

WANDERING SKIPPER SURVEY

Interstate 5 North Coast Corridor Project

SAN DIEGO COUNTY, CALIFORNIA
DISTRICT 11-SD-5 (PM R28.4/R55.4)
EA 235800 (P ID 11-000-0159)

SEPTEMBER 2012

Reference: Caltrans 11A1967 TO#5 Wandering Skipper Surveys
AECOM Project No. 60272300
GeomorphIS Project No. 9137-008

September 27, 2012

Susan Scatolini
California Department of Transportation
District 11, Environmental Division
4050 Taylor Street, MS 242
San Diego CA 92110

Subject: Results and Findings of Presence/Absence Surveys for the Wandering Skipper (*Panoquina errans*) in the Right-of-Way of California Department of Transportation (Caltrans) within three lagoons in San Diego County

Dear Ms. Scatolini,

The purpose of this letter report is to present findings of presence/absence surveys for Wandering Skipper (*Panoquina errans*) in the Right-of-Way (ROW) of California Department of Transportation (Caltrans) within three lagoons in San Diego County, California. The surveys were conducted by Michael Klein, consulting biologist, USFWS Permit TE039305-4.

Site Location and Description

Three lagoons were surveyed within the Caltrans ROW: Buena Vista Lagoon, Batiquitos Lagoon, and San Dieguito Lagoon (figure 1). Buena Vista Lagoon, the northern-most lagoon surveyed, is within the cities of Oceanside and Carlsbad in north San Diego County. Batiquitos Lagoon is south of the Buena Vista Lagoon, and is located within the communities of Leucadia and Encinitas. San Dieguito Lagoon is the southernmost lagoon surveyed and is located within the City of San Diego near the City of Del Mar.

All three lagoons contain coastal marsh habitat dominated with saltgrass (*Distichlis spicata*), and pickleweed (*Salicornia* sp.), California bulrush (*Schoeneoplectus californicus*) and cattails (*Typha* sp.). Also, all three lagoons contain coastal sage scrub habitat with California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*) as dominate plants.

Wandering Skipper

Biology

This coastal skipper can be seen in marsh habitats not far from its larval host plant, saltgrass. It is found from Santa Barbara to the tip of Baja California Sur on both sides of the peninsula. Even though its larval host plant is fairly common in salt marshes, this skipper is limited in its distribution. Adults fly from April to September and November, and December in Baja California Sur. They are more common from July thru September but will have early flight from April to June if winter rains are good and there is unrestricted tidal flow. Males usually perch on grass blades awaiting females. Both sexes are nectar feeders on flowers. Unlike the east coast species, this skipper is darker with usually larger white-yellowish spots, most of that are hyaline, on the upper surface of the forewing. Ventral hindwings are brown with yellow veins. It also has an irregular diffuse band of about four pale spots.

Spherical eggs are either pale yellow or white and are laid on the host plant or plants adjacent to the host plant. Once eggs hatch larvae feed on the saltgrass blades. As with most grass-feeding skippers, they are nocturnal feeders. When resting during the day as well as during their diapause state, they form a hibernaculum. They have multiple flights during their season and will diapause as mature larvae during their last brood.

Habitat

Panoquina errans is strictly a coastal salt marsh skipper. Marshes with tidal flow are the more likely occupied areas. Wherever saltgrass grows along the coast and within a tidal salt marsh environment, there is the potential to observe this skipper. Estuaries that are closed off to saltwater flushing due to events like sediment build up will not sustain the skipper. It is important to maintain a freshwater / saltwater flushing for sustaining them.

Survey Methods

Surveys were conducted by biologist Michael Klein. Mr. Klein developed a protocol for the skipper requiring that, conditions need to be mostly sunny to sunny, 65°F at one meter above the ground, wind speed is below 15 mph. Survey all patches of saltgrass within the ROW out to 50 feet from the saltgrass and cover no more than 8-acres in one hour. Since this was a presence/absence survey once any life cycle of the skipper, i.e. eggs, larvae, adults or pupa, observed, surveys would not need to continue for that lagoon. However, Mr. Klein inspected both the north and south side of the lagoons as well as the west and east side of the ROW.

A total of three visits were conducted. Dates and conditions are noted in the table 1 below.

