

Appendix A2

Quino Checkerspot Butterfly Survey
Results 45-Day Report

May 2024



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May 20, 2024

Ms. Stacey Love
Recovery Permit Coordinator
USFWS Carlsbad Office
2177 Salk Ave.
Carlsbad, CA 92008

**Quino Checkerspot Butterfly Survey Results 45-Day Report
County of San Diego Jacumba Fire Station #43 Project
San Diego County, California**

Dear Ms. Love:

Blackhawk Environmental Inc. biologists Seth Reimers (ES 80703A-3), Ryan Quilley (ES 92462A-3), Lorena Bernal (ES 14749C-4), and Dustin Janeke (ES 045153-5) conducted United States Fish & Wildlife Service (USFWS)-protocol Quino checkerspot butterfly (*Euphydryas editha quino*; QCB) surveys at the proposed County of San Diego Jacumba Fire Station #43 Project (Project) in the unincorporated community of Jacumba Hot Springs, San Diego County, California. This report includes project location & background, survey methods, results and conclusion sections.

PROJECT LOCATION & BACKGROUND

The Project covers approximately 5.01 acres within the unincorporated community of Jacumba Hot Springs in the Mountain Empire area of southeastern San Diego County (USGS 2021), located approximately one kilometer west of the Jacumba Airport and immediately east of Laguna Street, north of Old Highway 80 (Attachment A, Figure 1). The Survey Area included the 5.01-acre Project site, plus a 100-foot buffer along the rectangular-shaped parcel. The Project site is immediately bounded by fallow agricultural fields to the north and east, Old Highway 80 to the south, and rural residential residences to the west of the Survey Area. The Project site itself includes primarily fallow agricultural fields (Attachment A: Figures 1 and 2).

The Survey Area excluded fully developed areas (i.e., paved portions of Old Highway 80) but included all other land cover types (Figure 2). Topography of the survey area was predominantly flat, with furrows associated with historical row-crop cultivation throughout the Project site. Habitat was heavily dominated by weedy herbs, including London rocket (*Sisymbrium irio*), red-stemmed filaree (*Erodium cicutarium*), and short podded mustard (*Hirschfeldia incana*). Several fourwing saltbush (*Atriplex canescens*) shrubs were widely scattered in the Survey Area. Nonnative grasses in the Survey Area included foxtail barley (*Hordeum muirinum*), Brome grasses (*Bromus* spp.), and oat grass (*Avena* sp.). Shrub cover averaged about 2 percent overall.



The proposed Project includes a new fire station, parking lot and associated facilities of the fire station.

SURVEY METHODS

Blackhawk Environmental Senior Biologist Seth Reimers conducted a QCB habitat assessment on February 23, 2024, prior to the first survey. Following the assessment, the developed roadway of Old Highway 80 was excluded from the survey area, but all other habitats were included for protocol-level surveys. A total of 12 surveys were completed between February 23, 2024 and May 13, 2024. All surveys and nectar source documentation for this Project were completed by Blackhawk Environmental biologists Ryan Quilley (RQ), Seth Reimers (SR), Lorena Bernal (LB), or Dustin Janeke (DJ) (Table 1). Survey methods followed the latest USFWS QCB protocol (USFWS December 15, 2014).

The first survey on February 23 and each ensuing survey included a patterned search of the entire Survey Area with 100 percent visual coverage of all areas. All butterfly species and the number of each species observed during each survey were recorded, as well as suitable QCB nectar sources. All QCB host plant species and locations, if observed, were noted for later mapping. Following the initial assessment, QCB presence/absence surveys were conducted in suitable habitats generally once per week until the survey cycle was completed.

Protocol surveys were conducted during suitable weather conditions, generally in the late morning/early afternoon hours (Table 1). If weather conditions were too cool, rainy and/or windy to facilitate protocol level QCB surveys during a survey week, surveys were conducted during the following week, with no less than four days between surveys. The surveys were conducted by carefully walking slowly through QCB-suitable habitats while looking for QCB adults; care was taken on each step to examine the ground before setting foot to minimize or avoid the chance of accidentally stepping on larvae or eggs. Biologists visually searched for QCB during surveys, using binoculars as appropriate to view the Survey Area and identify butterfly species. All field data were recorded in the field, then transferred to data sheets in the Wildnote electronic application for inclusion in this report (Attachment B). All butterfly taxonomy used during QCB surveys referenced Kojiro Shiraiwa's 2010 book, *Butterflies of San Diego County*. Weather data were recorded in the field using digital anemometers and thermometers and are included in the survey conditions presented in Table 1.

Table 1. Survey Conditions

Date	Personnel	Start/End Times	Start/End Temperature (F°)	Start/End Wind Speed (mph)	Start/End Cloud Cover (%)	Start/End Precipitation
2/23/24	SR	1100-1200	63/63	8/6	10/10	none
3/1/24	DJ	1122-1237	70/69	9/11	0/0	none
3/8/24	SR	1230-1337	63/64	3/5	20/20	none
3/17/24	DJ	1505-1609	61/64	4/5	30/45	none
3/22/24	LB	1055-1200	70/73	4/5	85/65	none
3/28/24	DJ	1116-1242	68/69	6/10	70/70	none
4/3/24	DJ	1117-1243	70/75	2/2	0/0	none
4/12/24	RQ	1132-1235	74/81	13/12	0/0	none
4/17/24	DJ	1023-1142	78/81	6/3	1/2	none

4/24/24	DJ	0943-1102	69/72	6/11	0/0	none
5/1/24	DJ	1233-1351	81/83	4/5	0/0	none
5/8/24	DJ	1039-1155	70/74	9/9	0/0	none

SURVEY RESULTS

No QCB adults or larvae or larval host plants were observed. Eight potentially suitable nectar sources were found in the survey area, but butterfly diversity and numbers were low. Most surveys yielded five or fewer flowering species. Butterfly diversity was dominated by white butterflies (Family Pieridae), with cabbage white (*Pieris rapae*) and checkered white (*Pontia protodice*) butterflies the most abundant throughout the survey.

