APPENDIX P-2
Part 2
Biological Assessment

APPENDIX B

USFWS Offical Species List for the Project

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

San Diego County, California

Local office

Carlsbad Fish And Wildlife Office

(760) 431-9440
(760) 431-5901

2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385

http://www.fws.gov/carlsbad/

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

Peninsular Bighorn Sheep Ovis canadensis nelsoni There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/4970	Endangered

Birds

NAME	STATUS
Coastal California Gnatcatcher Polioptila californica californica There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo Vireo bellii pusillus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher Empidonax traillii extimus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6749	Endangered

Amphibians

NAME	STATUS
Arroyo (=arroyo Southwestern) Toad Anaxyrus californicus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/3762	Endangered

Insects

NAME	STATUS
Quino Checkerspot Butterfly Euphydryas editha quino (=E. e. wrighti) There is **final** critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/5900	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Quino Checkerspot Butterfly Euphydryas editha quino (=E. e. wrighti) https://ecos.fws.gov/ecp/species/5900#crithab	Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE

BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Allen's Hummingbird Selasphorus sasin — Breeds Feb 1 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9637

Black-chinned Sparrow Spizella atrogularis — Breeds Apr 15 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9447

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Costa's Hummingbird Calypte costae — Breeds Jan 15 to Jun 10
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9470

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that

week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

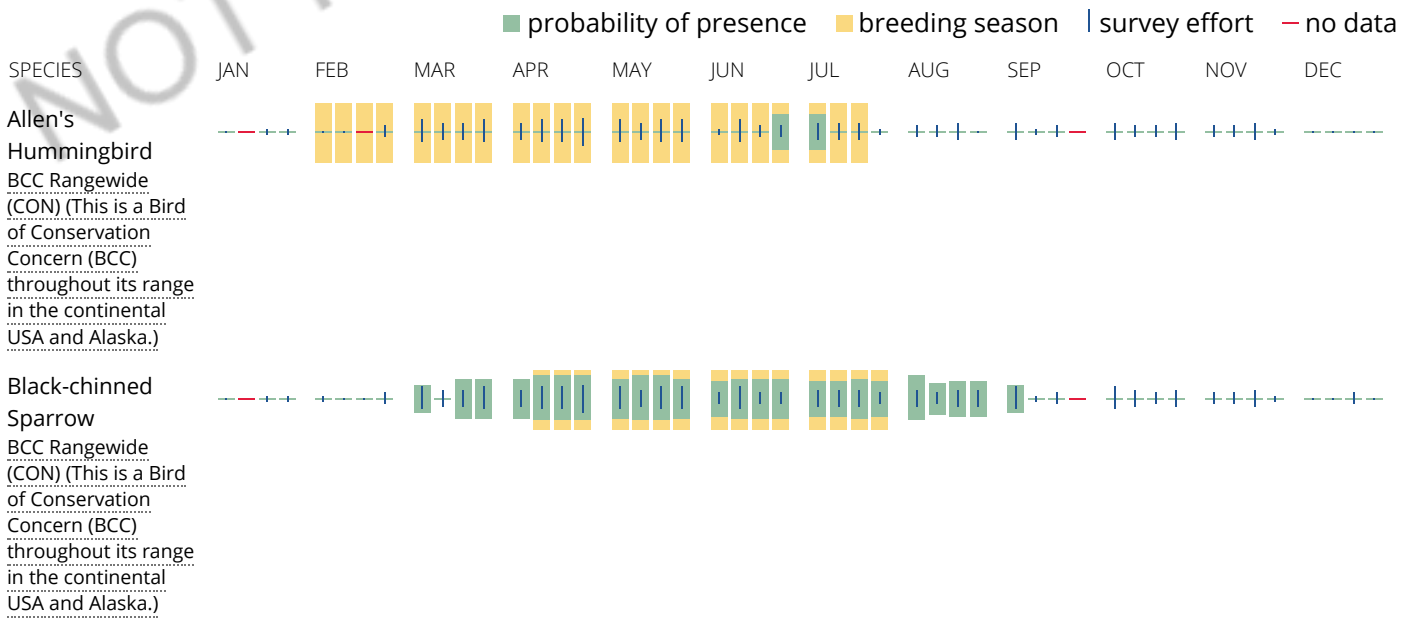
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

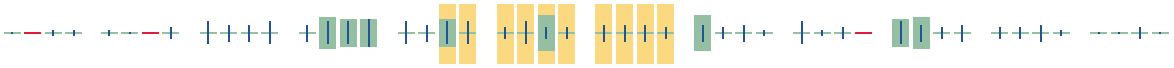
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

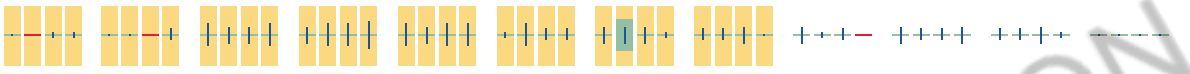


Common Yellowthroat
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

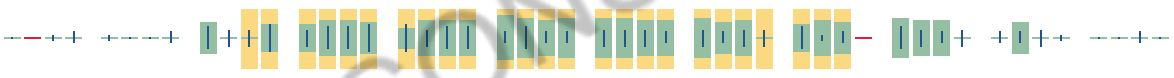


Costa's Hummingbird
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

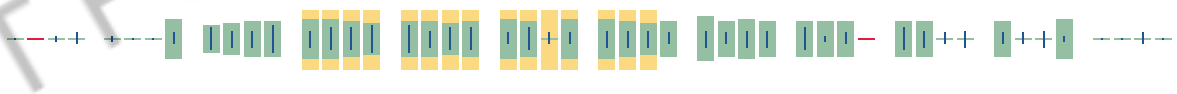
Golden Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



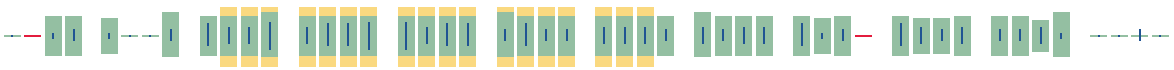
Lawrence's Goldfinch
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Nuttall's Woodpecker
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Oak Titmouse
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project

intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

- PEM1A
- PEM1B
- PEM1C
- PEM1Ch

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1A
- PSS1A
- PSSAh

FRESHWATER POND

- PUSCx
- PUSCh
- PUSAh

RIVERINE

- R4SBA
- R4SBC
- R3UBF

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

APPENDIX C

2010 and 2011 Focused Quino Checkerspot Butterfly Surveys

AECOM
1420 Kettner Boulevard
Suite 500
San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

July 5, 2010

Ms. Sandy Marquez
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

RE: 45-Day Summary Report of Focused Surveys for the Quino Checkerspot Butterfly for the Campo Wind Energy Project

Dear Ms. Marquez:

In compliance with the Special Terms and Conditions for Endangered and Threatened Wildlife Species Permit TE-820658-4.6, AECOM submits this letter report summarizing the results of focused surveys conducted during 2010 for the federally listed endangered Quino checkerspot butterfly (*Euphydryas editha quino*; Quino) associated with the Campo Wind Energy Project. AECOM currently holds an Endangered and Threatened Species Permit issued by the U.S. Fish and Wildlife Service (USFWS) under Section 10(a) of the federal Endangered Species Act. This permit authorizes AECOM to conduct presence/absence surveys for Quino and other species.

Project Description

The Campo Band of Mission Indians (a California federally recognized Indian tribe), Muht-Hei, Inc. (a tribally chartered corporation wholly owned by the Campo Band of Mission Indians), the Bureau of Indian Affairs, and Invenergy Wind California, LLC, propose construction and operation of a wind generation facility on the Campo Indian Reservation in southeastern San Diego County. This facility would be capable of generating up to 300 megawatts (MW) of electricity and would include turbine strings, substations, transmission facilities, and access roads. The exact footprint of project features is currently being designed. Generally, strings of 2.5-MW turbines are being considered for installation across ridgelines that do not contain residences throughout the reservation, including areas north and south of both Interstate 8 and State Route 94. Each turbine would be set on a large concrete foundation. Turbines would be connected by underground electrical cables to one or two substations. Each substation would be sited on approximately 2 to 3 acres and would consist of a graveled, fenced area containing transformer and switching equipment and an area to park utility vehicles. In addition, a three-phase overhead transmissions circuit would be constructed from each substation and would connect to the existing transmission network. Other likely facilities would include an Operations and Maintenance building; new access roads; and a temporary concrete batch plant. The biological survey area (BSA) identified for the proposed project includes approximately 4,417 acres. This acreage consists of all proposed project features with a 500-foot buffer around new, proposed features, and a 100-foot buffer around existing features of the site that are proposed to be used or modified (i.e., existing roads).

Site Description

The Campo Indian Reservation includes lands both north and south of Interstate 8 along the Tecate Divide, extending to a quarter of a mile north of the California and Mexico international border (Figure 1). The reservation is located between the communities of Old Campo and Jacumba, around the community of Live Oak Springs, and bisected by Church Road (Figure 2). On-site elevation ranges from approximately 3,030 to 4,320 feet above mean sea level.

The BSA supports a variety of habitat types and vegetation communities but is dominated by chamise chaparral with both a monotypic phase and a mixed chaparral phase. Additional vegetation communities found throughout the site and especially along ridges and slopes include redshank chaparral, big sagebrush scrub, and Sonoran subshrub scrub. A series of north-south-running ridges is located throughout the proposed project site separated by shallow valleys consisting of coast live oak woodland, nonnative grassland, and southern willow scrub vegetation. Buckwheat scrub is interspersed throughout the chamise chaparral primarily in shallow valleys, along washes and roads, and along firebreaks. Various large rock-outcrops are scattered throughout the site but are primarily located along the ridgelines.

Background Information

The Quino was added to the federal Endangered Species List by USFWS on January 16, 1997 (USFWS 1997). The species (*E. editha*) has a range extending from British Columbia and Alberta, Canada, south through Colorado and Utah, and west along the coast to northern Baja California. It is divided into 20 subspecies, each of which has its own range and biological and morphological characteristics. In California, there are 12 subspecies (Garth and Tilden 1986). Three other subspecies of *E. editha* are currently known to occur in Southern California. The Quino is the southwesternmost subspecies of *E. editha* (Mattoni et al. 1997).

The Quino is known to occur in association with a variety of plant communities, soil types, and elevations (up to 5,000 feet). The plant communities include clay soil meadows, open grasslands, coastal sage scrub, chamise chaparral, red shank chaparral, juniper woodlands, and semi-desert scrub (Ballmer et al. 2001). The Quino is also associated with clay soils that possess cryptogamic crusts and vernal pools (USFWS 2002).

The Quino is a medium-sized butterfly (approximately 0.8- to 1.1-inch wingspan) belonging to the family Nymphalidae. The adults are primarily orange-red with white and have black markings on the dorsal wing surface. They are active primarily in March and April. This active period may vary depending on weather conditions (Ballmer et al. 2001). The adult butterfly feeds on nectar, which it obtains from spring annuals such as popcorn flower (*Cryptantha* spp.), Layia (*Layia glandulosa*), goldenbush (*Ericameria* spp.), pincushion (*Chaenactis* spp.), fiddleneck (*Amsinckia intermedia*), chia (*Salvia columbariae*), and blue dicks (*Dichelostemma pulchella*), among others. It cannot use flowers that possess deep corolla tubes, such as monkeyflower (*Mimulus* spp.), or those that can be opened by bees,

such as snapdragons (USFWS 2002). Adult males and virgin females sometimes "hilltop," or travel to elevated locations to find mates. While waiting for females to arrive, the males will often exhibit "territorial behavior" and will chase other butterflies that approach them. Frequently, the butterflies are observed in meadows or clearings where their host plants occur (Ballmer et al. 2001).

A female may lay 20 to 75 eggs at one time and may produce up to 1,200 eggs in her lifetime. The eggs hatch in approximately 10 days under favorable weather conditions and the young larvae will immediately begin to feed upon a host plant. The feeding larvae use the dot-seed plantain (*Plantago erecta*), Patagonia plantain (*Plantago patagonica*), white snapdragon (*Antirrhinum coulterianum*), and Chinese houses (*Collinsia concolor)* as their host plants (Pratt 2009). Dark-tipped bird's-beak (*Cordylanthus rigidus*) and owl's clover (*Castilleja exserta*) are considered secondary hosts (USFWS 2002). New evidence suggests that Chinese houses is a primary larval food plant for Quino in the 900 to 1,300-meter elevation range (Pratt 2009), which is within the range coincident with the BSA.

After feeding, the early larva enters an obligatory aestival diapause (dormant stage), which may be broken after fall or winter rains (Murphy and White 1984; Osborne 1998). If adverse weather conditions occur, the emergent larva may reenter a diapause stage repeatedly, for up to 5 or 6 years, until favorable weather conditions permit sufficient growth of the host plant to allow the larva to complete its development.

The Quino was once common in Southern California. It ranged north into Ventura County, west to the Pacific Ocean, east to the deserts, and south into northern Baja California. Currently, it is known to occur only in a few, probably isolated, colonies in southwestern Riverside County, San Diego County, and northern Baja California.

Reasons for the butterfly's reduction in population are not well understood. Habitat loss due to degradation and fragmentation caused by urban and rural development, agricultural conversion, off-road-vehicular use, the invasion of nonnative plants and insects, fire management practices, overcollecting, and adverse weather conditions have likely contributed to the species' decline (USFWS 1997).

USFWS recommends that focused Quino surveys be conducted a minimum of five times during the adult flight season by biologists possessing a recovery permit for this species pursuant to Section 10(a)(1)(A) of the Endangered Species Act. The Quino flight season within a given area is determined by the activity of known Quino populations that are monitored annually by USFWS.

Survey Methodology

Habitat Assessment

Prior to the initiation of surveys, a focused habitat assessment of the 4,417-acre BSA was conducted from March 1 through March 5 and March 15 through March 17. One additional

day of habitat assessments was conducted on March 22 for adjustments to the proposed project footprint that were added during the week of March 8. Habitat assessments were conducted by Project permitted biologists David Faulkner, Martha Heath, Michael Klein, Ken Osborne, and Dale Powell. These permitted biologists were assisted by project supervised biologists Andrew Fisher and Shirley Innecken.

An internal meeting took place on March 10, 2010, to compile, review, and discuss the results of initial habitat assessments with project biologists Barbra Calantas, Dave Faulkner, Andrew Fisher, Michael Klein, and Erin Riley. Upon review of the initial habitat assessment mapping, differences in the interpretation of the USFWS Quino survey protocol (USFWS 2002) with regard to chaparral density and areas to include or exclude from surveys were identified and discussed. The survey protocol recommends excluding “dense chaparral” and “small openings (less than an acre) completely enclosed within dense chaparral.” It further defines “dense chaparral” as “vegetation so thick that it is inaccessible to humans except by destruction of woody vegetation for at least 100 meters.”

Ken Osborne defined excluded habitat using a strict interpretation of the protocol definition of dense chaparral. David Faulkner and Michael Klein applied a more restrictive interpretation of the protocol as it applied to the BSA than initially assumed in many areas. Their interpretation of excluded areas resulted in a narrowing of habitat to be surveyed. This was based on refining the mapping of dense chaparral to include vegetation that was relatively easily traversed and thought to be the optimal Quino habitat on-site. It was decided at this meeting that field review of initial habitat assessments would take place to ensure a consistent interpretation of the survey protocol and approach on habitat assessment mapping throughout the BSA.

These conclusions regarding the mapping of potential Quino habitat during the habitat assessment were discussed at a meeting on March 11, 2010, with USFWS, Invenergy, Lisa Gover (Campo Environmental Protection Agency), AECOM, and subcontracted biologist David Faulkner. At this meeting, AECOM and Invenergy provided a background of the project and discussed biological surveys scoped for the project. AECOM and David Faulkner provided the results of the initial habitat assessment mapping. David Faulkner described conditions at various specific areas within the survey area boundary and adjacent areas based on his experience completing Quino surveys for the proposed Campo Landfill project in prior years. He explained why these areas were or were not suitable for Quino, stating that most excluded areas consisted of closed-canopy chaparral (AECOM 2010).

It was agreed upon at the March 11, 2010, meeting that focused surveys should likely start the week of March 22, 2010, based on site conditions and seasonal weather patterns. Also, it was discussed that a typical survey week could be expected to last as long as 9 to 10 calendar days instead of the usually 7-day week due to adverse weather conditions given the elevation and interior mountain location of the site. USFWS agreed on the approach to habitat assessments that was discussed at the March 11, 2010 meeting. USFWS also concurred on the start date and survey week length.

Follow-up field review of Quino habitat assessments took place from March 15 through March 17, 2010. AECOM staff, Michael Klein, and David Faulkner conducted this second round of habitat assessments. Thus, areas defined as suitable Quino habitat during the first week of habitat assessments were reassessed to further refine mapping of closed-canopy chaparral habitat. The resulting 1,806 acres of included habitat is depicted in Figure 3 (see "original survey area").

As the focused adult surveys ensued, some surveyors observed patches of open habitat in the dense chaparral they deemed suitable for the species. Starting in survey week 2, Quino observations were made outside of the original survey area (Figure 3). The survey area was expanded during survey week 2 to include additional trails and narrow openings in the chaparral that were not easily visible during habitat assessments. The expanded survey area is depicted in Figure 3 and constitutes approximately 541 additional acres.

The total original Quino survey area within the BSA is approximately 1,806 acres. Focused surveys were conducted for 6 weeks over this 1,806-acre survey area according to the most current USFWS protocol (USFWS 2002). The expanded survey area, comprised of 541 acres, was surveyed according to the survey guidelines during weeks 2 through 6, thus receiving a full 5 weeks of surveys and spanning the entire documented 2010 flight season of the species in the BSA (Figure 3). Thus, focused surveys were conducted for a minimum of 5 weeks over the entire 2,347-acre survey area according to the most current USFWS protocol (USFWS 2002).

The final habitat assessment map including both the original and expanded survey areas and depicting all excluded habitats is presented on USGS Quad maps at 200 percent (Figure 4). Host plant locations are also depicted on the habitat assessment maps. The criteria for including habitat in the final survey area include the following:

- chaparral and scrub communities with passable openings between shrubs
- dirt roads and trails
- open hilltops and ridges
- rock outcroppings
- areas with concentrated nectaring sources and host plants

Focused Adult Quino Surveys

The start date for focused adult Quino surveys was determined based on the following: (1) the first detection of Quino during surveys for another project on the Campo Indian Reservation directly adjacent to the proposed project the previous year; (2) conditions at the project site this year relative to last year; and (3) conditions at the Jacumba reference site monitored by USFWS. Project biologists Michael Klein and David Faulkner conducted focused surveys for the proposed Campo Landfill project in previous years and provided input that the first Quino detections at the Campo Landfill site occurred around the third week of March the previous year. Based on this information, Ken Osborne stated that the flight season would likely begin at the Jacumba reference site around the third week of

March (Osborne 2010). However, based on colder temperatures at the site in mid-March, which delayed the flight season by at least by another week, and the lack of Quino at the Campo Landfill site that was being monitored during that time, it later was agreed that the fourth week of March would be an appropriate start date for surveys. Thus, focused adult surveys commenced on March 22, 2010, by surveyors Natalie Brodie, Gretchen Cummings, David Flietner, Martha Heath, Erik LaCoste, Brian Lostroh, Viviane Marquez, Margie Mulligan, Ken Osborne, Andrew Pigniolo, and Dale Powell.

The survey routes of each permitted biologist were recorded and mapped electronically using Garmin Global Positioning System (GPS) units. A list of all biologists who conducted habitat assessments and focused surveys, and their corresponding permit numbers is provided in Table 1. A summary of the survey schedule is presented in Table 2.

Table 1
Survey Personnel and TE Permit Numbers

Biologist	#TE Permit Number
Erin Bergman	#TE-820658 (supervised)
Natalie Brodie	#TE-135948
Michael Couffer	#TE-782703
Gretchen Cummings	#TE-031850
Frank Dittmer	#TE-225938
David Faulkner	#TE-838743
Andrew Fisher	#TE-820658 (supervised)
David Flietner	#TE-008031
Antonette Gutierrez	#TE-797999
Martha Heath	#TE-099005
Bonnie Hendricks	#TE-820658
Shirley Innecken	#TE-820658 (supervised)
Diana Jensen	#TE-797999
Michael Klein	#TE-039305
Gina Krantz	#TE-797999 (supervised)
Erik LaCoste	#TE-027736
Brian Lohstroh	#TE-063608
Viviane Marquez	#TE-800930
James McMorran	#TE-820658 (supervised)
Margie Mulligan	#TE-233291
Ken Osborne	#TE-837760
Andrew Pigniolo	#TE-053020
Dale Powell	#TE-006559
Steve Rink	#TE-797999

Table 2
Quino Checkerspot Butterfly Survey Schedule

Survey Week	Date	Survey Team	# Calendar Days[2]	# Person Days	Survey Rate
1	03/22/2010 – 04/02/2010	Brodie, Cummings, Faulkner, Fisher[1], Flietner, Heath, Innecken[1], LaCoste, Lohstroh, Marquez, McMorran[1], Mulligan, Osborne, Pigniolo, Powell	12 (5 days cancelled, 3 days delayed due to weather)	24	75 acres/day
2	04/02/2010 – 04/17/2010	Bergman[1], Brodie, Couffer, Cummings, Faulkner, Flietner, Gutierrez, Hendricks, Innecken[1], Jensen, LaCoste, Lohstroh, McMorran[1], Mulligan, Osborne, Powell	14 (3 days cancelled, 2 days delayed due to weather)	29	81 acres/day
3	04/18/2010 – 04/26/2010	Bergman[1], Brodie, Couffer, Faulkner, Gutierrez, Hendricks, LaCoste, Lohstroh, Mulligan, Powell	7 (2 days cancelled, 2 days ended early due to weather)	27	87 acres/day
4	04/27/2010 – 05/05/2010	Bergman[1], Brodie, Couffer, Dittmer, Faulkner, Fisher[1], Flietner, Gutierrez, Krantz, Hendricks, Lohstroh, Mulligan, Pigniolo, Powell, Rink	9 (3 days cancelled due to weather)	30	78 acres/day
5	05/05/2010 – 05/11/2010	Brodie, Couffer, Faulkner, LaCoste, Marquez, McMorran[1], Mulligan, Osborne, Powell	8 (3 days cancelled due to weather)	24	97 acres/day
6	05/12/2010 – 05/20/2010	Brodie, Couffer, Faulkner, Flietner, Lohstroh, Marquez, Mulligan, Powell	8 (1 day cancelled, 1 day ended early due to weather)	23	99 acres/day

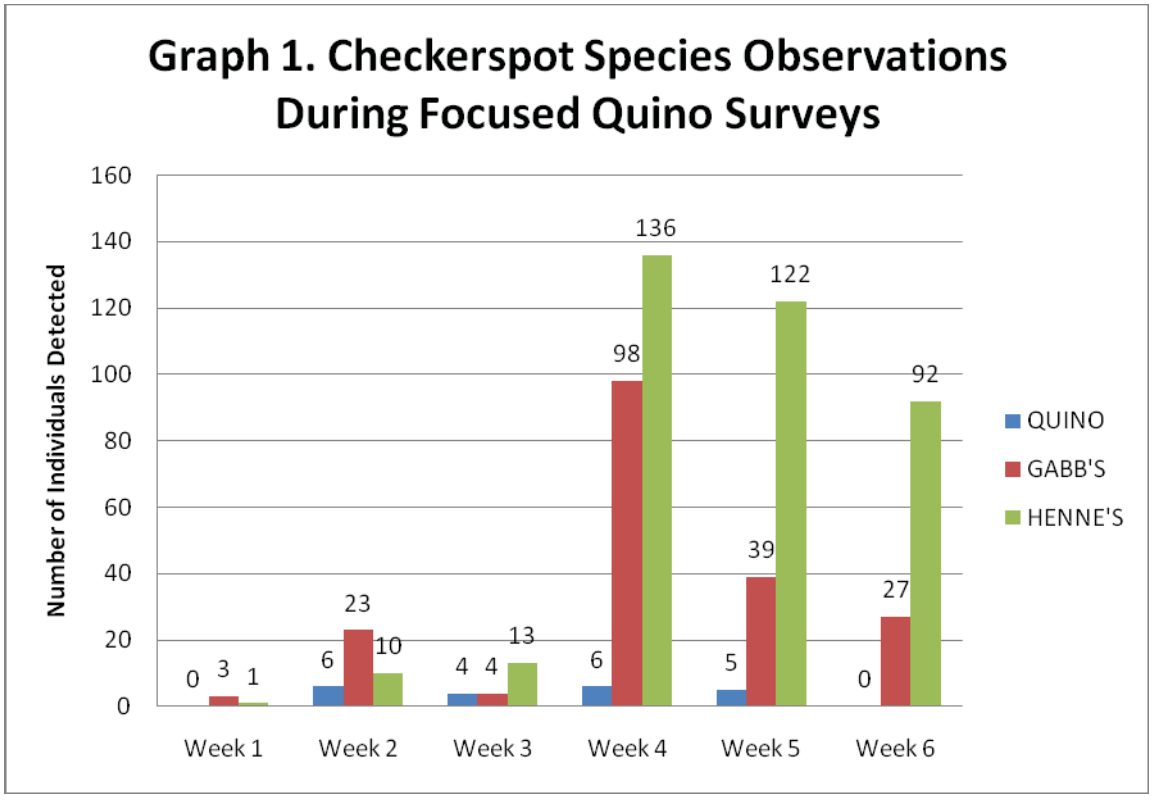
[1] Supervised to survey under TE# 820658.
[2] Cancelled calendar days, delayed calendar days, and calendar days where surveys were ended early are a result of unacceptable weather conditions outlined in the USFWS protocol.

