and Native American Contacts List for the proposed "Circle City Substation Project, an Electric Infrastructure Project" located from the Guasti and Chino areas of San Bernardino County to the Corona area in Riverside, California

Dear Ms. Tabares:

The Native American Heritage Commission (NAHC), the State of California 'Trustee Agency' for the protection and preservation of Native American cultural resources (c.f. CA Public Resources Code §21070; also c.f. *Environmental Protection Information Center v. Johnson* [198] 170 Cal App. 3rd 604), was able to perform a record search of its Sacred Lands File (SLF) for the affected project area (APE) requested. The California Environmental Quality Act (CEQA; CA Public Resources Code Section 21000 – 21177) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the California Code of Regulations §15064.5(b)(c)(f) CEQA guidelines). Section 15382 of the 2007 CEQA Guidelines defines a significant impact on the environment as "a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ... objects of historic or aesthetic significance." The NAHC SLF search **did not Indicate** the presence of Native American cultural resources within one-half mile of the proposed project sites (APEs). However, there are Native American cultural resources in close proximity to the APEs.

Also, this letter includes state and federal statutes relating to Native American historic properties of religious and cultural significance to American Indian tribes and interested Native American individuals as 'consulting parties' under both state and federal law.

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway., Culturally-affiliated tribes and individuals may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). We recommend that you contact persons on the attached list of Native American contacts. Furthermore we suggest that you contact the California Historic Resources Information System (CHRIS) at the Office of Historic Preservation Coordinator's office (at (916) 653-7278, for referral to the nearest Information Center of which there are 10.

Consultation with tribes and interested Native American consulting parties, on the NAHC list ,should be conducted in compliance with the requirements of federal NEPA (42

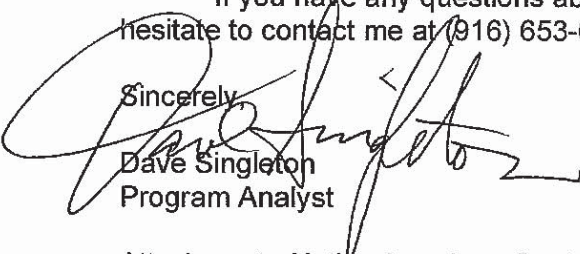
U.S.C. 4321-43351) and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 [f] *et seq.*), 36 CFR Part 800.3 (f) (2), the President's Council on Environmental Quality (CSQ; 42 U.S.C. 4371 *et seq.*) and NAGPRA (25 U.S.C. 3001-3013), as appropriate. . The 1992 *Secretary of the Interior's Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including *cultural landscapes*.

Lead agencies should consider avoidance, as defined in Section 15370 of the California Environmental Quality Act (CEQA) when significant cultural resources could be affected by a project. Also, Public Resources Code Section 5097.98 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery.

Although tribal consultation under the California Environmental Quality Act (CEQA; CA Public Resources Code Section 21000 – 21177) is 'advisory' rather than mandated, the NAHC does request 'lead agencies' to work with tribes and interested Native American individuals as 'consulting parties.' However, the 2006 SB 1059 the state enabling legislation to the Federal Energy Policy Act of 2005, does mandate tribal consultation for the 'electric transmission corridors. This is codified in the California Public Resources Code, Chapter 4.3, and §25330 to Division 15, requires consultation with California Native American tribes, and identifies both federally recognized and non-federally recognized on a list maintained by the NAHC. Consultation on specific projects must be the result of an on-going relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. Regarding tribal consultation, a relationship built around regular meetings and informal involvement with local tribes will lead to more qualitative consultation tribal input on specific projects.

The response to this search for Native American cultural resources is conducted in the NAHC Sacred Lands Inventory, established by the California Legislature (CA Public Resources Code §5097.94(a) and is exempt from the CA Public Records Act (c.f. California Government Code §6254.10) although Native Americans on the attached contact list may wish to reveal the nature of identified cultural resources/historic properties. Confidentiality of "historic properties of religious and cultural significance' may also be protected the under Section 304 of the NHPA or at the Secretary of the Interior' discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C, 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APE and possibly threatened by proposed project activity.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton
Program Analyst

Attachment: Native American Contacts

Native American Contacts
May 17, 2010
Riverside and San Bernardino Counties

Pechanga Band of Mission Indians
Paul Macarro, Cultural Resource Center
P.O. Box 1477 Luiseno
Temecula , CA 92593
pmacarro@pechanga-nsn.
(951) 308-9295 Ext 8106
(951) 676-2768
(951) 506-9491 Fax

Ramona Band of Cahuilla Mission Indians
Joseph Hamilton, Chairman
P.O. Box 391670 Cahuilla
Anza , CA 92539
admin@ramonatiribe.com
(951) 763-4105
(951) 763-4325 Fax

San Manuel Band of Mission Indians
James Ramos, Chairperson
26569 Community Center Drive Serrano
Highland , CA 92346
(909) 864-8933
(909) 864-3724 - FAX
(909) 864-3370 Fax

Ti'At Society
Cindi Alvitre
6515 E. Seaside Walk, #C Gabrielino
Long Beach , CA 90803
calvitre@yahoo.com
(714) 504-2468 Cell

Gabrieleno/Tongva San Gabriel Band of Mission
Anthony Morales, Chairperson
PO Box 693 Gabrielino Tongva
San Gabriel , CA 91778
(626) 286-1262 -FAX
(626) 286-1632
(626) 286-1758 - Home
(626) 286-1262 Fax

Santa Rosa Band of Mission Indians
John Marcus, Chairman
P.O. Box 609 Cahuilla
Hemet , CA 92546
srtribaloffice@aol.com
(951) 658-5311
(951) 658-6733 Fax

Gabrielino Tongva Nation
Sam Dunlap, Chairperson
P.O. Box 86908 Gabrielino Tongva
Los Angeles , CA 90086
samdunlap@earthlink.net
(909) 262-9351 - cell

Morongo Band of Mission Indians
Michael Contreras, Cultural Heritage Prog.
12700 Pumarra Road Cahuilla
Banning , CA 92220 Serrano
mcontreras@monongo-nsn.
(951) 755-5025
(951)201-1866 - cell
(951) 922-0105 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code. Also, federal National Environmental Policy Act (NEPA), National Historic Preservation Act, Section 106 and federal NAGPRA. And 36 CFR Part 800.3.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Circle City Substation Project, an Electric Infrastructure Project; located from the Guastl and Chino Area to the Corona area in Riverside County, California for which a Sacred Lands File search and Native American Contacts list

Native American Contacts
May 17, 2010
Riverside and San Bernardino Counties

San Manuel Band of Mission Indians Ann Brierty, Policy/Cultural Resources Department 26569 Community Center Drive Serrano Highland, CA 92346 abrierty@sanmanuel-nsn. (909) 864-8933 EXT-3250 (909) 649-1585 - cell (909) 862-5152 Fax	Willie J. Pink 48310 Pechanga Road Luiseno Temecula, CA 92592 wjpink@hotmail.com (909) 936-1216 Prefers e-mail contact
Juaneno Band of Mission Indians Alfred Cruz, Cultural Resources Coordinator P.O. Box 25628 Juaneno Santa Ana, CA 92799 alfredgcruz@sbcglobal.net 714-998-0721 714-998-0721 - FAX 714-321-1944 - cell	Serrano Nation of Indians Goldie Walker 6588 Valaria Drive Serrano Highland, CA 92346 (909) 862-9883
Kupa Cultural Center (Pala Band) Shasta Gaughen, Assistant Director 35008 Pala-Temecula Rd.PMB Box Luiseno Pala, CA 92059 cupa@palatribe.com (760) 891-3590 (760) 742-4543 - FAX	Cahuilla Band of Indians Luther Salgado, Sr., Chairperson PO Box 391760 Cahuilla Anza, CA 92539 tribalcouncil@cahuilla.net 915-763-5549
Pechanga Band of Mission Indians Mark Macarro, Chairperson P.O. Box 1477 Luiseno Temecula, CA 92593 tbrown@pechanga-nsn.gov (951) 676-2768 (951) 695-1778 Fax	Anna Hoover, Cultural Analyst Pechanga Cultural Resources Department P.O. Box 2183 Luiseño Temecula, CA 92593 (951-770-8104 (951) 694-0446 - FAX ahoover@pechanga-nsn.gov

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code. Also, federal National Environmental Policy Act (NEPA), National Historic Preservation Act, Section 106 and federal NAGPRA. And 36 CFR Part 800.3.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Circle City Substation Project, an Electric Infrastructure Project; located from the Guastl and Chino Area to the Corona area in Riverside County, California for which a Sacred Lands File search and Native American Contacts list

Native American Contacts
May 17, 2010
Riverside and San Bernardino Counties

Joseph Ontiveros, Cultural Resource Department
SOBOBA BAND OF LUISENO INDIANS
P.O. BOX 487 Luiseno
San Jacinto , CA 92581
(951) 654-5544, ext 4137
(951) 663-5279
jontiveros@soboba-msn.gov

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code. Also, federal National Environmental Policy Act (NEPA), National Historic Preservation Act, Section 106 and federal NAGPRA. And 36 CFR Part 800.3.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Circle City Substation Project, an Electric Infrastructure Project; located from the Guasti and Chino Area to the Corona area in Riverside County, California for which a Sacred Lands File search and Native American Contacts list



Mr. Paul Macarro
Pechanga Band of Mission Indians, Cultural Resource Center
PO Box 1477
Temecula, CA 92593

June 3, 2010

SUBJECT: Native American Consultation Regarding the Proposed Circle City Substation Project, San Bernardino and Riverside Counties, California.

Dear Mr. Macarro:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kV) substation (Circle City Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kV lines to serve the substation. This project was formerly known as the Horsetown Substation Project, and SCE initiated consultation with the Pechanga Band of Mission Indians in January, 2010. The location for potential transmission line routes has since been expanded and updated. The revised locations of the new potential transmission line routes are located within the project boundary in Figure 1. At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

The project area is located on portions of Sections 12, 13, 23, 24, 26, 27, 28, 33, 34 and 35 Township 2 South, Range 7 West, on portions of Sections 2, 3, 4, 9, 10, 11, 14, 15, 22, 23, 24, 25, 26 and 36, Township 3 South, Range 7 West, and on portions of Sections 30 and 31, Township 3 South, Range 6 West, San Bernardino Base Meridian (SBBM) as depicted in the Guasti, Corona North and Corona South USGS 7.5 Minute Series Topographic Quadrangles.

SCE would appreciate any information you may have regarding Native American cultural resources located in or near the proposed project location that could be affected by the proposed project. Any information concerning the location, identity, character and traditional use of cultural places identified during consultation will be considered confidential.

We encourage you to participate in this process. The potential impacts that this project may have on cultural resources important to the Native American community cannot be evaluated unless we are aware that the resource(s) exist. If possible, for project planning purposes we would like to receive any questions or concerns regarding this project within the next two weeks. If we have not heard from you within 30 days of the receipt of this letter, we will assume that you do not wish to participate in further consultation.

If you have any questions, please feel free to call me at (626) 302-5548, or via email at natasha.tabares@sce.com. Thank you for your assistance and participation in this project.

Sincerely,

A handwritten signature in blue ink, appearing to read "Natasha Tabares".

Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Mr. Joseph Hamilton
Ramona Band of Cahuilla Mission Indians
PO Box 391670
Anza, CA 92539

June 3, 2010

SUBJECT: Native American Consultation Regarding the Proposed Circle City Substation Project, San Bernardino and Riverside Counties, California.

Dear Mr. Hamilton:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kV) substation (Circle City Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kV lines to serve the substation. This project was formerly known as the Horsetown Substation Project, and SCE initiated consultation with the Ramona Band of Cahuilla Mission Indians in January, 2010. The location for potential transmission line routes has since been expanded and updated. The revised locations of the new potential transmission line routes are located within the project boundary in Figure 1. At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

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Sincerely,



Natasha Tabares, RPA

Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Mr. James Ramos
San Manuel Band of Mission Indians
26569 Community Center Drive
Highland, CA 92346

June 3, 2010

SUBJECT: Native American Consultation Regarding the Proposed Circle City Substation Project, San Bernardino and Riverside Counties, California.

Dear Mr. Ramos:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kV) substation (Circle City Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kV lines to serve the substation. The tentative locations of the potential routes for the transmission lines are located within the project boundary (Figure 1). At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

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Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Ms. Cindi Alvitre
Ti'At Society
6515 E. Seaside Walk, #C
Long Beach, CA 90803

June 3, 2010

SUBJECT: Native American Consultation Regarding the Proposed Circle City Substation Project, San Bernardino and Riverside Counties, California.

Dear Ms. Alvitre:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kv) substation (Circle City Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kv lines to serve the substation. The tentative locations of the potential routes for the transmission lines are located within the project boundary (Figure 1). At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

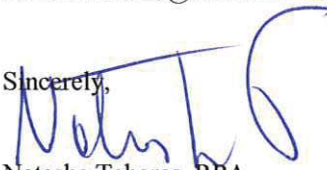
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Sincerely,



Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Mr. Anthony Morales
San Gabriel Band of Mission Indians
PO Box 693
San Gabriel, CA 91778

June 3, 2010

SUBJECT: Native American Consultation Regarding the Proposed Circle City Substation Project, San Bernardino and Riverside Counties, California.

Dear Mr. Morales:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kV) substation (Circle City Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kV lines to serve the substation. This project was formerly known as the Horsetown Substation Project, and SCE initiated consultation with the San Gabriel Band of Mission Indians in January, 2010. The location for potential transmission line routes has since been expanded and updated. The revised locations of the new potential transmission line routes are located within the project boundary in Figure 1. At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

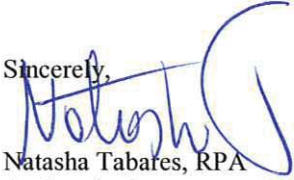
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Sincerely,



Natasha Tabares, RPA

Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Mr. John Marcus
Santa Rosa Band of Mission Indians
PO Box 609
Hemet, CA 92546

June 3, 2010

SUBJECT: Native American Consultation Regarding the Proposed Circle City Substation Project, San Bernardino and Riverside Counties, California.

Dear Mr. Marcus:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kV) substation (Circle City Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kV lines to serve the substation. This project was formerly known as the Horsetown Substation Project, and SCE initiated consultation with the Santa Rosa Band of Mission Indians in January, 2010. The location for potential transmission line routes has since been expanded and updated. The revised locations of the new potential transmission line routes are located within the project boundary in Figure 1. At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

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If you have any questions, please feel free to call me at (626) 302-5548, or via email at natasha.tabares@sce.com. Thank you for your assistance and participation in this project.

Sincerely,

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Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Mr. Sam Dunlap
Gabrielino Tongva Nation
PO Box 86908
Los Angeles, CA 90086

June 3, 2010

SUBJECT: Native American Consultation Regarding the Proposed Circle City Substation Project, San Bernardino and Riverside Counties, California.

Dear Mr. Dunlap:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kV) substation (Circle City Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kV lines to serve the substation. This project was formerly known as the Horsetown Substation Project, and SCE initiated consultation with the Gabrielino Tongva Nation in January, 2010. The location for potential transmission line routes has since been expanded and updated. The revised locations of the new potential transmission line routes are located within the project boundary in Figure 1. At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

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Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Mr. Michael Contreras
Morongo Band of Mission Indians
12700 Pumarra Road
Banning, CA 92220

June 3, 2010

SUBJECT: Native American Consultation Regarding the Proposed Circle City Substation Project, San Bernardino and Riverside Counties, California.

Dear Mr. Contreras:

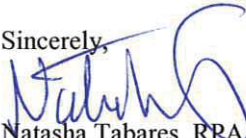
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Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Ms. Ann Brierty
San Manuel Band of Mission Indians
Cultural Resources Department
26569 Community Center Drive
Highland, CA 92346

June 3, 2010

SUBJECT: Native American Consultation Regarding the Proposed Circle City Substation Project, San Bernardino and Riverside Counties, California.