Observed butterfly species included:

- Checkered white (*Pontia protodice*)
- Cabbage white (*Pieris rapae*)
- Sara orangetip (*Anthocharis sara sara*)
- California marble (*Euchloe hyantis*)
- Orange sulphur (*Colias eurytheme*)
- Harford's sulphur (*Colias harfordii*)
- Painted lady (*Vanessa cardui*)
- West coast lady (*Vanessa annabella*)
- Western pygmy blue (*Brephidium exilis exilis*)

Observed potential QCB nectar sources included:

- Goldfields (*Lasthenia californica*)
- London rocket (*Sisymbrium irio*)
- Common fiddleneck (*Amsinckia intermedia*)
- Redstem filaree (*Erodium cicutarium*)
- Short podded mustard (*Hirschfeldia incana*)
- Tumble mustard (*Sisymbrium altissimum*)
- Common mustard (*Brassica rapa*)
- Herb sophia (*Descurainia sophia*)

Vegetation in the survey area consisted primarily of nonnative grassland dominated by multiple mustard species (*Sisymbrium* species) and foxtail barley (*Hordeum murinum*). Several large scattered fourwing saltbush (*Atriplex canescens*) were also present in the survey area. Additional vegetation communities included a disturbed road edge dominated by short podded mustard and a developed roadway (Old Hwy 80) which was not surveyed. Representative photographs of the Survey Area are presented in Attachment C.

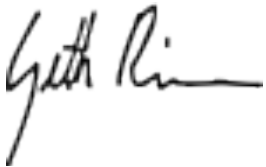
CONCLUSION

The QCB surveys were completed accordingly with USFWS protocol. No larval host plant patches were documented and no QCB were observed; therefore, QCB presence is not anticipated at this location. No specific QCB management recommendations are made in this report.

I certify that the information in this survey report and attached exhibits fully and accurately represents my work for the Jacumba Fire Station #43 Project QCB Surveys.

For questions on this report, please call 619-972-7932 or e-mail me at seth@blackhawkenv.com.

Sincerely,





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Dustin Janeke

Blackhawk Environmental, Inc.
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Seth Reimers

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Ryan Quilley

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USFWS Permit ES 14749C-4



ATTACHMENTS

A: Figures

B: Wildnote Forms

C: Photo Pages

REFERENCES

Shiraiwa, Kojiro. 2010. *The Butterflies of San Diego County*. Self-published. 73 pgs.

USFWS (United States Fish and Wildlife Service). 2014. *Quino Checkerspot Butterfly Survey Guidelines*. Carlsbad Field Office. Carlsbad, California. 8 pgs.

US Geological Survey. *Jacumba OE S quadrangle* [map] 1:24,000. 7.5 Minute Series (Topographic), 2021.