Results

Six weeks of focused surveys were conducted for the approximate 1,806 acres of the original focused survey area, shown in Figure 3. The expanded focused survey area of approximately 541 acres was surveyed from weeks 2 through 6 according to the USFWS protocol (USFWS 2002).

After 5 weeks of surveys, it was determined that a sixth week of Quino surveys at the site was necessary, based on continued observations of Quino individuals during the fifth week that appeared in moderate condition with minimal fading of wing color and fraying of wing edges. Potential larval host plants, including Chinese houses, were blooming with increasing abundance during survey week 5. While the actual blooms of Chinese houses do not benefit Quino larvae, the blooming cycle indicates that Chinese houses were still green and supple, and had not yet dried up during the Quino survey season. Thus, the host plants were still available for Quino larvae to feed on during the Quino survey season. Based on the continued presence of adult Quino and blooming stage of potential larval host plants during survey week 5, a sixth week of focused adult Quino surveys was added to the season. Per discussions with USFWS during survey week 5, Eric Porter and the project team determined that area already surveyed during weeks 1 through 5 in the southern third of the BSA did not need additional focused surveys (Figure 3) (Meyer 2010). This determination was based on number of Quino observations that clearly established presence of the species in this area (Figure 3).

Three checkerspot species were detected on-site, Quino, Gabb's checkerspot (*Chlosyne gabbi*), and Henne's chalcedon checkerspot (*Euphydryas chalcedona*). Observations of these three species overlapped with the exception of survey weeks 1 and 6 (no Quino detected during these weeks). These observations are displayed in Graph 1.



Survey-specific weather conditions and personnel are presented in Appendix A. Field datasheets are included as Appendix B.

A total of 61 butterfly species and various moth species were detected within the survey area, with peak numbers generally occurring during survey weeks 3 and 4. A list of all butterfly species observed within the survey area each survey week is summarized in Appendix C. A list of potential nectaring plant species in flower each survey week is presented in Appendix D. Generally, nectaring plants increased in diversity and abundance during survey weeks 3 and 4, which coincided with the times that Quino and other checkerspots were observed in greatest abundance. A list of vertebrate species detected during focused Quino surveys is presented in Appendix E.

During spring 2010, vegetation mapping and rare plant surveys were ongoing and concurrent with focused Quino surveys for the project. Botanists conducting vegetation mapping and rare plant surveys across 100 percent of the BSA also mapped all potential Quino larval host plants observed, including Chinese houses, Coulter's snapdragon, and dark-tip bird's beak. On-site, Chinese houses was the most abundant potential host plant and was associated with the chaparral understory and adjacent open areas of habitat. Coulter's snapdragon was also associated with the chaparral understory and open areas. Of these three species observed within the survey area, only Chinese houses was vegetatively mature as early as April, during the peak of Quino observations. The blooming period for Chinese houses on-site during spring 2010 was from mid-April to late-June. This species was past its peak bloom and in full fruit by late June. The other two species documented on-site, dark-tip bird's beak and Coulter's snapdragon, were present only as small basal rosettes and/or diminutive, immature plants in April. Coulter's snapdragon began blooming in early May in some areas, and dark-tip bird's beak is not expected to fully mature and bloom until July. All host plants that were detected within the survey area, including observations made by Quino surveyors and botanists during rare plant surveys, are provided in Figure 5.

Twenty-one Quino observations were made during the survey period during focused surveys. Two of these observations were likely of the same individual Quino due to distinct markings; therefore, 20 distinct Quino individuals were observed during focused surveys. Six additional Quino observations occurred incidentally during non-Quino project-specific survey efforts, which represent at least four distinct Quino individuals. Therefore, a minimum of 24 distinct Quino individuals were observed within the Campo Indian Reservation during the survey period, with a maximum of 27 observations made. Among these, eight of the observations occurred just outside the project boundaries on the Campo Indian Reservation as surveyors walked to and from their vehicle to access the site. All Quino detections are displayed in Figures 3 and 4. Information for each Quino sighting, including the survey week (where applicable), date, time, weather conditions, surveyor, and number of Quino individuals detected, is provided in Table 3. Detailed information on each sighting, including weather conditions, habitat conditions, and photographs of the habitat and/or individual(s) detected as applicable, is provided in the corresponding 24-hour notification letter (Appendix F).

Table 3
Quino Checkerspot Butterfly Observations

Observation Number	Survey Week	Date	Time	Temp	Wind	% Cloud Cover	Observer/ Permitted Biologist	Date Reported to USFWS	Number of Quino Observed
1	2[1]	04/08/2010	12:40-13:15	68.0°F	1-3 mph	0	Andrew Fisher[2], James McMorran[2]	04/09/2010	3 individuals
2	2	04/09/2010	13:00-13:15	73.0°F	0	0	Dave Flietner, Erin Bergman[2]	4/12/2010	2 individuals
3	2	04/13/2010	10:30	58.0°F	3 mph	0	Michael Couffer	04/14/2010	1 individual
4	2	04/15/2010	15:48-15:57	73.0°F	0	10	Ken Osborne	04/16/2010	2 individuals
5	2[1]	04/15/2010	10:15	64.4°F	3.3 mph	0	Andrew Fisher[2]	04/16/2010	1 individual
6	2[1]	04/15/2010	13:15	72.0°F	3.5-8 mph	100	Andrew Fisher[2], James McMorran[2]	04/16/2010	1 individual[3]
7	2	04/16/2010	10:10	71.5°F	1.7-4.2 mph	0	Bonnie Hendricks	04/16/2010	1 individual
8	3	04/19/2010	13:45	75.0°F	0-5 mph	5	Michael Couffer	04/19/2010	2 individuals
9	3	04/24/2010	13:20	82.0°F	0-3 mph	0	Michael Couffer	04/26/2010	1 individual
10	3	04/26/2010	14:13	82.0°F	0-3 mph	0	Michael Couffer	04/27/2010	1 individual
11	4[1]	04/27/2010	11:45	74.0°F	1-7 mph	15	Andrew Fisher[2]	04/29/2010	1 individual
12	4	04/27/2010	12:40	80.0°F	7-13 mph	5	Michael Couffer	04/29/2010	1 individual[4]
13	4	04/27/2010	12:27	74.0°F	5-7 mph	0	Dale Powell, Andrew Fisher[2]	04/29/2010	1 individual
14	4	04/27/2010	14:45	76.0°F	0-2 mph	10	Michael Couffer	04/29/2010	1 individual
15	4	04/27/2010	15:40-15:47	76.0°F	0-4 mph	10	Michael Couffer	04/29/2010	1 individual
16	4	05/01/2010	09:58-10:08	64.0°F	2-5 mph	0	Michael Couffer, Andrew Fisher[2]	05/02/2010	2 individuals
17	5	05/06/2010	08:45	73.0°F	1-5 mph	0	Antonette Gutierrez, Gina Krantz[2]	05/07/2010	1 individual
18	5	05/06/2010	10:44	73.0°F	1-5 mph	0	Michael Couffer	05/07/2010	1 individual[5]
19	5	05/06/2010	10:28; 12:04	71.0°F; 76.0°F	1-3 mph; 0-5 mph	0	Michael Couffer	05/07/2010	2 individuals
20	5	05/07/2010	11:25	76.0°F	0-6 mph	0	Michael Couffer	05/07/2010	1 individual

[1] Quino not observed during a focused survey; individual(s) observed incidentally during project avian surveys.
[2] Supervised. All observations made by supervised biologists were verified through photographs taken of the Quino individuals (see Appendix F).
[3] Individual is likely the same as one of three individuals documented in Observation 1.
[4] Likely the same Quino individual observed in Observation 11.
[5] Likely the same Quino individual observed in Observation 17.

Quino detections are primarily concentrated in the southern portion of the project area south of State Route 94. There are also at least four sightings in the northern portion of the project area near Interstate 8. One area of habitat in the southern portion of the site was adjacent to a previously known Quino location (Faulkner 2010). This area had the highest density of Quino individuals observed, with a cluster of nine total Quino observations throughout the survey period in the expanded survey area (Figure 3 – Inset 3).

Discussion

A total of 27 individual Quino observations (representing a minimum of 24 individual Quino) were made during the flight season, with likely repeat observations of the same individuals in at least three cases (Figure 3 - Inset 2 and Inset 3).

As recorded in Table 3, no Quino were detected during survey week 1. The first detection of Quino this season occurred on April 8, 2010, during the week 2 survey period. Quino were detected during survey weeks 2 through 5. No Quino were detected during survey week 6 on-site. Thus, the survey window of March 22 to May 20 appears to have appropriately encompassed the flight season for Quino at the project site this year.

After conclusion of the field season on June 24, 2010, an internal meeting between AECOM biologists and subconsultant biologists (Barbra Calantas, Michael Couffer, David Faulkner, Andrew Fisher, Bonnie Hendricks, Scott McMillan, Antonette Gutierrez, Ken Osborne, and Erin Riley) took place to discuss focused survey results and conclusions.

This meeting assessed results of adult focused surveys, host plant mapping and vegetation mapping across the entire BSA. In comparing the focused Quino survey area to the larger BSA, spans of dense chaparral with small openings exist outside of the survey area. These areas may incur some use by Quino at a reduced level. These spans of dense chaparral are suitable for the overall persistence of the population but do not consist of high quality Quino habitat. These areas lack concentrations of resources that would be likely to support dense localized Quino numbers or use at this point in time given the maturity of the chaparral community based on lack of recent fire or other disturbances. These areas of dense chaparral include hilltops/ridgelines and populations of host plants and nectaring sources that may serve as a resource to some degree to the local Quino population despite being excludable by interpretation of the survey protocol.

The total area surveyed, including the original and expanded survey areas (2,347 acres), represents what is considered the optimal habitat for Quino on-site. Of the areas surveyed, Quino were observed in a small percentage of the total survey area. The Quino is known to undergo population fluctuations with extirpation of local populations and recolonization of new areas in a fashion characteristic of metapopulation dynamics (Osborne 1998). Thus, the participants of the June 24 meeting concluded that a larger area of suitable habitat totaling 3,456 acres is potentially supporting the persistence of the species. Much of this area was excluded from surveys based on the presence of dense chaparral. However, the larger area of suitable habitat defined in Figure 5 includes all chaparral with host plants and

occasional openings (>1 acre).This area of suitable habitat is most relevant for discussing the larger patterns of species distribution through space and time (Figure 5).

If you have any questions or comments regarding this letter report, please contact me at (619) 233-1454.

Sincerely,

Barbra Calantas
Associate Wildlife Biologist
barbra.calantas@aecom.com

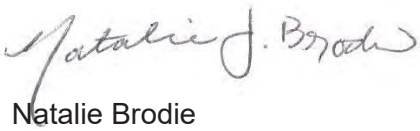
Attachments:

- Figure 1 – Regional Map
- Figure 2 – Vicinity Map
- Figure 3 – Quino Survey Area and Detections
- Figure 4 – Quino Habitat Assessment (Map Pocket)
- Figure 5 – Quino Larval Host Plants and Suitable Habitat
- Appendix A – Daily Weather Conditions for Focused Quino Surveys on Campo Wind Energy Project
- Appendix B – Field Data Sheets
- Appendix C – Summary of Butterfly and Moth Species Observed during Focused Quino Checkerspot Butterfly Surveys for the Campo Wind Energy Project
- Appendix D – Weekly Flowering Plant Observations for Campo Wind Energy Project
- Appendix E – Vertebrate Species Detected during Focused Quino Surveys for Campo Wind Energy Project
- Appendix F – 24-hour Notification Letters to USFWS

Certification

Qualified biologists who conducted Quino checkerspot butterfly habitat assessments and focused adult surveys for the Campo Wind Energy Site certify that the information in this survey report fully and accurately represents the work performed by AECOM biologists. Signatures of permitted biologists as listed in Table 1 who conducted focused surveys (March 22 through May 20, 2010) are included below. The results of focused surveys for listed species are typically considered valid for 1 year by the resource agencies.

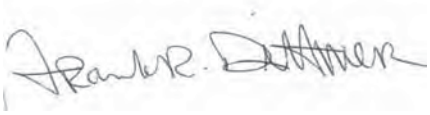
Bonnie Hendricks
AECOM Quino Surveyor



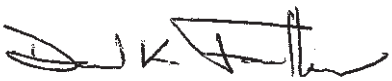
Natalie Brodie
Subcontracted Quino Surveyor

Michael Couffer
Subcontracted Quino Surveyor

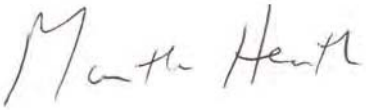
Gretchen Cummings
Subcontracted Quino Surveyor



Frank Dittmer
Subcontracted Quino Surveyor



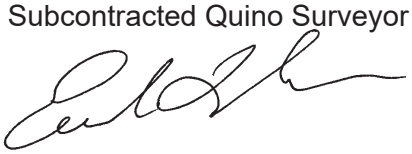
David Faulkner
Subcontracted Quino Surveyor



Martha Heath
Subcontracted Quino Surveyor

Steve Rink
Subcontracted Quino Surveyor

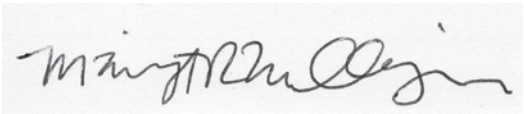
Diana Jensen
Subcontracted Quino Surveyor



Erik LaCoste
Subcontracted Quino Surveyor

Brian Lohstroh
Subcontracted Quino Surveyor

Viviane Marquez
Subcontracted Quino Surveyor

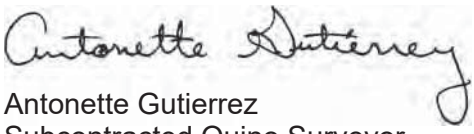


Margie Mulligan
Subcontracted Quino Surveyor

Ken Osborne
Subcontracted Quino Surveyor

Andrew Pigniolo
Subcontracted Quino Surveyor

Dale Powell
Subcontracted Quino Surveyor



Antonette Gutierrez
Subcontracted Quino Surveyor

David Flietner
Subcontracted Quino Surveyor

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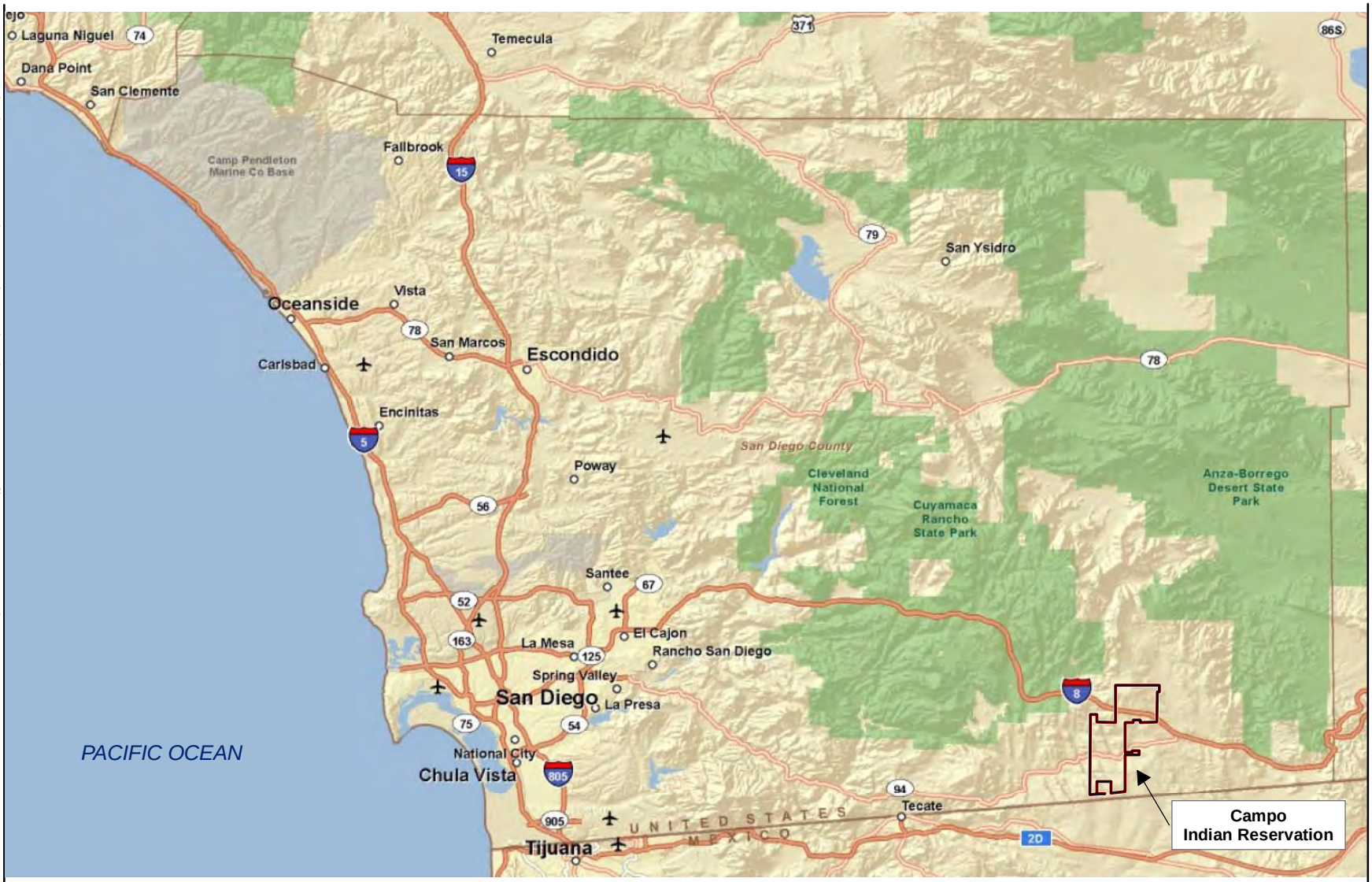
FIGURES

Campo Wind Energy Project Quino Checkerspot Butterfly Survey 45-day Report

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\regional_map.mxd, 06/25/10, LeeJ

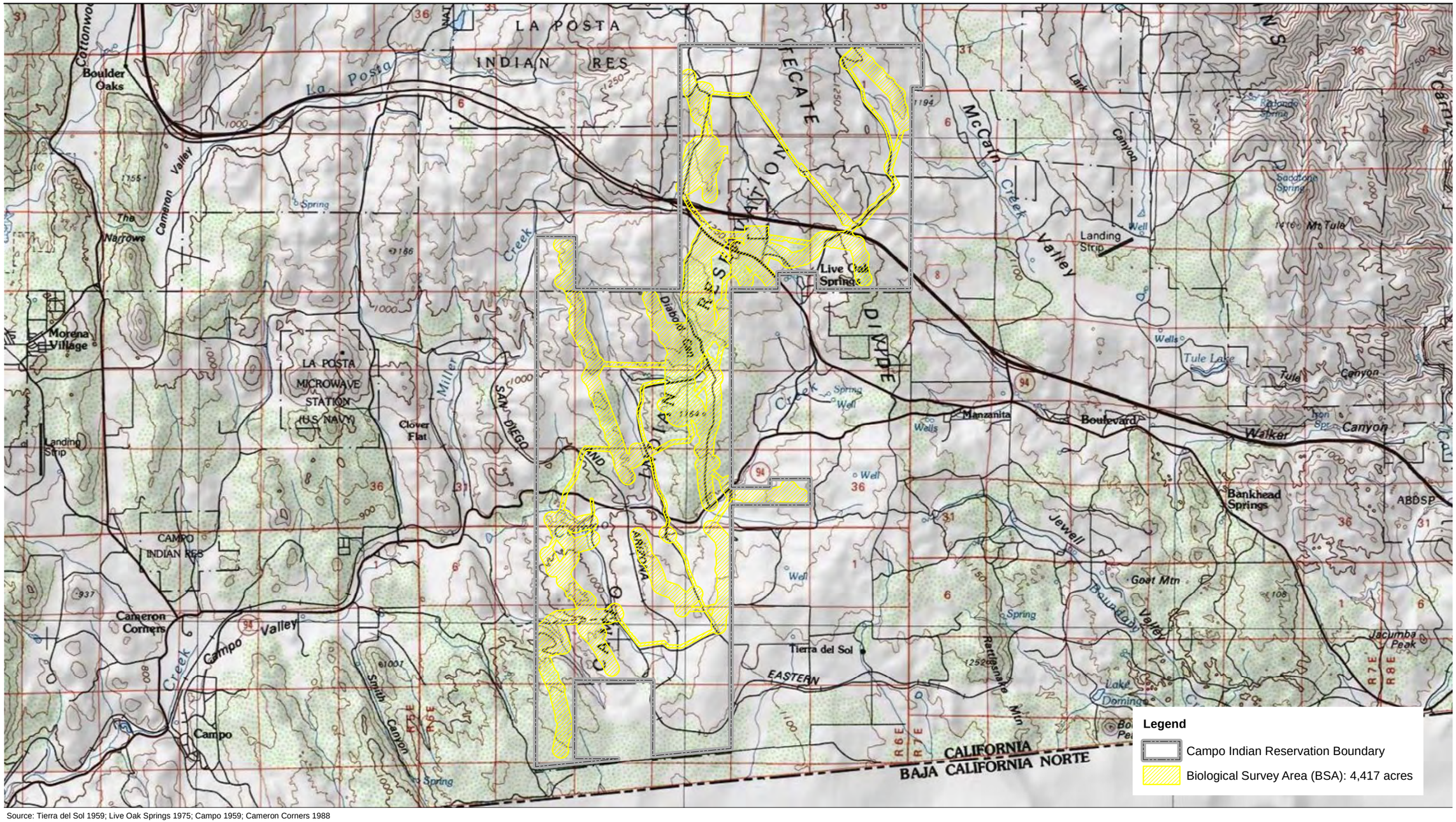


Source: ESRI 2009

12.8 0 12.8 Miles

Scale: 1 = 810,771.7; 1 inch = 12.8 mile(s)