Table 1. Wandering Skipper Survey Dates and Site Conditions

Date	Time	Weather Conditions	Lagoons and location
8/2/2012	0945-1415	Partly cloudy to sunny to marine layer, West @ 5-6 mph, 76-75°F	Buena Vista Lagoon and North ROW of Batiquitos Lagoon
8/6/2012	0945-1330	Mostly sunny, West wind @ 5-6 mph, 69-75°F	North and South ROW of Batiquitos Lagoon and North ROW of San Dieguito Lagoon
8/22/2012	0930-1100	Partly Cloudy, West wind @ 2-3 mph, 74-76°F	South ROW of San Dieguito Lagoon

Findings

Buena Vista Lagoon – A total of two Wandering Skippers were observed on the west and north side of the Caltrans ROW (figure 2; photos 1 and 2). The first one was located at 33.17414N 117.34956W accuracy ± 7 feet and the second one was located at 33.17399N 117.34944W accuracy ± 7 feet. Conditions were excellent for the skipper where the saltgrass was influenced by the tides. At the time the skippers were observed, high tide had just passed so much of the saltgrass and pickleweed were in the water

No skippers were observed on the north and east side of the lagoon. However, there was one section at location, 33.17557N 117.34950W accuracy ± 9 feet that was influenced by the tides, saltgrass was in water but no skippers were observed. This area also affected by non-native grasses and might be one of the reasons why it was not occupied. If Caltrans wants to restore this marsh area for the skipper it would be beneficial.

As one moves east along the north section of the lagoon the cattails and bulrushes get so thick it is difficult to move through it. The south side of the lagoon within the ROW is not suitable skipper habitat. It is dominated with *Eucalyptus* trees and bulrushes. No exposed marsh area within the south side of the ROW.

Batiquitos Lagoon – A total of two Wandering Skippers were observed on the west and north side of the Caltrans ROW (figure 3; photos 3 and 4), and two were observed on the south and west side of the ROW (photo 5). The first on was located at 33.09223N 117.30395W accuracy ± 7 feet and the second one was located at 33.09170N 117.30352W accuracy ± 9 feet. The third location was on the south and west side of the ROW, and had two skippers. The location is at 33.08767N 117.30085W accuracy ± 9 feet. Conditions at this site were very good for the skipper. The tide had just receded and access was easy to reach. The skippers were observed flying through the saltgrass patches which merged into coastal sage scrub habitat .

No skippers were observed on the north and east side of the ROW or in the Batiquitos Lagoon Preserve areas. Restoration of saltgrass habitat on the north and east side appears to be doing very well. Therefore conditions at this site are suitable for the skipper to occupy.

The south and east side of the lagoon were assessed via the Park & Ride parking area. There was also a gate that is normally locked but was open due to a park ranger monitoring snowy plovers. Access to the channel was restricted because of the plovers. However, what was observed appeared to not be the most suitable conditions for skippers. The better habitat was the marsh area near the Park & Ride. The area had limited saltgrass within the marsh area and the area appears to be higher than the channel and it looks like this area would mostly be influenced by tides in the winter months where the high tide is much higher than in the summer months. That being said this marsh area would have marginal suitability for the skipper since it is not influenced daily by the tides.

The south and west side has decent conditions for the skipper closer to the channel. However, the skippers were observed further away from the channel in a mostly disturbed saltgrass habitat adjacent to *Eucalyptus* trees as well as non-native grasses. They were nectaring on flowers of iceplant.

San Dieguito Lagoon – A total of two skippers were observed on the north and west side of the Caltrans ROW within the drainage adjacent to the San Diego County Fairgrounds (figure 4; photo 6). Both were located at 32.97505N 117.25179W accuracy ± 7 feet. Even though the observation was a few hundred meters north of the channel, the drainage maintained a consistent influence from the tides. The area had a large patch of saltgrass that grew into the coastal sage scrub habitat.

No skippers were observed on the north and east side of the ROW even though conditions were suitable for the skipper.

The south side of the ROW has suitable habitat for the skipper. However, there is a drainage on the south east side the runs north-south and drains into the channel. The area is dominated by pickleweed and a small patch of approximately 10 saltgrass plants. I would recommend that this area be enhanced with more saltgrass as mitigation for the proposed Caltrans project: improving the area will make the drainage suitable for the skipper.