Dear Ms. Brierty:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kV) substation (Circle City Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kV lines to serve the substation. The tentative locations of the potential routes for the transmission lines are located within the project boundary (Figure 1). At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

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Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Mr. Alfred Cruz
Cultural Resources Coordinator
Juaneno Band of Mission Indians
PO Box 25628
Santa Ana, CA 92799

June 3, 2010

SUBJECT: Native American Consultation Regarding the Proposed Circle City Substation Project, San Bernardino and Riverside Counties, California.

Dear Mr. Cruz:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kV) substation (Circle City Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kV lines to serve the substation. The tentative locations of the potential routes for the transmission lines are located within the project boundary (Figure 1). At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

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Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Ms. Shasta Gaughen
Kupa Cultural Center (Pala Band)
35008 Pala-Temecula Road
Pala, CA 92059

June 3, 2010

SUBJECT: Native American Consultation Regarding the Proposed Circle City Substation Project, San Bernardino and Riverside Counties, California.

Dear Ms. Gaughen:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kV) substation (Circle City Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kV lines to serve the substation. This project was formerly known as the Horsetown Substation Project, and SCE initiated consultation with the Kupa Cultural Center in January, 2010. The location for potential transmission line routes has since been expanded and updated. The revised locations of the new potential transmission line routes are located within the project boundary in Figure 1. At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

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Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Mr. Mark Macarro
Pechanga Band of Mission Indians
PO Box 1477
Temecula, CA 92593

June 3, 2010

SUBJECT: Native American Consultation Regarding the Proposed Circle City Substation Project, San Bernardino and Riverside Counties, California.

Dear Mr. Macarro:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kV) substation (Circle City Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kV lines to serve the substation. This project was formerly known as the Horsetown Substation Project, and SCE initiated consultation with the Pechanga Band of Mission Indians in January, 2010. The location for potential transmission line routes has since been expanded and updated. The revised locations of the new potential transmission line routes are located within the project boundary in Figure 1. At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

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If you have any questions, please feel free to call me at (626) 302-5548, or via email at natasha.tabares@sce.com. Thank you for your assistance and participation in this project.

Sincerely,

A handwritten signature in blue ink, appearing to read "Natasha Tabares".

Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Mr. Willie Pink
48310 Pechanga Road
Temecula, CA 92592

June 3, 2010

SUBJECT: Native American Consultation Regarding the Proposed Circle City Substation Project, San Bernardino and Riverside Counties, California.

Dear Mr. Pink:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kV) substation (Circle City Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kV lines to serve the substation. This project was formerly known as the Horsetown Substation Project, and SCE initiated consultation in January, 2010. The location for potential transmission line routes has since been expanded and updated. The revised locations of the new potential transmission line routes are located within the project boundary in Figure 1. At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.


The project area is located on portions of Sections 12, 13, 23, 24, 26, 27, 28, 33, 34 and 35 Township 2 South, Range 7 West, on portions of Sections 2, 3, 4, 9, 10, 11, 14, 15, 22, 23, 24, 25, 26 and 36, Township 3 South, Range 7 West, and on portions of Sections 30 and 31, Township 3 South, Range 6 West, San Bernardino Base Meridian (SBBM) as depicted in the Guasti, Corona North and Corona South USGS 7.5 Minute Series Topographic Quadrangles.

SCE would appreciate any information you may have regarding Native American cultural resources located in or near the proposed project location that could be affected by the proposed project. Any information concerning the location, identity, character and traditional use of cultural places identified during consultation will be considered confidential.

We encourage you to participate in this process. The potential impacts that this project may have on cultural resources important to the Native American community cannot be evaluated unless we are aware that the resource(s) exist. If possible, for project planning purposes we would like to receive any questions or concerns regarding this project within the next two weeks. If we have not heard from you within 30 days of the receipt of this letter, we will assume that you do not wish to participate in further consultation.

If you have any questions, please feel free to call me at (626) 302-5548, or via email at natasha.tabares@sce.com. Thank you for your assistance and participation in this project.

Sincerely,



Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Ms. Goldie Walker
Serrano Nation of Indians
6588 Valaria Drive
Highland, CA 92346

June 3, 2010

SUBJECT: Native American Consultation Regarding the Proposed Circle City Substation Project, San Bernardino and Riverside Counties, California.

Dear Ms. Walker:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kV) substation (Circle City Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kV lines to serve the substation. The tentative locations of the potential routes for the transmission lines are located within the project boundary (Figure 1). At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

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SCE would appreciate any information you may have regarding Native American cultural resources located in or near the proposed project location that could be affected by the proposed project. Any information concerning the location, identity, character and traditional use of cultural places identified during consultation will be considered confidential.

We encourage you to participate in this process. The potential impacts that this project may have on cultural resources important to the Native American community cannot be evaluated unless we are aware that the resource(s) exist. If possible, for project planning purposes we would like to receive any questions or concerns regarding this project within the next two weeks. If we have not heard from you within 30 days of the receipt of this letter, we will assume that you do not wish to participate in further consultation.

If you have any questions, please feel free to call me at (626) 302-5548, or via email at natasha.tabares@sce.com. Thank you for your assistance and participation in this project.

Sincerely,

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Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Mr. Luther Salgado, Sr.
Cahuilla Band of Indians
PO Box 391760
Anza, CA 92539

June 3, 2010

SUBJECT: Native American Consultation Regarding the Proposed Circle City Substation Project, San Bernardino and Riverside Counties, California.

Dear Mr. Salgado, Sr.:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kV) substation (Circle City Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kV lines to serve the substation. This project was formerly known as the Horsetown Substation Project, and SCE initiated consultation with the Cahuilla Band of Indians in January, 2010. The location for potential transmission line routes has since been expanded and updated. The revised locations of the new potential transmission line routes are located within the project boundary in Figure 1. At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

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SCE would appreciate any information you may have regarding Native American cultural resources located in or near the proposed project location that could be affected by the proposed project. Any information concerning the location, identity, character and traditional use of cultural places identified during consultation will be considered confidential.

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Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Ms. Anna Hoover
Pechanga Cultural Resources Department
PO Box 2183
Temecula, CA 92593

June 3, 2010

SUBJECT: Native American Consultation Regarding the Proposed Circle City Substation Project, San Bernardino and Riverside Counties, California.

Dear Ms. Hoover:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kV) substation (Circle City Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kV lines to serve the substation. This project was formerly known as the Horsetown Substation Project, and SCE initiated consultation with the Pechanga Cultural Resources Department in January, 2010. The location for potential transmission line routes has since been expanded and updated. The revised locations of the new potential transmission line routes are located within the project boundary in Figure 1. At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

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Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Mr. Joseph Ontiveros
Soboba Band of Luiseno Indians
PO Box 487
San Jacinto, CA 92581

June 3, 2010

SUBJECT: Native American Consultation Regarding the Proposed Circle City Substation Project, San Bernardino and Riverside Counties, California.

Dear Mr. Ontiveros:

Southern California Edison (SCE) proposes to construct a new 66/12 kilovolt (kV) substation (Circle City Substation) in order to meet projected demand requirements and to improve reliability in the cities of Corona and Norco and surrounding area. The project will involve the construction of additional 66 kV lines to serve the substation. This project was formerly known as the Horsetown Substation Project, and SCE initiated consultation with the Soboba Band of Luiseno Indians in January, 2010. The location for potential transmission line routes has since been expanded and updated. The revised locations of the new potential transmission line routes are located within the project boundary in Figure 1. At the recommendation of the Native American Heritage Commission (NAHC), SCE requests your input regarding the identification of potential effects to cultural resources, sacred lands or other heritage sites located within the project area.

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If you have any questions, please feel free to call me at (626) 302-5548, or via email at natasha.tabares@sce.com. Thank you for your assistance and participation in this project.

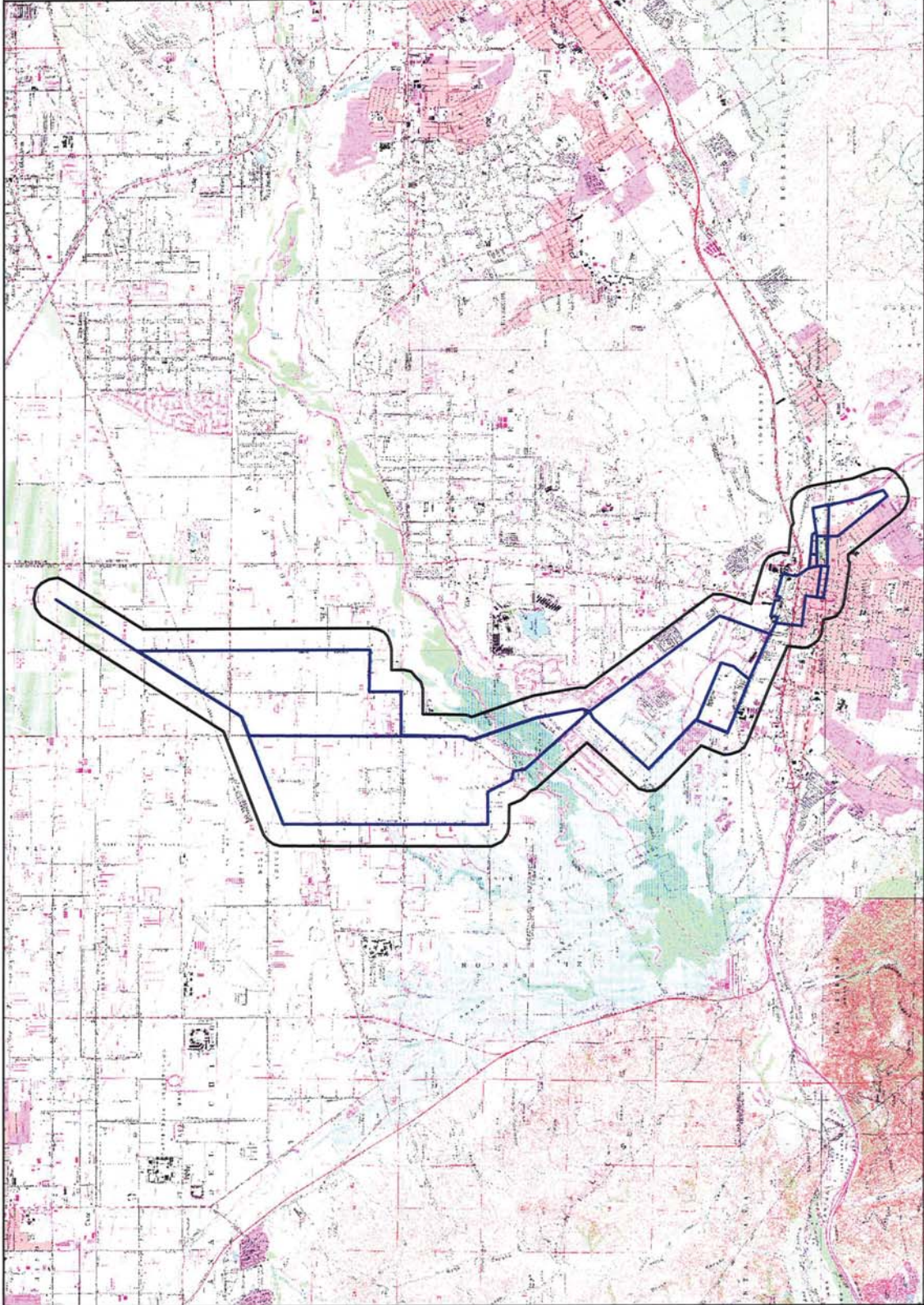
Sincerely,

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Natasha Tabares, RPA
Archaeologist
Southern California Edison
Corporate Environment, Health and Safety, GO1, QUAD 3 A.
2244 Walnut Grove Ave.
Rosemead, CA 91770

Enclosure 1: Map1

P.O. Box 800
2244 Walnut Grove Ave.
Rosemead, CA 91770



Circle City Substation Project

Legend

- Potential Transmission Routes
- Project Boundary

Date: June 3, 2010
 Original Scale: 1:75,000
 Project Number: 306687

Confidential Transmission Information Distribution Standards of Conduct
 CONFIDENTIAL
 Confidential Infrastructure Information
 If any questions or contact Corporate Security (27816) for handling/storage requirements.

Index Map



Projection: NAD 83 UTM Zone 11

ISSI
 Thomas Bros. Maps

USGS 7.5 Minute Topographic Quadrangle: Guasti, Corona North and Corona South, California
 0 2 4 Miles

Southern California Edison
 An Edison International Company

This map is a digital reproduction of a printed map. It is not intended to be used as a substitute for a printed map. The map is a reproduction of a printed map and may contain errors. The map is a reproduction of a printed map and may contain errors. The map is a reproduction of a printed map and may contain errors.

June 14, 2010
Southern California Edison
Attn: Natasha Tabares
Corporate Environment, Health and Safety, G01, Quad 3 A
2244 Walnut Grove Ave.
Rosemead, CA 91770

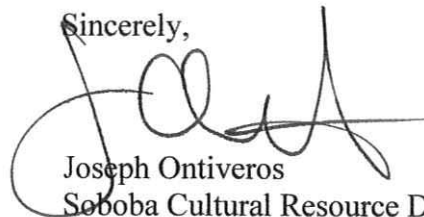
**Re: NATIVE AMERICAN CONSULTATION REGARDING THE
PROPOSED CIRCLE CITY SUBSTATION PROJECT,
SAN BERNARDINO AND RIVERSIDE COUNTIES, CALIFORNIA**

The Soboba Band of Luiseño Indians appreciates your observance of Tribal Cultural Resources and their preservation in your project. The information provided to us on said project has been assessed through our Cultural Resource Department, where it was concluded that although it is outside the existing reservation, the project area does fall within the bounds of our Tribal Traditional Use Areas. This project location is in close proximity to known village sites and is a shared use area that was used in ongoing trade between the Luiseno and Cahuilla tribes. Therefore it is regarded as highly sensitive to the people of Soboba.

Soboba Band of Luiseño Indians is requesting the following:

1. **Government to Government** consultation in accordance to Section 106. Including the transfer of information to the Soboba Band of Luiseno Indians regarding the progress of this project should be done as soon as new developments occur.
2. Soboba Band of Luiseño Indians continue to be a lead consulting tribal entity for this project.
3. Working in and around traditional use areas intensifies the possibility of encountering cultural resources during the construction/excavation phase. For this reason the Soboba Band of Luiseño Indians requests that Native American Monitor(s) from the Soboba Band of Luiseño Indians Cultural Resource Department to be present during any ground disturbing proceedings. Including surveys and archaeological testing.
4. Request that proper procedures be taken and requests of the tribe be honored (Please see the attachment)

Sincerely,



Joseph Ontiveros
Soboba Cultural Resource Department
P.O. Box 487
San Jacinto, CA 92581
Phone (951) 654-5544 ext. 4137

Cell (951) 663-5279

jontiveros@soboba-nsn.gov

Cultural Items (Artifacts). Ceremonial items and items of cultural patrimony reflect traditional religious beliefs and practices of the Soboba Band. The Developer should agree to return all Native American ceremonial items and items of cultural patrimony that may be found on the project site to the Soboba Band for appropriate treatment. In addition, the Soboba Band requests the return of all other cultural items (artifacts) that are recovered during the course of archaeological investigations. Where appropriate and agreed upon in advance, Developer's archeologist may conduct analyses of certain artifact classes if required by CEQA, Section 106 of NHPA, the mitigation measures or conditions of approval for the Project. This may include but is not limited or restricted to include shell, bone, ceramic, stone or other artifacts.

The Developer should waive any and all claims to ownership of Native American ceremonial and cultural artifacts that may be found on the Project site. Upon completion of authorized and mandatory archeological analysis, the Developer should return said artifacts to the Soboba Band within a reasonable time period agreed to by the Parties and not to exceed (30) days from the initial recovery of the items.

Treatment and Disposition of Remains

A. The Soboba Band shall be allowed, under California Public Resources Code § 5097.98 (a), to (1) inspect the site of the discovery and (2) make determinations as to how the human remains and grave goods shall be treated and disposed of with appropriate dignity.