Figure 1
Regional Map



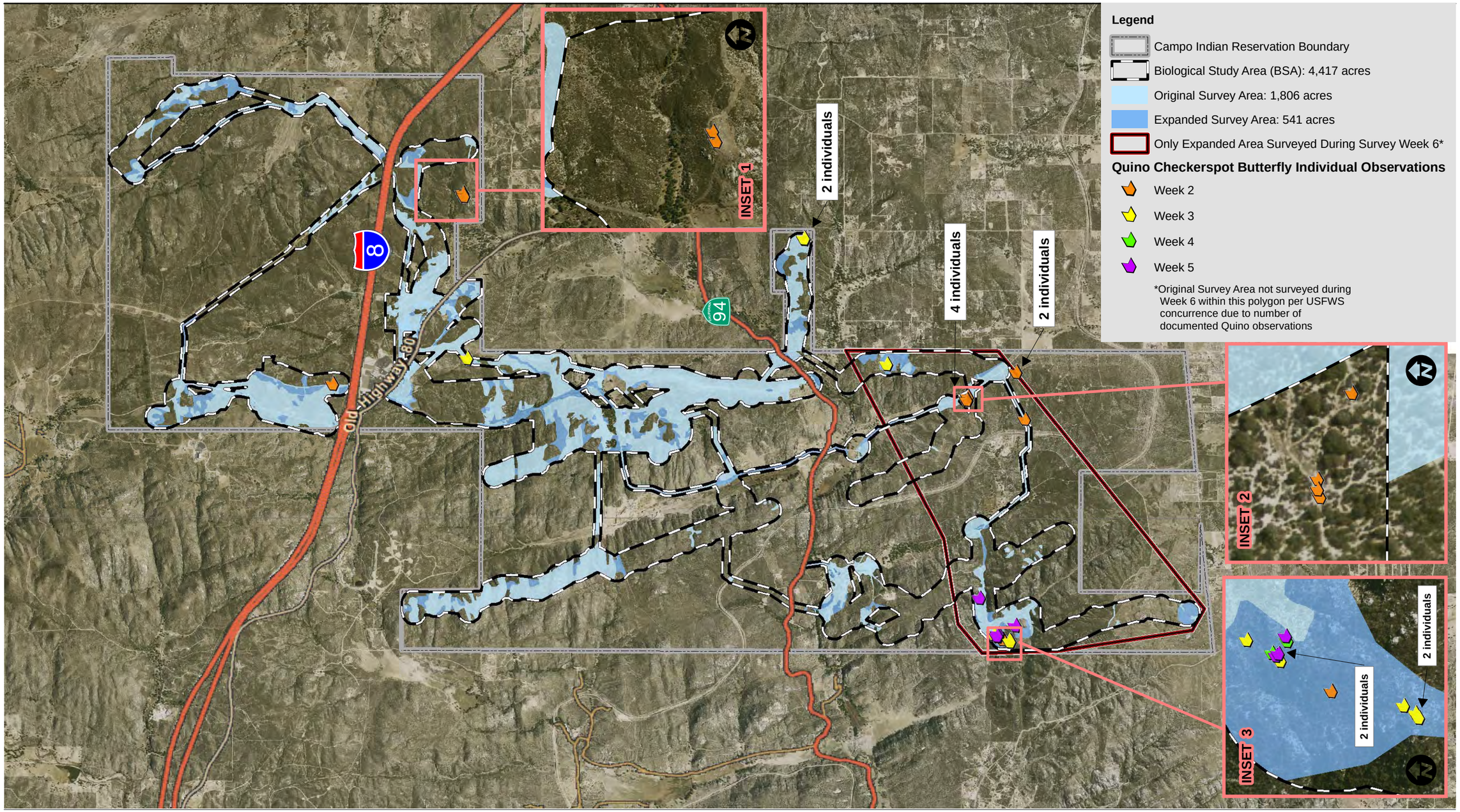
Source: Tierra del Sol 1959; Live Oak Springs 1975; Campo 1959; Cameron Corners 1988

6,500 3,250 0 6,500 Feet

Scale: 1 = 78,000; 1 inch = 6,500 feet

Figure 2
Vicinity Map

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\vicinity.mxd, 07/02/10, ShahS2



Source: DigitalGlobe 2008; Invenergy 2010

4,250 2,125 0 4,250 Feet

Scale: 1 = 51,000; 1 inch = 4,250 feet

Figure 3
Quino Checkerspot Butterfly Survey Area and Detections

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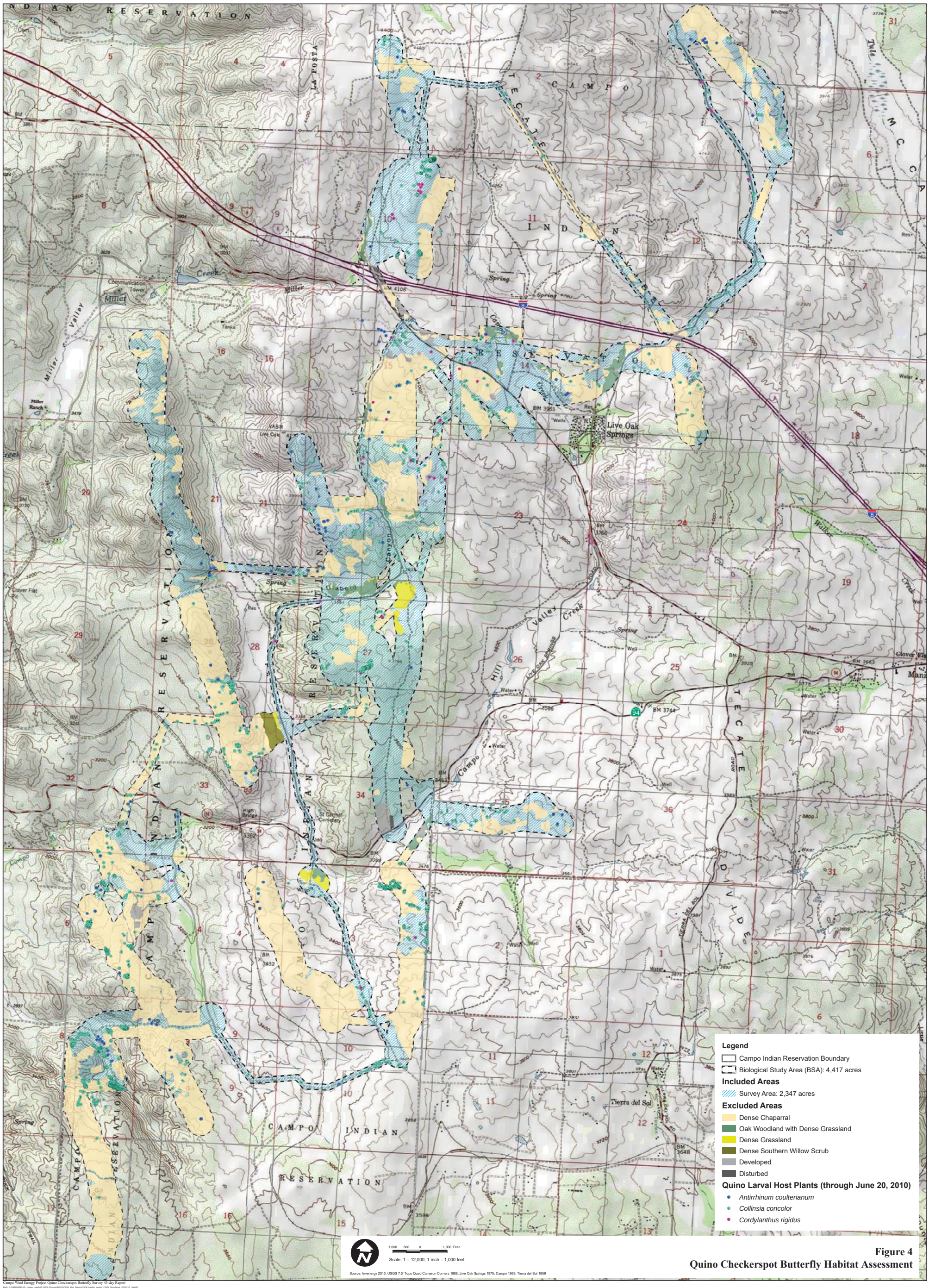
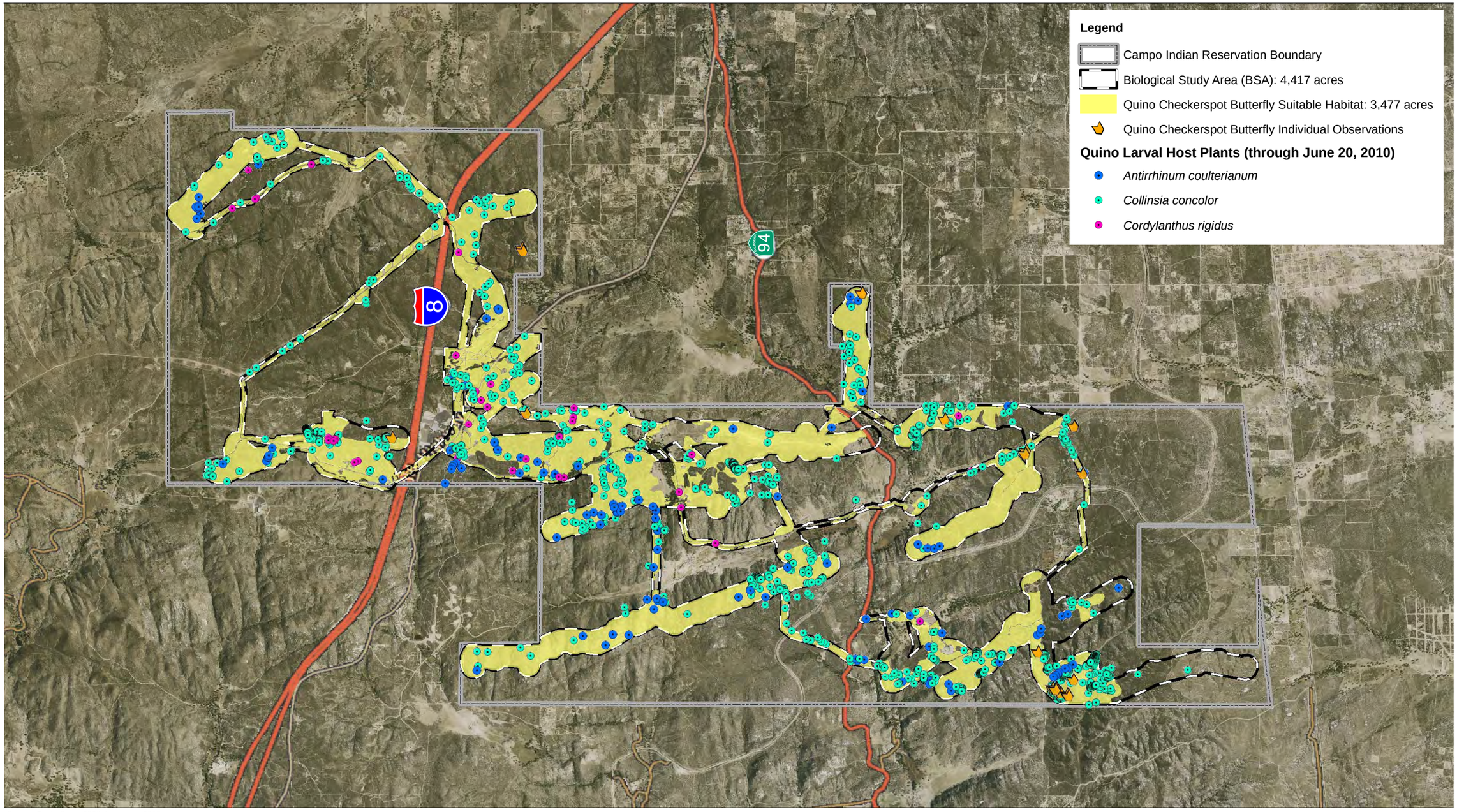


Figure 4
Quino Checkerspot Butterfly Habitat Assessment



Source: DigitalGlobe 2008; Invenergy 2010

4,250 2,125 0 4,250 Feet

Scale: 1 = 51,000; 1 inch = 4,250 feet

Figure 5
Quino Larval Host Plants and Suitable Habitat

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\45_Day_Reports\QCB_hostplants_suitablehab.mxd, 07/02/10, ShahS2

APPENDIX A

DAILY WEATHER CONDITIONS FOR FOCUSED QUINO SURVEYS ON CAMPO WIND ENERGY PROJECT

APPENDIX A
DAILY WEATHER CONDITIONS FOR FOCUSED QUINO SURVEYS ON CAMPO WIND ENERGY PROJECT

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
3/22/2010	1	Pigniolo	1030	61	0/2	20	patchy
3/22/2010	1	Pigniolo	1130	61	2/6	60	overcast
3/22/2010	1	Pigniolo	1230	63	2/6	85	overcast
3/22/2010	1	Pigniolo	1330	57	2/6	95	overcast
3/22/2010	1	Pigniolo	1400	58	2/6	100	overcast
3/22/2010	1	Marquez	1015	66.8	3.4/6.2	10	patchy
3/22/2010	1	Marquez	1140	67.2	0.6/1.6	60	patchy
3/22/2010	1	Marquez	1300	65.5	4.7/8.7	100	overcast
3/22/2010	1	Marquez	1400	63.8	2.1/4.8	100	overcast
3/22/2010	1	Marquez	1425	62.9	5.4/9.9	100	overcast
3/22/2010	1	Heath	1000	61	8/9	10	patchy
3/22/2010	1	Heath	1115	63	7.2/10.5	25	patchy
3/22/2010	1	Heath	1200	63	3.5/6.5	75	patchy
3/22/2010	1	Heath	1300	62	3.5/6.5	95	overcast
3/22/2010	1	Heath	1400	58.5	5.6/9.9	100	overcast
3/22/2010	1	Lohstroh	920	61	0/5	10	clear
3/22/2010	1	Lohstroh	1000	64	0/3	20	patchy
3/22/2010	1	Lohstroh	1100	61	3/5	40	patchy
3/22/2010	1	Lohstroh	1200	61	3/5	60	patchy
3/22/2010	1	Lohstroh	1300	60	3/5	100	overcast
3/22/2010	1	Lohstroh	1400	60	3/5	100	overcast
3/22/2010	1	Lohstroh	1445	60	3/5	100	overcast
3/22/2010	1	Faulkner	1000	65	2	30	patchy
3/22/2010	1	Faulkner	1100	68	3	50	patchy
3/22/2010	1	Faulkner	1200	68	5	70	patchy
3/22/2010	1	Faulkner	1300	65	6	100	overcast
3/22/2010	1	Faulkner	1400	64	6	100	overcast
3/22/2010	1	Faulkner	1500	63	2	100	overcast
3/22/2010	1	Faulkner	1600	59	13	100	overcast
3/22/2010	1	McMorran/Brodie	1315	66	2/4	90	overcast
3/22/2010	1	McMorran/Brodie	1415	64	8/12	90-100	overcast
3/22/2010	1	McMorran/Brodie	1015	68	2/6	10	clear
3/22/2010	1	McMorran/Brodie	1100	66	8/12	30-40	patchy
3/22/2010	1	McMorran/Brodie	1220	68	4/10	70-80	patchy
3/22/2010	1	McMorran/Brodie	1315	66	4/6	80-90	overcast
3/24/2010	1	Heath	930	60	5.6/8.6	0	clear
3/24/2010	1	Heath	1030	63	3.6/7.2	0	clear
3/24/2010	1	Heath	1130	67	2.6/4.5	0	clear
3/24/2010	1	Heath	1300	69.5	2.6/6.9	0	clear
3/24/2010	1	Heath	1400	64.5	2.9/7.8	0	clear
3/24/2010	1	Heath	1500	70	3.0/6.4	0	clear
3/24/2010	1	Heath	1600	65	15	0	clear
3/24/2010	1	LaCoste	950	60	10/15	0	clear
3/24/2010	1	LaCoste	1640	65	10/15	5	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
3/24/2010	1	Cummings	945	64	4.9/10.1		clear
3/24/2010	1	Cummings	1100	70	7.6/10.9		clear
3/24/2010	1	Cummings	1300	70	3.6/4.4		patchy
3/24/2010	1	Cummings	1415	71	2.1/3.0		patchy
3/24/2010	1	Mulligan/Innecken	1034	65	3/5	5	clear
3/24/2010	1	Mulligan/Innecken	1305	68	3/5	20	patchy
3/24/2010	1	Cummings	1520	75	2.0/6.3		patchy
3/24/2010	1	Mulligan/Innecken	1412	72	1	20	patchy
3/24/2010	1	Mulligan/Innecken	1512	72	5/6	20	patchy
3/24/2010	1	Mulligan/Innecken	1630	70	3/5	20	patchy
3/24/2010	1	Cummings	1520	75	2.0/6.3		patchy
3/24/2010	1	Cummings	1600	70	3.6/8.2		patchy
3/24/2010	1	Osborne	1121	72	1.0/3	0	clear
3/25/2010	1	Osborne	1140	72	2.8/5	0	clear
3/25/2010	1	Osborne	1215	60	6/10	0	clear
3/25/2010	1	Osborne	140	59	10/17	0	clear
3/25/2010	1	Osborne	410	61	1.7/4	0	clear
3/25/2010	1	Heath	1100	60	3.1/4.9	0	clear
3/25/2010	1	Heath	1220	61	7.2/10.3	0	clear
3/25/2010	1	Heath	1400	61	9.9/17.2	0	clear
3/25/2010	1	Heath	1500	61.5	5.5/14.7	0	clear
3/25/2010	1	Heath	1620	60.5	14.2/21.3	0	clear
3/25/2010	1	Faulkner	1300	63	7	0	clear
3/25/2010	1	Faulkner	1400	60	9	0	clear
3/25/2010	1	Faulkner	1400	60	9	0	clear
3/25/2010	1	Faulkner	1600	59	8	0	clear
3/25/2010	1	Faulkner	1100	60	7	0	clear
3/25/2010	1	Faulkner	1200	61	6	0	clear
3/25/2010	1	Faulkner	1300	63	7	0	clear
3/25/2010	1	Flietner/Innecken	1130	63	4/8	0	clear
3/25/2010	1	Flietner/Innecken	12	63	4/8	0	clear
3/25/2010	1	Flietner/Innecken	1220	70	0/3	0	clear
3/25/2010	1	Flietner/Innecken	1340	72	0/5	0	clear
3/25/2010	1	Flietner/Innecken	1410	72	3/7	0	haze
3/25/2010	1	Flietner/Innecken	1645	61	2/4	0	clear
3/26/2010	1	Flietner/Innecken	1020	63	0/2	0	clear
3/26/2010	1	Flietner/Innecken	1240	65	0/2	0	clear
3/26/2010	1	Flietner/Innecken	1450	72	0/2	0	clear
3/26/2010	1	Heath	1000	57	1.2/2.4	0	clear
3/26/2010	1	Heath	1130	64.7	0/2	0	clear
3/26/2010	1	Heath	1300	64.9	3.0/4.3	0	clear
3/26/2010	1	Heath	1430	67	2.1/4.1	0	clear
3/26/2010	1	Heath	1630	67.8	6.0/8.6	0	clear
3/27/2010	1	Faulkner	900	56	12	0	not available
3/27/2010	1	Faulkner	1000	56	10	0	not available
3/27/2010	1	Faulkner	1100	67	11	0	not available
3/27/2010	1	Faulkner	1200	63	7	0	not available
3/27/2010	1	Faulkner	1300	61	13	0	not available
3/29/2010	1	Brodie	1230	72	0/2	20	clear/patchy
3/29/2010	1	Brodie	13445	73	2/4	20-30	patchy