ATTACHMENT A

Figures



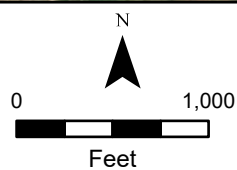
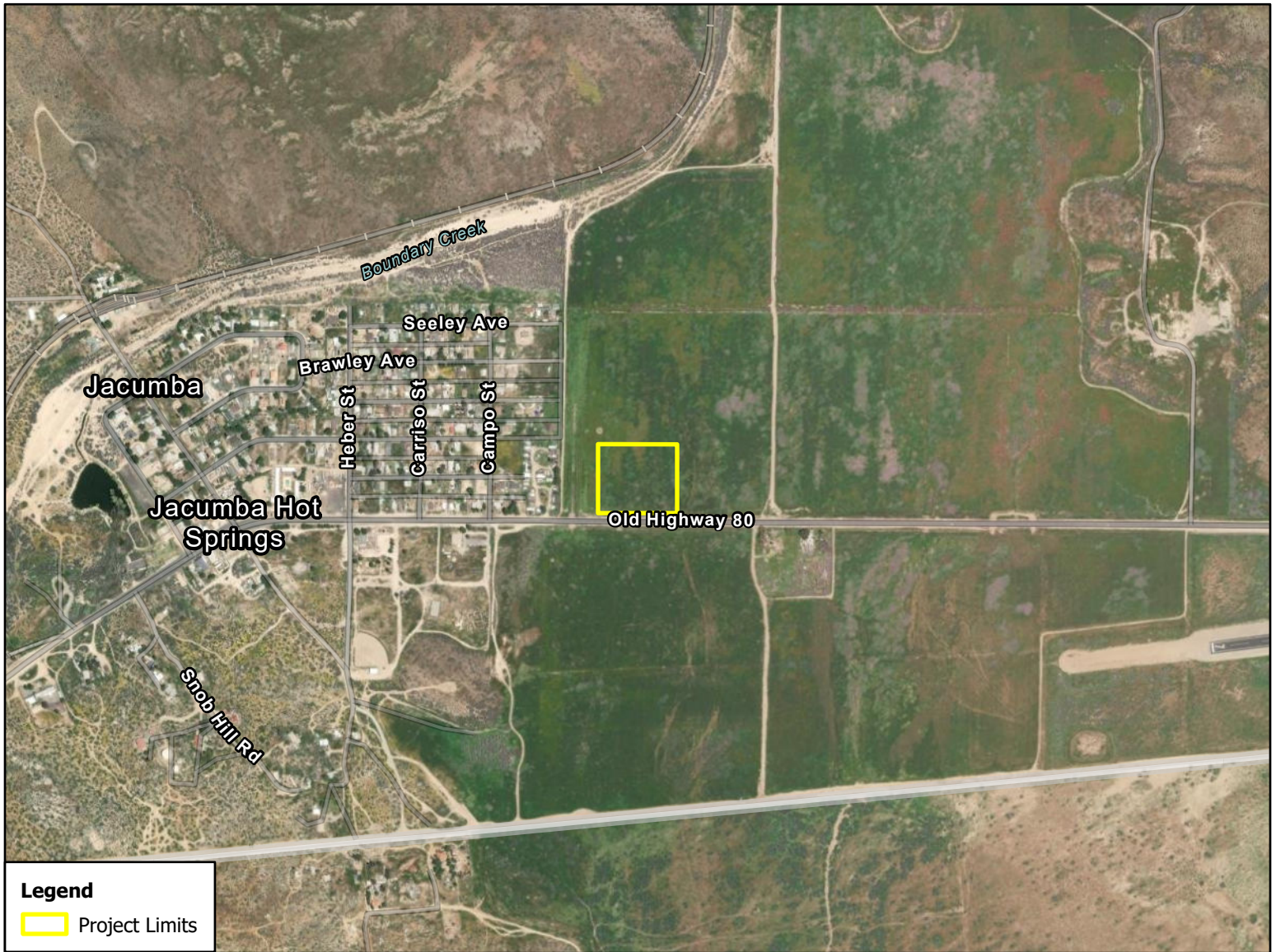
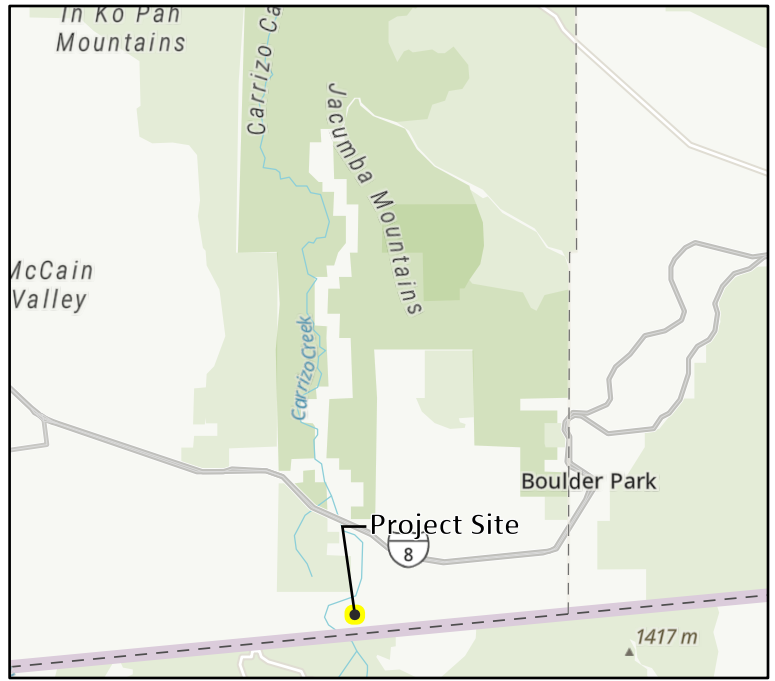
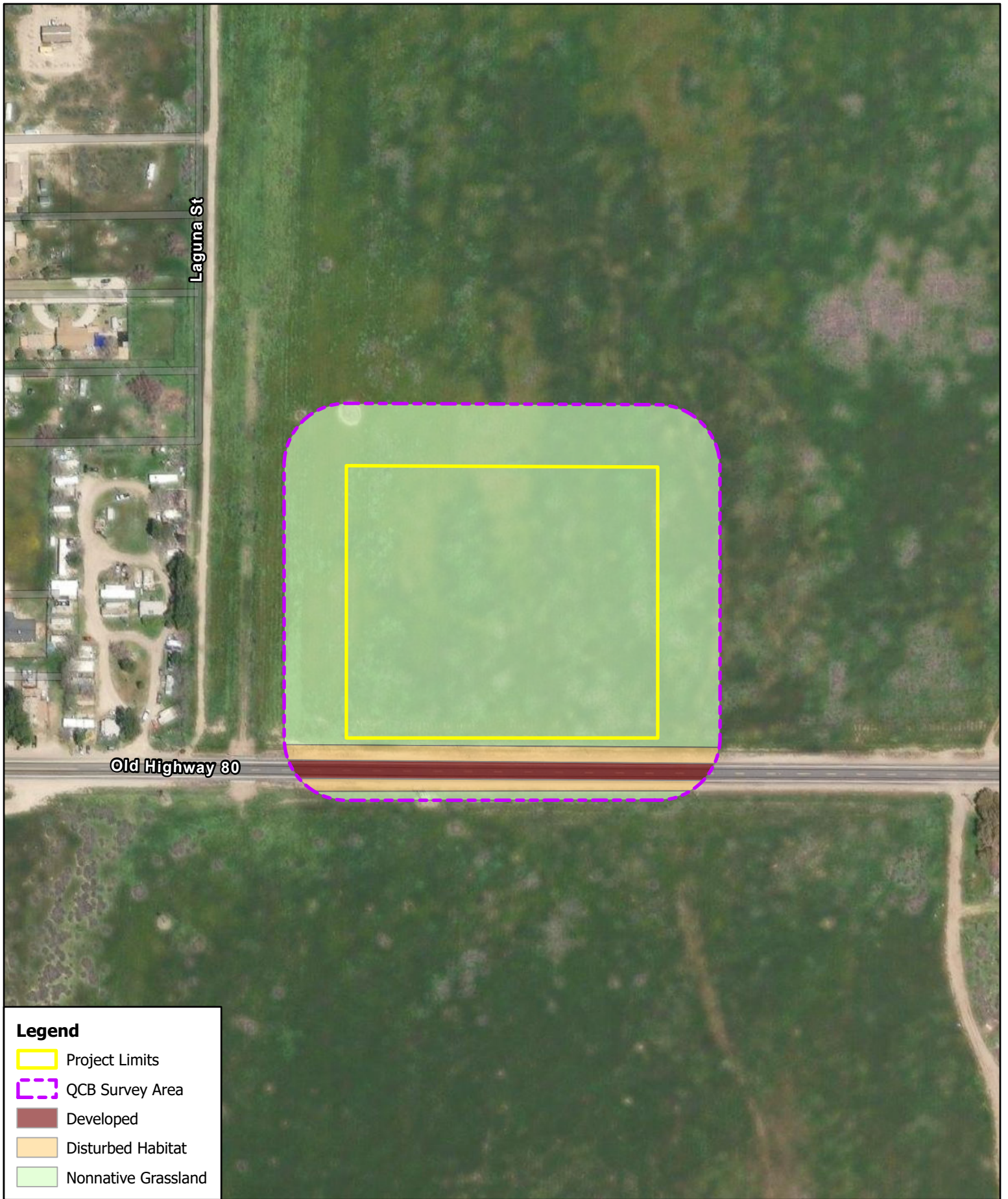