B. The Soboba Band, as MLD, shall complete its inspection within twenty-four (24) hours of receiving notification from either the Developer or the NAHC, as required by California Public Resources Code § 5097.98 (a). The Parties agree to discuss in good faith what constitutes "appropriate dignity" as that term is used in the applicable statutes.

C. Reburial of human remains shall be accomplished in compliance with the California Public Resources Code § 5097.98 (a) and (b). The Soboba Band, as the MLD in consultation with the Developer, shall make the final discretionary determination regarding the appropriate disposition and treatment of human remains.

D. All parties are aware that the Soboba Band may wish to rebury the human remains and associated ceremonial and cultural items (artifacts) on or near, the site of their discovery, in an area that shall not be subject to future subsurface

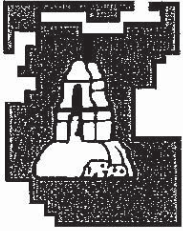
disturbances. The Developer should accommodate on-site reburial in a location mutually agreed upon by the Parties.

E. The term "human remains" encompasses more than human bones because the Soboba Band's traditions periodically necessitated the ceremonial burning of human remains. Grave goods are those artifacts associated with any human remains. These items, and other funerary remnants and their ashes are to be treated in the same manner as human bone fragments or bones that remain intact

Coordination with County Coroner's Office. The Lead Agencies and the Developer should immediately contact both the Coroner and the Soboba Band in the event that any human remains are discovered during implementation of the Project. If the Coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, the Coroner shall ensure that notification is provided to the NAHC within twenty-four (24) hours of the determination, as required by California Health and Safety Code § 7050.5 (c).

Non-Disclosure of Location Reburials. It is understood by all parties that unless otherwise required by law, the site of any reburial of Native American human remains or cultural artifacts shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, parties, and Lead Agencies, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code § 6254 (r).

Ceremonial items and items of cultural patrimony reflect traditional religious beliefs and practices of the Soboba Band. The Developer agrees to return all Native American ceremonial items and items of cultural patrimony that may be found on the project site to the Soboba Band for appropriate treatment. In addition, the Soboba Band requests the return of all other cultural items (artifacts) that are recovered during the course of archaeological investigations. Where appropriate and agreed upon in advance, Developer's archeologist may conduct analyses of certain artifact classes if required by CEQA, Section 106 of NHPA, the mitigation measures or conditions of approval for the Project. This may include but is not limited or restricted to include shell, bone, ceramic, stone or other artifacts.



PALA BAND OF MISSION INDIANS

Tribal Historic Preservation Office
35008 Pala Temecula Rd. PMB 445
Pala, CA 92059

Ph: (760) 891-3591
Fax: (760) 742-4543

June 15, 2010

Natasha Tabares, RPA
Southern California Edison
2244 Walnut Grove Ave.
Rosemead, Ca 91770

Re: Proposed Circle City Substation Project, San Bernardino and Riverside County

Dear Ms. Tabares:

The Pala Band of Mission Indians Tribal Historic Preservation Office has received your notification of the project referenced above. This letter constitutes our response on behalf of Robert Smith, Tribal Chairman.

We have consulted our maps and determined that the project as described is not within the boundaries of the recognized Pala Indian Reservation. The project is also beyond the boundaries of the territory that the tribe considers its Traditional Use Area (TUA). Therefore, we have no objection to the continuation of project activities as currently planned and we defer to the wishes of Tribes in closer proximity to the project area.

We appreciate involvement with your initiative and look forward to working with you on future efforts. If you have questions or need additional information, please do not hesitate to contact me by telephone at 760-891-3591 or by e-mail at sgaughen@palatribe.com.

Sincerely,

Shasta C. Gaughen, MA
Tribal Historic Preservation Officer
Pala Band of Mission Indians

ATTENTION: THE PALA TRIBAL HISTORIC PRESERVATION OFFICE IS RESPONSIBLE FOR ALL REQUESTS FOR CONSULTATION. PLEASE ADDRESS CORRESPONDENCE TO **SHASTA C. GAUGHEN** AT THE ABOVE ADDRESS. IT IS NOT NECESSARY TO ALSO SEND NOTICES TO PALA TRIBAL CHAIRMAN ROBERT SMITH. PLEASE ALSO NOTE THAT JOE NIXON NO LONGER WORKS FOR THE PALA THPO.

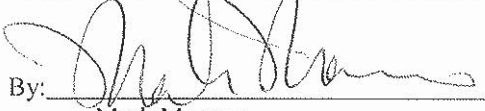
WORK ORDER
Circle City Substation Project – Survey

Date: September 8, 2011
Project Contractor: Southern California Edison ("SCE")
Pechanga Tribe: The Pechanga Band of Luiseño Indians, a federally recognized Indian tribe ("Pechanga Tribe")
Project: Professional Tribal Monitoring at the Circle City Substation Project Site (Survey)

The purpose of this Work Order is to contract for professional monitoring and consulting services by the Pechanga Tribe to monitor the survey to be completed in association with the Circle City Substation project.

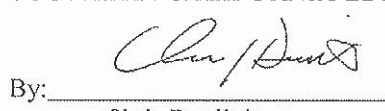
1. **Scope of Work:** The Pechanga Tribe shall furnish qualified personnel, equipment, materials and supplies necessary to perform services as described herein on a Time and Materials basis. The Pechanga Tribe shall provide a professional Tribal monitor who shall assist with and monitor the survey performed in conjunction with the Circle City Substation Project. The Agreement for Voluntary Tribal Monitoring provided by SCE is attached hereto and incorporated herein.
2. **Period of Performance:** The period of performance of this task order shall begin September 12, 2011 and continue through completion, unless otherwise modified or extended.
3. **Compensation:** The Pechanga Tribe shall provide Tribal monitors on a pro bono basis for this Project pursuant to the terms of the Agreement for Voluntary Tribal Monitoring.
4. **Location:** The survey shall include the Circle City Substation Project.
5. **Work Order Modifications:** Modifications or change orders to this Work Order will be agreed upon in writing between SCE and the Pechanga Tribe.
6. **Limitation of Scope:** The Parties agree that this Work Order and the Agreement for Voluntary Tribal Monitoring does not establish a precedent for any other SCE Project.

PECHANGA TRIBE:
PECHANGA BAND OF LUISEÑO INDIANS

By: 
Mark Macarro
Chairman

Date: 9.12.2011

Project Contractor:
SOUTHERN CALIFORNIA EDISON

By: 
Chris Doolittle
Senior Archaeologist, SCE

Date: 9-9-2011

**AGREEMENT FOR VOLUNTARY TRIBAL MONITORING FOR SOUTHERN CALIFORNIA
EDISON'S CIRCLE CITY SUBSTATION PROJECT
Riverside and San Bernardino Counties, California**

Purpose and Scope

The purpose of this agreement is to document procedures for Native American voluntary observation of survey activities for Southern California Edison's (SCE) Circle City Substation Project.

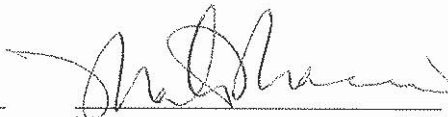
Native American Participation Plan

1. Tribal participation is voluntary. Tribal participants shall not be compensated by SCE.
2. Native American Tribes and/or tribal organizations who choose to participate shall prepare a list of individual tribal members or qualified individuals to act on behalf of their tribal organization along with current contact information. The list should identify a primary tribal contact that shall be responsible for coordinating day to day participation.
3. All volunteers must attend the daily safety tail board meeting prior to beginning work.
4. SCE or its consultants shall provide the tribes notice of work schedule no more than one week and no less than 24 hours prior to the specified work commencing. When feasible, SCE will provide at least 72 hours notice prior to specified work commencing.
5. If the tribe informs SCE's Senior Archaeologist that they cannot provide a monitor or if the individual tribal participant does not report at the agreed rotation work location at the time work is scheduled to begin, work shall commence as scheduled.

Acknowledged and Accepted:

Chris Doolittle
Senior Archaeologist
SCE

Date



Name:
Title:
Tribe:

Sept. 12, 2011
Date



- California Native Americans*
- Cultural Resources*
- Strategic Plan*
- Commissioners*
- Federal Laws and Codes*
- State Laws and Codes*
- Local Ordinances and Codes*
- Additional Information*
- Return to CNAHC Home Page*

Additional Information



Sacred Lands File & Native American Contacts List Request

NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd, Suite 100
 West Sacramento, CA 95691
 (916) 373-3710
 (916) 373-5471 – Fax
 nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Emailed on March 9, 2015

Project: Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project

County Riverside

USGS Quadrangle

Name Guasti, Corona North, Corona South (see below for T/R/Sec)

Township _____ Range _____ Section(s) _____ (See below)

Company/Firm/Agency: Southern California Edison

Contact Person: Amanda Cannon

Street Address: 1218 South Fifth Avenue

City: Monrovia Zip: 91016

Phone: (626) 462-8603

Fax: _____

Email: amanda.cannon@sce.com

Project Description:

Request for Sacred Lands File Search for the Project and Contact List. Project involves the construction of the Circle City Substation, construction of four new subtransmission lines, upgrade of an existing substation, and installation of fiber optic cable and communications equipment (see attached maps). The Project is depicted on the following quads:

- Guasti, CA USGS 7.5' Quad: T2S/R7W/Section 12, 13.
- Corona North, CA USGS 7.5' Quad: T2S/R7W/Section 13, 14, 23, 24, Unsectioned; T3S/R7W/Unsectioned; T3S/R6W/Unsectioned.
- Corona South CA USGS 7.5' Quad: T3S/R6W/Unsectioned; T4S/R6W/Section 5, Unsectioned.

Southern California Edison
 Circle City Substation and
 Mira Loma-Jefferson
 Subtransmission Line Project
 Riverside County, CA

Project Area
 USGS Quad Index



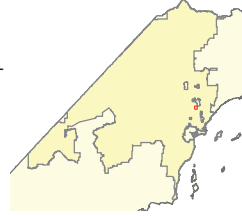
Date: March 9, 2015

Contains Transmission
 Information Distribution
 limited to FERC
 Standards of Conduct

CONFIDENTIAL
 Contains Critical
 Electric Infrastructure
 Information

If any questions contact
 Corporate Security
 (27875)
 for handling/storage
 requirements.

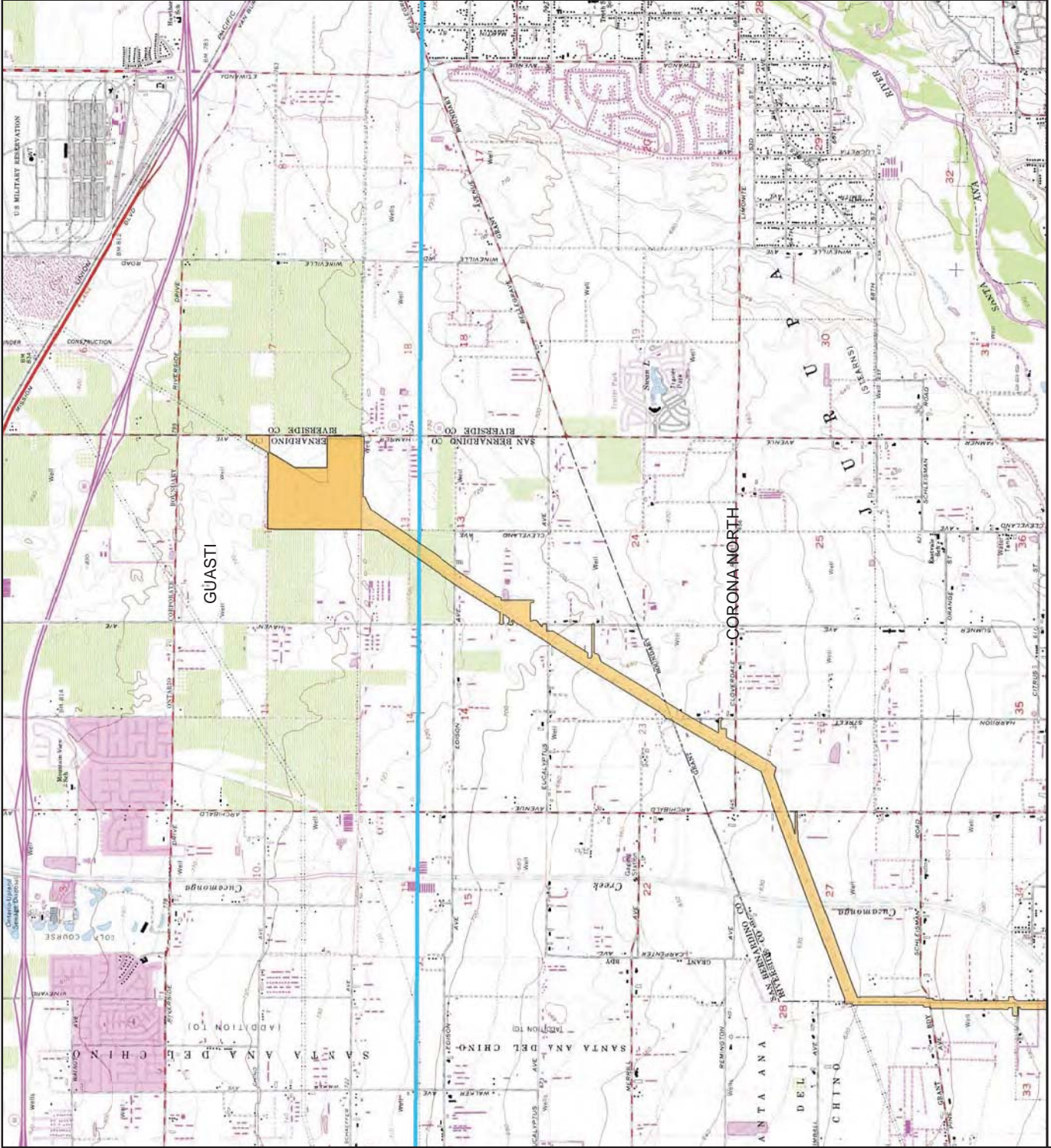
Index Map



Projection: NAD 83 UTM Zone 11

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Southern California Edison
 Circle City Substation and
 Mira Loma-Jefferson
 Subtransmission Line Project
 Riverside County, CA