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
3/29/2010	1	Brodie	1445	72	2/4	10-20	overcast
3/29/2010	1	Brodie	1600	70	4/6	0	clear
3/29/2010	1	Brodie	930	64	0/2	0	clear
3/29/2010	1	Brodie	1040	68	0/2	0	clear
3/29/2010	1	Brodie	1130	70	0/2	10	clear
3/29/2010	1	Brodie	1215	72	0/2	20	clear
3/29/2010	1	Heath	900	69.2	0.8/1.6	0	clear
3/29/2010	1	Heath	1100	73.1	2.9/5.8	0	clear
3/29/2010	1	Heath	1200	72.2	3.0/5.6	0	clear
3/29/2010	1	Heath	1330	77	2.3/5.3	0	patchy
3/29/2010	1	Heath	1600	72	5.7/14.9	0	clear
3/29/2010	1	Powell	930	68	1/5	0	clear
3/29/2010	1	Powell	1100	75	5/7	0	clear
3/29/2010	1	Powell	1200	79	4/8	0	patchy
3/29/2010	1	Powell	1300	77	7/11	0	patchy
3/29/2010	1	Powell	1400	80	6/10	0	patchy
3/29/2010	1	Powell	1500	76	6/12	0	patchy
3/29/2010	1	Powell	1620	75	5/10	0	clear
3/29/2010	1	Pigniolo/Fisher	915	60	0	0	clear
3/29/2010	1	Pigniolo/Fisher	1015	60	0	0	clear
3/29/2010	1	Pigniolo/Fisher	1115	76	0/5	0	clear
3/29/2010	1	Pigniolo/Fisher	1215	78	0/6	20	patchy
3/29/2010	1	Pigniolo/Fisher	1315	79	0/6	40	patchy
3/29/2010	1	Pigniolo/Fisher	1415	81	2/7	10	clear
3/29/2010	1	Pigniolo/Fisher	1515	74	2/5	5	clear
3/29/2010	1	Faulkner	900	69	1	0	clear
3/29/2010	1	Faulkner	1000	73	1	0	clear
3/29/2010	1	Faulkner	1100	78	1	0	clear
3/29/2010	1	Faulkner	1200	81	1	0	patchy
3/29/2010	1	Faulkner	1300	83	5	50	patchy
3/29/2010	1	Faulkner	1400	81	2	50	patchy
3/29/2010	1	Faulkner	1500	81	5	0	clear
3/29/2010	1	Faulkner	1500	81	5	0	clear
3/29/2010	1	Faulkner	1600	62	15	0	clear
3/30/2010	1	Mulligan	1040	64	3/6	5	clear
3/30/2010	1	Mulligan	1205	73	4/6	0	clear
3/30/2010	1	Mulligan	1335	73	4/7	0	clear
3/30/2010	1	Powell	1235	67	8/11	0	clear
3/30/2010	1	Powell	1330	72	4/7	0	clear
3/30/2010	1	Powell	1430	68	7/11	0	clear
3/30/2010	1	Powell	1530	70	8/12	0	clear
3/30/2010	1	Powell	1625	65	5/9	0	clear
3/30/2010	1	Heath	1030	63.5	4.5/7.2	10	clear
3/30/2010	1	Heath	1230	66	8.7/12.4	20	clear
3/30/2010	1	Heath	1430	64.7	15.9/19.6	10	clear
3/30/2010	1	Heath	1600	60	15.0	10	clear
3/30/2010	1	Powell	1030	61	4/8	10	patchy
3/30/2010	1	Powell	1200	70	8/10	0	clear
3/30/2010	1	Lohstroh	1040	61.4	5/8	10	clear
3/30/2010	1	Lohstroh	1140	65	6/10	0	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
3/30/2010	1	Lohstroh	1240	67	4/7	0	clear
3/30/2010	1	Lohstroh	1400	69	6/8	0	clear
3/30/2010	1	Lohstroh	1500	70	3/5	0	clear
3/30/2010	1	Lohstroh	1600	64	3/7	0	clear
3/30/2010	1	Lohstroh	1610	65	5/10	0	clear
4/2/2010	1	Flietner	1045	63	0/2	0	clear
4/2/2010	1	Flietner	1420	75	0/2	0	clear
4/2/2010	1	Flietner	1635	66	2/5	10	clear
4/2/2010	1	Powell/McMorran	1050	59	8/12	0	clear
4/2/2010	2	Powell/McMorran	1210	60	10/17	0	clear
4/2/2010	2	Powell/McMorran	1245	62	7/15	0	clear
4/2/2010	2	Powell/Innecken	1140	63	1/3	0	clear
4/2/2010	2	Powell/Innecken	1300	68	1/3	0	clear
4/2/2010	2	Powell/Innecken	1400	69	4/8	0	clear
4/2/2010	2	Powell/Innecken	1500	65	4/8	0	clear
4/2/2010	2	Powell/Innecken	1600	61	4/8	0	clear
4/2/2010	2	Powell/Innecken	1700	59	5/8	0	clear
4/2/2010	2	Cummings	1040	66	3.3/4.9	0	clear
4/2/2010	2	Cummings	1230	68	3.8/5.4	0	clear
4/2/2010	2	Cummings	1245	68	3./5.4	0	clear
4/2/2010	2	Cummings	1245	68	3.8/5.4	0	clear
4/2/2010	2	Cummings	1545	62	3.6/8.2	0	clear
4/2/2010	2	Faulkner	1300	68	5	0	clear
4/2/2010	2	Faulkner	1400	69	4	0	clear
4/2/2010	2	Faulkner	1500	69	4	0	clear
4/2/2010	2	Faulkner	1600	67	9	0	clear
4/2/2010	2	Faulkner	1600	67	9	0	clear
4/2/2010	2	Faulkner	1700	65	9	0	clear
4/2/2010	2	Faulkner	1030	59	3	0	clear
4/2/2010	2	Faulkner	1100	66	1	0	clear
4/2/2010	2	Faulkner	1200	72	0	0	clear
4/2/2010	2	Faulkner	1300	68	5	0	clear
4/6/2010	2	Mulligan	1250	65	3/6	0	clear
4/6/2010	2	Mulligan	1340	63	5/8	0	clear
4/6/2010	2	Mulligan	1420	63	5/8	0	clear
4/6/2010	2	Mulligan	1000	60	5/9	0	clear
4/6/2010	2	Mulligan	1107	62	1/4	0	clear
4/6/2010	2	Mulligan	1210	63	3/6	0	clear
4/6/2010	2	Mulligan	1400	63	4/8	0	clear
4/6/2010	2	Mulligan	1522	63	4/8	0	clear
4/6/2010	2	Faulkner	1400	64	8	0	clear
4/6/2010	2	Faulkner	1500	65	9	0	clear
4/6/2010	2	Faulkner	1000	57	7	0	clear
4/6/2010	2	Faulkner	1100	57	7	0	clear
4/6/2010	2	Faulkner	1200	63	7	0	clear
4/6/2010	2	Faulkner	1300	61	13	0	clear
4/6/2010	2	Faulkner	1200	63	7	0	clear
4/6/2010	2	Faulkner	1300	61	13	0	clear
4/6/2010	2	Faulkner	1400	64	8	0	clear
4/6/2010	2	Faulkner	1500	65	9	0	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
4/6/2010	2	Faulkner	1600	63	8	0	clear
4/6/2010	2	Lohstroh	1000	60	5/8	0	clear
4/6/2010	2	Lohstroh	1100	60	10/14	0	clear
4/6/2010	2	Lohstroh	1200	61	4/9	0	clear
4/6/2010	2	Lohstroh	1300	61	4/7	0	clear
4/6/2010	2	Lohstroh	1400	61	8/12	0	clear
4/6/2010	2	Lohstroh	1445	62	7/12	0	clear
4/8/2010	2	Faulkner/Bergman	1500	78	2	0	clear
4/8/2010	2	Faulkner/Bergman	1600	78	5	0	clear
4/8/2010	2	Faulkner/Bergman	1000	68	5	0	clear
4/8/2010	2	Faulkner/Bergman	1100	69	6	0	clear
4/8/2010	2	Faulkner/Bergman	1200	72	7	0	clear
4/8/2010	2	Faulkner/Bergman	1300	77	0	0	clear
4/8/2010	2	Faulkner/Bergman	1400	78	5	0	clear
4/8/2010	2	Faulkner/Bergman	900	60	7	0	clear
4/8/2010	2	Faulkner/Bergman	1000	68	5	0	clear
4/8/2010	2	Osborne	914	59	2.5/5	0	clear
4/8/2010	2	Osborne	1120	69	1.7/2.8	0	clear
4/8/2010	2	Osborne	1400	72	0	0	clear
4/8/2010	2	Osborne	1625	74	0	0	clear
4/8/2010	2	Powell	1330	72	2/5	0	clear
4/8/2010	2	Powell	1435	75	0	0	clear
4/8/2010	2	Powell	1625	72	4/6	0	clear
4/8/2010	2	Powell	845	63	5/7	0	clear
4/8/2010	2	Powell	955	67	10/13	0	clear
4/8/2010	2	Powell	1130	71	3/7	0	clear
4/8/2010	2	Powell	1240	71	6/9	0	clear
4/8/2010	2	Powell	1310	74	5/9	0	clear
4/8/2010	2	Flietner	900	57	3/6	0	clear
4/8/2010	2	Flietner	930	61	3/6	0	clear
4/8/2010	2	Flietner	1620	70	0/2	0	clear
4/9/2010	2	Flietner/Bergman	1020	69	0	0	clear
4/9/2010	2	Flietner/Bergman	1235	73	0	0	clear
4/9/2010	2	Flietner/Bergman	1430	74	5/8	0	clear
4/9/2010	2	Flietner/Bergman	1550	73	3/6	0	clear
4/9/2010	2	Couffer	1430	74	3/5	0	clear
4/9/2010	2	Couffer	1500	73	1/4	0	clear
4/9/2010	2	Couffer	1600	72	1/6	0	clear
4/9/2010	2	Couffer	930	67	0/2	0	clear
4/9/2010	2	Couffer	1000	74	0/4	0	clear
4/9/2010	2	Couffer	1100	72	0/5	0	clear
4/9/2010	2	Couffer	1200	76	0/2	0	clear
4/9/2010	2	Couffer	1300	77	1/4	0	clear
4/9/2010	2	Couffer	1400	73	3/7	0	clear
4/13/2010	2	Lohstroh/Innecken	1040	62	2/5	0	clear
4/13/2010	2	Lohstroh/Innecken	1200	67	2/3	0	clear
4/13/2010	2	Lohstroh/Innecken	1300	64	0/3	0	clear
4/13/2010	2	Lohstroh/Innecken	1430	66	0/6	0	clear
4/13/2010	2	Lohstroh/Innecken	1520	62	3/8	30	patchy
4/13/2010	2	Lohstroh/Innecken	1640	59	3/8	30	patchy

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
4/13/2010	2	Powell	1330	62	2/4	25	clear
4/13/2010	2	Powell	1440	61	4/7	25	clear
4/13/2010	2	Powell	1550	58	1/3	20	clear
4/13/2010	2	Powell	1030	64	0	15	clear
4/13/2010	2	Powell	1210	60	2/4	30	clear
4/13/2010	2	Faulkner	1100	48	3	0	clear
4/13/2010	2	Faulkner	1200	55	2	0	clear
4/13/2010	2	Faulkner	1300	58	2	5	clear
4/13/2010	2	Faulkner	1400	61	3	5	clear
4/13/2010	2	Faulkner	1500	55	8	10	clear
4/13/2010	2	Faulkner	1600	52	9	10	clear
4/13/2010	2	Couffer	1000	58	0/3	0	clear
4/13/2010	2	Couffer	1100	58	0/3	0	clear
4/13/2010	2	Couffer	1200	56	0/2	0	clear
4/13/2010	2	Couffer	1300	65	0/1	0	clear
4/13/2010	2	Couffer	1400	67	1/2	0	clear
4/13/2010	2	Couffer	1500	66	0/3	0	clear
4/13/2010	2	Couffer	1600	63	1/5	0	clear
4/14/2010	2	LaCoste	930	65	3/7	5	clear
4/14/2010	2	LaCoste	130	70	3/6	75	overcast
4/14/2010	2	LaCoste	230	67	4/8	90	overcast
4/14/2010	2	LaCoste	300	66	80	80	overcast
4/14/2010	2	Cummings	945	60.3	1/2.2	20	patchy
4/14/2010	2	Cummings	1125	98.7	3.2/3.8	25	patchy
4/14/2010	2	Cummings	1345	70	2.6/3.9	40	patchy
4/14/2010	2	Cummings	1420	77	2.6/6.2	70	patchy
4/14/2010	2	Cummings	1600	74	.8/1.9	80	patchy
4/14/2010	2	Cummings	1645	69	1.3/2.1	70	patchy
4/14/2010	2	Powell/Mulligan	1015	63	0/2	0	clear
4/14/2010	2	Powell/Mulligan	1205	64	0	0	clear
4/14/2010	2	Powell/Mulligan	1300	72	1/3	0	clear
4/14/2010	2	Powell/Mulligan	1430	60	7/10	75	
4/14/2010	2	Powell/Mulligan	1645	70	3/5	50	
4/14/2010	2	Powell/Mulligan	945	62	0/2	0	clear
4/14/2010	2	Powell/Mulligan	1005	65	0/2	0	clear
4/15/2010	2	Osborne	900	63	2/4	0	clear
4/15/2010	2	Osborne	1030	66	3.9/6	0	clear
4/15/2010	2	Osborne	1400	72	2.4/6	10	clear
4/15/2010	2	Osborne	1600	73	0	10	overcast
4/15/2010	2	Powell	900	61	8/11	0	clear
4/15/2010	2	Powell	1015	66	11/14	0	clear
4/15/2010	2	Powell	1125	68	7/11	0	clear
4/15/2010	2	Powell	1410	72	4/7	0	clear
4/15/2010	2	Faulkner	900	64	6	0	clear
4/15/2010	2	Faulkner	1000	67	3	0	clear
4/15/2010	2	Faulkner	1100	64	9	0	clear
4/15/2010	2	Couffer	900	67	1/5	0	clear
4/15/2010	2	Couffer	1000	68	1/8	0	clear
4/15/2010	2	Couffer	1100	71	0/7	0	clear
4/15/2010	2	Couffer	1200	71	0/8	0	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
4/15/2010	2	Couffer	1300	70	2/6	0	clear
4/15/2010	2	Couffer	1400	71	0/3	50	patchy
4/15/2010	2	Couffer	1500	70	1/4	90	overcast
4/16/2010	2	Couffer	900	67	0/3	0	clear
4/16/2010	2	Couffer	1300	60	2/5	0	clear
4/16/2010	2	Couffer	1100	70	0/3	0	clear
4/16/2010	2	Couffer	1200	73	0/3	0	clear
4/16/2010	2	Couffer	1300	74	1/4	0	clear
4/16/2010	2	Couffer	1400	76	0/3	0	clear
4/16/2010	2	Couffer	1500	73	2/5	0	clear
4/16/2010	2	Powell	1510	75	4/7	0	clear
4/16/2010	2	Powell	1700	70	3/6	0	clear
4/16/2010	2	Powell	945	60	2/4	0	clear
4/16/2010	2	Powell	1055	72	5/8	0	clear
4/16/2010	2	Powell	1200	78	10/13	0	clear
4/16/2010	2	Powell	1400	72	5/8	0	clear
4/16/2010	2	Powell	1445	72	3/5	0	clear
4/16/2010	2	Hendricks	915	59.5	4.4/8.2	0	clear
4/16/2010	2	Hendricks	1020	71.5	1.7/4.2	0	clear
4/16/2010	2	Hendricks	1150	72	1.2/2.5	0	clear
4/16/2010	2	Hendricks	1230	72	2.0/3.0	0	clear
4/16/2010	2	Hendricks	345	73.5	3.2/10.3	0	clear
4/16/2010	2	Hendricks	1515	73.7	1.4/4.2	0	clear
4/16/2010	2	Hendricks	1700	67.2	2.3/5.8	0	clear
4/16/2010	2	Hendricks	1545	61.3	4.5/8.7	0	clear
4/17/2010	2	Mulligan	900	67	0/3	80	overcast
4/17/2010	2	Mulligan	1000	70	0/4	100	overcast
4/17/2010	2	Mulligan	1245	79	1/5	100	overcast
4/17/2010	2	Couffer	900	67	0/4	100	overcast
4/17/2010	2	Couffer	1000	67	0/2	100	overcast
4/17/2010	2	Couffer	1100	70	0/3	100	overcast
4/17/2010	2	Couffer	1200	73	0/4	100	overcast
4/17/2010	2	Couffer	1300	75	0/5	100	overcast
4/17/2010	2	Couffer	1320	75	0/5	100	overcast
4/17/2010	2	Powell	900	66	9/11	90	overcast
4/17/2010	2	Powell	1010	72	6/8	60	overcast
4/17/2010	2	Powell	1110	72	7/9	50	overcast
4/17/2010	2	Powell	1125	72	7/9	50	overcast
4/17/2010	2	Powell	1300	70	6/9	50	overcast
4/17/2010	2	Mulligan	1300	79	2/8	100	overcast
4/17/2010	2	Mulligan	1600	80	2/4	100	overcast
4/18/2010	3	Gutierrez	900	76	0	80	overcast
4/18/2010	3	Gutierrez	1000	78	0	40	patchy
4/18/2010	3	Gutierrez	1100	82	0	40	patchy
4/18/2010	3	Gutierrez	1600	84	2	30	patchy
4/18/2010	3	Powell	830	66	0	0	clear
4/18/2010	3	Powell	1000	77	0	0	clear
4/18/2010	3	Powell	1130	80	2/4	0	clear
4/18/2010	3	Powell	1145	80	3/6	0	clear
4/18/2010	3	Powell	1330	78	4/7	0	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
4/18/2010	3	Powell	1430	74	4/7	0	clear
4/18/2010	3	Couffer	844	70	0	0	clear
4/18/2010	3	Couffer	900	71	0	0	clear
4/18/2010	3	Couffer	1000	75	0	0	clear
4/18/2010	3	Couffer	1100	77	0/2	0	clear
4/18/2010	3	Couffer	1200	78	0/3	0	clear
4/18/2010	3	Couffer	1300	82	0/3	0	clear
4/18/2010	3	Couffer	1400	80	0/4	0	clear
4/19/2010	3	Powell	1550	76	3/6	0	clear
4/19/2010	3	Powell	1635	72	6/9	0	clear
4/19/2010	3	Faulkner	1500	71	4	0	clear
4/19/2010	3	Faulkner	1630	69	7/8	0	clear
4/19/2010	3	LaCoste	1640	64	2/4	30	patchy
4/19/2010	3	LaCoste	1215	62	5/10	5	clear
4/19/2010	3	LaCoste	1415	76	5/10	0	clear
4/19/2010	3	LaCoste	1530	70	5/10	0	clear
4/19/2010	3	Brodie/Bergman	1045	65	4/7	40	patchy
4/19/2010	3	Brodie/Bergman	1145	72	4/8	10	clear
4/19/2010	3	Brodie/Bergman	1330	74	2/5	0	clear
4/19/2010	3	Brodie/Bergman	1445	75	2/5	0	clear
4/19/2010	3	Brodie/Bergman	1540	73	3/6	0	clear
4/19/2010	3	Brodie/Bergman	1200	73	3/6	0	clear
4/19/2010	3	Brodie/Bergman	1300	72	3/6	0	clear
4/19/2010	3	Brodie/Bergman	1330	74	2/5	0	clear
4/19/2010	3	Powell	1045	69	2/4	20	clear
4/19/2010	3	Powell	1215	75	6/8	0	clear
4/19/2010	3	Powell	1330	79	5/7	0	clear
4/19/2010	3	Powell	1500	81	6/9	0	clear
4/19/2010	3	Couffer	1100	69	0/6	45	patchy
4/19/2010	3	Couffer	1200	70	1/6	5	clear
4/19/2010	3	Couffer	1300	75	0/5	5	clear
4/19/2010	3	Couffer	1400	75	0/4	5	clear
4/19/2010	3	Couffer	1500	76	0/5	0	clear
4/19/2010	3	Couffer	1600	75	0/6	0	clear
4/19/2010	3	Couffer	1630	75	0/3	0	clear
4/19/2010	3	Faulkner	1000	70	4	50	clear
4/19/2010	3	Faulkner	1130	71	6	30	patchy
4/19/2010	3	Faulkner	1200	73	5	0	clear
4/19/2010	3	Faulkner	1330	76	3	0	clear
4/19/2010	3	Faulkner	1400	76	4	0	clear
4/20/2010	3	Couffer	945	65	1/5	0	clear
4/20/2010	3	Couffer	1000	64	2/6	0	clear
4/20/2010	3	Couffer	1100	68	2/8	5	clear
4/20/2010	3	Couffer	1200	68	2/5	5	clear
4/20/2010	3	Couffer	1300	70	0/4	5	clear
4/20/2010	3	Couffer	1400	72	0/4	10	patchy
4/20/2010	3	Couffer	1445	70	2/8	50	patchy
4/20/2010	3	Faulkner	900	59	3		clear
4/20/2010	3	Faulkner	1000	67	1		clear
4/20/2010	3	Faulkner	1100	63	9		patchy

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
4/20/2010	3	Faulkner	1200	64	7		patchy
4/20/2010	3	Faulkner	1300	65	9	30	patchy
4/20/2010	3	Faulkner	1400	63	10	50	patchy
4/20/2010	3	Faulkner	1500	62	9	40	patchy
4/20/2010	3	Lohstroh/Faulkner	945	65	2-6/12	40	clear
4/20/2010	3	Lohstroh/Faulkner	1045	65	4/10	40	clear
4/20/2010	3	Lohstroh/Faulkner	1200	67	4/8	20	patchy
4/20/2010	3	Lohstroh/Faulkner	1300	69	6-9/12	40	patchy
4/20/2010	3	Lohstroh/Faulkner	1400	64	6/12	40	patchy
4/20/2010	3	Lohstroh/Faulkner	1440	67	6/12	50	patchy
4/20/2010	3	Lohstroh/Faulkner	1545	62	8/15	50	patchy
4/20/2010	3	Mulligan	1030	65	2/6	20	patchy
4/20/2010	3	Mulligan	1200	65	4/8	30	patchy
4/20/2010	3	Mulligan	1400	64	8/13	50	patchy
4/20/2010	3	Mulligan	1600	66	4/10	50	patchy
4/20/2010	3	Powell	1230	66	7/10	0	clear
4/20/2010	3	Powell	950	64	4/6	0	clear
4/20/2010	3	Powell	1045	66	4/6	0	clear
4/20/2010	3	Powell	1100	66	4/6	0	clear
4/20/2010	3	Powell	1320	66	7/10	0	clear
4/20/2010	3	Powell	1500	67	8/11	10	patchy
4/20/2010	3	Powell	1615	62	9/14	10	patchy
4/23/2010	3	Powell	1250	58	7/10	10	patchy
4/23/2010	3	Powell	1350	63	8/10	10	patchy
4/23/2010	3	Powell	1505	65	7/10	15	patchy
4/23/2010	3	Powell	1625	60	5/10	10	patchy
4/23/2010	3	Faulkner	1100	59	4	0	clear
4/23/2010	3	Faulkner	1200	60	6	0	clear
4/23/2010	3	Faulkner	1300	61	9	0	clear
4/23/2010	3	Faulkner	1400	62	5	10	patchy
4/23/2010	3	Faulkner	1500	65	3	50	patchy
4/23/2010	3	Faulkner	1600	64	4	40	patchy
4/23/2010	3	Couffer	1045	60	2/7	0	clear
4/23/2010	3	Couffer	1100	61	2/6	0	clear
4/23/2010	3	Couffer	1200	63	3/7	0	clear
4/23/2010	3	Couffer	1300	59	3/7	0	clear
4/23/2010	3	Couffer	1400	61	4/9	0	clear
4/23/2010	3	Couffer	1415	59	4/9	0	clear
4/23/2010	3	Hendricks	1155	59.5	4.3/8.2	0	clear
4/23/2010	3	Hendricks	1320	62.1	4.3/12.1	0	clear
4/23/2010	3	Hendricks	1415	65.3	2.6/4.9	0	clear
4/23/2010	3	Hendricks	1510	61.5	8.0/15.1	10	clear
4/23/2010	3	Hendricks	1615	57.2	4.2/8.1	1	clear
4/24/2010	3	Powell	835	63	0	0	clear
4/24/2010	3	Powell	945	68	1/3	0	clear
4/24/2010	3	Powell	1130	77	3/6	0	clear
4/24/2010	3	Powell	1315	77	4/6	0	clear
4/24/2010	3	Powell	1340	79	3/5	0	clear
4/24/2010	3	Powell	1540	75	4/6	0	clear
4/24/2010	3	Couffer	1518	73	2/6	0	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
4/24/2010	3	Couffer	1600	73	1/5	0	clear
4/24/2010	3	Couffer	1623	73	1/3	0	clear
4/24/2010	3	Couffer	1240	70	2/9	0	clear
4/24/2010	3	Couffer	1300	77	0/4	0	clear
4/24/2010	3	Couffer	1320	82	0/3	0	clear
4/24/2010	3	Couffer	1400	77	0/2	0	clear
4/24/2010	3	Couffer	1500	73	1/9	0	clear
4/24/2010	3	Couffer	900	66	0	0	clear
4/24/2010	3	Couffer	1000	70	0	0	clear
4/24/2010	3	Couffer	1100	73	0/3	0	clear
4/24/2010	3	Couffer	1200	71	0/3	0	clear
4/24/2010	3	Couffer	1210	71	0/3	0	clear
4/25/2010	3	Couffer	1150	80	0/4	0	clear
4/25/2010	3	Couffer	1200	80	0/4	0	clear
4/25/2010	3	Couffer	1300	85	0/1	0	clear
4/25/2010	3	Couffer	1400	78	0/4	0	clear
4/25/2010	3	Couffer	1500	75	3/7	0	clear
4/25/2010	3	Couffer	1515	75	3/7	0	clear
4/25/2010	3	Couffer	830	76	0	0	clear
4/25/2010	3	Couffer	900	74	0/1	0	clear
4/25/2010	3	Couffer	1000	77	0/1	0	clear
4/25/2010	3	Couffer	1100	78	0/3	0	clear
4/25/2010	3	Couffer	1130	79	0/2	0	clear
4/25/2010	3	Powell	1215	79	3/5	0	clear
4/25/2010	3	Powell	1410	77	5/7	0	clear
4/25/2010	3	Powell	1615	77	3/6	0	clear
4/25/2010	3	Powell	840	69	0	0	clear
4/25/2010	3	Powell	1010	74	3/5	0	clear
4/25/2010	3	Powell	1105	76	4/5	0	clear
4/26/2010	3	Brodie	930	69	0	0	clear
4/26/2010	3	Brodie	1030	72	0	0	clear
4/26/2010	3	Brodie	1130	76	2/4	0	clear
4/26/2010	3	Brodie	1235	75	0	0	clear
4/26/2010	3	Brodie	1340	76	0	0	clear
4/26/2010	3	Brodie	1520	74	0	0	clear
4/26/2010	3	Powell	830	74	0	0	clear
4/26/2010	3	Powell	1025	78	4/7	0	clear
4/26/2010	3	Powell	1130	83	2/4	0	clear
4/26/2010	3	Faulkner	1400	87	2	5	patchy
4/26/2010	3	Faulkner	1500	80	6	5	patchy
4/26/2010	3	Faulkner	1600	75	5	5	patchy
4/26/2010	3	Faulkner	900	75	0	0	clear
4/26/2010	3	Faulkner	1000	77	2	0	clear
4/26/2010	3	Faulkner	1100	79	4	0	clear
4/26/2010	3	Faulkner	1200	83	0	0	clear
4/26/2010	3	Faulkner	1300	83	0	5	patchy
4/26/2010	3	Faulkner	1400	87	2	5	patchy
4/26/2010	3	Couffer	1335	83	0/2	0	clear
4/26/2010	3	Couffer	1400	82	0/3	0	clear
4/26/2010	3	Couffer	1500	80	2/6	5	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
4/26/2010	3	Couffer	1600	79	2/6	5	clear
4/26/2010	3	Couffer	845	72	1/5	0	clear
4/26/2010	3	Couffer	900	73	0/3	0	clear
4/26/2010	3	Couffer	1000	72	0/3	0	clear
4/26/2010	3	Couffer	1100	80	0/6	0	clear
4/26/2010	3	Couffer	1130	82	0/2	0	clear
4/27/2010	4	Rink	912	70	1-2/5	2-5	patchy
4/27/2010	4	Rink	1030	70	2-3/5	3-5	patchy
4/27/2010	4	Rink	1130	71	2-3/5	5-7	patchy
4/27/2010	4	Rink	1230	73	3-4/5	10-12	patchy
4/27/2010	4	Couffer	1200	81	0/3	5	clear
4/27/2010	4	Couffer	1300	80	7/13	5	clear
4/27/2010	4	Couffer	1400	75	3/7	10	clear
4/27/2010	4	Couffer	1500	76	0/2	10	clear
4/27/2010	4	Couffer	1600	76	0/4	10	clear
4/27/2010	4	Couffer	848	72	0	0	clear
4/27/2010	4	Couffer	900	73	0/2	0	clear
4/27/2010	4	Couffer	1000	76	1/5	0	clear
4/27/2010	4	Couffer	1100	77	0/3	0	clear
4/27/2010	4	Powell	845	74	2/4	0	clear
4/27/2010	4	Powell	1115	77	5/8	0	clear
4/27/2010	4	Powell	1140	74	5/7	0	clear/patchy
4/27/2010	4	Powell	1345	72	6/9	0	clear
4/27/2010	4	Powell	1500	78	5/8	0	clear
4/27/2010	4	Powell	1555	73	7/10	0	clear
4/27/2010	4	Mulligan/Bergman	920	67	0/4	1	clear
4/27/2010	4	Mulligan/Bergman	1200	78	4/8	10	clear
4/27/2010	4	Mulligan/Bergman	1515	78	2/6	20	patchy
4/27/2010	4	Faulkner	900	65	1	0	clear
4/27/2010	4	Faulkner	1000	73	2	0	clear
4/27/2010	4	Faulkner	1100	73	4	0	clear
4/27/2010	4	Faulkner	1100	73	2	0	clear
4/27/2010	4	Faulkner	1200	77	2	0	clear
4/27/2010	4	Faulkner	1300	77	8	10	patchy
4/27/2010	4	Faulkner	1400	75	10	50	patchy
4/27/2010	4	Faulkner	1500	73	11	0	clear
4/30/2010	4	Couffer/Powell	1300	62	2/4	60	patchy
4/30/2010	4	Couffer/Powell	1400	61	2/7	50	patchy
4/30/2010	4	Couffer/Powell	1300	63	4/6	50	patchy
4/30/2010	4	Couffer/Powell	1405	61	4/7	50	clear/patchy
4/30/2010	4	Couffer/Powell	1550	55	5/9	75	patchy
4/30/2010	4	Faulkner	1100	63	2	30	patchy
4/30/2010	4	Faulkner	1200	65	1	40	patchy
4/30/2010	4	Faulkner	1300	67	5	50	overcast/drizzle
4/30/2010	4	Faulkner	1400	62	9	50	overcast/drizzle
4/30/2010	4	Hendricks/Bergman	1130	64.7	3.7/7	60	patchy
4/30/2010	4	Hendricks/Bergman	1215	57	4.9/8.8	80	overcast
4/30/2010	4	Hendricks/Bergman	1245	60.4	3.7/8.7	30	patchy
4/30/2010	4	Hendricks/Bergman	1350	67.6	5.1/7.5	40	patchy
4/30/2010	4	Hendricks/Bergman	1430	57.7	5.2/8.3	80	overcast