Figure 1
Project Vicinity and Location



Legend






-  Project Limits
-  QCB Survey Area
-  Developed
-  Disturbed Habitat
-  Nonnative Grassland

Figure 2
QCB Survey Results

Jacumba Fire Station Project

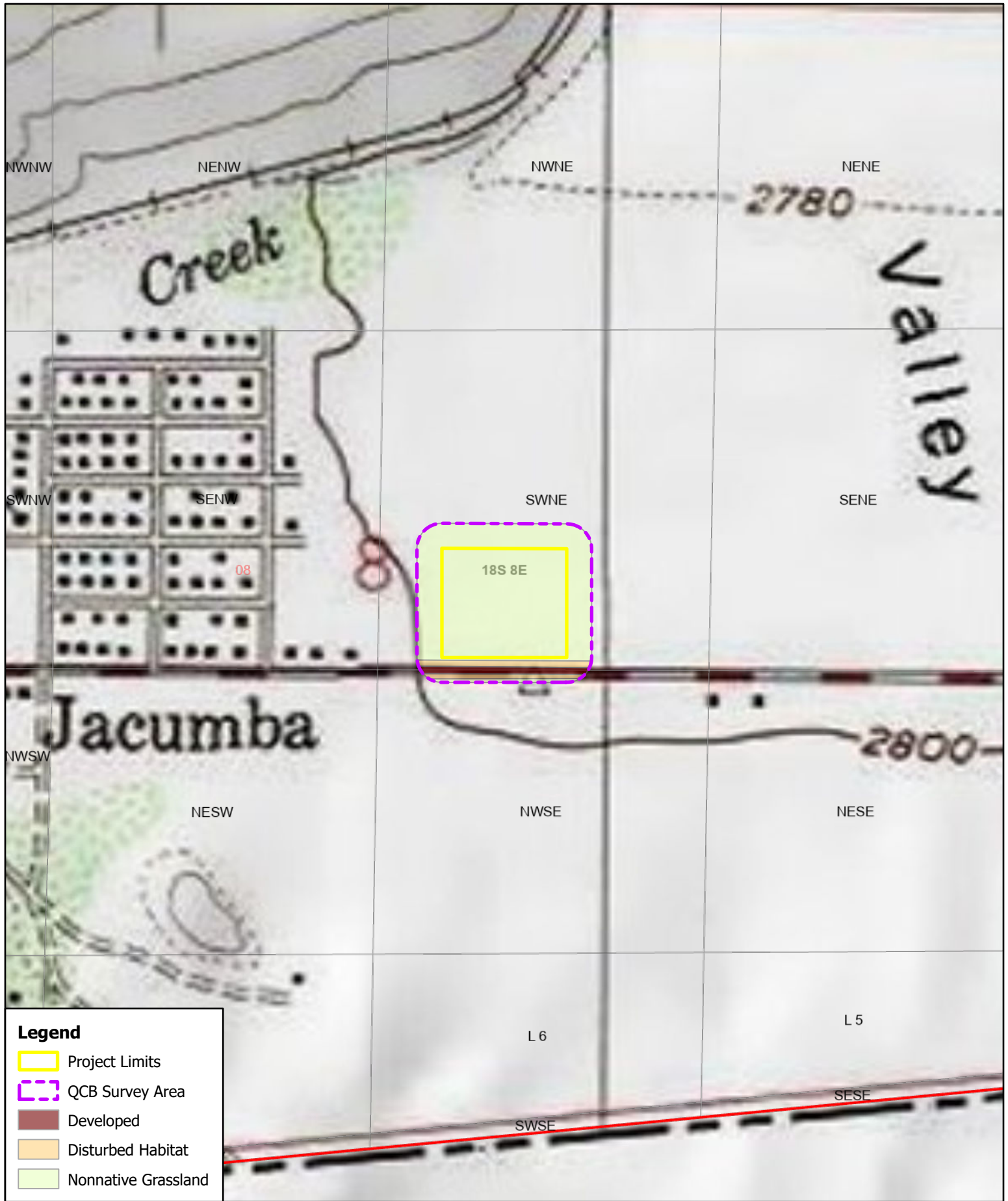


Figure 3
QCB Survey USGS Quad

Jacumba OE S USGS 7.5' Quad, Section 8 Township 18S Range 8E
 Jacumba Fire Station Project