Project Area
 USGS Quad Index

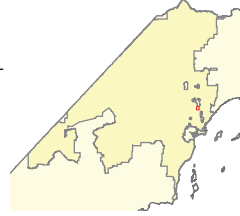
Date: March 9, 2015

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Index Map

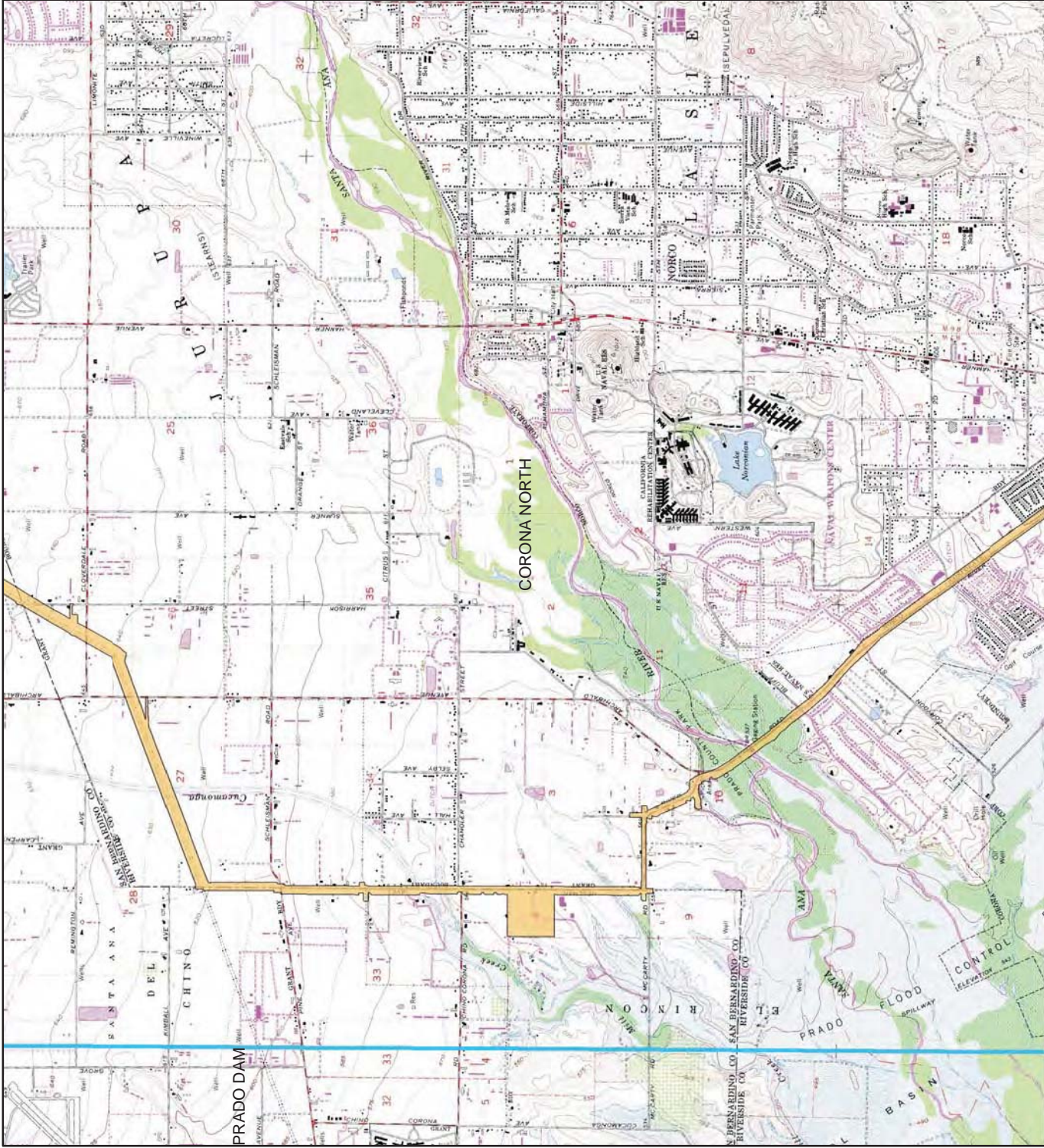


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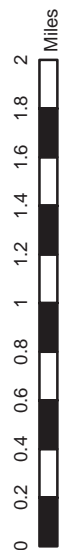
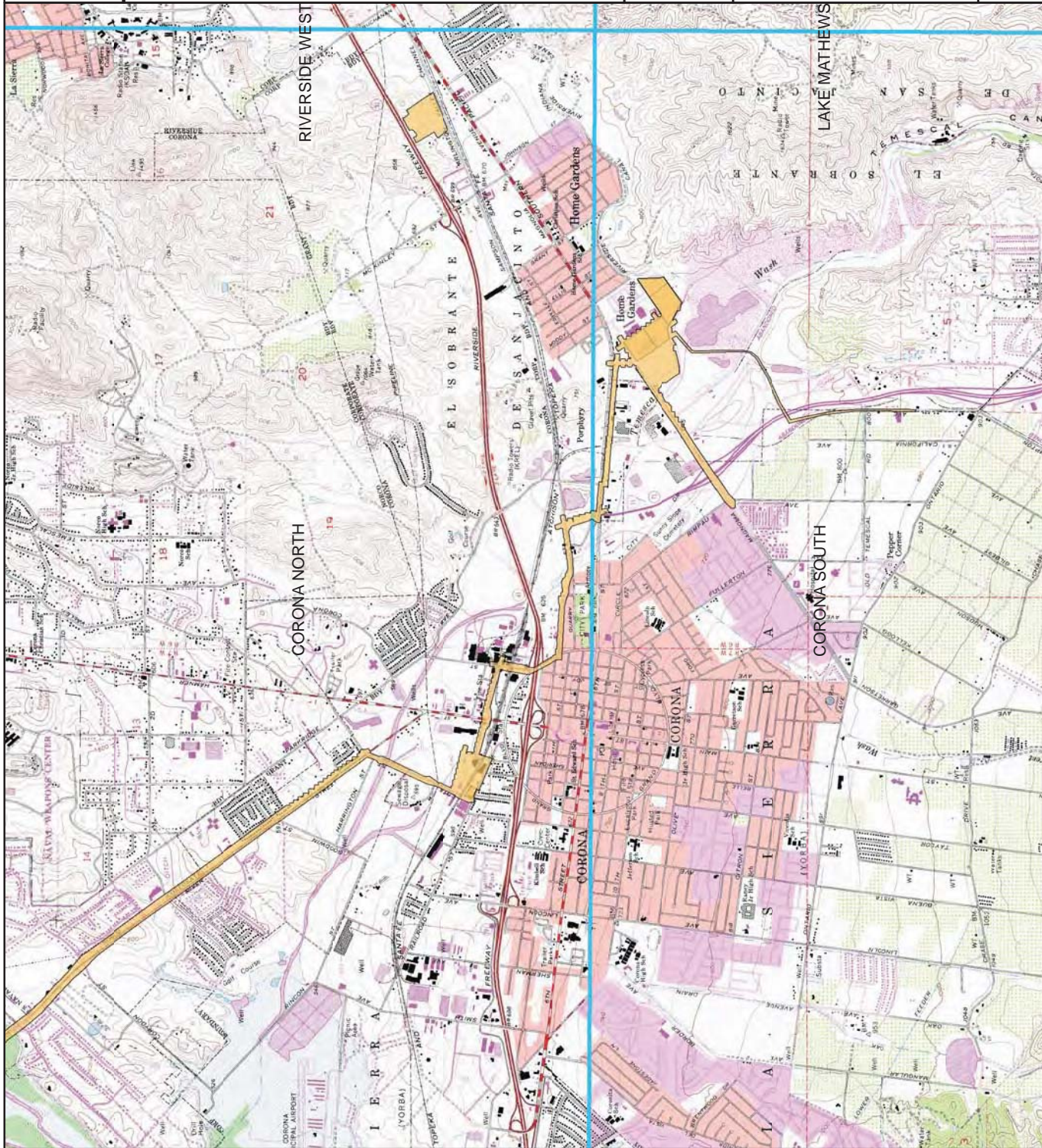
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NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd., ROOM 100
West SACRAMENTO, CA 95691
(916) 373-3710
Fax (916) 373-5471



April 6, 2015

Amanda Cannon
Southern California Edison
1218 south Fifth Avenue
Monrovia, CA 91016

Re: Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project,
Riverside County.

Dear Ms. Cannon,

A record search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) for the project referenced above. The search indicates the potential of Native American cultural resources in the Corona North and Corona South Quadrangles that may be impacted. For specific information regarding this site, please contact the tribes on the Riverside County list.

The absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American cultural resources in any APE. Other sources of cultural resources information should be contacted regarding known and recorded sites. Please contact all of the people on the attached *Native American Contact List*. The list should provide a starting place to locate areas of potential adverse impact within the APE. I suggest you contact all of those listed, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those on the list, your organization will be better able to respond to claims of failure to consult. If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: Katy.Sanchez@nahc.ca.gov.

Sincerely,

A handwritten signature in blue ink that reads "Katy Sanchez".

Katy Sanchez
Associate Government Program Analyst

**Native American Contact List
Riverside County
April 6, 2015**

Pala Band of Mission Indians
Shasta Gaughen, PhD, THPO
PMB 50, 35008 Pala-Temecula Luiseno
Pala , CA 92059 Cupeno
sgaughen@palatribe.com
(760) 891-3515

(760) 742-3189 Fax

Pauma & Yuima Reservation
Randall Majel, Chairperson
P.O. Box 369 Luiseno
Pauma Valley CA 92061
(760) 742-1289 ext 317

(760) 742-3422 Fax

Pechanga Band of Mission Indians
Paul Macarro, Cultural Resources Manager
P.O. Box 1477 Luiseno
Temecula , CA 92593
pmacarro@pechanga-nsn.gov
(951) 770-8100

(951) 506-9491 Fax

Rincon Band of Mission Indians
Vincent Whipple, Tribal Historic Pres. Officer
1 West Tribal Road Luiseno
Valley Center, CA 92082
vwhipple@rincontri.org
(760) 297-2635

(760) 297-2639 Fax

Soboba Band of Mission Indians
Rosemary Morillo, Chairperson; Attn: Carrie Garcia
P.O. Box 487 Luiseno
San Jacinto , CA 92581
carrieg@soboba-nsn.gov
(951) 654-2765

(951) 654-4198 Fax

Juaneno Band of Mission Indians Acjachemen
Chairperson
32161 Avenida Los Amigos Juaneno
San Juan Capistrano CA 92675
(949) 293-8522

Tongva Ancestral Territorial Tribal Nation
John Tommy Rosas, Tribal Admin.
Gabrielino Tongva
tattnlaw@gmail.com
(310) 570-6567

Gabrieleno/Tongva San Gabriel Band of Mission Indian
Anthony Morales, Chairperson
P.O. Box 693 Gabrielino Tongva
San Gabriel , CA 91778
GTTribalcouncil@aol.com
(626) 483-3564 Cell

(626) 286-1262 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting locative Americans with regard to cultural resources for the proposed Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside County.

**Native American Contact List
Riverside County
April 6, 2015**

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St. Gabrielino Tongva
Los Angeles , CA 90012
sgoad@gabrielino-tongva.com
(951) 807-0479

Pauma & Yuima
ATTN: EPA
P.O. Box 369 Luiseno
Pauma Valley CA 92061
kymberli_peters@yahoo.com
(760) 742-1289

(760) 742-3422 Fax

Juaneno Band of Mission Indians Acjachemen
Teresa Romero, Chairwoman
31411-A La Matanza Street Juaneno
San Juan Capistrano CA 92675
tromoero@juaneno.com
(949) 488-3484
(530) 354-5876 Cell
(949) 488-3294 Fax

Rincon Band of Mission Indians
Bo Mazzetti, Chairperson
1 West Tribal Road Luiseno
Valley Center, CA 92082
bomazzetti@aol.com
(760) 749-1051

(760) 749-8901 Fax

Morongo Band of Mission Indians
Denisa Torres, Cultural Resources Manager
12700 Pumarra Road Cahuilla
Banning , CA 92220 Serrano
dtorres@morongo-nsn.gov
(951) 572-6004 Fax

Juaneno Band of Mission Indians
Adolph 'Bud' Sepulveda, Vice Chairperson
P.O. Box 25828 Juaneno
Santa Ana , CA 92799
bssepul@yahoo.net
(714) 838-3270
(714) 914-1812 Cell

Pauma Valley Band of Luiseño Indians
Bennaec Calac
P.O. Box 369 Luiseno
Pauma Valley CA 92061
bennaecalac@aol.com
(760) 617-2872

San Luis Rey Band of Mission Indians
Tribal Council
1889 Sunset Drive Luiseno
Vista , CA 92081
cjmojado@slrmissionindians.org
(760) 724-8505

(760) 742-3422 Fax

(760) 724-2172 Fax

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**Native American Contact List
Riverside County
April 6, 2015**

San Luis Rey Band of Mission Indians
Cultural Department
1889 Sunset Drive Luiseno
Vista , CA 92081 Cupeno
cjmojado@slrmissionindians.org
(760) 724-8505

(760) 724-2172 Fax

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Road Cahuilla
Banning , CA 92220 Serrano
(951) 849-8807
(951) 755-5200
(951) 922-8146 Fax

La Jolla Band of Mission Indians
Lavonne Peck, Chairwoman
22000 Highway 76 Luiseno
Pauma Valley CA 92061
Rob.roy@lajolla-nsn.gov
(760) 742-3771

(760) 742-1704 Fax

Pauma & Yuima Reservation
Charles Devers, Cultural Committee
P.O. Box 369 Luiseno
Pauma Valley CA 92061
(760) 742-1289

(760) 742-3422 Fax

Pechanga Band of Mission Indians
Mark Macarro, Chairperson
P.O. Box 1477 Luiseno
Temecula , CA 92593
mgoodhart@pechanga-nsn.
(951) 770-6100

(951) 695-1778 Fax

Juaneño Band of Mission Indians
Sonia Johnston, Tribal Chairperson
P.O. Box 25628 Juaneno
Santa Ana , CA 92799
sonia.johnston@sbcglobal.net

William J. Pink
48310 Pechanga Road Luiseno
Temecula , CA 92592
wjpink@hotmail.com
(909) 936-1216
Prefers e-mail contact

Juaneno Band of Mission Indians
Anita Espinoza
639 Holten Road Juaneno
Talent , Or 97540
neta777@sbcglobal.net

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Native American Contact List
Riverside County
April 6, 2015

Cahuilla Band of Indians
Luther Salgado, Chairperson
P.O. Box 391760 Cahuilla
Anza , CA 92539
Chairman@cahuilla.net
(760) 763-5549
(760) 763-2631 Tribal EPA

Gabrieleno Band of Mission Indians - Kizi Nation
Andrew Salas, Chairperson
P.O. Box 393 Gabrielino
Covina , CA 91723
gabrielenoindians@yahoo.
(626) 926-4131

Pechanga Cultural Resources Department
Anna Hoover, Cultural Analyst
P.O. Box 2183 Luiseño
Temecula , CA 92593
ahoover@pechanga-nsn.gov
(951) 770-8104

Pala Band of Mission Indians
Robert H. Smith, Chairperson
PMB 50, 35008 Pala-Temecula Luiseno
Pala , CA 92059 Cupeno
dhuss@palatribe.com
(760) 891-3500

(951) 694-0446 Fax

(760) 742-3189 Fax

Ernest H. Siva
Morongo Band of Mission Indians Tribal Elder
9570 Mias Canyon Road Serrano
Banning , CA 92220 Cahuilla
siva@dishmail.net
(951) 849-4676

Gabrielino /Tongva Nation
Sam Dunlap, Cultural Resources Director
P.O. Box 86908 Gabrielino Tongva
Los Angeles , CA 90086
samdunlap@earthlink.net
(909) 262-9351

Soboba Band of Luiseno Indians
Joseph Ontiveros, Cultural Resource Department
P.O. BOX 487 Luiseno
San Jacinto , CA 92581
jontiveros@soboba-nsn.gov
(951) 663-5279
(951) 654-5544, ext 4137
(951) 654-4198 Fax

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Bennae Calac
Pauma Valley Band of Luiseno Indians
P.O. Box 369
Pauma Valley, CA 92061

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Ms. Calac:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horsetown Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

- *Guasti, CA USGS 7.5-minute quadrangle*: T2S, R7W, Sections 12 and 13.
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- *Corona South, CA USGS 7.5-minute quadrangle*: T3S, R6W, unsectioned; and T4S, R6W, Section 5 and unsectioned.

Archaeological surveys have been conducted for the project; no prehistoric resources have been identified within the project area. Coordination with the Native American Heritage Commission (NAHC) has been conducted and the NAHC recommended that your community be contacted.

SCE requests any information or comments your community might have regarding cultural resources, tribal cultural resources (as defined by California Public Resources Code (PRC) Section 21074), or other areas of concern within or near this project (please see the attached map for details). Please note that SCE is not the California Environmental Quality Act (CEQA) lead agency responsible for tribal consultation per PRC Section 21080.3.1 and is currently soliciting this preliminary information for its planning and project development purposes only.

If possible, we would like to receive any questions, concerns, or any other information that you can provide for the project by June 30, 2015. If you have any questions or comments, please feel free to contact me at (626) 462-8603 or amanda.cannon@sce.com.