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
5/1/2010	4	Powell	1445	67	7/9	0	clear
5/1/2010	4	Powell	1605	65	6/7	0	clear
5/1/2010	4	Powell		62	4/6	0	clear
5/1/2010	4	Powell		6	5/7	0	clear
5/1/2010	4	Powell	1330	66	6/9	0	clear
5/1/2010	4	Powell	1425	67	6/8	0	clear
5/1/2010	4	Couffer/Fisher	930	63	0/3	0	clear
5/1/2010	4	Couffer/Fisher	1000	64	2/5	0	clear
5/1/2010	4	Couffer/Fisher	1100	67	0/4	5	clear
5/1/2010	4	Couffer/Fisher	1200	68	0/3	5	clear
5/1/2010	4	Couffer/Fisher	1300	72	0/5	5	clear
5/1/2010	4	Couffer/Fisher	1400	73	0/5	0	clear
5/1/2010	4	Couffer/Fisher	1500	68	2/5	0	clear
5/1/2010	4	Lohstroh	930	64	0/3	0	clear
5/1/2010	4	Lohstroh	1130	64	6/10	10	patchy
5/1/2010	4	Lohstroh	1300	65	5/13	5	patchy
5/1/2010	4	Lohstroh	1400	72	2/8	1	clear
5/1/2010	4	Lohstroh	1520	69	0/10	1	clear
5/1/2010	4	Lohstroh	1550	67	0/10	3	clear
5/1/2010	4	Mulligan	900	60	2/6	0	clear
5/1/2010	4	Mulligan	1200	66	4/10	40	patchy
5/1/2010	4	Mulligan	1300	67	8/12	25	patchy
5/1/2010	4	Mulligan	1530	37	6/8	25	patchy
5/2/2010	4	Powell	1055	59	4/6	0	clear
5/2/2010	4	Powell	1200	62	5/7	0	clear
5/2/2010	4	Powell	1230	67	4/6	0	clear
5/2/2010	4	Powell	1355	70	5/7	0	clear
5/2/2010	4	Powell	1615	72	4/7	0	clear
5/2/2010	4	Couffer	1020	60	0/3	0	clear
5/2/2010	4	Couffer	1100	66	0/3	0	clear
5/2/2010	4	Couffer	1200	64	0/7	0	clear
5/2/2010	4	Couffer	1300	73	0/3	0	clear
5/2/2010	4	Couffer	1400	76	0/2	0	clear
5/2/2010	4	Couffer	1500	74	0/6	0	clear
5/2/2010	4	Couffer	1600	71	2/8	0	clear
5/3/2010	4	Dittmer	900	68.9	2/4	0	clear
5/3/2010	4	Dittmer	1550	77	2/4	0	clear
5/3/2010	4	Pigniolo	1300	74	0/2	0	clear
5/3/2010	4	Pigniolo	1400	76	0/2	0	clear
5/3/2010	4	Pigniolo	1530	77	0/2	0	clear
5/3/2010	4	Pigniolo	915	60	2/6	0	clear
5/3/2010	4	Pigniolo	1015	66	2/6	0	clear
5/3/2010	4	Pigniolo	1115	69	2/6	0	clear
5/3/2010	4	Pigniolo	1215	69	2/4	0	clear
5/3/2010	4	Pigniolo	1245	68	0/4	0	clear
5/3/2010	4	Flietner	830	64	5/9	0	clear
5/3/2010	4	Flietner	1600	77	3/5	0	clear
5/3/2010	4	Faulkner	900	67	5	0	clear
5/3/2010	4	Faulkner	1000	71	4	0	clear
5/3/2010	4	Faulkner	1100	75	2	0	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
5/3/2010	4	Faulkner	1200	76	3	0	clear
5/3/2010	4	Faulkner	1300	78	1	0	clear
5/3/2010	4	Faulkner	1400	78	2	0	clear
5/3/2010	4	Faulkner	1500	83	1	0	clear
5/3/2010	4	Faulkner	1600	79	4	0	clear
5/3/2010	4	Couffer	835	67	3/6	0	clear
5/3/2010	4	Couffer	900	70	3/8	0	clear
5/3/2010	4	Couffer	1000	72	3/10	0	clear
5/3/2010	4	Couffer	1100	74	4/8	0	clear
5/3/2010	4	Couffer	1200	77	0/3	0	clear
5/3/2010	4	Couffer	1300	80	0/4	0	clear
5/3/2010	4	Couffer	1400	81	0/4	0	clear
5/3/2010	4	Couffer	1500	80	0/3	0	clear
5/3/2010	4	Powell	830	65	7/9	0	clear
5/3/2010	4	Powell	950	67	7/10	0	clear
5/3/2010	4	Powell	1115	75	4/7	0	clear
5/3/2010	4	Powell	1430	78	5/8	0	clear
5/3/2010	4	Powell	1600	81	4/6	0	clear
5/3/2010	4	Powell	1640	79	7/11	0	clear
5/4/2010	4	Lohstroh	840	68	0/1	0	clear
5/4/2010	4	Lohstroh	1040	78	0/4	0	clear
5/4/2010	4	Lohstroh	1300	80	3/8	0	clear
5/4/2010	4	Lohstroh	1420	83	3/8	0	clear
5/4/2010	4	Lohstroh	1515	79	4/8	0	clear
5/4/2010	4	Powell	850	68	2/3	0	clear
5/4/2010	4	Powell	1020	71	6/7	0	clear
5/4/2010	4	Powell	1115	78	2	0	clear
5/4/2010	4	Powell	1155	75	7/12	0	clear
5/4/2010	4	Powell	1325	78	5/9	0	clear
5/4/2010	4	Powell	1520	76	9/13	0	clear
5/4/2010	4	Powell	1545	76	8/11	0	clear
5/4/2010	4	Powell	1120	78	8/12	0	clear
5/4/2010	4	Powell	1145	75	7/12	0	clear
5/4/2010	4	Faulkner	900	70	0	0	clear
5/4/2010	4	Faulkner	1000	74	5	0	clear
5/4/2010	4	Faulkner	1100	77	4	0	clear
5/4/2010	4	Faulkner	1200	80	6/7	0	clear
5/4/2010	4	Faulkner	1300	83	8	0	clear
5/4/2010	4	Faulkner	1400	80	7	0	clear
5/4/2010	4	Faulkner	1500	80	7	0	clear
5/4/2010	4	Faulkner	1600	78	8	0	clear
5/4/2010	4	Flietner	820	58	0/2	0	clear
5/4/2010	4	Flietner	850	66	2/4	0	clear
5/4/2010	4	Flietner	1030	75	3/5	0	clear
5/4/2010	4	Flietner	1100	77	0/3	0	clear
5/4/2010	4	Flietner	1630	83	7/10	0	clear
5/4/2010	4	Couffer	1100	78	3/5	0	clear
5/4/2010	4	Couffer	1200	76	7/14	0	clear
5/4/2010	4	Couffer	1300	81	0/6	0	clear
5/4/2010	4	Couffer	1400	81	3/8	0	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
5/4/2010	4	Couffer	1500	81	0/5	0	clear
5/4/2010	4	Couffer	1530	80	0/5	0	clear
5/4/2010	4	Couffer	840	70	0/2	0	clear
5/4/2010	4	Couffer	900	69	0/2	0	clear
5/4/2010	4	Couffer	1000	73	0/3	0	clear
5/4/2010	4	Couffer	1015	73	0/2	0	clear
5/4/2010	4	Brodie	900	64	0	0	clear
5/4/2010	4	Brodie	1005	68	2/5	0	clear
5/4/2010	4	Brodie	1110	70	6/11	0	clear
5/4/2010	4	Brodie	1200	75	5/10	0	clear
5/4/2010	4	Brodie	1305	73	4/9	0	clear
5/4/2010	4	Brodie	1415	73	4/12	0	clear
5/4/2010	4	Brodie	1515	69	6/13	0	clear
5/4/2010	4	Gutierrez	1115	76	1.5/3	0	clear
5/4/2010	4	Gutierrez	1300	78	25/10	0	clear
5/4/2010	4	Gutierrez	900	72	0	0	clear
5/4/2010	4	Gutierrez	1000	76	0/2	0	clear
5/4/2010	4	Gutierrez	1100	78	2/5	0	clear
5/4/2010	4	Gutierrez	1310	78	2.5/10	0	clear
5/4/2010	4	Gutierrez	1500	78	2.5/10	0	clear
5/4/2010	4	Mulligan	1345	80	2/5	0	clear
5/4/2010	4	Mulligan	1530	80	3/6	0	clear
5/4/2010	4	Mulligan	900	75	0/2	0	clear
5/4/2010	4	Mulligan	1200	80	3/6	0	clear
5/4/2010	4	Mulligan	1330	80	4/6	0	clear
5/5/2010	4	Powell	1145	76	4/7	0	clear
5/5/2010	4	Powell	1400	78	3/5	0	clear
5/5/2010	4	Powell	1515	78	3/6	0	clear
5/5/2010	4	Powell	1615	78	5/8	0	clear
5/5/2010	4	Couffer	900	68	1/4	0	clear
5/5/2010	4	Couffer	1000	73	2/6	0	clear
5/5/2010	4	Couffer	1100	76	1/4	0	clear
5/5/2010	4	Couffer	1130	73	5/13	0	clear
5/5/2010	4	Brodie	1130	75	7/11	0	clear
5/5/2010	4	Brodie	1230	76	6/11	0	clear
5/5/2010	4	Brodie	1330	72	4/9	0	clear
5/5/2010	4	Brodie	1435	75	5/10	0	clear
5/5/2010	5	Marquez	915	70.7	2.6/4.3	0	clear
5/5/2010	5	Marquez	1015	69	2.1/4.4	0	clear
5/5/2010	5	Marquez	1140	72	3.8/5.4	0	clear
5/5/2010	5	Marquez	1255	75.5	5.3/6.8	0	clear
5/5/2010	5	Marquez	1355	75.1	6.2/8.5	0	clear
5/5/2010	5	Marquez	1455	74.9	7.6/9.8	0	clear
5/5/2010	5	Brodie	900	62	3/7	0	clear
5/5/2010	5	Brodie	1015	69	3/9	0	clear
5/5/2010	5	Brodie	1100	72	4/10	0	clear
5/5/2010	5	Mulligan	900	76	4	0	clear
5/5/2010	5	Mulligan	1200	80	6/10	3	clear
5/5/2010	5	Mulligan	1500	81	5/9	5	clear
5/5/2010	5	Osborne	906	70	0	0	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
5/5/2010	5	Osborne	1015	77	1.5/5.8	0	clear
5/5/2010	5	Osborne	1340	72	8.5/14	0	clear
5/5/2010	5	Osborne	1557	71	9.9/14.7	0	clear
5/5/2010	5	Couffer	1200	82	1/7	0	clear
5/5/2010	5	Couffer	1300	77	2/10	0	clear
5/5/2010	5	Couffer	1400	78	3/10	0	clear
5/5/2010	5	Couffer	1500	78	3/10	0	clear
5/5/2010	5	Couffer	1548	77	3/13	5	clear
5/5/2010	5	Powell	845	72	3/5	0	clear
5/5/2010	5	Powell	1015	72	5/6	0	clear
5/5/2010	5	Powell	1120	73	9/13	0	clear
5/5/2010	5	LaCoste	845	64	3/6	0	clear
5/5/2010	5	LaCoste	1100	71	4/8	0	clear
5/5/2010	5	LaCoste	1330	72	8/12	0	clear
5/5/2010	5	LaCoste	1430	76	6/10	0	clear
5/5/2010	5	Osborne	905	67	1.8/4.4	0	clear
5/5/2010	5	Osborne	1030	71	1.5/4.4	0	clear
5/5/2010	5	Osborne	1302	73	3.7/13.5	0	clear
5/5/2010	5	Osborne	1500	75	4.3/9.3	0	clear
5/5/2010	5	Osborne	1555	74	4/9.2	0	clear
5/6/2010	5	Powell	830	60	2/4	0	clear
5/6/2010	5	Powell	945	73	1/3	0	clear
5/6/2010	5	Powell	1010	74	3/5	0	clear
5/6/2010	5	Powell	1215	78	6/8	0	clear
5/6/2010	5	Powell	1430	76	4/6	0	clear
5/6/2010	5	Powell	1515	77	7/9	0	clear
5/6/2010	5	Brodie	1345	75	3/5	0	clear
5/6/2010	5	Brodie	1500	74	3/6	0	clear
5/6/2010	5	Brodie	1540	73	3/7	0	clear
5/6/2010	5	Couffer	830	69	0	0	clear
5/6/2010	5	Couffer	900	70	1/3	0	clear
5/6/2010	5	Couffer	1000	71	1/3	0	clear
5/6/2010	5	Couffer	1100	73	1/5	0	clear
5/6/2010	5	Couffer	1200	76	0/5	0	clear
5/6/2010	5	Couffer	1300	81	0/4	0	clear
5/6/2010	5	Couffer	1400	83	0/3	0	clear
5/6/2010	5	Couffer	1500	77	1/5	0	clear
5/6/2010	5	Brodie	930	69	2/5	0	clear
5/6/2010	5	Brodie	1100	73	4/7	0	clear
5/6/2010	5	Brodie	1230	75	3/5	0	clear
5/6/2010	5	Brodie	1315	75	4/7	0	clear
5/6/2010	5	Mulligan	900	62	4/7	0	clear
5/6/2010	5	Mulligan	1200	72	3/6	0	clear
5/6/2010	5	Mulligan	1430	75	4/8	0	clear
5/7/2010	5	Mulligan	900	65	6/10	0	clear
5/7/2010	5	Mulligan	1200	74	0/4	0	clear
5/7/2010	5	Mulligan	1245	76	2/4	0	clear
5/7/2010	5	Mulligan	1300	79	2/4	0	clear
5/7/2010	5	Mulligan	1530	82	2/5	0	clear
5/7/2010	5	Faulkner	1300	80	3	0	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
5/7/2010	5	Faulkner	1400	80	4	0	clear
5/7/2010	5	Faulkner	1500	80	3	0	clear
5/7/2010	5	Faulkner	1600	78	6	0	clear
5/7/2010	5	Faulkner	1100	76	6	0	clear
5/7/2010	5	Faulkner	1200	80	3	0	clear
5/7/2010	5	Faulkner	1300	80	3	0	clear
5/7/2010	5	Faulkner	900	69	03	0	clear
5/7/2010	5	Faulkner	1000	72	7	0	clear
5/7/2010	5	Faulkner	1100	76	6	0	clear
5/7/2010	5	Couffer	838	72	0/7	0	clear
5/7/2010	5	Couffer	900	73	0/8	0	clear
5/7/2010	5	Couffer	1000	75	0/8	0	clear
5/7/2010	5	Couffer	1100	76	0/6	0	clear
5/7/2010	5	Couffer	1200	83	0/4	0	clear
5/7/2010	5	Couffer	1300	88	0/2	0	clear
5/7/2010	5	Couffer	1400	80	1/6	0	clear
5/7/2010	5	Couffer	1500	84	1/4	0	clear
5/7/2010	5	Powell	1345	79	5/7	0	clear
5/7/2010	5	Powell	1455	78	6/9	0	clear
5/7/2010	5	Powell	845	71	5/6	0	clear
5/7/2010	5	Powell	1000	75	6/8	0	clear
5/7/2010	5	Powell	1245	78	5/8	0	clear
5/7/2010	5	Powell	1335	78	4/6	0	clear
5/8/2010	5	Couffer/McMorran	1215	79	4/11	0	clear
5/8/2010	5	Couffer/McMorran	1300	77	2/6	0	clear
5/8/2010	5	Couffer/McMorran	1400	78	4/14	0	clear
5/8/2010	5	Couffer/McMorran	1500	79	4/9	0	clear
5/8/2010	5	Couffer/McMorran	1520	78	2/7	0	clear
5/8/2010	5	Couffer/McMorran	845	66	0/3	0	clear
5/8/2010	5	Couffer/McMorran	900	71	0/3	0	clear
5/8/2010	5	Couffer/McMorran	1000	72	1/4	0	clear
5/8/2010	5	Couffer/McMorran	1100	72	1/4	0	clear
5/8/2010	5	Couffer/McMorran	1200	74	4/9	0	clear
5/8/2010	5	Powell	830	63	4/6	0	clear
5/8/2010	5	Powell	1025	71	7/8	0	clear
5/8/2010	5	Powell	1210	71	8/12	0	clear
5/8/2010	5	Powell	1430	76	8/11	0	clear
5/8/2010	5	Powell	1515	77	11/14	0	clear
5/8/2010	5	Powell	1520	78	5/7	0	clear
5/8/2010	5	Powell	1620	75	6/9	0	clear
5/11/2010	5	Mulligan	1330	74	2/4	5	clear
5/11/2010	5	Mulligan	1545	74	3/6	0	clear
5/11/2010	5	Mulligan	900	65	0/2	0	clear
5/11/2010	5	Mulligan	1110	75	0/5	0	clear
5/11/2010	5	Mulligan	1300	76	2/5	3	clear
5/12/2010	6	Powell	915	67	4/6	0	clear
5/12/2010	6	Powell	1110	71	5/8	0	clear
5/12/2010	6	Powell	1340	75	4/5	0	clear
5/12/2010	6	Powell	1600	72	6/8	0	clear
5/12/2010	6	Brodie	1100	67	0	0	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
5/12/2010	6	Brodie	1220	70	0	0	clear
5/12/2010	6	Brodie	1415	70	0/2	0	clear
5/12/2010	6	Brodie	900	61	0	0	clear
5/12/2010	6	Brodie	1010	65	0	0	clear
5/12/2010	6	Brodie	1100	67	0	0	clear
5/12/2010	6	Brodie	1415	70	0	0	clear
5/12/2010	6	Brodie	1435	71	0/2	0	clear
5/12/2010	6	Brodie	1445	71	2/5	0	clear
5/12/2010	6	Brodie	1600	69	2/6	0	clear
5/12/2010	6	Marquez	1045	71.4	1.2/1.7	0	clear
5/12/2010	6	Marquez	1240	76.3	1.6/4.6	0	clear
5/12/2010	6	Marquez	1400	75.8	2.1/5.4	0	clear
5/12/2010	6	Marquez	1520	70.5	2.8/4.6	0	clear
5/12/2010	6	Marquez	835	65.3	.5/1.2	0	clear
5/12/2010	6	Marquez	945	69	2.2/2.8	0	clear
5/12/2010	6	Marquez	1045	76.3	2.3/5.4	0	clear
5/12/2010	6	Lohstroh	1330	76	3/7	0	clear
5/12/2010	6	Lohstroh	1430	74	3/8	0	clear
5/12/2010	6	Lohstroh	1530	73	3/12	0	clear
5/12/2010	6	Lohstroh	845	63	0/1	0	clear
5/12/2010	6	Lohstroh	1210	74	0/3	0	clear
5/12/2010	6	Lohstroh	1300	79	0/4	0	clear
5/12/2010	6	Couffer	845	65	0	0	clear
5/12/2010	6	Couffer	857	67	0/1	0	clear
5/12/2010	6	Couffer	1400	72	3/5	0	clear
5/12/2010	6	Couffer	1500	73	3/11	0	clear
5/12/2010	6	Couffer	900	67	0/1	0	clear
5/12/2010	6	Couffer	1000	71	0/2	0	clear
5/12/2010	6	Couffer	1100	72	1/4	0	clear
5/12/2010	6	Couffer	1200	74	1/3	0	clear
5/12/2010	6	Couffer	1300	73	1/4	0	clear
5/12/2010	6	Couffer	1345	72	3/5	0	clear
5/12/2010	6	Faulkner	1200	79	4	0	clear
5/12/2010	6	Faulkner	1300	79	4	10	clear
5/12/2010	6	Faulkner	1400	77	4	10	clear
5/12/2010	6	Faulkner	1500	76	7	0	clear
5/12/2010	6	Faulkner	1600	76	5	0	clear
5/12/2010	6	Faulkner	900	68	1	0	clear
5/12/2010	6	Faulkner	1000	75	1	0	clear
5/12/2010	6	Faulkner	1100	76	0	0	clear
5/12/2010	6	Faulkner	1200	79	4	0	clear
5/13/2010	6	Mulligan	900	67	2/5	1	clear
5/13/2010	6	Mulligan	1115	78	0/4	10	clear
5/13/2010	6	Mulligan	1515	79	3/6	15	clear
5/13/2010	6	Brodie	1230	72	4/8	10-20	clear
5/13/2010	6	Brodie	1330	74	2/8	10-20	clear
5/13/2010	6	Brodie	1600	70	3/6	10-20	clear
5/13/2010	6	Lohstroh	940	74	0/1	0	clear
5/13/2010	6	Lohstroh	1200	78	3/5	20	patchy
5/13/2010	6	Lohstroh	1300	80	0/3	20	patchy