ATTACHMENT B

Wildnote Forms



Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	424443
Survey Date	02/23/2024
User	Seth Reimers

Survey Info

Surveyor Name	Seth Reimers (TE 80703A)
Additional Surveyors/Trainee	
Survey Area	Jacumba Fire Station
Survey Pass Number	1

Survey Conditions

Start Time	11:00 AM
Start Temp	63
Start Wind Speed (avg. mph)	8
Start Cloud Cover (%)	10
End Time	12:00 PM
End Temp	63
End Wind Speed (avg. mph)	6
End Cloud Cover (%)	10

Habitat Notes

Nectar Plants	<i>Erodium cicutarium</i> / Coastal heron's bill, Redstem filaree <i>Sisymbrium irio</i> / London rocket
Host Plants Observed	
Vegetation Communities Surveyed (inc. dominant ssp)	Non-native grassland dominated by HORMUR, SISIRI, and EROCIC

Butterfly Species Observed

Butterfly Species Observed	<i>Pieris rapae</i> / Cabbage White
Quino Checkerspot, <i>Euphydryas editha quino</i>	0
Quino Checkerspot Butterfly Observed	No
Additional Notes	5 cabbage white butterflies total. No host plant observed.
Photos	None

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	426001
Survey Date	03/01/2024
User	Dustin Janeke

Survey Info

Surveyor Name	Other Permitted Personnel
Additional Surveyors/Trainee	Dustin Janeke
Survey Area	Jacumba Fire Station
Survey Pass Number	2

Survey Conditions

Start Time	11:22 AM
Start Temp	70
Start Wind Speed (avg. mph)	9.2
Start Cloud Cover (%)	0
End Time	12:37 PM
End Temp	69
End Wind Speed (avg. mph)	11
End Cloud Cover (%)	0

Habitat Notes

Nectar Plants	<i>Sisymbrium irio</i> / London rocket <i>Erodium cicutarium</i> / Coastal heron's bill, Redstem filaree
Host Plants Observed	
Vegetation Communities Surveyed (inc. dominant ssp)	Non-native grassland dominated by SISIRI and EROCIC and HIRINC.

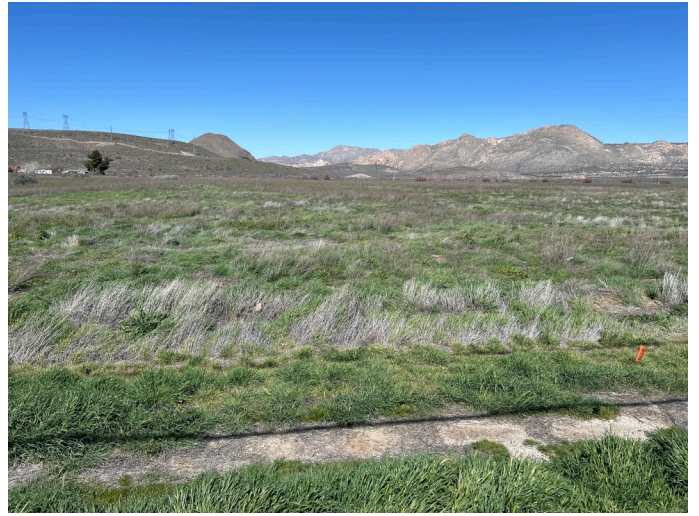
Butterfly Species Observed

Butterfly Species Observed	<i>Euchloe hyantis lotta</i> / Desert Pearly Marble <i>Pieris rapae</i> / Cabbage White
Quino Checkerspot, <i>Euphydryas editha quino</i>	0
Quino Checkerspot Butterfly Observed	No
Additional Notes	Unk white sp 6 California marble 2 Cabbage white 5

Photos



View looking northwest across survey area.



View looking northeast across survey area.

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	427618
Survey Date	03/08/2024
User	Seth Reimers

Survey Info

Surveyor Name	Seth Reimers (TE 80703A)
Additional Surveyors/Trainee	
Survey Area	Jacumba Fire Station
Survey Pass Number	3

Survey Conditions

Start Time	12:30 PM
Start Temp	63
Start Wind Speed (avg. mph)	3
Start Cloud Cover (%)	20
End Time	01:37 PM
End Temp	64
End Wind Speed (avg. mph)	5
End Cloud Cover (%)	20

Habitat Notes

Nectar Plants	<i>Sisymbrium irio</i> / London rocket <i>Erodium cicutarium</i> / Coastal heron's bill, Redstem filaree <i>Sisymbrium altissimum</i> / Tumble mustard
Host Plants Observed	
Vegetation Communities Surveyed (inc. dominant ssp)	No change from first survey