Conclusions

Wandering Skippers were found at the three lagoons surveyed for Caltrans. Each of the three lagoons had suitable habitat for Wandering Skipper. Some areas where no skippers were detected during the surveys had suitable conditions and may have been occupied by skippers despite non-detection. The results of this presence/absence survey determined that Wandering Skipper are present at the three Caltrans sites. Additional surveys would be required to determine the extent of the skipper presence at the sites.

Other sensitive species heard or observed during the surveys included black-tailed jackrabbit at Batiquitos Lagoon and coastal California gnatcatcher at Batiquitos Lagoon on the north and west sections of the ROW in the sage scrub slopes. At least two gnatcatchers were heard.

Please contact me if you have any other questions related to the surveys and this report at 619-347-3244.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michael W. Klein". The signature is fluid and cursive, with a large initial "M" and a stylized "K".

Michael W. Klein

ATTACHMENTS

Table A- 1. Wildlife Species Observed at Three North County Lagoons, Wandering Skipper Survey – August 2012

Species	Buena Vista Lagoon	Batiquitos Lagoon	San Dieguito Lagoon
INVERTEBRATES			
INSECTS			
Dragonflies & Damselflies - Odonata			
Common Green Darner	√		
Blue-eyed Darner	√	√	√
Western Pondhawk	√	√	
Neon Skimmer		√	
Variegated Meadowhawk		√	√
Grasshoppers, Crickets, Katydid - Orthoptera			
Devastating Grasshopper		√	√
True Bug - Hemiptera			
Spittle Bug		√	√
Cicada			√
Butterflies, Moths & Skippers - Lepidoptera			
Custodiata Geometrid Moth		√	
Western Tiger Swallowtail			√
Checkered White	√	√	√
Gray Hairstreak			√
Marine Blue	√	√	
Western Pygmy Blue		√	√
Fatal Metalmark		√	
Mourning Cloak	√	√	√
Lorquin's Admiral			√
Eufala Skipper		√	
Umber Skipper	√		
Fiery Skipper			√
Sandhill Skipper			√
Wandering Skipper	√	√	√
Flies - Diptera			
Cactus Fly	√		
Bombus Bee Fly			√
Exoprosopa Bee Fly			√
Bronze Bottle Fly	√		

Species	Buena Vista Lagoon	Batiquitos Lagoon	San Dieguito Lagoon
Little House Fly			√
Parasarcophaga Flesh Fly			√
Beetles - Coleoptera			
Pacific Tiger Beetle		√	
Wasps, Ants & Bees - Hymenoptera			
Black and Yellow Mud Dauber Wasp	√	√	
Ammophila Thread-waisted Wasp			√
Red Velvet Ant			√
Ligatus Sweat Bee		√	
Valley Carpenter Bee		√	
European Honey Bee		√	√
Golden Polistes Wasp			√

Table A- 2. Invertebrate List for Three North County Lagoons, Wandering Skipper Survey – August 2012

INVERTEBRATES
INSECTS
Dragonflies & Damselflies – Odonata
Family Aeshnidae – Darners
Common Green Darner (<i>Anax junius</i>)
Blue-eyed Darners (<i>Aeshna multicolor</i>)
Family Libellulidae – Cruisers, Emeralds, Baskettails & Skimmers
Western Pondhawk (<i>Erythemis collocata</i>)
Neon Skipper (<i>Libellula croceipennis</i>)
Variegated Meadowhawk (<i>Sympetrum corruptum</i>)
Grasshopper, Crickets and Katydid – Orthoptera
Family Acrididae – Short-horned Grasshoppers
Devastating Grasshopper (<i>Melanoplus devastator</i>)
True Bugs – Hemiptera
Family Cercopidae – Spittle Bugs
Spittle Bug (<i>Aphrophora</i> sp.)
Family Cicadidae – Cicadas
Cicada (<i>Okanagan</i> asp.)
Butterflies, Moths & Skippers – Lepidoptera
Family Geometridae – Geometry Moths
Custodiata Moth (<i>Perizoma custodiata</i>)
Family Peridae – Whites, Marbles and Sulphurs
Checkered White (<i>Pontia protodice</i>)
Family Lycaenidae – Coppers, Hairstreaks and Blues
Western Gray Hairstreak (<i>Strymon melinus pudicus</i>)
Marine Blue (<i>Leptotes marina</i>)
Western Pygmy Blue (<i>Brephidum exile</i>)
Family Riodinidae – Metalmarks
Dammer's Fatal Metalmark (<i>Calephelis nemesis dammersi</i>)
Family Nymphalidae – Brush-footed Butterflies
Mourning Cloak (<i>Nymphalis antiopa</i>)
Powell's Lorquin's Admiral (<i>Limenitis lorquini powelli</i>)
Family Hesperidae – Skippers
Fiery Skipper (<i>Hylephila phyleus</i>)
Eufala Skipper (<i>Lerodea eufala</i>)