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
5/13/2010	6	Lohstroh	1400	81	0/3	30	patchy
5/13/2010	6	Lohstroh	1530	82	0/9	10	patchy
5/13/2010	6	Lohstroh	850	69	0/1	0	clear
5/13/2010	6	Lohstroh	930	72	0/1	0	clear
5/13/2010	6	Brodie	850	60	0	0	clear
5/13/2010	6	Brodie	1015	65	0	0	clear
5/13/2010	6	Brodie	1145	69	2/6	10	clear
5/14/2010	6	Powell	1325	85	4/6	0	clear
5/14/2010	6	Powell	1435	80	5/7	5	clear
5/14/2010	6	Powell	1530	75	6/9	10	clear
5/14/2010	6	Powell	1600	80	4/5	5	clear
5/14/2010	6	Powell	1325	85	4/6	0	clear
5/14/2010	6	Powell	1435	80	5/7	5	clear
5/14/2010	6	Powell	1530	75	6/9	10	clear
5/14/2010	6	Powell	1600	80	4/5	5	clear
5/14/2010	6	Couffer	1030	77	0/3	0	clear
5/14/2010	6	Couffer	1100	78	0/5	0	clear
5/14/2010	6	Couffer	1200	80	0/3	0	clear
5/14/2010	6	Couffer	1230	79	0/3	0	clear
5/14/2010	6	Couffer	1330	74	0/5	0	clear
5/14/2010	6	Couffer	1400	73	0/3	5	clear
5/14/2010	6	Couffer	1500	75	0/3	20	clear
5/14/2010	6	Couffer	1600	75	0/1	20	clear
5/14/2010	6	Couffer	1621	77	0/2	20	clear
5/14/2010	6	Couffer	851	75	0/2	0	clear
5/14/2010	6	Couffer	900	75	0	0	clear
5/14/2010	6	Couffer	1000	81	0/2	0	clear
5/14/2010	6	Mulligan	900	70	2/7	0	clear
5/14/2010	6	Mulligan	1215	75	4/6	10	clear
5/14/2010	6	Mulligan	1515	79	4/6	20	clear
5/14/2010	6	Lohstroh	850	70	0/4	0	clear
5/14/2010	6	Lohstroh	1015	75	0/4	0	clear
5/14/2010	6	Lohstroh	1140	79	0/7	0	clear
5/14/2010	6	Lohstroh	1320	76	3/6	20	patchy
5/14/2010	6	Lohstroh	1430	79	3/5	20	patchy
5/14/2010	6	Lohstroh	1500	78	0/2	30	patchy
5/14/2010	6	Faulkner	1300	74	0	0	clear
5/14/2010	6	Faulkner	1400	75	4	0	clear
5/14/2010	6	Faulkner	1500	77	2	30	patchy
5/14/2010	6	Faulkner	1600	74	2	50	patchy
5/14/2010	6	Faulkner	900	69	5	0	clear
5/14/2010	6	Faulkner	1000	74	3	0	clear
5/14/2010	6	Faulkner	1100	78	2	0	clear
5/14/2010	6	Faulkner	1200	80	5	0	clear
5/14/2010	6	Faulkner	1300	74	0	0	clear
5/14/2010	6	Powell	845	74	4/6	0	clear
5/14/2010	6	Powell	1100	80	3/5	0	clear
5/14/2010	6	Powell	1230	81	7/9	0	clear
5/15/2010	6	Flietner	1210	80	5/8	0	clear
5/15/2010	6	Flietner	1510	80	4/6	5	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
5/15/2010	6	Flietner	840	74	6/10	0	clear
5/15/2010	6	Powell	1150	74	5/10	0	clear
5/15/2010	6	Powell	1315	81	5/7	0	clear
5/15/2010	6	Powell	1415	78	7/9	0	clear
5/15/2010	6	Powell	1510	81	3/4	0	clear
5/15/2010	6	Powell	840	72	6/8	0	clear
5/15/2010	6	Powell	1010	73	7/12	0	clear
5/15/2010	6	Powell	1135	76	7/9	0	clear
5/15/2010	6	Couffer	830	74	4/9	0	clear
5/15/2010	6	Couffer	900	74	3/9	0	clear
5/15/2010	6	Couffer	1000	78	0/4	0	clear
5/15/2010	6	Couffer	1100	80	0/5	0	clear
5/15/2010	6	Couffer	1200	76	0/6	0	clear
5/15/2010	6	Couffer	1300	80	0/7	0	clear
5/15/2010	6	Couffer	1400	84	0/4	0	clear
5/15/2010	6	Couffer	1415	84	0/4	0	clear
5/16/2010	6	Powell	1515	80	7/9	0	clear
5/16/2010	6	Powell	1610	81	5/7	0	clear
5/16/2010	6	Powell	845	71	8/11	0	clear
5/16/2010	6	Powell	950	76	6/10	0	clear
5/16/2010	6	Powell	1130	78	6/9	0	clear
5/16/2010	6	Powell	1255	81	5/6	0	clear
5/16/2010	6	Powell	1450	79	4/7	0	clear
5/16/2010	6	Faulkner	900	70	4	0	clear
5/16/2010	6	Faulkner	1000	75	5	0	clear
5/16/2010	6	Faulkner	1100	77	5	0	clear
5/16/2010	6	Faulkner	1200	75	7	0	clear
5/16/2010	6	Faulkner	1300	73	6	0	clear
5/16/2010	6	Faulkner	1400	81	3	0	clear
5/16/2010	6	Faulkner	1500	80	4	0	clear
5/16/2010	6	Faulkner	1600	77	8	0	clear
5/17/2010	6	Flietner	1040	69	3/5	100	overcast
5/17/2010	6	Flietner	1120	73	2/4	100	overcast
5/17/2010	6	Flietner	1600	68	3/6	10	clear
5/17/2010	6	Faulkner	1500	68	8	0	clear
5/17/2010	6	Faulkner	1600	66	11	0	clear
5/17/2010	6	Faulkner	1400	75	8	50	patchy
5/17/2010	6	Faulkner	1500	68	8	0	clear
5/17/2010	6	Faulkner	1100	68	5	100	overcast
5/17/2010	6	Faulkner	1200	69	5	100	overcast
5/17/2010	6	Faulkner	1300	72	4	100	overcast
5/17/2010	6	Faulkner	1400	75	8	50	patchy
5/17/2010	6	Faulkner	1000	69	5	100	overcast
5/17/2010	6	Couffer	1000	69	0/5	100	overcast
5/17/2010	6	Couffer	1100	69	0/3	100	overcast
5/17/2010	6	Couffer	1200	74	0/3	100	overcast
5/17/2010	6	Couffer	1300	70	0/2	100	overcast
5/17/2010	6	Couffer	1400	73	0/3	80	overcast
5/17/2010	6	Couffer	1500	70	2/8	20	patchy
5/17/2010	6	Couffer	1545	69	2/5	20	patchy

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
5/17/2010	6	Powell	1050	60	3/5	100	overcast
5/17/2010	6	Powell	1210	65	6/8	100	overcast
5/17/2010	6	Powell	1125	67	6/8	100	overcast
5/17/2010	6	Powell	1300	67	5/10	100	overcast
5/19/2010	6	Couffer	840	668	0/1	0	clear
5/19/2010	6	Couffer	900	69	081	0	clear
5/19/2010	6	Couffer	1000	71	0/1	0	clear
5/19/2010	6	Couffer	1100	85	0/2	0	clear
5/19/2010	6	Couffer	1200	84	0	0	clear
5/19/2010	6	Couffer	1300	82	0/1	0	clear
5/19/2010	6	Powell	930	67	0	0	clear
5/19/2010	6	Powell	1045	82	4/6	0	clear
5/19/2010	6	Powell	1230	84	5/8	0	clear
5/19/2010	6	Lohstroh	1230	74	0/5	0	clear
5/19/2010	6	Lohstroh	1300	78	3/10	0	clear
5/19/2010	6	Lohstroh	1400	81	0/5	0	clear
5/19/2010	6	Lohstroh	1500	83	0/6	0	clear
5/19/2010	6	Lohstroh	1530	86	0/5	0	clear
5/19/2010	6	Lohstroh	845	66	0/1	0	clear
5/19/2010	6	Lohstroh	1000	70	0/3	0	clear
5/20/2010	6	Couffer	848	71	3/4	0	clear
5/20/2010	6	Couffer	900	73	2/4	0	clear
5/20/2010	6	Couffer	1000	78	2/6	0	clear
5/20/2010	6	Couffer	1100	77	2/6	0	clear
5/20/2010	6	Couffer	1200	75	1/5	0	clear
5/20/2010	6	Couffer	1300	80	3/6	0	clear
5/20/2010	6	Couffer	1315	80	3/5	0	clear

APPENDIX B

FIELD DATASHEETS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Osborne Add'l Person: Josh Date: 3/25/2010

Project: Campo Wind Energy Project Map #: "15" Survey Sxn: N/A

GPS Unit: 5 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	1121	72	1.0/3	0	(clear) patchy overcast drizzle shower
1121	-1140	72	2.8/5		clear patchy overcast drizzle shower
1215		60	6/10	0	(clear) patchy overcast drizzle shower
140		59	10/17		(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
410		61	1.7/4		(clear) patchy overcast drizzle shower
END					clear patchy overcast drizzle shower

Habitat On-site (circle): (open soils), hilltops, ridges, rock outcrops, soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
C. perplexa (Callophrys)	7 XXX	~32
V. cardui (Vanessa)	2 ||||| ||	9
B brizo (Erynnis)	1 |||||	6
A. mormo (Apodemia)	1 ||||	6
E. hyantis (Euchloe)	|| ||||| |||	10
A. sara (Anthocharis)	||| ||	5
Nymphalis californica			1
Papilio eurymedon	||||	4
Celastrina ladon	||	2
Incisalia augustinus	||	2
Moths:		
Euproserpinus phaeton		
Litocala sexsignata		
Leptarctia		
Alypia ridingsii		

Page 1 of 1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Arctostaphylos sp. common on N end of Map 14. (a nectar source)
		Erodium cicutarium (nectar) generally common.
		Map 15 (not used) but covered on

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Andrew Pigniolo Add'l Person: Philip Paipa Date: 3/22/10

Project: Campo Wind Energy Project Map #: 9 Survey Sxn: _____

GPS Unit : #1 QCB Protocol Survey # 1 of 5 .

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1030	61	0-2	20	clear	(patchy)	overcast	drizzle	shower
	1130	61	2-6	60	clear	patchy	(overcast)	drizzle	shower
	1230	63	2-6	85	clear	patchy	(overcast)	drizzle	shower
	1330	57	2-8	95	clear	patchy	(overcast)	drizzle	shower
	~~1430~~				clear	patchy	overcast	drizzle	shower
	~~1530~~				clear	patchy	overcast	drizzle	shower
END	~~1630~~ 1400	58	2-6	100	clear	patchy	(overcast)	drizzle	shower

Habitat On-site (circle): (open soils) (hilltops) (ridges) (rock outcrops) soil crusts, clay soils, old roads, (various nectar sources)

Butterfly Species	Tally	Total
Pale Swallowtail	I	1
Sara Orangetip	IIII	8
Spring White	IIII	10
Perplexing Hairstreak	IIIII	12
Southern blue	III	3
Dusky wing skipper	IIII	7
Tortoise Shell	I	1
		42

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)

TOTAL NUMBER OF QCB DETECTED: ∅ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Viviane Marquez Add'l Person: Dave Shupp Date: 3/22/10

Project: Campo Wind Energy Project Map #: 20 Survey Sxn: _____

GPS Unit : 4 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START					clear	patchy	overcast	drizzle	shower
	10:15	66.8	3.4/6.2	10	clear	(patchy)	overcast	drizzle	shower
	11:40	71.2	0.6/11.6	60	clear	(patchy)	overcast	drizzle	shower
	1:00	65.5	4.7/8.7	100%	clear	patchy	(overcast)	drizzle	shower
	2:00	63.8	2.1/4.8	100%	clear	patchy	(overcast)	drizzle	shower
end	2:25	62.9	5.4/9.9	100%	clear	patchy	(overcast)	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Sara's Orangetip	𝍸 𝍸 𝍸 |||	13
Checkered White	𝍸 ||	7
Perplexing hairstreak	𝍸	5
Lady Sp.	𝍸 ||	7
Funereal Dusky wing	||	2
VMEP01	excluded polygon dense chaparral	
VMEP02	excluded polygon dense chaparral	
NO QCB		
transferred to second page		

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
VMEP01	excluded polygon	dense chaparral
VMEP02	excluded polygon	dense chaparral

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: M. Heath Add'l Person: Joshua Paipa Date: 3/22/10

Project: Campo Wind Energy Project Map #: 12 Survey Sxn: _____

GPS Unit : 3 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	10:00	61	8/9	10	clear	(patchy)	overcast	drizzle	shower
	11:15	63	7.2/10.5	25%	clear	(patchy)	overcast	drizzle	shower
	12:00	63	9.5/20	75%	clear	patchy	(overcast)	drizzle	shower
	13:00	62	3.5/6.5	95%	clear	patchy	(overcast)	drizzle	shower
	14:00	58.5	5.6/9.9	100%	clear	patchy	(overcast)	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Sara OT Orange Tip	II	2
Blue species	II	2
Acmon Blue	I	1

LOOK DATA ON BACK!

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Calif Poppy – flowering
		Baby Blue eyes "
		Erodium flowering
MHHL02	Sensitive Sp	Map 12 Coast Horn Lizard SVV
		Goldfields? few
	Mexican	Manganita flowering – not good host thick
		Buckbrush flowering
		Miner's lettuce flowering

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: BRIAN LOHSTROH Add'l Person: OMAR (Escort) Date: 3/22/10

Project: Campo Wind Energy Project Map #: 19 Survey Sxn: _____

GPS Unit : 6 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0920	61	0-5	10	clear	patchy	overcast	drizzle	shower
	1000	64	0-3	20	clear	patchy	overcast	drizzle	shower
	1100	61	3-5	40	clear	patchy	overcast	drizzle	shower
	1200	61	3-5	60	clear	patchy	overcast	drizzle	shower
	1300	60	3-5	100	clear	patchy	overcast	drizzle	shower
	1400	60	3-5	100	clear	patchy	overcast	drizzle	shower
END	1445	60	3-5	100	clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
orange tip	IIII III	8
common white	IIII I	6
Funereal Duskywing	III	3
Perplexing Hair Streak	IIII III	8
Southern blue	II	2
Cal. Tortoiseshell	IIII II	7
Brown elfin	IIII I	6

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Bush
		RTHa
		Scja
		CaTh
		CORA
		Bobcat scat + track
		SCOC (W. fence Lizard)
		UTST (side-blotch Lizard)
BL DB01	Desert beauty	Desert beauty Linanthus
		Gopher & Nacke
		Anhu
		WCSP
		CALT
		ORJU
		HuVi
		SPTO
BLCP01	Campo pea?	Campo pea, need to verify when blooming, photos
BLJR01	SD BT jackrabbit	2 indiv cottontail

TOTAL NUMBER OF QCB DETECTED: ϕ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: Eugene Pebbles Date: 22 March 2010

Project: Campo Wind Energy Project Map #: 26/25 Survey Sxn: _____

GPS Unit : 2 QCB Protocol Survey # 1 of 5 .

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1000	65	2 W	30	clear	(patchy)	overcast	drizzle	shower
	1100	68	3 W	50	clear	(patchy)	overcast	drizzle	shower
	1200	68	5 W	70	clear	(patchy)	overcast	drizzle	shower
	1300	65	6 W	100	clear	patchy	(overcast)	drizzle	shower
	1400	64	6 W	100	clear	patchy	(overcast)	drizzle	shower
	1500	63	2 W	100	clear	patchy	(overcast)	drizzle	shower
END	1600	59	13 W	100	clear	patchy	(overcast)	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, ridges, rock outcrops, soil crusts, clay soils, (old roads), various nectar sources

Butterfly Species	Tally	Total
A. Sara	~~HHH~~ ~~HHH~~ I	11
C. perplexa	II	2
N. Californica	III	3
V. Cardui (Worn)	I	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
~~DFCH01~~ DFCH01	1 pt.	Collensia sp. - Common

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Natalie Brodie (Jimmy McMorran) Add'l Person: David Dyche Date: 22 Mar 2010

Project: Campo Wind Energy Project Map #: 15 Survey Sxn: 15

GPS Unit : 5 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1315	66°	2/4	90%	clear	patchy	(overcast)	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1415	64°	8/12	90-100%	clear	patchy	(overcast)	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

* ENDED EARLY DUE TO WEATHER

Butterfly Species	Tally	Total
unidentified lg.	1	1

NO DATA ON BACK

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Natalie Brodie (Jimmy McMorran) Add'l Person: David Dyche Date: 22 Mar 2010

Project: Campo Wind Energy Project Map #: 10 Survey Sxn: 10

GPS Unit : 5 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1015	68°	2 / 6	<10%	(clear)	patchy	overcast	drizzle	shower
	1100	66°	8 / 12	30-40%	clear	(patchy)	overcast	drizzle	shower
	1220	68°	4 / 10	70-80%	clear	(patchy)	overcast	drizzle	shower
	1315	66°	4 / 6	80-90%	clear	patchy	(overcast)	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1315	66°	4 / 6	80-90%	clear	patchy	(overcast)	drizzle	shower

Habitat On-site (circle): (open soils, hilltops, ridges, rock outcrops), soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Sara orangetip	IIII II	7
Purplering hairstreak	III	3
Pale swallowtail	I	1
Unidentified lady (probably Painted)	I	1
Acmon blue	I	1
Funereal Duskywing	I	1
Southern blue	I	1
DATA ON BACK!!		

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
NBAR-01	Point	Ant Cou. on slight hillside, few individuals scattered up slope
		CATT
		CORA
		DATI
	Rombback of map	BEWR
		WEBJ
		DEJU
		RTHA
		striped racer
		ROWR
		SPTO
		NUWO
		ANHU
		BTSP

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: M. Mulligan Add'l Person: S. Innecken, P Paipa Date: 3.24.10

Project: Campo Wind Energy Project Map #: 9 Survey Sxn: _____

GPS Unit : 2 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	10:34	65	3-5	5	(clear)	patchy	overcast	drizzle	shower
	1305	~~68~~	3-5	20	clear	(patchy)	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources
dg

Butterfly Species	Tally	Total
SARA'S ORANGE TIP	II	2
? DUSKYWING	IIII	4
COMMON WHITE	III	3
ACMON BLUE	II	2
BROWN ELFIN	II	2
BOISDUVAL'S METALMARK	III	3
PERPLEXING HAIRSTREAK	IIII	4

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MMCS01	sensitive ~~nectar~~ plant	Caulanthus simulans ~50 plants
MMHL01	Sensitive reptile	Horn Lizard
MMHL02	Sensitive reptile	Horn Lizard
MMCS02	Sensitive plant	Caulanthus simulans ~25 plants
	nectar plant	Cryptantha sp.

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: M. Heath Add'l Person: Joshua Paipa Date: 3/24/10

Project: Campo Wind Energy Project Map #: 12 Survey Sxn:

GPS Unit : #3 QCB Protocol Survey # #1 of 5

TIME (24-hour)	Temp (F°):	Wind (avg/max)	% CC	Sky				
START 09:30	60	5.6 / 8.6	0%	(clear)	patchy	overcast	drizzle	shower
10:30	63	3.6 / 7.2	0%	(clear)	patchy	overcast	drizzle	shower
11:30	67	2.6 / 4.5	0%	(clear)	patchy	overcast	drizzle	shower
13:00	69.5	2.6 / 6.9	0%	(clear)	patchy	overcast	drizzle	shower
14:00	64.5	2.9 / 7.8	5%	(clear)	patchy	overcast	drizzle	shower
15:00	70	3.0 / 6.4	0%	(clear)	patchy	overcast	drizzle	shower
END 16:00	65	/ 15	0%	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, (rock outcrops) soil crusts, clay soils, (old roads) various nectar sources

Butterfly Species	Tally	Total
Painted Lady	𝍸 IIII	10
Blue species	I	1
Dusky wing	I	1
Sheep Hairstreak	IIII III	8
Sara Orange Tip	𝍸 𝍸 IIII I	16
[redacted] Spring white	I	1
White sp?	II	2
Behr's metalmark	IIII III	8
Common Blue	𝍸	5
Wright's Metalmark ?	I	1

40 sq in
2.5 / 1000

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Erodium - many flowers
		Goldfields - flowers
		SCJA, CAQU, ACWO, AMCU, CATO, NOFL
		Calif GS, Pocket Gopher
		Audubons Cottontail rabbit
		Buckbrush flowering / bees
		Mexican Mangarita pink/white flowers
		Baby blueeyes
		Calif Poppy
		Grand Lotus? - small yellow flower
		Sagebrush lizard

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Erik LaCoste Add'l Person: _____ Date: 3/24/10

Project: Campo Wind Energy Project Map #: 5 Survey Sxn: _____

GPS Unit : 1 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0950	60	10/15	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	340	65	10/15	5	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources)

Butterfly Species	Tally	Total
Painted LADY	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	35
Duskywing SP	1	1
Perplexing hairstreak	𝍸 1	6
Checkered white	1	1
California MARBLE	11	2
Sara ORANGE TIP	𝍸	5
Acmon Blue	11	2
Spring AZURE	1	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Goldfields (Lasthenia .)
		filaree (Erodium sp)
		Baby Blue eyes
		Cryptantha
ELNL 01	Point	Lotus sp - small yellow flower.

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Gretchen Cummings Add'l Person: Eugene Date: 3/24/10

Project: Campo Wind Energy Project Map #: 19 Survey Sxn: _____

GPS Unit : 4 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0945	64	4.9/10.1		(clear)	patchy	overcast	drizzle	shower
	1100	70	7.6/10.9		(clear)	patchy	overcast	drizzle	shower
	1300	70	3.0/4.4		clear	(patchy)	overcast	drizzle	shower
	1415	71	2.1/3.0		clear	(patchy)	overcast	drizzle	shower
	[illegible]	[illegible]	[illegible]		clear	(patchy)	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1520	75	2.0/6.3		clear	(patchy)	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, (rock outcrops), soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
Callophrys affinis (Green Hairstreak)	𝍸 ||	7
Vanessa cardui (Painted Lady)	𝍸 𝍸 𝍸 𝍸 ||	22
Sphyngid moth	|||	4
Nymphalis californica (California Tortoiseshell)	|	1
Erynnis pacuvius	||	2
Anthocharis sara (Sara's Orangetip)	𝍸 𝍸 𝍸 ||	17
Pontia sp.	|	1
Colias sp.	|	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
GCNL1	Woodrat nest	San Diego Desert Woodrat nest in Yucca
		WEST 1111
		Plagiobothrys sp.
GCBJ1	Jackrabbit fresh pellets	Black-tailed Jackrabbit pellets fresh
		Arctostaphylos sp.
		Amsinckia menzesii
		CORA 111
GCBJ2	Jackrabbit	Jackrabbit between shrubs startled out
		Pectocarya
		BUSH 11
		Thomomys bottae burrows
		CATH 1
		Uta stansburiana 11
		Sylvilagus auduboni 11
		Spermophilus beecheyi 11
		HOWR 1
		Sceloporus orcutti 1111
		Neotoma fuscipes nest under Oak
		Lasthenia sp. (Goldfields)
		Sceloporus occidentalis 111
		LEGO 11
		OATI 11
		SPTO 1
GCNL2	Woodrat Nest	San Diego Desert Woodrat nest in boulders
		Nemophila menziesii lots!
		Descurainia pinnata

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Margie Mulligan Add'l Person: S. Innekin P Pairy Date: 3.24.10

Project: Campo Wind Energy Project Map #: 15 Survey Sxn: _____

GPS Unit : 2 QCB Protocol Survey # 1 of 5

TIME (24-hour)	Temp (F°):	Wind (avg/max)	% CC	Sky				
START				clear	patchy	overcast	drizzle	shower
1412	72	1-3	20	clear	patchy	overcast	drizzle	shower
1512	72	5-6	20	clear	patchy	overcast	drizzle	shower
1630	70	3-5	20	clear	patchy	overcast	drizzle	shower
				clear	patchy	overcast	drizzle	shower
				clear	patchy	overcast	drizzle	shower
END				clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
BROWN ELFIN	III	3
SARA'S ORANGE TIP	HH	5
COMMON WHITE	III	3
LADY — ? FLYING THRU	I	1
PERPLEXING HAIRSTREAK	II	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		PRAIRIE FALCON
		REDTAIL
	NECTAR SOURCE	CRYPTANTHA SP. (INTERMEDIA)
MMCS03	sensitive Plant	Caulanthus simulans - 3 plants scattered
MMCH01	host plants	Collinsia host plants
MMCS04	sensitive plant	Caulanthus simulans - end pt of plants scattered midslope ~~across~~ below ridge - between MMCS03.