Butterfly Species Observed

Butterfly Species Observed	<i>Vanessa cardui</i> / Painted Lady <i>Brephidium exila</i> / Western Pygmy-Blue <i>Pieris rapae</i> / Cabbage White
Quino Checkerspot, <i>Euphydryas editha quino</i>	0
Quino Checkerspot Butterfly Observed	No
Additional Notes	4 cabbage white butterflies 1 western pygmy blue butterfly 1 painted lady
Photos	None

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	429370
Survey Date	03/17/2024
User	Dustin Janeke

Survey Info

Surveyor Name	Other Permitted Personnel
Additional Surveyors/Trainee	Dustin Janeke
Survey Area	Jacumba Fire Station
Survey Pass Number	4

Survey Conditions

Start Time	03:05 PM
Start Temp	61
Start Wind Speed (avg. mph)	3.5
Start Cloud Cover (%)	30
End Time	04:09 PM
End Temp	64
End Wind Speed (avg. mph)	4.9
End Cloud Cover (%)	45

Habitat Notes

Nectar Plants	<i>Erodium cicutarium</i> / Coastal heron's bill, Redstem filaree <i>Hirschfeldia incana</i> / Mustard <i>Descurainia sophia</i> / Herb sophia <i>Sisymbrium irio</i> / London rocket <i>Sisymbrium altissimum</i> / Tumble mustard
Host Plants Observed	

Vegetation Communities Surveyed (inc. dominant ssp)	Non native grassland dominated by EROCIC, HIRINC, and SISIRI.
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Butterfly Species Observed

Butterfly Species Observed	
Quino Checkerspot Butterfly Observed	No
Additional Notes	No butterflies observed during protocol survey.

Photos



View looking Northeast across survey area.



View looking Northwest across survey area.

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	440196
Survey Date	03/22/2024
User	Lorena Bernal

Survey Info

Surveyor Name	Other Permitted Personnel
Additional Surveyors/Trainee	Lorena Bernal (TE 14749C)
Survey Area	Jacumba Fire Station
Survey Pass Number	5

Survey Conditions

Start Time	10:55 AM
Start Temp	70
Start Wind Speed (avg. mph)	0-4
Start Cloud Cover (%)	85
End Time	12:00 PM
End Temp	73
End Wind Speed (avg. mph)	1-5
End Cloud Cover (%)	65

Habitat Notes

Nectar Plants	<i>Erodium cicutarium</i> / Coastal heron's bill, Redstem filaree <i>Sisymbrium irio</i> / London rocket <i>Sisymbrium altissimum</i> / Tumble mustard <i>Hirschfeldia incana</i> / Mustard
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Host Plants Observed

Vegetation Communities Surveyed (inc. dominant ssp)	Non-native grassland dominated by EROCIC, SISIRI and SISALT.
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Butterfly Species Observed

Butterfly Species Observed	<i>Pieris rapae</i> / Cabbage White
Quino Checkerspot, <i>Euphydryas editha quino</i>	0
Quino Checkerspot Butterfly Observed	No

Additional Notes

Photos	7 cabbage whites. One unknown blue species.
	None

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	432754
Survey Date	03/28/2024
User	Dustin Janeke

Survey Info

Surveyor Name	Other Permitted Personnel
Additional Surveyors/Trainee	Dustin Janeke
Survey Area	Jacumba Fire Station
Survey Pass Number	6

Survey Conditions

Start Time	11:16 AM
Start Temp	67.8
Start Wind Speed (avg. mph)	5.8
Start Cloud Cover (%)	70
End Time	12:42 PM
End Temp	69
End Wind Speed (avg. mph)	9.6
End Cloud Cover (%)	70

Habitat Notes

Nectar Plants	<i>Erodium cicutarium</i> / Coastal heron's bill, Redstem filaree <i>Lasthenia californica</i> / Goldfields <i>Amsinckia intermedia</i> / Common fiddleneck <i>Descurainia sophia</i> / Herb sophia <i>Sisymbrium altissimum</i> / Tumble mustard <i>Sisymbrium irio</i> / London rocket <i>Hirschfeldia incana</i> / Mustard
Host Plants Observed	

Vegetation Communities Surveyed (inc. dominant ssp)	Non native grassland dominated by EROCIC, SISIRI, and HIRINC.
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Butterfly Species Observed

Butterfly Species Observed	<i>Pieris rapae</i> / Cabbage White <i>Pontia protodice</i> / Checkered White <i>Vanessa annabella</i> / West Coast Lady
Quino Checkerspot, <i>Euphydryas editha quino</i>	0
Quino Checkerspot Butterfly Observed	No

Additional Notes	Clouds are very high and thin, more haze than cloud. Not affecting ground conditions or butterfly activity.
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Some butterfly activity. Most of the activity is on the west edge of site.

San Diego gopher snake

Checkered white: 5

Cabbage white: 7

White sp.: 1

West Coast Lady: 2

Photos



View northwest across the survey area.



View northeast across the survey area.

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	434078
Survey Date	04/03/2024
User	Dustin Janeke

Survey Info

Surveyor Name	Other Permitted Personnel
Additional Surveyors/Trainee	Dustin Janeke
Survey Area	Jacumba Fire Station
Survey Pass Number	7

Survey Conditions

Start Time	11:17 AM
Start Temp	70
Start Wind Speed (avg. mph)	1.5
Start Cloud Cover (%)	0
End Time	12:43 PM
End Temp	75
End Wind Speed (avg. mph)	2.4
End Cloud Cover (%)	0

Habitat Notes

Nectar Plants	<i>Descurainia sophia</i> / Herb sophia <i>Erodium cicutarium</i> / Coastal heron's bill, Redstem filaree <i>Amsinckia intermedia</i> / Common fiddleneck <i>Sisymbrium irio</i> / London rocket <i>Lasthenia californica</i> / Goldfields <i>Sisymbrium altissimum</i> / Tumble mustard <i>Hirschfeldia incana</i> / Mustard <i>Brassica rapa</i> / Common mustard, Turnip, Field mustard
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Host Plants Observed	
Vegetation Communities Surveyed (inc. dominant ssp)	Non-native grassland dominted by EROCIC, SISIRI, and HIRINC.