Umber Skipper (<i>Poanes melane</i>)
Sandhill Skipper (<i>Polites sabuketi</i>)
Wandering Skipper (<i>Panoquina errans</i>)
Flies – Diptera
Family Bombyliidae – Bee Flies
Bombus Bee Fly (<i>Bombus</i> sp.)
Exoprosopa Bee Fly (<i>Exoprosopa</i> sp.)
Family Syrphidae – Hover Flies
Cactus Fly (<i>Copestylum mexicana</i>)
Family Calliphoridae – Blow Fly
Bronze Bottle Fly (<i>Phaenicia cuprina</i>)
Family Muscidae – House Flies
Little House Fly (<i>Fannia canicularis</i>)
Family Sarcophagidae – Flesh Flies
Parasarcophaga Flesh fly (<i>Parasarcophaga</i> sp.)
Beetles – Coleoptera
Family Carabidae – Ground Beetles
Pacific Tiger Beetle (<i>Cincindela haemorrhagica pacifica</i>)
Wasps, Ants and Bees – Hymenoptera
Family Sphecidae - Thread-waisted Wasp
Black and Yellow Mud Dauber (<i>Sceliphron caementarium</i>)
Threadwaisted Wasp (<i>Ammophila</i> sp.)
Family Halictidae – Sweat Bees
Ligatus Sweat Bee (<i>Halictus ligatus</i>)
Family Apidae – Bumble and Honey Bees
Valley Carpenter Bee (<i>Xylocopa varipuncta</i>)
European Honey Bee (<i>Apis mellifera</i>)
Family Mutillidae – Velvet Ant
Red Velvet Ant (<i>Dasymutilla magnifica</i>)
Family Vespidae – True Wasp
Golden Polistes Wasp (<i>Polistes fuscatus aurifer</i>)