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Gretchen Cummings Add'l Person: Eugene Date: 3/24/10

Project: Campo Wind Energy Project Map #: 20 Survey Sxn: _____

GPS Unit : 4 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1520	75	2.0/6.3		clear	(patchy)	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1600	70	3.6/8.2		clear	(patchy)	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, (old roads), various nectar sources

Butterfly Species	Tally	Total
None		

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
GCEP1	excluded polygon	dense Chaparral - excluded habitat

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: M. Heath Add'l Person: Lewis Connolly Date: 3/25/10

Project: Campo Wind Energy Project Map #: 12, 13 Survey Sxn: NA

GPS Unit: 8 QCB Protocol Survey # 1 of 5.

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	11:00	60	3.1/4.9	0%	(clear) patchy overcast drizzle shower
	12:20	61	7.2/10.3	0%	(clear) patchy overcast drizzle shower
	14:00	61	9.9/17.3	0%	(clear) patchy overcast drizzle shower
	15:00	61.5	5.5/14.7	0%	(clear) patchy overcast drizzle shower
	16:20	60.5	14.2/21.3	0%	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END					clear patchy overcast drizzle shower

Habitat On-site (circle): (open soils), (hilltops), ridges, (rock outcrops), (soil crusts), (clay soils), (old roads), ~~vague~~ few (nectar sources)

Butterfly Species	Tally	Total
Map 12		
Painted Lady	|||	3
Sara Orange Tip	|	1
Blue sp	|	1
~~Common wt or Spring wt~~	|	1
Map 13		
Behr's Metal Mark	|||	3
Painted Lady	||	2
Green Hairstreak	|	1
Woolybear caterpillars	~~||||~~	5
I saw many dark butterflies flying — probably green hairstreaks		

Shirley Sat Ph 8816 514 78912

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
Map 12		Buckbrush flowering
		Ramona Lilac flowering
		Mexican Margarite "
		Erodium "
		Arabis perennans (Nevada Rock Cress) pc
		~~Popcorn flower~~
		Baby blue eyes
		SCJA, ANHU, RTHA
		Audubon CT, CAGS, Pocket Gopher / Woodrat nest / Packrat
		Miner's lettuce flower
		Ground lotus "
		Yellow flower unid (picture)
		Mustard - small
MHLI01	Sensitive sp	Mountain Lion Tracks (found 2 wks ago but I forgot to GPS at that time)
		Popcorn flower
		Map 13 - Many large cat tracks the area

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: Eugene Pablo Date: 25 March 2010

Project: Campo Wind Energy Project Map #: 25/24 Survey Sxn: ______

GPS Unit : #7 QCB Protocol Survey # 1 of 5.

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	1300	63°	7 W	Ø	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END	1400	60	9 W	Ø	(clear) patchy overcast drizzle shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
C. perplexa		2
A. Sara.		12
V. cardui		2
N. Californica		1
C. lanfordii		1
E. lota		~~#~~ 3
C. augustinus		2
S. melinus		1
G. l. australis		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
#25 (24)		Nectar Sources: Poppies
		Cryptantha
		Lotus
		Baby blue eyes
		Mustard (native)

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: Eugene Pablo Date: 25 March 2010

Project: Campo Wind Energy Project Map #: 24 Survey Sxn: _____

GPS Unit : #7 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1400	60°	9 mph W	Ø	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1600	59°	8 W	Ø	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, ridges, (rock outcrops), soil crusts, clay soils, (old roads), various, (nectar sources)

Butterfly Species	Tally	Total
N. California		2
C. perplexa		3
A. sara		8
A. virgulti		4

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
#24		Nectar: Lupines Poppies Cryptantha } Few annuals in flower yet

TOTAL NUMBER OF QCB DETECTED: 8 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID K. FAULKNER Add'l Person: Eugene Paiz Date: 25 MARCH 2010

Project: Campo Wind Energy Project Map #: 27 Survey Sxn: N/A

GPS Unit : #7 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1100	60	7 W	Ø	(clear)	patchy	overcast	drizzle	shower
	1200	61	6 W	Ø	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1300	63	7	Ø	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) hilltops (ridges) (rock outcrops) soil crusts, clay soils (old roads) various nectar sources

Butterfly Species	Tally	Total
C. perplexa		6
V. Cardui		3
A. SARA		15
N. Californica		2
P. ~~sp~~ sisyphi		2
C. Augustinus		3
Pieris sphinx		LOTS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
Map #27		Few Annuals in flower : Cryptantha Mustard (native) Erodium sp.

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David Flietner Add'l Person: Shirley Innecken Date: 3/25/10

Project: Campo Wind Energy Project Map #: 5 Survey Sxn: ~~#~~ N/A

GPS Unit: 6 QCB Protocol Survey # 1 of 5.

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1130	63	4-8	0	clear (circled)	patchy	overcast	drizzle	shower
	12				clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1200	63	4-8	0	clear (circled)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils (circled), hilltops, ridges, rock outcrops (circled), soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Acmon blue	5	6
Duskywing	•	1
Bramble hairstreak	•	1

1/6 3/25/10 2/2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Last cal
		Canis last
		coyote
		Aud cottontail

TOTAL NUMBER OF QCB DETECTED: ∅ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David Fletner Add'l Person: Shirley Innecken Date: 3/25/10

Project: Campo Wind Energy Project Map #: 15 Survey Sxn: _____

GPS Unit : 6 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1220	70	0-3	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1340	72	0-5	0	(clear)	patchy	overcast	(drizzle)	(shower)

Habitat On-site (circle): (open soils), hilltops, ridges, (rock outcrops), soil crusts, clay soils, old roads, (various nectar sources)

Butterfly Species	Tally	Total
Painted Lady	5	
Dusky Skipper	7	
Acmon's blue	2	
Bramble hairstreak	1	
Behrs metalmark	2	
	2	

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
	~~Last c~~	~~Last call~~
		~~Camis bist~~
		~~coyote~~
		~~Aud cotton~~
		Peeb canya sp.
		Cryptantha
		Esch ~~minut~~
		Lotus salsu?
		B. CAGN
		Ams menz
		annual Lotus
		Ceanoth cuneatus

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David Fleetner Add'l Person: Shirley Innocken Date: 3/25/10

Project: Campo Wind Energy Project Map #: 19 Survey Sxn: _____

GPS Unit : 6 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Slight haze Sky				
START	1410	72	~~2-4~~ 3-4	0	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1645	61	2-4	0	clear	patchy	overcast	~~drizzle~~	~~shower~~

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
white		2
Behrs metalmark		1
Bramble hair streak		4
~~4~~		

Page 1 of 2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
DFLV01	pt	Lathyrus vestitus
DFCS01	pt	Caulanthus simulans ~20
		Nemophila menz
		~~Plagiobothrys sp~~
		Cryptantha (small)
		dead sign
		Cuniscenia

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DANE FLIEGNER Add'l Person: SHIRLEY LOVELACE Date: 3/26/10

Project: Campo Wind Energy Project Map #: 16 Survey Sxn: _____

GPS Unit : 2 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1020	63°	0-2	0	(clear)	patchy	overcast	drizzle	shower
	1240	65°	0-2	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1450	72°	0-2	0	(clear)	patchy	overcast	~~drizzle~~	shower

Habitat On-site (circle): (open soils), hilltops, (ridges), (rock outcrops), soil crusts, clay soils, old roads, (various nectar sources)

Butterfly Species	Tally	Total
Sara orangetip	𝍸 |||	13
Bramble Hairstreak	𝍸	5
Behrs metalmark	𝍸 I	6
Funereal duskywing	I	1
common white	𝍸	5
Painted lady	I	1
Acmon blue	𝍸 I	6

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Cryptantha/ Plagio
		Camissonia bist
		annual Lotus
		Lisch minut
		Clastonia perfoliata
		Nemop menz
DFCH01	point - 002 0559967, 3616193	Collinsia seedlings (not a positive ID)
DFHL01	point	Horned lizard
		Strep Caudanthus heter
		granite spiny lizard
DFWRG1	point	1 Woodrat nest
		Amsinck menz
DFEP01	excluded poly	dense chaparral

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: M. Heath Add'l Person: Lewis Connolly Date: 3/26/10

Project: Campo Wind Energy Project Map #: 13, 18 Survey Sxn: _____

GPS Unit : 4 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°)	Wind (avg/max)	% CC	Sky				
START	10:00	57	1.2 / 2.4	0%	clear	patchy	overcast	drizzle	shower
	11:30	64.7	0-2	0%	clear	patchy	overcast	drizzle	shower
	13:00	64.9	3.0 / 4.3	0%	clear	patchy	overcast	drizzle	shower
	14:30	67.6	2.1 / 4.1	0%	clear	patchy	overcast	drizzle	shower
	16:30	67.8	6.0 / 8.6	0%	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Butterflies Flying

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources (few)

Butterfly Species	Tally	Total
Southern Blue	1	1
Green hairstreak	𝍸 𝍸 𝍸 𝍸 1	21
Painted Lady	𝍸 11	7
Acmon Blue	𝍸 1	6
Sara Orange Tip	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	35
Blue sp	11	2
Brown Elfin	1	1
Behr's Metalmark	𝍸	5
Dusky wing	𝍸	5
White sp	111	3
Spring white 2 mating	𝍸 𝍸 111	13

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Popcorn flower
		Fiddleneck "
		Mexican Manzanita "
		Baby blue eyes "
		Audubon cottontail / Pocket gopher / woodrat nest SIGN
		SCJA Anco Bushtits CAQU
		Miner's lettuce flowering
		Mustard - small "
		Buckbrush flowering
		Anise
		Goldfields
		Calif Poppy
		Desert woolly daisy
		Fiddleneck
		Peony
		White thorn ceanothus
		Yucca
		BTSP TUVU RTHA
		Western fence lizard
		Tree frogs Tadpoles nearby / sp??
MHEP220	Map 13	Dense Chaparral

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID K. FAULKNER Add'l Person: Eugenia Patiño Date: 27 March 2010

Project: Campo Wind Energy Project Map #: 24 Survey Sxn: _____

GPS Unit : S QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	56	12	0	clear	patchy	overcast	drizzle	shower
	1000	56	10	0	clear	patchy	overcast	drizzle	shower
	1100	67	11	0	clear	patchy	overcast	drizzle	shower
	1200	63	7	0	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1300	61	13	0	clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Erynnis funeralis		1
A. sara		5
Euchloe ausonides		4
P. acmon		1
E. phaeton - spring		9
E. c. chalcedona		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
A 24		Nectar = Poppies
		Erodium
		Baby blue-eyes
		Amsinkia
		Lupines

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Natalie Brodie Add'l Person: Phillip Date: 29 Mar 2010

Project: Campo Wind Energy Project Map #: 4 Survey Sxn: 4

GPS Unit : # 8 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1230	72°	0-2	20%	(clear)	(patchy)	overcast	drizzle	shower
	1345	73°	2/4	20-30%	clear	(patchy)	overcast	drizzle	shower
	1445	72°	2/4	10-20%	clear	(patchy)	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1600	70°	4/6	0	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Acmon blue	III	3
Sara orangetip	IIII	5
Funereal Duskywing	IIII	5
Marble	IIII IIII I	11
Perplexing Hairstreak	II	2
Behr's metalmark	III	3
Painted lady	II	2
Brown elfin	III	3
Hind-whited sulfur	III	3
		37

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Cryptantha sp.
		Goldfields
NBCHJ2	point/host plant	Ceanothus (20+) in bushes (scrub oak & chamise)
NBHL01	point	horned lizard

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Natalie Brodie Add'l Person: Phillip Date: 29 Mar 2010

Project: Campo Wind Energy Project Map #: 3 Survey Sxn: 3

GPS Unit : #8 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0930	64°	0-2	0	(clear)	patchy	overcast	drizzle	shower
	1040	65°	0-2	0	(clear)	patchy	overcast	drizzle	shower
	1130	70°	0-2	10%	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1215	72°	0-2	20% high haze	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) hilltops, ridges, rock outcrops, (soil crusts) clay soils, (old roads) (various nectar sources)

Butterfly Species	Tally	Total
Sara orangetip	𝍸 𝍸 |	11
Acmon blue	𝍸 𝍸	10
Perplexing hairstreak	𝍸 |||	8
Brown elfin	||	2
Dain's Metalmark	𝍸	5
Funereal Duskywing	𝍸 |	6
Painted Lady	|	1
Unidentified sulfur	|	1
		44

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
NBARC1	point / host plant	Antirrhinum rosettes. ~3 annual buckwheat
NBCH01	point/host plant	50+ collinsia in shade of chamise
NBCD01	point/host plant	3 cordylanthus sprouts in crack in asphalt
NBCD02	point/host plant	5+ cordylanthus sprouts along road, goldfields

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: M. Heath Add'l Person: Josh Paipa Date: 3/29/10

Project: Campo Wind Energy Project Map #: 18/8 Survey Sxn: _____

GPS Unit : 4 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	09:00	69.2	0.8/1.6	0%	(clear)	patchy	overcast	drizzle	shower
	11:00	73.1	2.9/5.8	0%	(clear)	patchy	overcast	drizzle	shower
	12.00	72.2	3.0/5.6	0%	(clear)	patchy	overcast	drizzle	shower
	13:30	77	2-3/5.3	0%	clear	(patchy)	overcast	drizzle	shower
	16:00	72	5.7/14.9	0%	clear	(patchy)	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) hilltops, ridges, (rock outcrops), (soil crusts), clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
Sara Orange Tip	𝍸 𝍸 𝍸 𝍸 𝍸 ||	27
Spring wt	𝍸 ||||	9
Behr's metal mark	|	1
Green hairstreak	𝍸 𝍸 𝍸 𝍸 |||	23
Blue sp	|||	3
Dusky wing sp	|	1
Sulphur sp	|	1
Acmon Blue	𝍸 𝍸 𝍸 |||	18
Painted Lady	𝍸 ||	7
Mable	|	1
Gabb Cs (potential): Orange b. Holly		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
	Map 18	Erodium flower
		Mustard (small) "
		Fiddleneck "
		Baby blue eyes "
		Popcorn "
		DTSP/SCJA/TUVU/WOODPECKER SP ?
		Gold field's "
		DYC's "
		Wild cucumber "
		Cream colored flower "
		White thorn ceanothus "
		Calif. Poppy "
MHPC01	Sensitive sp	Jewel flower yellow Paysons Caud ← Slender Pod Jewel
~~#3~~		" " " purple/pink same location
		many plants area of NE map 18
		pocket gopher & coyote sign
MHHL02	Horned lizard	Large Map 8
		Mexican Manzanita flowering
		Scrub oak flowering
MHHL03	"	Small - Juv Map 8
		Purple lupine - fuzzy leaves - Bajada lupine Small
		Spiny lizard

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Omar Bately Date: 3/29/10

Project: Campo Wind Energy Project Map #: 11 Survey Sxn: _____

GPS Unit : 1 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	9:30	68°	1/5 S	0	(clear)	patchy	overcast	drizzle	shower
	11:00	75°	5/7 SE	0	(clear)	patchy	overcast	drizzle	shower
	12:00	79°	4/8 SW	cirrus	clear	(patchy)	overcast	drizzle	shower
	13:00	77°	7/11 SW	"	clear	(patchy)	overcast	drizzle	shower
	14:00	80°	6/10 SW	"	clear	(patchy)	overcast	drizzle	shower
	15:00	76°	6/12 SW	"	clear	(patchy)	overcast	drizzle	shower
END	16:20	75°	5/10 SW	0	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Sara's Orange Tip	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	41
Blue?	𝍸 𝍸	11
Perplexing Hairstreak	𝍸 𝍸	10
Behrs Metalmark	𝍸	8
Acmon Blue	1	1
Tiger Swallowtail	1	1
White?	1	1

Page 1 of 2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Amsonkia
		Cryptantha
		Erodium
		Lasthenia
		Mustard ?
		Lupinus
		Viola
		Ceanothus
		Calif Poppy
		Baby Blue
		Monardella
		Eriogonum

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Andrew Pigniolo Add'l Person: Andrew Fisher Louis Connily Date: 3/29/10

Project: Campo Wind Energy Project Map #: 16 Survey Sxn:

GPS Unit : #7 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	0915	60	0	0	(clear) patchy overcast drizzle shower
	1015	69	0	0	(clear) patchy overcast drizzle shower
	1115	76	0-5	0	(clear) patchy overcast drizzle shower
	1215	78	0-6	20	clear (patchy) overcast drizzle shower
	1315	79	0-6	40	clear (patchy) overcast drizzle shower
	1415	81	0-7	10	(clear) patchy overcast drizzle shower
END	1515	74	2-5	5	(clear) patchy overcast drizzle shower
	1615	75	2-6	2	clear

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Perplexing Hairstreak		29
Painted Lady		5
Marble/Spring White		24
Funerial Duskywing		10
Sarah Orange tip		24
Unid Dusk		5
Spring Azure		2
Pale Swallowtail		2
Common White		1
Brown Elfin		5
Tortoise Shell		2
Gabbs?/Underwing moth?		2
Behrs Metalmark		4
Acmon blue		4

Horned Lizard APHL07

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
APHL01	Sensitive sp Point	Horned Lizard - juvenile
APHL02	↓	" "
APHL03		" "
APHL04		" "
APBJ01		Blacktailed Jackrabbit
		Ceanothus cuneatus blooming
		Arabis sp "
		Erodium cicutarium "
		Nemophila menz "
		Cryptantha sp. "
		Lotthenia sp. Just starting
		Lathrys sp " "
		Bird: HOLA, COHA, WEKI, WEBL, BUSH, BTSP CALT, NOFL,
		Speckled Rattlesnake, Side-blotch Fence Lizard, Granite spiny lizard

TOTAL NUMBER OF QCB DETECTED: ϕ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K Faulkner Add'l Person: Eugene Pablo Date: 3-29-2010

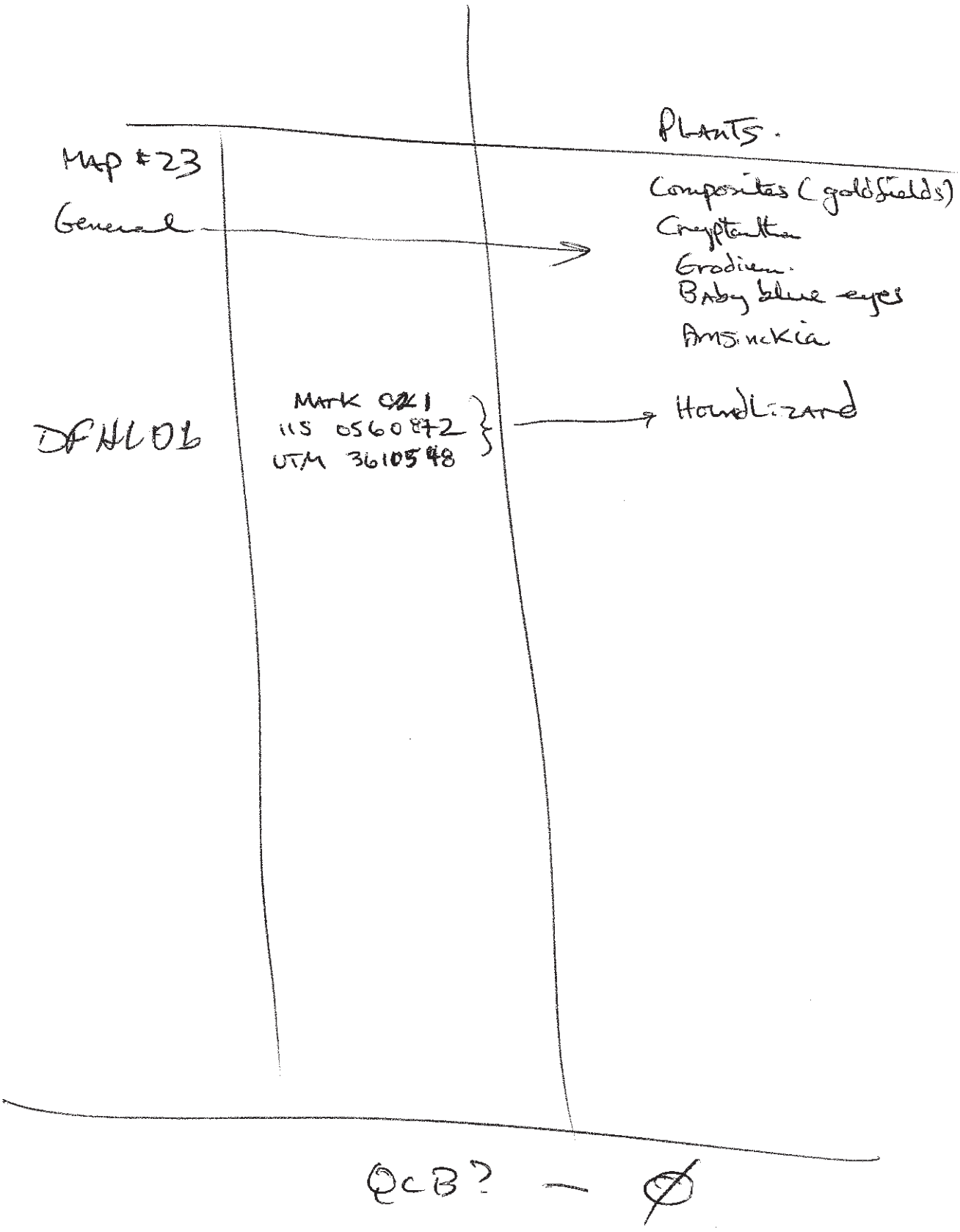
Project: Campo Wind Energy Project Map #: 23 Survey Sxn: _____

GPS Unit : 5 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	69°	1 mph	Ø	(clear)	patchy	overcast	drizzle	shower
	1000	73°	1	Ø	(clear)	patchy	overcast	drizzle	shower
	1100	78°	1	Ø	(clear)	patchy	overcast	drizzle	shower
	1200	81°	1	Ø	clear	patchy	overcast	drizzle	shower
	1300	83	5	50%	clear	(patchy)	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, (ridges), (rock outcrops), soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
A. Sara		25+
A. Virgulti		3
C. perplexa		7
C. Augustinus (elfin)		7
Euchloe h. lotta		8
Erynnis brizo		6
P. Sisyphus		2
N. Californica		1


Plants.
Map #23
General
Composites (goldfields)
Cryptantha
Grodiem.
Baby blue eyes
Amsinckia
DFHL06
Mark ORI
11S 0560872
UTM 3610548
Horned Lizard
QcB? — Ø

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID K. FAULKNER Add'l Person: Eugene Pablo Date: 29 MAR 2010

Project: Campo Wind Energy Project Map #: 20 Survey Sxn: _____

GPS Unit : 5 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1400	81°	2 mph	50	clear	(patchy)	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1500	81°	5 mph	Ø	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Euchloe A. lotta		2
A. sara.		3
A. virgulti		1
C. perplexa		1
Echo blue		1
C. Augustinus		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
#20		Goldfields
		Appius
		Cryptantha

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: Eugene Pubis Date: 29 MAR 2010

Project: Campo Wind Energy Project Map #: 21 Survey Sxn: _____

GPS Unit : 5 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1500	81	5	Ø	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1600	62	15	Ø	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
E. h. Lotta		3
A. Sara		2
Erynnis sp. (brizo?)		11

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
21		— Goldfields
		Poppies
		Cryptantha

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MARGIE MULLIGAN Add'l Person: _____ Date: 3.30.10

Project: Campo Wind Energy Project Map #: 22 Survey Sxn: _____

GPS Unit : 8 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1040	64	3-6	5	(clear)	patchy	overcast	drizzle	shower
	1205	73	4-6	0	(clear)	patchy	overcast	drizzle	shower
	1335	78	4-7	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Behr's Metalmark	TTH IIII	9
Perplexing Hairstreak	TTH III	8
Sara's Orange Tip	TTH I	6
Common White	I	1
California Tortoiseshell	I	1
Pearly Marble	TTH	5

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MMCS01	rare plant pt	Caulanthus simulans - scattered on tp 250
MMHH01	Sensitive herp pt	Horn Lizard - 1
	Nectar Sources	Cryptantha sp
		Pectocarya linearis
		Amsinkia menziesii
		Cercocarpus [illegible] betuloides
		Erodium cicutarium
		Eschscholzia spp.
		Nemophila menziesii
		(Lasthenia only in bud at site)
		gracilis
MMEP01	polygon	should be excluded. Too dense w/ too
		small of an opening. Did survey for QCB#1
MMEP02	polygon	should be excluded b/c too dense
		with some open drainages that are very
		small and very steep of DG. Did not see
		any butterflies in habitat. Did survey for
		QCB#1.