Sincerely,

Amanda Cannon, MA, RPA
Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Chairperson
Juaneno Band of Mission Indians
32161 Avenida Los Amigos
San Juan Capistrano, CA 92675

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

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(626) 462-8603
amanda.cannon@sce.com

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Cultural Department
San Luis Rey Band of Mission Indians
1889 Sunset Drive
Vista, CA 92081

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

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Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Charles Devers
Cultural Committee
Pauma & Yuima Reservation
P.O. Box 369
Pauma Valley, CA 92061

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Mr. Devers:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horseshoe Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Sincerely,

Amanda Cannon, MA, RPA
Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Sam Dunlap
Cultural Resources Director
Gabrielino/Tongva Nation
P.O. Box 86908
Los Angeles, CA 90086

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Mr. Dunlap:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horseshoe Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Sincerely,

Amanda Cannon, MA, RPA
Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Anita Espinoza
Juaneno Band of Mission Indians
639 Holten Road
Talent, OR 97540

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Ms. Espinoza:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horsetown Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Archaeological surveys have been conducted for the project; no prehistoric resources have been identified within the project area. Coordination with the Native American Heritage Commission (NAHC) has been conducted and the NAHC recommended that your community be contacted.

SCE requests any information or comments your community might have regarding cultural resources, tribal cultural resources (as defined by California Public Resources Code (PRC) Section 21074), or other areas of concern within or near this project (please see the attached map for details). Please note that SCE is not the California Environmental Quality Act (CEQA) lead agency responsible for tribal consultation per PRC Section 21080.3.1 and is currently soliciting this preliminary information for its planning and project development purposes only.

If possible, we would like to receive any questions, concerns, or any other information that you can provide for the project by June 30, 2015. If you have any questions or comments, please feel free to contact me at (626) 462-8603 or amanda.cannon@sce.com.

Sincerely,

Amanda Cannon, MA, RPA
Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Shasta Gaughen, PhD
Tribal Historic Preservation Officer
Pala Band of Mission Indians
PMB 50, 35008 Pala-Temecula
Pala, CA 92059

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Ms. Gaughen:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horseshoe Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Amanda Cannon, MA, RPA
Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Sandonne Goad
Chairperson
Gabrielino/Tongva Nation
106 ½ Judge John Aiso St.
Los Angeles, CA 90012

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Ms. Goad:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horseshoe Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Amanda Cannon, MA, RPA
Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map

Anna Hoover
Cultural Analyst
Pechanga Cultural Resources Department
P.O. Box 2183
Temecula, CA 92593

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Ms. Hoover:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horseshoe Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Sincerely,

Amanda Cannon, MA, RPA
Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Sonia Johnston
Tribal Chairperson
Juaneno Band of Mission Indians
P.O. Box 25628
Santa Ana, CA 92799

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Ms. Johnston:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horseshoe Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Sincerely,

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Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Paul Macarro
Cultural Resources Manager
Pechanga Band of Mission Indians
P.O. Box 1477
Temecula, CA 92593

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Mr. Macarro:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horseshoe Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Archaeologist
Southern California Edison
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Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Randall Majel
Chairperson
Pauma & Yuima Reservation
P.O. Box 369
Pauma Valley, CA 92061

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Mr. Majel:

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Sincerely,

Amanda Cannon, MA, RPA
Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Mark Macarro
Pechanga Band of Mission Indians
P.O. Box 1477
Temecula, CA 92593

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Mr. Macarro:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horsetown Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Robert Martin
Chairperson
Morongo Band of Mission Indians
12700 Pumarra Road
Banning, CA 92220

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Mr. Martin:

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Amanda Cannon, MA, RPA
Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Bo Mazzetti
Chairperson
Rincon Band of Mission Indians
1 West Tribal Road
Valley Center, CA 92082

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Mr. Mazzetti:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horseshoe Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Archaeologist
Southern California Edison
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Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map

Anthony Morales
Chairperson
Gabrieleno/Tongva San Gabriel Band of Mission Indians
P.O. Box 693
San Gabriel, CA 91778

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Mr. Morales:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horseshoe Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Rosemary Morillo
Chairperson
Soboba Band of Mission Indians
P.O. Box 487
San Jacinto, CA 92581

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Ms. Morillo:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horseshoe Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

- *Guasti, CA USGS 7.5-minute quadrangle*: T2S, R7W, Sections 12 and 13.
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- *Corona South, CA USGS 7.5-minute quadrangle*: T3S, R6W, unsectioned; and T4S, R6W, Section 5 and unsectioned.

Archaeological surveys have been conducted for the project; no prehistoric resources have been identified within the project area. Coordination with the Native American Heritage Commission (NAHC) has been conducted and the NAHC recommended that your community be contacted.

SCE requests any information or comments your community might have regarding cultural resources, tribal cultural resources (as defined by California Public Resources Code (PRC) Section 21074), or other areas of concern within or near this project (please see the attached map for details). Please note that SCE is not the California Environmental Quality Act (CEQA) lead agency responsible for tribal consultation per PRC Section 21080.3.1 and is currently soliciting this preliminary information for its planning and project development purposes only.

If possible, we would like to receive any questions, concerns, or any other information that you can provide for the project by June 30, 2015. If you have any questions or comments, please feel free to contact me at (626) 462-8603 or amanda.cannon@sce.com.

Sincerely,

Amanda Cannon, MA, RPA
Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Joseph Ontiveros
Cultural Resources Department
Soboba Band of Luiseno Indians
P.O. Box 487
San Jacinto, CA 92581

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Mr. Ontiveros:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horseshoe Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Pauma & Yuima
ATTN:EPA
P.O. Box 369
Pauma Valley, CA 92061

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

To Whom It May Concern:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horsetown Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Amanda Cannon, MA, RPA
Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Lavonne Peck
Chairwoman
La Jolla Band of Mission Indians
22000 Highway 76
Pauma Valley, CA 92061

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Ms. Peck:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horseshoe Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Archaeological surveys have been conducted for the project; no prehistoric resources have been identified within the project area. Coordination with the Native American Heritage Commission (NAHC) has been conducted and the NAHC recommended that your community be contacted.

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Sincerely,

Amanda Cannon, MA, RPA
Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map

William J. Pink
48310 Pechanga Road
Temecula, CA 92592

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Mr. Pink:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horsetown Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Archaeological surveys have been conducted for the project; no prehistoric resources have been identified within the project area. Coordination with the Native American Heritage Commission (NAHC) has been conducted and the NAHC recommended that your community be contacted.

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Sincerely,

Amanda Cannon, MA, RPA
Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Teresa Romero
Chairwoman
Juaneno Band of Mission Indians
31411-A La Matanza Street
San Juan Capistrano, CA 92675

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Ms. Romero:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horseshoe Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Archaeological surveys have been conducted for the project; no prehistoric resources have been identified within the project area. Coordination with the Native American Heritage Commission (NAHC) has been conducted and the NAHC recommended that your community be contacted.

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Amanda Cannon, MA, RPA
Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Andrew Salas
Chairperson
Gabrieleno Band of Mission Indians
P.O. Box 393
Covina, CA 91723

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Mr. Salas:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horseshoe Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Sincerely,

Amanda Cannon, MA, RPA
Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Luther Salgado
Chairperson
Cahuilla Band of Indians
P.O. Box 391760
Anza, CA 92539

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Mr. Salgado:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horseshoe Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Sincerely,

Amanda Cannon, MA, RPA
Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map

Adolph Sepulveda
Vice Chairperson
Juaneno Band of Mission Indians
P.O. Box 25828
Santa Ana, CA 92799

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Mr. Sepulveda:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horseshoe Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Ernest H. Siva
Morongo Band of Mission Indians Tribal Elder
9570 Mias Canyon Road
Banning, CA 92220

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Mr. Siva:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horsetown Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Robert H. Smith
Chairperson
Pala Band of Mission Indians
PMB 50, 35008 Pala-Temecula
Pala, CA 92059

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Mr. Smith:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horseshoe Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Archaeologist
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amanda.cannon@sce.com

Enclosure: Project Map



Denisa Torres
Cultural Resources Manager
Morongo Band of Mission Indians
12700 Pumarra Road
Banning, CA 92220

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Ms. Torres:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horseshoe Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

- *Guasti, CA USGS 7.5-minute quadrangle*: T2S, R7W, Sections 12 and 13.
- *Corona North CA USGS 7.5-minute quadrangle*: T2S, R7W, Sections 13, 14, 23, 24, unsectioned; T3S, R7W, unsectioned; and T3S, R6W, unsectioned.
- *Corona South, CA USGS 7.5-minute quadrangle*: T3S, R6W, unsectioned; and T4S, R6W, Section 5 and unsectioned.

Archaeological surveys have been conducted for the project; no prehistoric resources have been identified within the project area. Coordination with the Native American Heritage Commission (NAHC) has been conducted and the NAHC recommended that your community be contacted.

SCE requests any information or comments your community might have regarding cultural resources, tribal cultural resources (as defined by California Public Resources Code (PRC) Section 21074), or other areas of concern within or near this project (please see the attached map for details). Please note that SCE is not the California Environmental Quality Act (CEQA) lead agency responsible for tribal consultation per PRC Section 21080.3.1 and is currently soliciting this preliminary information for its planning and project development purposes only.

If possible, we would like to receive any questions, concerns, or any other information that you can provide for the project by June 30, 2015. If you have any questions or comments, please feel free to contact me at (626) 462-8603 or amanda.cannon@sce.com.

Sincerely,

Amanda Cannon, MA, RPA
Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Tribal Council
San Luis Rey Band of Mission Indians
1889 Sunset Drive
Vista, CA 92081

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

To Whom It May Concern:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horsetown Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Archaeological surveys have been conducted for the project; no prehistoric resources have been identified within the project area. Coordination with the Native American Heritage Commission (NAHC) has been conducted and the NAHC recommended that your community be contacted.

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Sincerely,

Amanda Cannon, MA, RPA
Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map



Vincent Whipple
Tribal Historic Preservation Officer
Rincon Band of Mission Indians
1 West Tribal Road
Valley Center, CA 92082

May 22, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Mr. Whipple:

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horseshoe Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment. The project crosses the following USGS 7.5-minute quadrangles, townships, ranges, and sections:

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Sincerely,

Amanda Cannon, MA, RPA
Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016
(626) 462-8603
amanda.cannon@sce.com

Enclosure: Project Map

Amanda Cannon

From: Amanda Cannon
Sent: Monday, June 01, 2015 12:18 PM
To: 'tattnlaw@gmail.com'
Subject: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties
Attachments: Circle City_06012015.pdf

Dear Mr. Rosas,

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horsetown Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment.

I received your contact information from the Native American Heritage Commission. SCE requests any information or comments your community might have regarding cultural resources, tribal cultural resources (as defined by California Public Resources Code (PRC) Section 21074), or other areas of concern within or near this project

Attached is a letter providing additional Project details.

If you have any questions, please feel free to call me at (626) 462-8603 or contact me via e-mail at amanda.cannon@sce.com. Thank you for your assistance and participation in this Project.

Regards,
Amanda

Amanda Cannon, MA, RPA
Archaeologist
Natural and Cultural Resources
Corporate Environmental, Health, and Safety

Southern California Edison
Monrovia Office Building
260I, 2nd Floor
1218 South 5th Avenue
Monrovia, CA 91016
Office: (626) 462-8603 / PAX 74603
Fax: (626) 462-2586
amanda.cannon@sce.com



John Tommy Rosas
Tongva Ancestral Territorial Tribal Nation

June 1, 2015

SUBJECT: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear Mr. Rosas:

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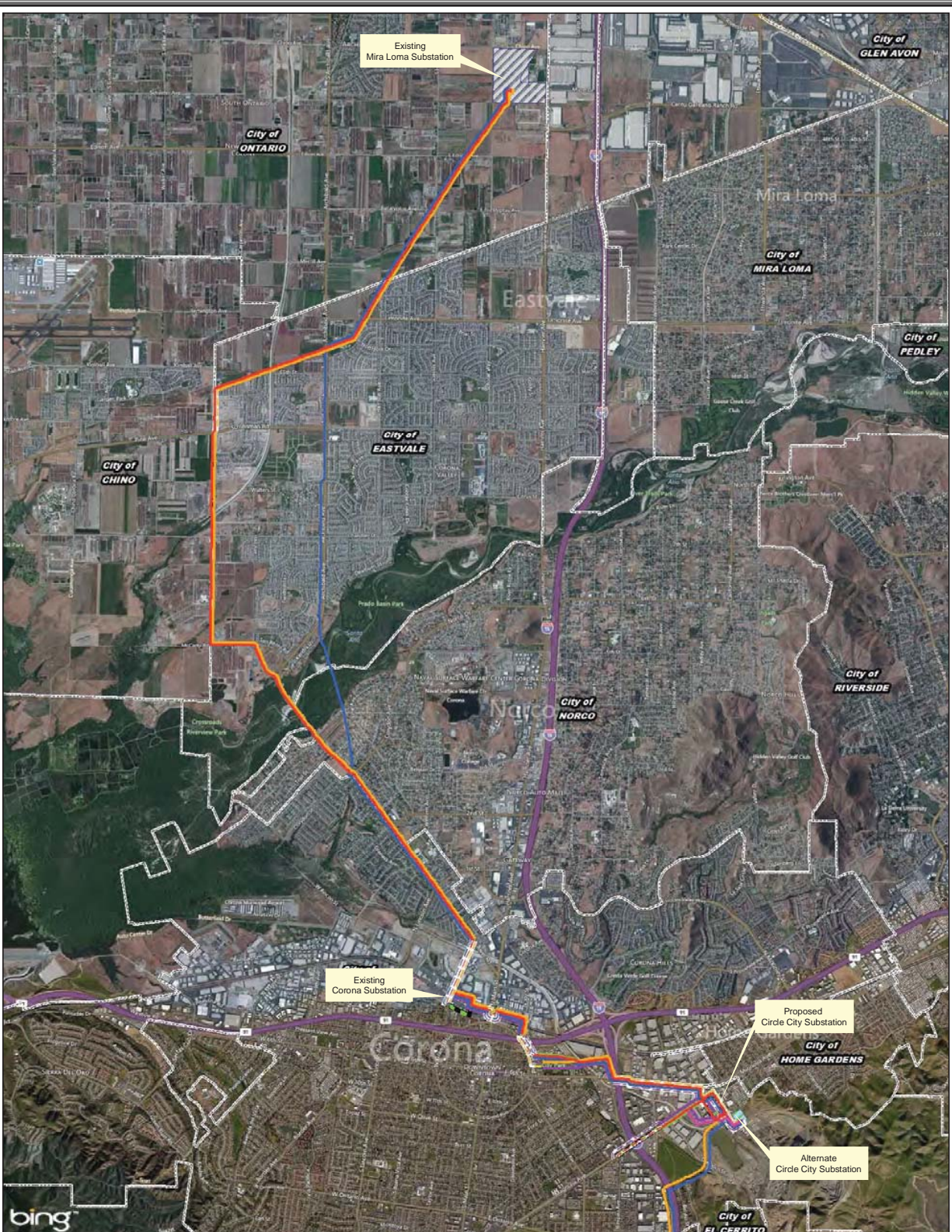
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Southern California Edison
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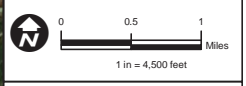
Enclosure: Project Map



Circle City Substation Project

Proposed/Alternate Routes

Legend		SOURCE LINE		TELECOMMUNICATION LINE	
MIRA LOMA-JEFFERSON LINE		Alternative 1		Overhead	
Proposed, OH, Subtrans Line Route Alternative 1		Alternative, OH, Source Line Route Alternative 1		Overhead	
Proposed, UG, Subtrans Line Route Alternative 1		Alternative, OH, Source Line Route Alternative 2		Underground	
Alternative 2		Alternative 2		Substation Area	
Alternative, OH, Subtrans Line Route Alternative 2		Alternative, OH, Source Line Route Alternative 2		Existing Substation Boundary	
Alternative, UG, Subtrans Line Route Alternative 2		Alternative, UG, Source Line Route Alternative 2		Proposed Substation Boundary	
Alternative 3		Alternative 3		City Boundaries	
Alternative, OH, Subtrans Line Route Alternative 3		Alternative, OH, Source Line Route Alternative 3		City Boundaries	
Alternative, UG, Subtrans Line Route Alternative 3		Alternative, UG, Source Line Route Alternative 3		City Boundaries	
Alternative 4		Alternative 4			
Alternative, OH, Subtrans Line Route Alternative 4		Alternative, OH, Source Line Route Alternative 4			
Alternative, UG, Subtrans Line Route Alternative 4		Alternative, UG, Source Line Route Alternative 4			



Notification #: 201219752
 Date: 5/6/2015
 File Name:
 CCSPP_CircleCity_OverviewAerial_HighLevel_11x17_20150506.mxd
 Version #: 01

Features depicted herein are planning level accuracy, and intended for informational purposes only. Distances and locations may be distorted at this scale. Always consult with the proper legal documents or agencies regarding such features. Real Properties Department.