Source: GeomorphIS, LLC; Esri Basemaps, 2011



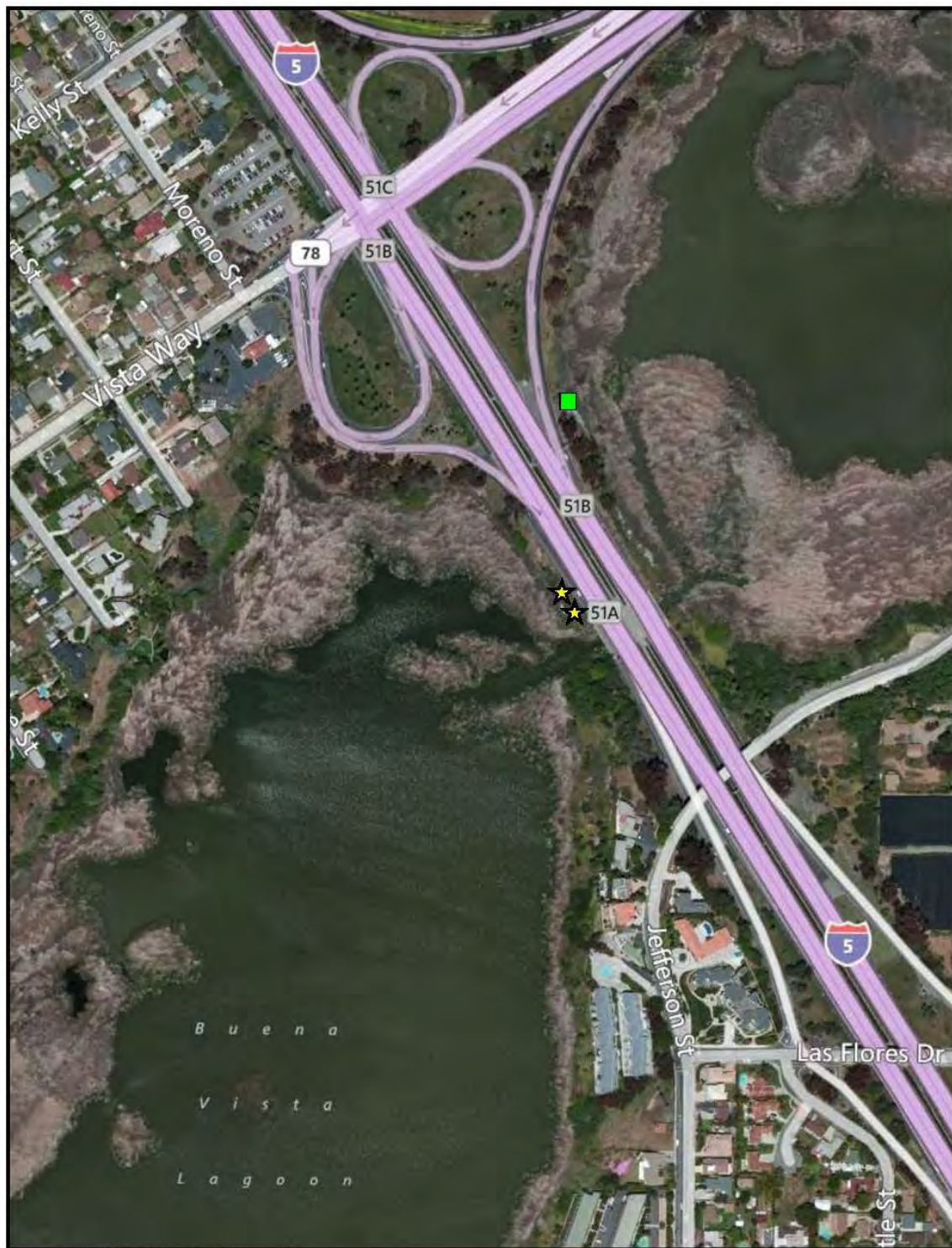
0 1 2 Miles

Scale: 1:126,720 1 inch equals 2 miles

Figure 1
Lagoon Survey Locations

Surveys for Wandering Skippers on Caltrans Right-of-Ways

Path: C:\Projects\AECOM\Caltrans_OnCall\Map_MXD\Wandering Skipper_Survey_Fig1.mxd, 8/26/2012, s.goff



Source: GeomorphIS, LLC; Bing-Esri Basemaps, 2011



0 200 400 Feet
Scale: 1:4,800 1 inch = 400 feet

Wandering Skipper Survey (Aug 2012)