Butterfly Species Observed

Butterfly Species Observed	<i>Anthocharis sara sara</i> / Pacific Sara Orangetip <i>Pontia protodice</i> / Checkered White <i>Vanessa annabella</i> / West Coast Lady
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Quino Checkerspot, <i>Euphydryas editha quino</i>	0
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Quino Checkerspot Butterfly Observed	No
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Additional Notes

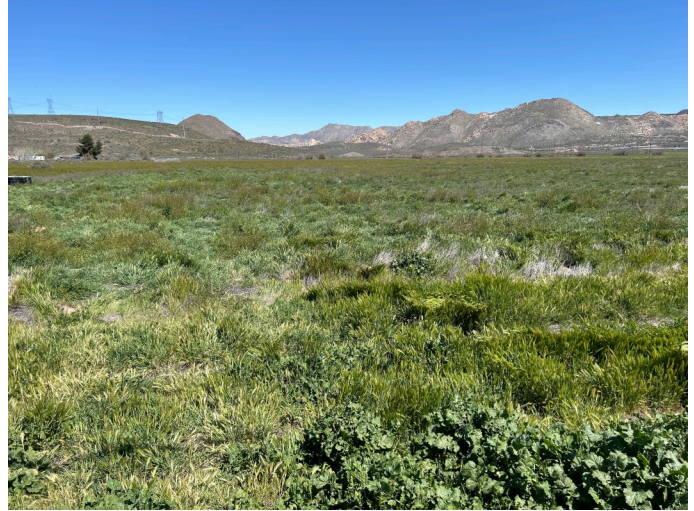
Butterflies more common on western half of site.

White sp. 6
Blue sp. 1
Sarah's orange tip. 1
Checkered white. 2
West coast lady. 1

Photos



View northwest across the survey area.



View northeast across the survey area.

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	436538
Survey Date	04/12/2024
User	Ryan Quilley

Survey Info

Surveyor Name	Ryan Quilley (TE 92462A)
Additional Surveyors/Trainee	
Survey Area	Jacumba Fire Station
Survey Pass Number	8

Survey Conditions

Start Time	11:32 AM
Start Temp	74
Start Wind Speed (avg. mph)	13
Start Cloud Cover (%)	0
End Time	12:35 PM
End Temp	81
End Wind Speed (avg. mph)	12
End Cloud Cover (%)	0

Habitat Notes

Nectar Plants	<i>Erodium cicutarium</i> / Coastal heron's bill, Redstem filaree <i>Sisymbrium irio</i> / London rocket <i>Sisymbrium altissimum</i> / Tumble mustard <i>Hirschfeldia incana</i> / Mustard <i>Amsinckia intermedia</i> / Common fiddleneck
Host Plants Observed	

Vegetation Communities Surveyed (inc. dominant ssp)	Non-native grassland dominated by EROCIC, SISIRI, and HIRINC.
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Butterfly Species Observed

Butterfly Species Observed	<i>Pieris rapae</i> / Cabbage White
Quino Checkerspot, <i>Euphydryas editha quino</i>	0
Quino Checkerspot Butterfly Observed	No
Additional Notes	11 cabbage whites. Approx ground temp 82 (start), 89 (end)
Photos	None

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	437858
Survey Date	04/17/2024
User	Dustin Janeke

Survey Info

Surveyor Name	Other Permitted Personnel
Additional Surveyors/Trainee	Dustin Janeke
Survey Area	Jacumba Fire Station
Survey Pass Number	9

Survey Conditions

Start Time	10:23 AM
Start Temp	78
Start Wind Speed (avg. mph)	6
Start Cloud Cover (%)	1
End Time	11:42 AM
End Temp	81
End Wind Speed (avg. mph)	3
End Cloud Cover (%)	2

Habitat Notes

Nectar Plants	<i>Brassica rapa</i> / Common mustard, Turnip, Field mustard <i>Erodium cicutarium</i> / Coastal heron's bill, Redstem filaree <i>Hirschfeldia incana</i> / Mustard <i>Sisymbrium altissimum</i> / Tumble mustard <i>Sisymbrium irio</i> / London rocket
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Host Plants Observed

Vegetation Communities Surveyed (inc. dominant ssp)	Non-native grassland dominated by EROCIC, SISIRI, and HIRINC.
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Butterfly Species Observed

Butterfly Species Observed	<i>Colias eurytheme</i> / Orange Sulphur <i>Pieris rapae</i> / Cabbage White <i>Pontia protodice</i> / Checkered White
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Quino Checkerspot, <i>Euphydryas editha quino</i>	0
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Quino Checkerspot Butterfly Observed	No
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Additional Notes	Checkered white. 11 Cabbage white. 2 Orange Sulphur 2 White sp. 8
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Photos



View northeast across the survey area.



View northwest across the survey area.