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File: P:\PROJECTS\MPO_Proposed_Circle_City_Substation_ProposedMap\Overview\CCSP_CircleCity_OverviewAerial_HighLevel_11x17_20150506.mxd

Amanda Cannon

From: Johntommy Rosas <tattnlaw@gmail.com>
Sent: Monday, June 01, 2015 12:34 PM
To: Amanda Cannon; andysalas07@yahoo.com
Subject: Re: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

thanks

please use salas group for all monitoring we require for those excavations -
thnak jt

On Mon, Jun 1, 2015 at 12:18 PM, Amanda Cannon <Amanda.Cannon@sce.com> wrote:

Dear Mr. Rosas,

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horsetown Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment.

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Attached is a letter providing additional Project details.

If you have any questions, please feel free to call me at [\(626\) 462-8603](tel:626-462-8603) or contact me via e-mail at amanda.cannon@sce.com. Thank you for your assistance and participation in this Project.

Regards,

Amanda

Amanda Cannon, MA, RPA

Archaeologist

Natural and Cultural Resources

Corporate Environmental, Health, and Safety

Southern California Edison

Monrovia Office Building

260I, 2nd Floor

1218 South 5th Avenue

Monrovia, CA 91016

Office: [\(626\) 462-8603](tel:6264628603) / PAX 74603

Fax: [\(626\) 462-2586](tel:6264622586)

amanda.cannon@sce.com

--

JOHN TOMMY ROSAS

TRIBAL ADMINISTRATOR

TRIBAL LITIGATOR

TONGVA ANCESTRAL TERRITORIAL TRIBAL NATION

A TRIBAL SOVEREIGN NATION UNDER UNDRIP

AND AS A CALIFORNIA NATIVE AMERICAN TRIBE / SB18-AJ52-AJR 42

25 U.S. Code § 1679 - Public Law 85-671

August 18, 1958 | [H. R. 2824] 72 Stat. 619

Tribal sovereignty in the United States is the inherent authority of indigenous tribes to govern themselves within and outside the borders and waters of the United States of America .

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tongvanation.org

Amanda Cannon

From: Andy Salas <andysalas07@yahoo.com>
Sent: Monday, June 01, 2015 1:41 PM
To: Johntommy Rosas
Cc: Amanda Cannon
Subject: Re: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Thank you Mr. Rosas

Sent from my iPhone

On Jun 1, 2015, at 12:34 PM, Johntommy Rosas <tattnlaw@gmail.com> wrote:

thanks
please use salas group for all monitoring we require for those excavations -
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Amanda

Amanda Cannon, MA, RPA

Archaeologist

Natural and Cultural Resources

Corporate Environmental, Health, and Safety

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amanda.cannon@sce.com

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JOHN TOMMY ROSAS

TRIBAL ADMINISTRATOR

TRIBAL LITIGATOR

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tongvanation.org

RINCON BAND OF LUISEÑO INDIANS

Culture Committee

1 W. Tribal Road · Valley Center, California 92082 ·
(760) 297-2621 or (760) 297-2622 & Fax: (760) 749-8901



June 1, 2015

Amanda Cannon
Southern California Edison
1218 South 5th Avenue
Monrovia, CA 91016

**Re: Southern California Edison's Circle City Substation and Mira Loma-Jefferson
Subtransmission Line Project**

Dear Ms. Cannon:

Thank you for inviting us to submit comments on the Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project. This letter is written on behalf of the Rincon Band of Luiseño Indians. Rincon is submitting these comments concerning your projects potential impact on Luiseño cultural resources.

The Rincon Band has concerns for impacts to historic and cultural resources and the finding of items of significant cultural value that could be disturbed or destroyed and are considered culturally significant to the Luiseño people. This is to inform you, your identified location is within the Aboriginal Territory of the Luiseño people, but is not within Rincon's Historic boundaries. We defer you to the Pechanga Band of Luiseño Indians or Soboba Band of Luiseño Indians who are closer to your project area

Please contact the Native American Heritage Commission and they will assist with a referral to other tribes in the project area.

Thank you for the opportunity to protect and preserve our cultural assets.

Sincerely,

A handwritten signature in blue ink that reads "Rose Duro". The signature is written in a cursive style.

Rose Duro
Rincon Culture Committee Chairman

Amanda Cannon

From: Andy <gabrielenoindians@yahoo.com>
Sent: Monday, June 01, 2015 5:00 PM
To: Amanda Cannon; Dr. Christina Swindall Martinez; Tim Miguel; Martha Gonzalez. Kizh Gabrieleno
Cc: Katy@NAHC Sanchez
Subject: Cultural Resources Inquiry for Southern California Edison circle city Substation and Mira Loma (wines ville) Jefferson subtransmission line project, riverside and San Bernardino counties.

Dear Amanda Cannon MA, RPA
Archeologist

This email is in regards to the above project location :

*“The Entire project locale lies in an area where the traditional territories of the **Gabrieleño** villages adjoined and overlapped with each other, at least during the Late Prehistoric and Protohistoric Periods. The homeland of the **Gabrieleños** , probably the most influential Native American group in aboriginal southern California (Bean and Smith 1978a:538), was centered in the **Los Angeles Basin**, and reached as far east as the **San Bernardino-Riverside - Channel Islands and the inland costal areas**. Villages were based on clan or lineage groups. Their home/ base sites are marked by midden deposits, often with bedrock mortars. During their seasonal rounds to exploit plant resources, small groups would migrate within their traditional territory in search of specific plants and animals. Their gathering strategies often left behind signs of special use sites, usually grinding slicks on bedrock boulders, at the locations of the resources. Not only were these areas known as village locations but later they became territory of the San a Gabriel Mission later known as Mission Lands.*

Therefore in order to protect our Cultural resources we're requesting one of our experienced & certified Native American monitors to be on site during any & all ground disturbances.

In all cases, when the NAHC states there are “No” records of sacred sites” in the subject area; they always refer the contractors back to the Native American Tribes whose tribal territory the project area is in. This is due to the fact, that the NAHC is only aware of general information on each California NA Tribe they are “NOT ” the “experts” on our Tribe. Our Elder Committee & Tribal Historians are the experts and is the reason why the NAHC will always refer contractors to the local tribes. Please contact our office regarding this project to coordinate a Native American Monitor to be present. Please see attachments .

Sincerely,

Andy Salas Chairman Of Gabrieleño Band Of Mission Indians/Kizh (Kit'c) Nation
Of the Los Angeles Basin, Orange county and the Channel islands.

NOTICE: PLEASE FILE OUR CONTACT INFORMATION FOR CONSULTATION ON ALL FUTURE PROJECTS WITHIN OUR TRIBAL TERRITORY.....

"Territory of Jurupa"

<http://jurupavalley.org/About-The-City/History>

Ethnography and Ethnohistory

The RCF alignments are located in an area of uncertain ethnographic occupancy (Bean 1972:map facing page 1). To the north and east were the Serrano, who occupied the San Bernardino Valley and Mountains. To the east were the Cahuilla, whose territory encompassed the San Geronimo Pass, San Jacinto Mountains, and Colorado Desert. The Luiseño lived to the south, and the Gabrielino extended westward from the Jurupa area to the Pacific Coast. Some ethnographic studies have attributed the project area to the Gabrielino (Johnston 1962: map facing page 1; McCawley 1996:Map 7; Strong 1929:Map 7), another shows it extending from Serrano territory on the north to Gabrielino territory on the south (Drucker 1937: Figure 1), and yet another shows it extending from Serrano territory on the north to Luiseño territory on the south (Kroeber 1925:Plate 57). Finally, the area is also sometimes shown in Cahuilla territory (Heizer 1978:ix), although this may reflect presence of Cahuillas from the San Jacinto Mountains who moved in the San Bernardino Valley and Riverside areas during historical times to work in agriculture and as domestic help (Beattie 1953; Goodman 1993).

Aboriginally, all were hunters and gatherers who utilized both large and small game, as well as numerous plant resources, for food. Large animals such as deer, pronghorn, and mountain sheep were hunted with bows and arrows, while smaller animals such as rabbits, hares, and various rodents were taken with throwing sticks, nets, and snares. Piñon nuts and acorns from several species of oak formed the staples of the diet, supplemented by yucca stalks and flowers, seeds from holly-leaved cherries, chia and other sages, fruits and berries, and roots, tubers, and greens.

The ethnohistoric settlement pattern consisted of permanent villages located in proximity to reliable sources of water, and within range of a variety of floral and faunal food resources, which were exploited from temporary camp locations surrounding the main village. There is some suggestion in the ethnographic record that a Gabrielino village known as *Hurungna*, for which the later *Jurupa Rancho* was named, was located along the Santa Ana River in the vicinity of the project's river crossing (Johnston 1962: map facing page 1; McCawley 1996:Map 7). However, well-documented ethnographic village sites are otherwise absent in the project area (Bean 1978:Figure 1; Kroeber 1925:Plate 57), possibly as a result of early disruption of native culture in the area by Spanish mission activities. Detailed information on the lifeways of all the groups from the project area may be found in Kroeber (1925) and Heizer (1978), among other sources.

Today, the descendants of the Native American groups from the project region are affiliated with the federally recognized San Manuel Band of Mission Indians in Highland, the Soboba Band of Luiseño Indians

Gabrielino

LOWELL JOHN BEAN AND CHARLES R. SMITH

The **Gabrielino** (gãbrẽal'ẽnõ) are, in many ways, one of the most interesting—yet least known—of native California peoples. At the time of Spanish contact in 1769 they occupied the “most richly endowed coastal section in southern California” (Blackburn 1962-1963:6), which is most of present-day Los Angeles and Orange counties, plus several offshore islands (San Clemente, Santa Catalina, San Nicolas). With the possible exception of the Chumash, the **Gabrielino** were the wealthiest, most populous, and most powerful ethnic nationality in aboriginal southern California, their influence spreading as far north as the San Joaquin valley Yokuts, as far east as the Colorado River, and south into Baja California.

Language, Territory, and Environment

Gabrielino was one of the Cupan languages in the Takic family, which is part of the Uto-Aztecan linguistic stock (Bright 1975).^{*} Internal linguistic differences existed. Harrington (1962:viii) suggesting four dialects and Kroeber (1925), six. Harrington's four-part division includes: **Gabrielino** proper, spoken mainly in the Los Angeles basin area; **Fernandeño**, spoken by people north of the Los Angeles basin, mainly in the San Fernando valley region; **Santa Catalina Island dialect**; and **San Nicolas Island dialect**—although according to Bright (1975) insufficient data exist to be sure of the Cupan affiliation of the San Nicolas speech. There were probably dialectal differences also between many mainland villages, a result not only of geographical separation but also of social, cultural, and linguistic mixing with neighboring non-**Gabrielino** speakers.

The names **Gabrielino** and **Fernandeño** (fernãn'dãnyõ) refer to the two major Spanish missions established in **Gabrielino** territory—San Gabriel and San Fernando.

^{*} Italicized **Gabrielino** words have been written in a phonemic alphabet by Kenneth C. Hill, on the basis of John Peabody Harrington's unpublished field notes. The consonants are: (stops and affricate) p, t, c, k, ʔ; (fricatives) s, ʃ, x, h; (nasals) m, n, ɲ; (approximants) w, ɬ, r, ʎ, w. Stressed vowels are [e], [ɛ], [o], [ɔ], [u], which may occur long or short; in unstressed syllables the vowels are only [e], [ɛ], and [o].

It was to these two missions that the majority of the Indians living on the coastal plains and valleys of southern California were removed.

Although the major outlines of **Gabrielino** territorial occupation are known, the fixing of definitive boundaries is difficult. Generally, **Gabrielino** territory included the watersheds of the Los Angeles, San Gabriel, and Santa Ana rivers, several smaller intermittent streams in the Santa Monica and Santa Ana mountains, all of the Los Angeles basin, the coast from Aliso Creek in the south to Topanga Creek in the north, and the islands of San Clemente, San Nicolas, and Santa Catalina (fig. 1). The area thus bounded encompassed several biotic zones (such as Coast-Marsh, Coastal Strand, Prairie, Chaparral, Oak Woodland, Pine) and, following Hudson's (1971) studies, can be divided into four macro-environmental zones (excluding the islands): Interior Mountains/Adjacent Foothills, Prairie, Exposed Coast, and Sheltered Coast. Each area is characterized by a particular floral-faunal-geographical relationship that allows delineation of subsistence-settlement patterns “according to the macro-environmental setting.” The interior mountains and foothills, according to Hudson, comprise an area of numerous resources including “many small animals, deer, acorns, sage, piñon nuts, and a variety of other plants and animal foods.” Settlement-pattern studies



Fig. 1. Tribal territory.

MISSION RANCHOS

In addition to the residences were built outlying ranchos with livestock, primarily principal San Gabriel Puente, Rancho Santa and Rancho Santa 201 202. Webb 10

Sent from my iPhone

Amanda Cannon

From: Alexis Wallick <awallick@palatribe.com>
Sent: Friday, June 05, 2015 2:44 PM
To: Amanda Cannon
Subject: Circle City Substation and Mira Loma-Jefferson Subtransmission line Project
Attachments: So Cal Edison- Circle City Substation and Mira Loma -Jefferson Subtransmission Line Project.pdf; Pala THPO - contact info letter 022715.pdf

Attached is the response to the request for comment on this project, sent on behalf of Shasta Gaughen. Please see attached letter regarding contact information.

Alexis Wallick

Pala Band of Mission Indians
Assistant Tribal Historic Preservation Officer
Pala Environmental Department, THPO
35008 Pala Temecula Road, Pmb 50; Pala, CA 92059
(760)891-3537
awallick@palatribe.com

**PALA TRIBAL HISTORIC
PRESERVATION OFFICE**

PMB 50, 35008 Pala Temecula Road
Pala, CA 92059
760-891-3510 Office | 760-742-3189 Fax



June 5, 2015

Amanda Cannon, MA, RPA
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016

Re: Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project

Dear Mrs. Cannon:

The Pala Band of Mission Indians Tribal Historic Preservation Office has received your notification of the project referenced above. This letter constitutes our response on behalf of Robert Smith, Tribal Chairman.

We have consulted our maps and determined that the project as described is not within the boundaries of the recognized Pala Indian Reservation. The project is also beyond the boundaries of the territory that the tribe considers its Traditional Use Area (TUA). Therefore, we have no objection to the continuation of project activities as currently planned and we defer to the wishes of Tribes in closer proximity to the project area.

We appreciate involvement with your initiative and look forward to working with you on future efforts. If you have questions or need additional information, please do not hesitate to contact me by telephone at 760-891-3515 or by e-mail at sgaughen@palatribe.com.

Sincerely,



Shasta C. Gaughen, PhD
Tribal Historic Preservation Officer
Pala Band of Mission Indians

ATTENTION: THE PALA TRIBAL HISTORIC PRESERVATION OFFICE IS RESPONSIBLE FOR ALL REQUESTS FOR CONSULTATION. PLEASE ADDRESS CORRESPONDENCE TO SHASTA C. GAUGHEN AT THE ABOVE ADDRESS. IT IS NOT NECESSARY TO ALSO SEND NOTICES TO PALA TRIBAL CHAIRMAN ROBERT SMITH.