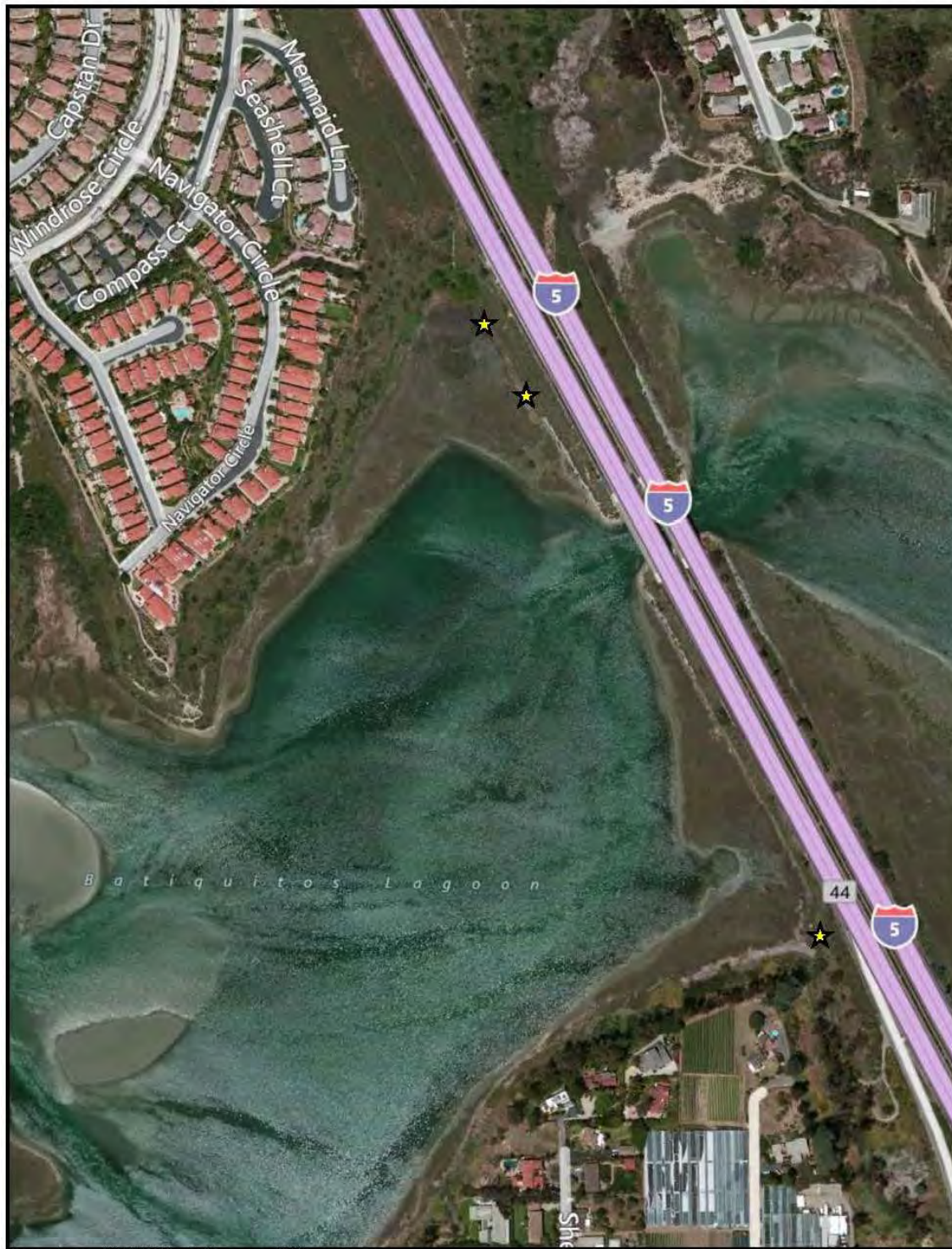
■ Saltgrass patch (needs enhancement)

★ Wandering skipper sighting

Figure 2
Buena Vista Lagoon

Surveys for Wandering Skippers on Caltrans Right-of-Ways

Path: C:\Projects\AECOM\Caltrans_OnCall\Map_MXD\WanderingSkipper_Survey_Fig2.mxd, 8/26/2012, e.goff,



Source: GeomorphIS, LLC; Bing-Esri Basemaps, 2011



0 200 400 Feet

Scale: 1:4,800 1 inch = 400 feet

Wandering Skipper Survey (Aug 2012)



Wandering skipper sighting

Figure 3
Bataquitos Lagoon

Surveys for Wandering Skippers on Caltrans Right-of-Ways

Path: C:\Projects\AECOM\Caltrans_OnCall\Map_MXD\WanderingSkipper_Survey_Fig3.mxd, 8/26/2012, s.goff.



Surveys for Wandering Skippers on Caltrans Right-of-Ways
Path: C:\Projects\AECOM\Caltrans_OnCall\Map_MXD\WanderingSkipper_Survey_Fig4.mxd, 8/26/2012, egoff.



Photo 1. Buena Vista Lagoon Wandering Skipper location – August 2, 2012



Photo 2. Wandering Skipper from Buena Vista Lagoon – August 2, 2012



Photo 3. Wandering Skipper location at north Batiquitos Lagoon – August 2, 2012



Photo 4. Wandering Skipper from north Batiquitos Lagoon - August 2, 2012



Photo 5. Wandering Skipper from south Batiquitos Lagoon – August 6, 2012



Photo 6. Wandering Skipper from north San Dieguito Lagoon – August 6, 2012