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	440478
Survey Date	04/24/2024
User	Dustin Janeke

Survey Info

Surveyor Name	
Additional Surveyors/Trainee	Dustin Janeke
Survey Area	Jacumba Fire Station
Survey Pass Number	10

Survey Conditions

Start Time	09:43 AM
Start Temp	69
Start Wind Speed (avg. mph)	6
Start Cloud Cover (%)	0
End Time	11:02 AM
End Temp	72
End Wind Speed (avg. mph)	11
End Cloud Cover (%)	0

Habitat Notes

Nectar Plants	<i>Hirschfeldia incana</i> / Mustard <i>Sisymbrium altissimum</i> / Tumble mustard <i>Sisymbrium irio</i> / London rocket <i>Erodium cicutarium</i> / Coastal heron's bill, Redstem filaree <i>Brassica rapa</i> / Common mustard, Turnip, Field mustard
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Host Plants Observed

Vegetation Communities Surveyed (inc. dominant ssp)	Non-native grassland dominated by EROCIC, SISIRI, and HIRINC.
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Butterfly Species Observed

Butterfly Species Observed	<i>Pontia protodice</i> / Checkered White <i>Pieris rapae</i> / Cabbage White
Quino Checkerspot, <i>Euphydryas editha quino</i>	0
Quino Checkerspot Butterfly Observed	No

Additional Notes

London rocket (SISIRI) and tumble mustard (SISALT) are almost finished flowering. Filaree (EROCOC) is nearing the end of bloom. Short-podded mustard (HIRINC) is still in substantial bloom.

Checkered white. 6

Photos



View northwest across the survey area.



View northeast across the survey area.

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	443277
Survey Date	05/01/2024
User	Dustin Janeke

Survey Info

Surveyor Name	Other Permitted Personnel
Additional Surveyors/Trainee	Dustin Janeke
Survey Area	Jacumba Fire Station
Survey Pass Number	11

Survey Conditions

Start Time	12:33 PM
Start Temp	81
Start Wind Speed (avg. mph)	4
Start Cloud Cover (%)	0
End Time	01:51 PM
End Temp	83
End Wind Speed (avg. mph)	5
End Cloud Cover (%)	0

Habitat Notes

Nectar Plants	<i>Amsinckia intermedia</i> / Common fiddleneck <i>Hirschfeldia incana</i> / Mustard <i>Sisymbrium irio</i> / London rocket <i>Erodium cicutarium</i> / Coastal heron's bill, Redstem filaree
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Host Plants Observed

Vegetation Communities Surveyed (inc. dominant ssp)	Non-native grassland dominated by EROCIC, SISIRI, and HIRINC.
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Butterfly Species Observed

Butterfly Species Observed	<i>Colias harfordii</i> / Harford's Sulphur <i>Pontia protodice</i> / Checkered White
Quino Checkerspot, <i>Euphydryas editha quino</i>	0
Quino Checkerspot Butterfly Observed	No

Additional Notes	London rocket is almost completely in seed. Shortpodded mustard is most significant nectar source, mostly along the south edge along the road margin. Checkered white. 8 Hartford's Sulphur 1 White sp. 6
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Photos



View northwest across the survey area.



View northeast across the survey area.

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	445781
Survey Date	05/08/2024
User	Dustin Janeke

Survey Info

Surveyor Name	Other Permitted Personnel
Additional Surveyors/Trainee	Dustin Janeke
Survey Area	Jacumba Fire Station
Survey Pass Number	12

Survey Conditions

Start Time	10:39 AM
Start Temp	70
Start Wind Speed (avg. mph)	9
Start Cloud Cover (%)	0
End Time	11:55 AM
End Temp	74
End Wind Speed (avg. mph)	9
End Cloud Cover (%)	0

Habitat Notes

Nectar Plants	<i>Sisymbrium irio</i> / London rocket <i>Sisymbrium altissimum</i> / Tumble mustard <i>Hirschfeldia incana</i> / Mustard <i>Erodium cicutarium</i> / Coastal heron's bill, Redstem filaree
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Host Plants Observed

Vegetation Communities Surveyed (inc. dominant ssp)	Non-native grassland dominated by HIRINC, SISIRI and EROCIC.
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Butterfly Species Observed

Butterfly Species Observed	<i>Pieris rapae</i> / Cabbage White <i>Pontia protodice</i> / Checkered White
Quino Checkerspot, <i>Euphydryas editha quino</i>	0
Quino Checkerspot Butterfly Observed	No

Additional Notes
90% of plants past bloom. Short podded mustard (HIRINC) on north road edge is most substantial bloom left.

Photos



View east along Old Hwy 80 of north road edge.



View Northwest across survey area.



View northeast across survey area.

ATTACHMENT C

Photo Pages





Photograph 1: Northeast-facing view of the Survey Area during Survey 4. Photograph taken from the northern edge of Old Hwy. 80 showing the Survey Area dominated by *Erodium cicutarium*, *Sisymbrium irio*, and non-native grasses.



Photograph 2: Northwest-facing view of the Survey Area during Survey 4. Photograph taken from the northern edge of Old Hwy. 80 showing the Survey Area dominated by *Erodium cicutarium*, *Sisymbrium irio*, and non-native grasses.



Photograph 3. Northeast-facing view of the Survey Area during Survey 12. Photograph taken from the northern edge of Old Hwy. 80 showing the Survey Area with senescent *Erodium cicutarium*, *Sisymbrium irio* and nonnative grasses. *Hirschfeldia incana* was the only available nectar source by the last survey.



Photograph 4: Northwest-facing view of the Survey Area during Survey 12. Photograph taken from the northern edge of Old Hwy. 80 showing the Survey Area with senescent *Erodium cicutarium*, *Sisymbrium irio*, and non-native grasses. The Survey Area lacked significant areas of bare ground and most of the site was covered in thick thatch.