**PALA TRIBAL HISTORIC
PRESERVATION OFFICE**

PMB 50, 35008 Pala Temecula Road
Pala, CA 92059
760-891-3510 Office | 760-742-3189 Fax



February 27, 2015

It has come to the attention of the Pala Band of Mission Indians Tribal Historic Preservation Office (Pala THPO) that government agencies and their consultants have been directed by the Native American Heritage Commission to send requests for Native American consultation to every known point of contact for tribes within geographic proximity to those projects. This has resulted in the Pala THPO receiving multiple and duplicative copies of consultation requests for many projects. To reduce the paperwork burden on the Pala THPO as well as on agencies and consultants, please note that requests for consultation need only be sent directly to the Pala THPO:

Shasta Gaughen, PhD
Pala THPO
PMB 50, 35008 Pala Temecula Road
Pala, CA 92059
sgaughen@palatribe.com

If your agency requires that government-to-government consultation requests be sent directly to a Pala government official, please send requests to the Pala Chairman:

Robert Smith, Chairman
Pala Band of Mission Indians
PMB 50, 35008 Pala Temecula Road
Pala, CA 92059
rsmith@palatribe.com.

Requests for consultation do not need to be sent to both of these points of contact. We prefer that requests be sent directly to the Pala THPO; if they must be sent to the tribal chairman, please do not also send a copy to the Pala THPO. We accept requests via e-mail or postal mail; again, there is no need to use both.

All other addresses or other points of contact for the Pala Band of Mission Indians should be deleted from your contact lists. This includes the Cupa Cultural Center, which used to house the Pala THPO. The only points of contact for the Pala Band of Mission Indians are those listed above.

The NAHC has been provided this updated contact information but it may take some time for the changes to be reflected in their contact lists. We appreciate your cooperation in using only the contact information in this letter. Please contact me directly with any questions or concerns.

Sincerely,

Shasta C. Gaughen, PhD
Pala THPO

Amanda Cannon

From: Johntommy Rosas <tattnlaw@gmail.com>
Sent: Wednesday, June 10, 2015 1:29 PM
To: Amanda Cannon
Subject: Re: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

thanks ,jt

On Wed, Jun 10, 2015 at 1:25 PM, Amanda Cannon <Amanda.Cannon@sce.com> wrote:

Hello Mr. Rosas,

Thank you for reaching out to me regarding Southern California Edison's (SCE) Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project.

SCE is currently preparing a Proponent's Environmental Assessment document that will be filed with the California Public Utilities Commission (CPUC) and will be available to the public for review. SCE is seeking a Permit to Construct (PTC) from the CPUC to construct the Project; a PTC has not yet been issued.

I will keep you apprised as Project planning continues. Please feel free to contact me with any questions, concerns, or additional input.

Regards,

Amanda

Amanda Cannon, MA, RPA

Archaeologist

Natural and Cultural Resources

Corporate Environmental, Health, and Safety

Southern California Edison

Monrovia Office Building

260I, 2nd Floor

1218 South 5th Avenue

Monrovia, CA 91016

Office: [\(626\) 462-8603](tel:6264628603) / PAX 74603

Fax: [\(626\) 462-2585](tel:6264622585)

amanda.cannon@sce.com

From: Johntommy Rosas [mailto:tattnlaw@gmail.com]

Sent: Monday, June 01, 2015 12:34 PM

To: Amanda Cannon; andysalas07@yahoo.com

Subject: Re: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

thanks

please use salas group for all monitoring we require for those excavations -

thnak jt

On Mon, Jun 1, 2015 at 12:18 PM, Amanda Cannon <Amanda.Cannon@sce.com> wrote:

Dear Mr. Rosas,

Southern California Edison (SCE) is in the process of planning the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (previously known as the *Horsetown Substation Project*). The proposed project will serve current and projected demand for electricity and maintain electric system reliability in portions of northwestern Riverside County, including the cities of Corona, Norco, and the surrounding communities of unincorporated Riverside County. The project involves construction of the new

Circle City 66kV/12kV substation, four new 66kV subtransmission source lines with a combination of underground and overhead construction, the removal and replacement of existing poles to create the new Mira Loma-Jefferson 66kV subtransmission line with a combination of underground and overhead construction, upgrade of the existing Mira Loma Substation, and installation of fiber optic cable and communication equipment.

I received your contact information from the Native American Heritage Commission. SCE requests any information or comments your community might have regarding cultural resources, tribal cultural resources (as defined by California Public Resources Code (PRC) Section 21074), or other areas of concern within or near this project

Attached is a letter providing additional Project details.

If you have any questions, please feel free to call me at [\(626\) 462-8603](tel:626-462-8603) or contact me via e-mail at amanda.cannon@sce.com. Thank you for your assistance and participation in this Project.

Regards,

Amanda

Amanda Cannon, MA, RPA

Archaeologist

Natural and Cultural Resources

Corporate Environmental, Health, and Safety

Southern California Edison

Monrovia Office Building

260I, 2nd Floor

1218 South 5th Avenue

Monrovia, CA 91016

Office: [\(626\) 462-8603](tel:626-462-8603) / PAX 74603

Fax: [\(626\) 462-2586](tel:6264622586)

amanda.cannon@sce.com

--

JOHN TOMMY ROSAS

TRIBAL ADMINISTRATOR
TRIBAL LITIGATOR
TONGVA ANCESTRAL TERRITORIAL TRIBAL NATION

A TRIBAL SOVEREIGN NATION UNDER UNDRIP

AND AS A CALIFORNIA NATIVE AMERICAN TRIBE / SB18-AJ52-AJR 42

25 U.S. Code § 1679 - Public Law 85-671

August 18, 1958 | [H. R. 2824] 72 Stat. 619

Tribal sovereignty in the United States is the inherent authority of indigenous tribes to govern themselves within and outside the borders and waters of the United States of America .

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tongvanation.org

--

JOHN TOMMY ROSAS

TRIBAL ADMINISTRATOR
TRIBAL LITIGATOR
TONGVA ANCESTRAL TERRITORIAL TRIBAL NATION

A TRIBAL SOVEREIGN NATION UNDER UNDRIP

AND AS A CALIFORNIA NATIVE AMERICAN TRIBE / SB18-AJ52-AJR 42

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Tribal sovereignty in the United States is the inherent authority of indigenous tribes to govern themselves within and outside the borders and waters of the United States of America .

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tongvanation.org

Amanda Cannon

From: Andy <gabrielenoindians@yahoo.com>
Sent: Friday, June 12, 2015 9:39 AM
To: Amanda Cannon
Subject: Re: Cultural Resources Inquiry for Southern California Edison circle city Substation and Mira Loma (wines ville) Jefferson subtransmission line project, riverside and San Bernardino counties.

Thank you Amanda

Sent from my iPhone

On Jun 10, 2015, at 1:28 PM, Amanda Cannon <Amanda.Cannon@sce.com> wrote:

Hello Chairman Salas,

Thank you for reaching out to me regarding Southern California Edison's (SCE) Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project.

SCE is currently preparing a Proponent's Environmental Assessment document that will be filed with the California Public Utilities Commission (CPUC) and will be available to the public for review. SCE is seeking a Permit to Construct (PTC) from the CPUC to construct the Project; a PTC has not yet been issued.

I will keep you apprised as Project planning continues. Please feel free to contact me with any questions, concerns, or additional input.

Regards,
Amanda

Amanda Cannon, MA, RPA
Archaeologist
Natural and Cultural Resources
Corporate Environmental, Health, and Safety

Southern California Edison
Monrovia Office Building
260I, 2nd Floor
1218 South 5th Avenue
Monrovia, CA 91016
Office: (626) 462-8603 / PAX 74603
Fax: (626) 462-2585
amanda.cannon@sce.com

From: Andy [<mailto:gabrielenoindians@yahoo.com>]
Sent: Monday, June 01, 2015 5:00 PM

To: Amanda Cannon; Dr. Christina Swindall Martinez; Tim Miguel; Martha Gonzalez. Kizh Gabrieleno

Cc: Katy@NAHC Sanchez

Subject: Cultural Resources Inquiry for Southern California Edison circle city Substation and Mira Loma (wines ville) Jefferson subtransmission line project, riverside and San Bernardino counties.

Dear Amanda Cannon MA, RPA
Archeologist

This email is in regards to the above project location :

*“The Entire project locale lies in an area where the traditional territories of the **Gabrieleño** villages adjoined and overlapped with each other, at least during the Late Prehistoric and Protohistoric Periods. The homeland of the **Gabrieleños** , probably the most influential Native American group in aboriginal southern California (Bean and Smith 1978a:538), was centered in the **Los Angeles Basin**, and reached as far east as the **San Bernardino-Riverside - Channel Islands and the inland costal areas**. Villages were based on clan or lineage groups. Their home/ base sites are marked by midden deposits, often with bedrock mortars. During their seasonal rounds to exploit plant resources, small groups would migrate within their traditional territory in search of specific plants and animals. Their gathering strategies often left behind signs of special use sites, usually grinding slicks on bedrock boulders, at the locations of the resources. Not only were these areas known as village locations but later they became territory of the San a Gabriel Mission later known as Mission Lands.*

Therefore in order to protect our Cultural resources we're requesting one of our experienced & certified Native American monitors to be on site during any & all ground disturbances.

In all cases, when the NAHC states there are “**No**” records of sacred sites” in the subject area; they always refer the contractors back to the Native American Tribes whose tribal territory the project area is in. This is due to the fact, that the NAHC is only aware of general information on each California NA Tribe they are “**NOT** ” the “experts” on our Tribe. Our Elder Committee & Tribal Historians are the experts and is the reason why the NAHC will always refer contractors to the local tribes.

Please contact our office regarding this project to coordinate a Native American Monitor to be present. Please see attachments .

Sincerely,

Andy Salas Chairman Of Gabrieleño Band Of Mission Indians/Kizh
(Kit'c) Nation

Of the Los Angeles Basin, Orange county and the Channel islands.

NOTICE: PLEASE FILE OUR CONTACT INFORMATION FOR CONSULTATION ON ALL FUTURE PROJECTS WITHIN OUR TRIBAL TERRITORY.....

"Territory of Jurupa"

<http://jurupavalley.org/About-The-City/History>

<image001.jpg>

<image002.jpg>

<image003.jpg>

Sent from my iPhone

June 10, 2015

Attn: Amanda Cannon, Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016



Re: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

The Soboba Band of Luiseño Indians appreciates your observance of Tribal Cultural Resources and their preservation in your project. The information provided to us on said project has been assessed through our Cultural Resource Department, where it was concluded that although it is outside the existing reservation, the project area does fall within the bounds of our Tribal Traditional Use Areas. This project location is in proximity to known sites, is a shared use area that was used in ongoing trade between the tribes, and is considered to be culturally sensitive by the people of Soboba.

Soboba Band of Luiseño Indians is requesting the following:

1. To initiate a consultation with the project proponents and lead agency.
2. The transfer of information to the Soboba Band of Luiseno Indians regarding the progress of this project should be done as soon as new developments occur.
3. Soboba Band of Luiseño Indians continues to act as a consulting tribal entity for this project.
4. Working in and around traditional use areas intensifies the possibility of encountering cultural resources during the construction/excavation phase. For this reason the Soboba Band of Luiseño Indians requests that Native American Monitor(s) from the Soboba Band of Luiseño Indians Cultural Resource Department to be present during any ground disturbing proceedings. Including surveys and archaeological testing.
5. Request that proper procedures be taken and requests of the tribe be honored (Please see the attachment)

Sincerely,

A handwritten signature in black ink, appearing to read "JOE", with a long horizontal stroke extending to the right.

Joseph Ontiveros, Director of Cultural Resources
Soboba Band of Luiseño Indians
P.O. Box 487
San Jacinto, CA 92581
Phone (951) 654-5544 ext. 4137
Cell (951) 663-5279
jontiveros@soboba-nsn.gov

Cultural Items (Artifacts). Ceremonial items and items of cultural patrimony reflect traditional religious beliefs and practices of the Soboba Band. The Developer should agree to return all Native American ceremonial items and items of cultural patrimony that may be found on the project site to the Soboba Band for appropriate treatment. In addition, the Soboba Band requests the return of all other cultural items (artifacts) that are recovered during the course of archaeological investigations. Where appropriate and agreed upon in advance, Developer's archeologist may conduct analyses of certain artifact classes if required by CEQA, Section 106 of NHPA, the mitigation measures or conditions of approval for the Project. This may include but is not limited or restricted to include shell, bone, ceramic, stone or other artifacts.

The Developer should waive any and all claims to ownership of Native American ceremonial and cultural artifacts that may be found on the Project site. Upon completion of authorized and mandatory archeological analysis, the Developer should return said artifacts to the Soboba Band within a reasonable time period agreed to by the Parties and not to exceed (30) days from the initial recovery of the items.

Treatment and Disposition of Remains.

A. The Soboba Band shall be allowed, under California Public Resources Code § 5097.98 (a), to (1) inspect the site of the discovery and (2) make determinations as to how the human remains and grave goods shall be treated and disposed of with appropriate dignity.

B. The Soboba Band, as MLD, shall complete its inspection within twenty-four (24) hours of receiving notification from either the Developer or the NAHC, as required by California Public Resources Code § 5097.98 (a). The Parties agree to discuss in good faith what constitutes "appropriate dignity" as that term is used in the applicable statutes.

C. Reburial of human remains shall be accomplished in compliance with the California Public Resources Code § 5097.98 (a) and (b). The Soboba Band, as the MLD in consultation with the Developer, shall make the final discretionary determination regarding the appropriate disposition and treatment of human remains.

D. All parties are aware that the Soboba Band may wish to rebury the human remains and associated ceremonial and cultural items (artifacts) on or near, the site of their discovery, in an area that shall not be subject to future subsurface disturbances. The Developer should accommodate on-site reburial in a location mutually agreed upon by the Parties.

E. The term "human remains" encompasses more than human bones because the Soboba Band's traditions periodically necessitated the ceremonial burning of human remains. Grave goods are those artifacts associated with any human remains. These items, and other funerary remnants and their ashes are to be treated in the same manner as human bone fragments or bones that remain intact

Coordination with County Coroner's Office. The Lead Agencies and the Developer should immediately contact both the Coroner and the Soboba Band in the event that any human remains are discovered during implementation of the Project. If the Coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, the Coroner shall ensure that notification is provided to the NAHC within twenty-four (24) hours of the determination, as required by California Health and Safety Code § 7050.5 (c).

Non-Disclosure of Location Reburials. It is understood by all parties that unless otherwise required by law, the site of any reburial of Native American human remains or cultural artifacts shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, parties, and Lead Agencies, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code § 6254 (r). Ceremonial items and items of cultural patrimony reflect traditional religious beliefs and practices of the Soboba Band. The Developer agrees to return all Native American ceremonial items and items of cultural patrimony that may be found on the project site to the Soboba Band for appropriate treatment. In addition, the Soboba Band requests the return of all other cultural items (artifacts) that are recovered during the course of archaeological investigations. Where appropriate and agreed upon in advance, Developer's archeologist may conduct analyses of certain artifact classes if required by CEQA, Section 106 of NHPA, the mitigation measures or conditions of approval for the Project. This may include but is not limited or restricted to include shell, bone, ceramic, stone or other artifacts.



Cahuilla Tribal Environmental Protection Office
52701 Highway 371 Suite B-1
Anza, California 92539
(951) 763-2631 Fax (951) 763-2632)

June 11, 2015

Subject: Change of Address

Please be advised that the mailing address of the Cahuilla Band of Indians has changed as follows;

Cahuilla Band of Indians
52701 Highway 371
Anza, CA 92539

The Tribe no longer has a Post Office Box number.

Also the address to the Cahuilla Tribal Environmental Protection Office has also changed as follows;

Cahuilla Tribal Environmental Protection Office
52701 Highway 371 Suite B
Anza, CA 92539

Please make the correct changes to your mailing list. The US Post Office will soon stop forwarding our mail to our new address from our old PO Box number.

Respectfully,

A handwritten signature in black ink that reads "Yvonne L. Markle".

Yvonne L. Markle
Cahuilla Environmental Office Manager
Cahuilla Band of Indians

Amanda Cannon

From: Amanda Cannon
Sent: Tuesday, June 16, 2015 2:02 PM
To: 'Cultural'
Cc: Dixon, Patti; Jeremy Zagarella
Subject: RE: SCE's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project.

Hello Mr. Devers,

Thank you for reaching out to me regarding Southern California Edison's (SCE) Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project.

SCE is currently preparing a Proponent's Environmental Assessment document that will be filed with the California Public Utilities Commission (CPUC) and will be available to the public for review. SCE is seeking a Permit to Construct (PTC) from the CPUC to construct the Project; a PTC has not yet been issued.

I will keep you apprised as Project planning continues. Please feel free to contact me with any questions, concerns, or additional input.

Regards,
Amanda

Amanda Cannon, MA, RPA
Archaeologist
Natural and Cultural Resources
Corporate Environmental, Health, and Safety

Southern California Edison
Monrovia Office Building
260I, 2nd Floor
1218 South 5th Avenue
Monrovia, CA 91016
Office: (626) 462-8603 / PAX 74603
Fax: (626) 462-2585
amanda.cannon@sce.com

From: Cultural [mailto:Cultural@pauma-nsn.gov]
Sent: Monday, June 15, 2015 11:01 AM
To: Amanda Cannon
Cc: Dixon, Patti; Jeremy Zagarella
Subject: SCE's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project.

Ms. Cannon,

The Pauma Band of Luiseno Indians has received your May 22 notice for the Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project. We are unaware of any specific cultural sites or resources within the project area. We are also unaware if the Information Center for Riverside has any information on cultural sites within the

project area. If cultural sites or close to the project area, we would recommend the use of monitors for the ground disturbance phase. Please keep us apprised on the progression of the project.

Thank you,

Chris Devers
Cultural Liaison
Pauma Band of Luiseno Indians

Amanda Cannon

From: Amanda Cannon
Sent: Thursday, July 09, 2015 8:36 AM
To: 'Ray Huaute'
Cc: Denisa Torres
Subject: RE: Chairman's mail-Edison -- Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project.

Hello Mr. Huaute,

Thank you for reaching out to me regarding Southern California Edison's (SCE) Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project.

SCE is currently preparing a Proponent's Environmental Assessment document that will be filed with the California Public Utilities Commission (CPUC) and will be available to the public for review. SCE is seeking a Permit to Construct (PTC) from the CPUC to construct the Project; a PTC has not yet been issued. The CPUC is the lead agency for the Project.

I will keep you apprised as Project planning continues. Archaeological field surveys have been completed. I will contact you if any additional field surveys are needed due to Project engineering changes, etc. Thank you for providing a copy of the Morongo Band of Mission Indians' Standard Development Conditions.

Please feel free to contact me with any questions, concerns, or additional input. I look forward to coordinating with the Morongo Band of Mission Indians and the CPUC on the Project, including your request for a copy of the California Historical Resources Information System record search results and a copy of the cultural survey results report for the Project.

Regards,
Amanda

Amanda Cannon, MA, RPA
Archaeologist
Natural and Cultural Resources
Corporate Environmental, Health, and Safety

Southern California Edison
Monrovia Office Building
260I, 2nd Floor
1218 South 5th Avenue
Monrovia, CA 91016
Office: (626) 462-8603 / PAX 74603
Fax: (626) 462-2585
amanda.cannon@sce.com

From: Ray Huaute [mailto:RHuaute@morongo-nsn.gov]
Sent: Tuesday, June 30, 2015 1:55 PM
To: Amanda Cannon

Cc: Denisa Torres

Subject: RE: Chairman's mail-Edison

Dear Amanda,

Please find our recommendations at this time for this project in the attachment. Should you have any further questions or concerns feel free to contact me.

Sincerely,

Raymond Huaute
Cultural Resource Specialist
Morongo Band of Mission Indians
12700 Pumarra Road
Banning, CA 92220
Phone: (951) 755-5025
Fax: (951) 572-6004
Email: rhuaute@morongo-nsn.gov

From: Sasha Waters

Sent: Friday, June 19, 2015 11:48 AM

To: Franklin Dancy; Denisa Torres; Ray Huaute

Subject: Chairman's mail-Edison

Sending up original to Denisa. Received USPS postmarked 5.27.15, Certified, return receipt.

Thanks,

Sasha



Morongo Band of Mission Indians

Cultural Heritage Program

12700 Pumarra Road, Banning, CA 92220

Phone (951)755-5025

Fax (951)572-6004

Date: June 30, 2015

Re: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

Dear,

Amanda cannon, MA, RPA

Archaeologist

Southern California Edison

Thank you for contacting the Morongo Band of Mission Indians regarding the above referenced project(s). The tribe greatly appreciates the opportunity to comment on the project. After reviewing our records and consulting with our tribal elders and cultural experts, we would like to respectfully offer the following comments and/or recommendations:

___ The project is outside of the Tribe's current reservation boundaries and is not within an area considered to be a traditional use area or one in which the Tribe has cultural ties (i.e. Cahuilla or Serrano Territory). We recommend contacting the appropriate tribes who have cultural affiliation to the project area. We have no further comments at this time.

___ The project is outside of the Tribe's current reservation boundaries but within in an area considered to be a traditional use area or one in which the Tribe has cultural ties (i.e. Cahuilla or Serrano Territory). At this time, we are not aware of any cultural resources on the property; however, that is not to say there is nothing present. At this time, we ask that you impose specific conditions regarding all cultural and/or archaeological resources and buried cultural materials on any development plans or entitlement applications (see Standard Development Conditions attachment).

X The project is outside of the Tribe's current reservation boundaries but within in an area considered to be a traditional use area or one in which the Tribe has cultural ties (i.e. Cahuilla or Serrano Territory). At this time we ask that you impose specific conditions regarding all cultural and/or archaeological resources and buried cultural materials on any development plans or entitlement applications (see Standard Development Conditions attachment). Furthermore, we would like to formally request the following:

X A thorough records search be conducted by contacting one of the CHRIS (California Historical Resources Information System) Archaeological Information Centers and have a copy of the search results be provided to the tribe.

X A comprehensive cultural survey be conducted of the proposed project property and any APE's (Areas of Potential Effect) within the property. We would also like to request

that a tribal monitor be present during the cultural survey and that a copy of the results be provided to the tribe as soon as it can be made available.

___ Morongo would like to request that our tribal monitors be present during any test excavations or subsequent ground disturbing activities during the construction phase of the project.

___ The project is located within the current boundaries of the Morongo Band of Mission Indians Reservation. Please contact the Morongo Band of Mission Indians planning department for further details.

Once again, the Morongo Band of Mission Indians appreciates the opportunity to comment on this project. Please be aware that receipt of this letter does not constitute “meaningful” tribal consultation nor does it conclude the consultation process. This letter is merely intended to initiate consultation between the tribe and lead agency, which may be followed up with additional emails, phone calls or face-to-face consultation if deemed necessary. If you should have any further questions with regard to this matter, please do not hesitate to contact me at your convenience.

Very truly yours,

Raymond Huate
Cultural Resource Specialist
Morongo Band of Mission Indians
Email: rhuate@morongo-nsn.gov
Phone: (951) 755-5025

MORONGO
BAND OF
MISSION
INDIANS



A SOVEREIGN NATION

Standard Development Conditions

The Morongo Band of Mission Indians asks that you impose specific conditions regarding cultural and/or archaeological resources and buried cultural materials on any development plans or entitlement applications as follows:

1. If human remains are encountered during grading and other construction excavation, work in the immediate vicinity shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5.
2. In the event that Native American cultural resources are discovered during project development/construction, all work in the immediate vicinity of the find shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the overall project may continue during this assessment period.
 - a. If significant Native American cultural resources are discovered, for which a Treatment Plan must be prepared, the developer or his archaeologist shall contact the Morongo Band of Mission Indians.
 - b. If requested by the Tribe¹, the developer or the project archaeologist shall, in good faith, consult on the discovery and its disposition (e.g. avoidance, preservation, return of artifacts to tribe, etc.).

¹ The Morongo Band of Mission Indians realizes that there may be additional tribes claiming cultural affiliation to the area; however, Morongo can only speak for itself. The Tribe has no objection if the archaeologist wishes to consult with other tribes and if the city wishes to revise the condition to recognize other tribes.

**Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project
Record of Correspondence**

Date: July 6, 2015

Recorder: Amanda Cannon (SCE)

Contact: Anna Hoover (Pechanga Cultural Resources Department)

Subject: Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project

Correspondence Format: Phone Conversation

Summary of Correspondence:

Ms. Hoover called Ms. Cannon indicating she received SCE's May 22, 2015 outreach letter and the Pechanga Band of Mission Indians is currently preparing a response and will provide the response to SCE.

Amanda Cannon

From: Joseph Ontiveros <jontiveros@soboba-nsn.gov>
Sent: Thursday, July 16, 2015 2:45 PM
To: Amanda Cannon
Subject: RE: Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project

Amanda,

Thank you for the notification. I look forward to updates and future dialog with you.

Thanks again,

Joe

Joseph Ontiveros

Cultural Resource Director

Soboba Band of Luiseno Indians

P.O. Box 487

San Jacinto, Ca 92581

P (951) 654-2765 ext.4137

C (951) 663-5279

From: Amanda Cannon [mailto:Amanda.Cannon@sce.com]
Sent: Thursday, July 09, 2015 8:19 AM
To: Joseph Ontiveros
Subject: Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project

Hello Director Ontiveros,

Thank you for reaching out to me regarding Southern California Edison's (SCE) Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project (your letter is attached for reference).

SCE is currently preparing a Proponent's Environmental Assessment document that will be filed with the California Public Utilities Commission (CPUC) and will be available to the public for review. SCE is seeking a Permit to Construct (PTC) from the CPUC to construct the Project; a PTC has not yet been issued. The CPUC is the lead agency for the Project.

I will keep you apprised as Project planning continues. Archaeological field surveys have been completed. I will contact you if any additional field surveys are needed due to Project engineering changes, etc. Thank you for providing the Soboba Band of Luiseño Indians' procedures for the treatment of cultural items, disposition of human remains, coordination with the County Coroner's Office, and non-disclosure of location reburials.

Please feel free to contact me with any questions, concerns, or additional input. I look forward to coordinating with the Soboba Band of Luiseño Indians and the CPUC on the Project.

Regards,

Amanda

Amanda Cannon, MA, RPA
Archaeologist
Natural and Cultural Resources
Corporate Environmental, Health, and Safety

Southern California Edison
Monrovia Office Building
260I, 2nd Floor
1218 South 5th Avenue
Monrovia, CA 91016
Office: (626) 462-8603 / PAX 74603
Fax: (626) 462-2585
amanda.cannon@sce.com

June 10, 2015

Attn: Amanda Cannon, Archaeologist
Southern California Edison
1218 South 5th Ave
Monrovia, CA 91016



Re: Cultural Resources Inquiry for Southern California Edison's Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties

The Soboba Band of Luiseño Indians appreciates your observance of Tribal Cultural Resources and their preservation in your project. The information provided to us on said project has been assessed through our Cultural Resource Department, where it was concluded that although it is outside the existing reservation, the project area does fall within the bounds of our Tribal Traditional Use Areas. This project location is in proximity to known sites, is a shared use area that was used in ongoing trade between the tribes, and is considered to be culturally sensitive by the people of Soboba.

Soboba Band of Luiseño Indians is requesting the following:

1. To initiate a consultation with the project proponents and lead agency.
2. The transfer of information to the Soboba Band of Luiseno Indians regarding the progress of this project should be done as soon as new developments occur.
3. Soboba Band of Luiseño Indians continues to act as a consulting tribal entity for this project.
4. Working in and around traditional use areas intensifies the possibility of encountering cultural resources during the construction/excavation phase. For this reason the Soboba Band of Luiseño Indians requests that Native American Monitor(s) from the Soboba Band of Luiseño Indians Cultural Resource Department to be present during any ground disturbing proceedings. Including surveys and archaeological testing.
5. Request that proper procedures be taken and requests of the tribe be honored (Please see the attachment)

Sincerely,

A handwritten signature in black ink, appearing to read "JOE", is written over a large, light-colored circular mark.

Joseph Ontiveros, Director of Cultural Resources
Soboba Band of Luiseño Indians
P.O. Box 487
San Jacinto, CA 92581
Phone (951) 654-5544 ext. 4137
Cell (951) 663-5279
jontiveros@soboba-nsn.gov

Cultural Items (Artifacts). Ceremonial items and items of cultural patrimony reflect traditional religious beliefs and practices of the Soboba Band. The Developer should agree to return all Native American ceremonial items and items of cultural patrimony that may be found on the project site to the Soboba Band for appropriate treatment. In addition, the Soboba Band requests the return of all other cultural items (artifacts) that are recovered during the course of archaeological investigations. Where appropriate and agreed upon in advance, Developer's archeologist may conduct analyses of certain artifact classes if required by CEQA, Section 106 of NHPA, the mitigation measures or conditions of approval for the Project. This may include but is not limited or restricted to include shell, bone, ceramic, stone or other artifacts.

The Developer should waive any and all claims to ownership of Native American ceremonial and cultural artifacts that may be found on the Project site. Upon completion of authorized and mandatory archeological analysis, the Developer should return said artifacts to the Soboba Band within a reasonable time period agreed to by the Parties and not to exceed (30) days from the initial recovery of the items.

Treatment and Disposition of Remains.

A. The Soboba Band shall be allowed, under California Public Resources Code § 5097.98 (a), to (1) inspect the site of the discovery and (2) make determinations as to how the human remains and grave goods shall be treated and disposed of with appropriate dignity.

B. The Soboba Band, as MLD, shall complete its inspection within twenty-four (24) hours of receiving notification from either the Developer or the NAHC, as required by California Public Resources Code § 5097.98 (a). The Parties agree to discuss in good faith what constitutes "appropriate dignity" as that term is used in the applicable statutes.

C. Reburial of human remains shall be accomplished in compliance with the California Public Resources Code § 5097.98 (a) and (b). The Soboba Band, as the MLD in consultation with the Developer, shall make the final discretionary determination regarding the appropriate disposition and treatment of human remains.

D. All parties are aware that the Soboba Band may wish to rebury the human remains and associated ceremonial and cultural items (artifacts) on or near, the site of their discovery, in an area that shall not be subject to future subsurface disturbances. The Developer should accommodate on-site reburial in a location mutually agreed upon by the Parties.

E. The term "human remains" encompasses more than human bones because the Soboba Band's traditions periodically necessitated the ceremonial burning of human remains. Grave goods are those artifacts associated with any human remains. These items, and other funerary remnants and their ashes are to be treated in the same manner as human bone fragments or bones that remain intact

Coordination with County Coroner's Office. The Lead Agencies and the Developer should immediately contact both the Coroner and the Soboba Band in the event that any human remains are discovered during implementation of the Project. If the Coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, the Coroner shall ensure that notification is provided to the NAHC within twenty-four (24) hours of the determination, as required by California Health and Safety Code § 7050.5 (c).

Non-Disclosure of Location Reburials. It is understood by all parties that unless otherwise required by law, the site of any reburial of Native American human remains or cultural artifacts shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, parties, and Lead Agencies, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code § 6254 (r). Ceremonial items and items of cultural patrimony reflect traditional religious beliefs and practices of the Soboba Band. The Developer agrees to return all Native American ceremonial items and items of cultural patrimony that may be found on the project site to the Soboba Band for appropriate treatment. In addition, the Soboba Band requests the return of all other cultural items (artifacts) that are recovered during the course of archaeological investigations. Where appropriate and agreed upon in advance, Developer's archeologist may conduct analyses of certain artifact classes if required by CEQA, Section 106 of NHPA, the mitigation measures or conditions of approval for the Project. This may include but is not limited or restricted to include shell, bone, ceramic, stone or other artifacts.