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Eugene Pavlo Date: 3/30/10

Project: Campo Wind Energy Project Map #: 1 Survey Sxn: _____

GPS Unit : 1 QCB Protocol Survey # 1 of 5

TIME (24-hour)	Temp (F°):	Wind (avg/max)	% CC	Sky
START 12:35	67°	9/14	0	(clear) patchy overcast drizzle shower
13:30	72°	4/7	0	(clear) patchy overcast drizzle shower
14:30	68°	7/11	0	(clear) patchy overcast drizzle shower
15:30	70°	8/12	0	(clear) patchy overcast drizzle shower
16:25	65°	5/9	0	(clear) patchy overcast drizzle shower
				clear patchy overcast drizzle shower
END				clear patchy overcast drizzle shower

Habitat On-site (circle): (open soils), hilltops, (ridges), (rock outcrops), soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
Perplexing	𝍸 𝍸 I	11
Sara	𝍸 IIII	9
Marble	III	4
Dusky wing	II	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Baby Blues
		Erodium
		~~Mustard~~?
		Manzanita
		Calif Poppy
		Amsinckia
		Cryptantha
DPBJ015		
~~DPBJ01~~	point	Black-tailed Jack Rabbit
DPBJ02	point	" Black-tailed Jack Rabbit
~~DPB~~		

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: M. Heath Add'l Person: Lewis Connolly Date: 3/30/10

Project: Campo Wind Energy Project Map #: 8, 7 Survey Sxn: _____

GPS Unit : 5 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	10:30	63.5	4.5 / 7.2	10%	(clear)	patchy	overcast	drizzle	shower
	12:30	66.0	8.7 / 12.4	20%	(clear)	patchy	overcast	drizzle	shower
	14:30	64.7	15.9 / 19.6	10%	(clear)	patchy	overcast	drizzle	shower
	16:00	60	15.0	10%	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Orangetip – Sara	𝍸 𝍸 𝍸 I	16
Painted Lady	𝍸 II	7
Sara Wt	𝍸 𝍸 II	12
Green Hairstreak	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 II	37
Blue sp	II	2
Dusky Wing	III	3
Acmon Blue	𝍸 𝍸 𝍸 II	17
White sp	III	3

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Scrub oak flowering
		Baby blue eyes * - means flowering
		Plantain *
		Buckbrush *
		Sun cup *
		Fiddleneck *
		Popcorn *
		SCOA/ CAQU/ Am CR
		Gold fields *
		Owl's Clover *
MHHLO4		Horned Lizard juvenile
05		" " "
06		" " "
		Blue Lupine small *
		Mountain Mahogany
MHEP260	Excluded Poly	Dense Chaparral
1	" "	" "
2	" "	" "
3	" "	" "

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Eugene Pablo Date: 3/3/2010

Project: Campo Wind Energy Project Map #: 11 Survey Sxn: _____

GPS Unit : 1 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	15:30	61°	4/8	10	clear	patchy	overcast	drizzle	shower
	12:00	70°	8/10	0	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Perplexing	𝍸 1	6
Sara Marble	111	3
Sara	11	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Dainty Blue
		Cryptantha
		Melilotus?
		Erodium
		Pentstemon
		Mimulus
		Calif Poppy
		Amsinckia
DPBJ03 ~~DPBJ03~~		Black-Tailed Jackrabbit

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: BRIAN LOHSTROH Add'l Person: Phillip (Escort) Date: 3/30/10

Project: Campo Wind Energy Project Map #: 16 Survey Sxn: _____

GPS Unit : 7 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1040	61.4	5-8 mph	10	clear	patchy	overcast	drizzle	shower
	1140	65	6-10	0%	clear	patchy	overcast	drizzle	shower
	1240	67	4-7		clear	patchy	overcast	drizzle	shower
	1400	69	6-8		clear	patchy	overcast	drizzle	shower
	1500	70	3-5		clear	patchy	overcast	drizzle	shower
	1600	64	3-7		clear	patchy	overcast	drizzle	shower
END	1610	65	5-10		clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Perplexing Hairstreak	𝍸 𝍸 𝍸 |||	18
Common White	𝍸 𝍸 ||	12
Dusky wing Skipper (sp.)	𝍸 𝍸 |	11
Brown elfin	|||	3
Acmon Blue	𝍸 𝍸	10
Painted Lady	||	2
Behr's Metalmark	𝍸 𝍸 𝍸 ||	17
Funereal Duskywing	||	2
S. Orangetip	𝍸	5
Southern Blue	|	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
PBO		HOLA
		CORA
		SCja
		WeKi
		Oafi
		Hofi
		Saph
		RTita
		Lasp
		Anhu
		SPTO
		Wren
		NoWO
		BC sp
		Lego
		California toad larvae (likely)
		Side-blotch Lizard
		Granite spiny Lizard
		W. Fence lizard
		Striped racer
		CA ground squirrel
		Cottontail
BLHL01	Rare Species	Coast horned Lizard
BLHL02	"	Coast horned Lizard
BLPJ01	Rare plant	Payson's jewel flower 2 indiv.
BLPJ02	"	" 40 indiv
BLPJ03	"	" 10 indiv
		Nectar Sources: erodium, Senecio cal, Layfrenia cal, popcorn flower, Amsinkia Nemophila, Beachura, cercocarpus, desert dandelion ca poppy, camissonia, Manzanita

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAN.D.K.FAULKNER Add'l Person: DAN MASON | ERIN Date: 8 APR 2010

Project: Campo Wind Energy Project Map #: 15 Survey Sxn: CAMPO L

GPS Unit : 8 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1000	68	5	∅	(clear)	patchy	overcast	drizzle	shower
	1100	69	6	∅	(clear)	patchy	overcast	drizzle	shower
	1200	72	7	∅	(clear)	patchy	overcast	drizzle	shower
	1300	77	0	∅	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1400	78	5	∅	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), soil crusts, clay soils, (old roads), various (nectar sources)

Butterfly Species	Tally	Total
P. Acmon		6
A. Virgulti		25+
C. perplexa		15+
Erynnis sp.		6
Nymphalis californica		2
Euchloe h. lotta		20+
U. cardui		4
A. Sara		3
P. eurymedon (Pale Swallow)		1
Southern blue		2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
15	GPS: Mark 1	Collinsia
		goldfields
		Cryptantha
		Composites
		Sugar bush
		Amsinckias
		Erodium
		Mustard
		blue dicks

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID K. FAULKNER Add'l Person: Luis Conrado Date: 13 APRIL 2010

Project: Campo Wind Energy Project Map #: 25 Survey Sxn: CAMPO IR

GPS Unit : 9 QCB Protocol Survey # ?? of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1100	48°	3	∅	(clear)	patchy	overcast	drizzle	shower
	1200	55°	2	∅	(clear)	patchy	overcast	drizzle	shower
	1300	58°	2	>5%	(clear)	patchy	overcast	drizzle	shower
	1400	61°	3	>5%	(clear)	patchy	overcast	drizzle	shower
	1500	55°	8	> 10	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1600	52	9	>10	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, (ridges), (rock outcrops), soil crusts, clay soils, (old roads), various (nectar sources)

Butterfly Species	Tally	Total
Euchloe h. Zotta		15+
C. perplexa		3
A. Vinqueti		8
Arrowhead blue		1
P. Acmon		6
P. Sisyphrii		2
V. Virginiensis (Am Lady)		1
C. gabbii		1
Erynnis funeralis		2
E. brizo		6

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
#25	CAMPO-R	Cryptantha
		Goldfields
		Sugar Bush
		Baby Blue Eyes
		Wallflower
		Viola sp.
		[GPS Turned off @ ~1530 - battery]

TOTAL NUMBER OF QCB DETECTED: ∅ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Swinney McMorrow Date: 4/3/10

Project: Campo Wind Energy Project Map #: 27 Survey Sxn: _____

GPS Unit : 3 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	10:50	59°	8/12	0	(clear)	patchy	overcast	drizzle	shower
	12:10	60°	10/17	0	(clear)	patchy	overcast	drizzle	shower
	12:45	62°	7/15	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	(shower)

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Dusky-wing	III	3
Sara	IIII	4
Purplish Copper	I	1
Lady	IIII	4
Marble	II	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Eriodictyon
		Avolus
		Cryptantha
		Ceanothus
		Menziesia
		Security Guard
		Chris Dines
		Bald Eagle Security Inc.
		Badge 120

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID FLETCHER Add'l Person: LEWIS Date: 4/24/10

Project: Campo Wind Energy Project Map #: 19 Survey Sxn: Campo - O

GPS Unit : 2 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1045	63	0-2	0	(clear)	patchy	overcast	drizzle	shower
	1420	75	0-2	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1635	66	2-5	10	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, ridges, (rock outcrops), soil crusts, clay soils, old roads, (various nectar sources)

Butterfly Species	Tally	Total
Bramble hairstreak	⊠⊠∴	24
Cabbage white	⊠⊏	17
Sara orange-tip	⊠⁚	15
Funereal dusky wing	⁚	3
W. Tailed blue	⁚	2
Lady sp.	⁚⁚	4
Acmon blue	•	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Nemoph menz
		Cryptantha int
		Amsinckia menz
		Camissonia sp.
		Plagiobothrys sp.
		Lasthenia cal
		annual lotus sp.
	point	Eschscholtzia minut
DFC402	Collinsia hetero	~ 20 plants, ~ 3 ft²
↑ (may have been entered as aachO2)		
Note: GPS batteries died for a few minutes ~ noon, so some of survey not tracked		

TOTAL NUMBER OF QCB DETECTED: ∅ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Phillip Paipa / Shelley Innecken Date: 4/2/10

Project: Campo Wind Energy Project Map #: 10,15,16 Survey Sxn: ____________

GPS Unit: 3 QCB Protocol Survey # 2 of 5.

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	11:40	63°	1/3	0	(clear) patchy overcast drizzle shower
	13:00	68°		0	(clear) patchy overcast drizzle shower
	14:00	69°	4/8	0	(clear) patchy overcast drizzle shower
	15:00	65°	4	0	(clear) patchy overcast drizzle shower
	16:00	61	4	0	(clear) patchy overcast drizzle shower
	17:00	59°	5/8	0	(clear) patchy overcast drizzle shower
END					clear patchy overcast drizzle shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Sara	𝍸 I	6
Common White	III	3
Behrs 𝍸 𝍸 𝍸 𝍸	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	50
Marbles	𝍸 𝍸 𝍸 𝍸 III	23
Lady?	I	1
Checkerspot?	I	1
Orange Butterfly	II	2
Tiger Swallowtail	II	2
Perplexing	𝍸 𝍸 𝍸 𝍸 II	22
Brown Elfin	I	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Cryptantha - microtha
		Eriodictyon
		Mustard ?
		Lotus
		Unknown composite
		Poppies
		Descurainia
		Caulanthus
		Plagiobothrys
		Amsinckia
		Ceanothus
		Dichelostemma
		Arabis
SI CSO1		Caulanthus simulans Pace
SI CSO2		"
SI CSO3		"
Other Points Don't Count		

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Gretchen Cummings Add'l Person: Josh Date: 4/2/10

Project: Campo Wind Energy Project Map #: 19 Survey Sxn: P

GPS Unit : 1 QCB Protocol Survey # 2 of 5 .

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1040	66	3.3/4.9		(clear)	patchy	overcast	drizzle	shower
	1230	68	3.8/5.4		(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1245	68	3.8/5.4		(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, (ridges), (rock outcrops), soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
Vanessa cardui (Painted Lady)	IIII II	7
Euchloe hyantis (Pearly Marble)	IIII	5
Apodemia mormo virgulti (Mormon's Metalmark)	IIII IIII II	12
Erynnis sp. (Duskywing)	III	3
Icaricia acmon (Acmon Blue)	I	1
Pontia cf. sisymbrii (Spring White)	II	2
Colias harfordii (Harford Sulphur)	I	1
Pholisora catullus (Common Sootywing)	III	3
Callophrys affinis (Green Hairstreak)	III	3

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
GC	Neotoma lepida nest	Desert Woodrat nest
GC	Neotoma lepida nest	Desert Woodrat nest
GC	Neotoma lepida nest	Desert Woodrat nest
		ANHU
		NOFL
		TUVU
		SPTO
		WEST
		RSHA
		CAQU
		BGGN
		BUSH
		CATH
		HOWR
		OATI
		ACWO
		CORA
		Sceloporus orcutti II
		Uta stansburiana IIII
		Plagiobothrys sp.
		Cryptantha sp.
		Lasthenia sp.
		Nemophila menzeisii
		Amsinckia menzeisii
		Pectocarya sp.
		Erodium cicutarium
		Lupinus bicolor

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Gretchen Cummings Add'l Person: Josh Date: 4/2/10

Project: Campo Wind Energy Project Map #: 20 Survey Sxn: P

GPS Unit : 1 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	1245	68	3.8/5.4		(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END	1545	62	3.6/8.2		(clear) patchy overcast drizzle shower

Habitat On-site (circle): open soils, hilltops, (ridges) (rock outcrops), soil crusts, clay soils, (old roads), various nectar sources

Butterfly Species	Tally	Total
Vanessa cardui (Painted Lady)	II	2
Callophrys affinis (Green Hairstreak)	IIII	4
Euchloe hyantis (Pearly Marble)	IIII II	7
Apodemia mormo virgulti (Mormon Metalmark)	IIII IIII IIII IIII IIII IIII	30
Erynnis sp. (Duskywing)	II	2
Pontia cf. Sisymbrii (Spring White)	I	1
Anthocharis sara (Sara Orangetip)	IIII IIII IIII	15
Erynnis funeralis	I	1
Callophrys augustinus (Brown Elfin)	I	1
Sphyngid moth	I	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Sceloporus orcutti I
		ANHU
		CORA
		BUSH
		OATI
		Uta stansburiana I
		Thomomys bottae holes
		Sylvilagus audubonii II
		Plagiobothrys sp.
		Cryptantha sp.
		Lasthenia sp.
		Nemophila menzeisi:
		Amsinckia menzeisii
		Tansy Mustard (Descurainia sp.)
		Pectocarya sp.
		Erodium cicutarium
		Lupinus bicolor
		Eschscholzia californica (California Poppy)
		Cream Cups

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: Eugene Pablo Date: 2 APRIL 2010

Project: Campo Wind Energy Project Map #: 23 Survey Sxn: Q

GPS Unit : 8 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1600	67°	9 mph	Ø	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1700	65°	9 mph	Ø	clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Anthocharis Sara		2
Euchloe h. Zoha		4
C. Perplexa (Bramble)		1
Vanessa Cardui		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
23		Cryptantha
		Baby Blue eyes
		Amsinckia

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID K. FAULKNER Add'l Person: Eugene Pablo Date: 2 APRIL 2010

Project: Campo Wind Energy Project Map #: 22 Survey Sxn: CAMPO 9

GPS Unit : 8 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1300	68°	5 W	Ø	clear	patchy	overcast	drizzle	shower
	1400	69°	4 W	Ø	clear	patchy	overcast	drizzle	shower
	1500	69°	4 W	Ø	clear	patchy	overcast	drizzle	shower
	1600	67°	9 W	Ø	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
P. Sisymbrii (Spring white)		11
Vanessa sp. (Lady)		1
V. Cardui (Painted lady)		2
A. Virgulti (B. Metal)		3
A. SARA (Sara orange)		8
E. hyantis (Pearly)		6
C. Augustina (B. Elfin)		3
E fumeralis (Fin Dusky)		2
E. brizo. (Sleepy Dusky)		3

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
22		Amsinckia
		cryptantha
		Poppies
		Lupines

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: Eugene Pavlo Date: 2 APRIL 2010

Project: Campo Wind Energy Project Map #: 26 Survey Sxn: Campo ©

GPS Unit : 8 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1030	59°	3mph W	Ø	(clear)	patchy	overcast	drizzle	shower
	1100	66°	1 W	Ø	(clear)	patchy	overcast	drizzle	shower
	1200	72	Ø W	Ø	(clear)	patchy	overcast	drizzle	shower
	1300	68	5 W	Ø	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
Euchloe hyantis		7
A. Sara		11
C. perplexa		7
A. Virgulti		4
Erynnis brizo		1
C. Dracotaltix monstrosus (♂)		1
E. phaeton		20+
Nymphalis californica		1
V. cardui		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
26		Cryptantha
		Amsinckia
		Baby blue eyes
		Basket Bush.
		Wallflower

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Margie Mulligan Add'l Person: _____ Date: 4·6·2010

Project: Campo Wind Energy Project Map #: 4 Survey Sxn: _____

GPS Unit : 9 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1250	65	3-6(9)	0	clear	patchy	overcast	drizzle	shower
	1340	63	5-8	8	clear	patchy	overcast	drizzle	shower
	1420	63	5-8	8	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Acmon Blue	II	2
Pearly Marble	II	2
Painted Lady	I	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MMAD01	sensitive plant pt	Astragalus douglasii var. perstrictus East side of Manzanita Rd. 23 vegetative plants in deep granitic soils. Edge of redshank mostly Artemisia tridentata ssp. tridentata Very disturbed and probably cleared to repair drainage pipe.
MMAD02	sensitive plant pt	Astragalus douglasii var perstrictus West side of Manzanita Rd. 9 vegetative plants in deep granitic soils. w/ Eriogonum fasc, Quercus x acutidens, Ceanothus leucodermis. Edge of oak riparian. Disturbed area by road. & Artemisia tridentata
	Nectar Sources:	Pectocarya sp.
		Cryptantha sp
		Amsonkia menziesii
		Lasthenia (very little!) gracilis
		Nemophila menziesii

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Margie Mulligan Add'l Person: _____ Date: 4.6.10

Project: Campo Wind Energy Project Map #: 3 Survey Sxn: _____

GPS Unit : 9 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1000	60	5-9	0	(clear)	patchy	overcast	drizzle	shower
0930	1107	62	1-4 (8)	0	(clear)	patchy	overcast	drizzle	shower
	1210	63	3-6	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Perplexing Hairstreak	𝍸 I	6
Propertius Duskywing	II	2
Acmon Blue	𝍸	5
Pearly Marble	I	1
Painted Lady	II	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
	Nectar Source:	Lasthenia gracilis
	~~Eriogonum microanthum~~	Cryptantha micrantha
		Amsinckia menziesii
		Nemophila menziesii
		Coreopsis californica

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Margie Mulligan Add'l Person: _____ Date: 4·6·2010

Project: Campo Wind Energy Project Map #: 8 Survey Sxn: _____

GPS Unit : 9 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1400	63	4-8	0	(clear)	patchy	overcast	drizzle	shower
	1522	63	4-8	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Perplexing Hairstreak	II	2
Propertius Duskywing	IIII	4
Brown Elfin	I	1
Pearly Marble	I	1
Sara's Orangetip	I	1
Acmon Blue	I	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
	Nectar Sources:	Ceanothus greggii perplexans
		Cryptantha sp.
		Cryptantha micrantha
		Amsinkia menziesii
		Lasthenia gracilis
MMGV01		Geraea viscida. East side of Manzanita Rd. 3 plants vegetative. Red Shank, Ceanothus greggii ssp. perplexans, Eriogonum fasciculatum, Chamise, Chamise Chaparral w/ deep granitic soils. No impact but side of road.

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: Eugene Pablo Date: 6 APRIL 2010

Project: Campo Wind Energy Project Map #: 17 Survey Sxn: CAMPO N

GPS Unit : 8 QCB Protocol Survey # QCB 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1400	64	8 NE	Ø	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1500	65°	9 NE	Ø	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) hilltops, ridges, rock outcrops, soil crusts, clay soils, (old roads), various (nectar sources)

Butterfly Species	Tally	Total
Euchloe h. lotta		2
C. perplexa		3
So. Blue		1
P. Acmon		4
A. vinculata		4

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
#17		Cryptantha
		Erodium
		Mustard
		Amsinckia
		Sugar bush

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID K. FAULKNER Add'l Person: Eugene Pablo Date: 6 APRIL 2010

Project: Campo Wind Energy Project Map #: 23 Survey Sxn: CAMPO 9

GPS Unit : 8 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1000	57	7	Ø	(clear)	patchy	overcast	drizzle	shower
	1100	57	7	Ø	(clear)	patchy	overcast	drizzle	shower
	1200	63	7	Ø	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1330	61	13	Ø	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, (ridges), (rock outcrops), soil crusts, clay soils, (old roads), various (nectar sources)

Butterfly Species	Tally	Total
Euchloe h. Zetta		2
E. Augustina		1
E. pulplera		5
A. SARA		3

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
23		Goldfields
		Composites
		Cryptantha
		Erodium
		Mustard

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David M. Faulkner Add'l Person: Eugene Pablo Date: 6 Apr 2018

Project: Campo Wind Energy Project Map #: 21 Survey Sxn: CAMPO N

GPS Unit : 8 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1200	63	7	0	(clear)	patchy	overcast	drizzle	shower
	1380	61	13	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1400	64	8	0	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), soil crusts, clay soils, (old roads), various (nectar sources)

Butterfly Species	Tally	Total
Euchloe h. lotta		3
A. SARA		8
Erynnis sp.		4

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
21		Composites
		Cryptantha

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID K FAULKNER Add'l Person: Eugene Pablo Date: 6 APRIL 2010

Project: Campo Wind Energy Project Map #: 18 Survey Sxn: CAMPO N

GPS Unit : 8 QCB Protocol Survey # 2 of 5 .

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	1500	65	9	Ø	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END	1600	63	8	Ø	(clear) patchy overcast drizzle shower

Habitat On-site (circle): (open soils), hilltops, ridges, (rock outcrops), soil crusts, clay soils, (old roads), various (nectar sources)

Butterfly Species	Tally	Total
A. Virgulti		8
A. Sara		2
E. h. Zotta		6
P. Acmon		3
E. brizo		2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
18		Composites
		Goldfields
		Cryptantha
		baby blue eyes

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: BRIAN LOHSTROH Add'l Person: David D. (Escort) Date: 4/6/10

Project: Campo Wind Energy Project Map #: 16 + 19 Survey Sxn: M

GPS Unit : 10 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max) MPH	% CC	Sky				
START	1000	60	5-8	Clear 0%	clear	patchy	overcast	drizzle	shower
	1100	60	10-14	Clear	clear	patchy	overcast	drizzle	shower
	1200	61	4-9	Clear	clear	patchy	overcast	drizzle	shower
	1300	61	4-7	Clear	clear	patchy	overcast	drizzle	shower
	1400	61	8-12	Clear	clear	patchy	overcast	drizzle	shower
	1445	62	7-12	Clear	clear	patchy	overcast	drizzle	shower
END	↑				clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Painted Lady	II	2
Perplexing Hairstreak	IIII	7
pearly Marble	I	1
Dusky wing SP	IIII	4
Acmon Blue	III	3
Behr's Metalmark	III	3
Silvery Blue	I	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
~~CORA~~		CORA
		Scja
		SPTO
		WCSP
BLPF01	Rare bird	PrFa (prarie falcon)
		LaSP
		Oati
		HoLA
		RTHa
		WeKi
		Bush
BLCP02	Rare plant	Campo pea, (Lathyrus splendens) 5 individ.
BLCP03	"	Campo pea 1 individual
BLCP04	"	Campo pea, 2 individuals
BLCP01	"	Campo pea, 2 ind (previously mapped?) confirmi
BLCP05	"	Campo pea, 4 individuals
		Jacumba milk vetch? Not mapped, will be
		confirmed by botanists. (S. Inaction)

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: Dan Hinson / ERIN Date: 8 APR 2010

Project: Campo Wind Energy Project Map #: 16 Survey Sxn: CAMPO-L

GPS Unit : 8 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1500	78	2	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1600	78	5	0	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), soil crusts, clay soils, old roads, various (nectar sources)

Butterfly Species	Tally	Total
A. Sara		2
Philosoma catalina		1
Vanessa cardui		2
Euchloe h. Julia		8

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
16.		
		Cryptantha
		Goldfields

TOTAL NUMBER OF QCB DETECTED: ∅ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: Dan Mason | Erin Date: 8 APR 2010

Project: Campo Wind Energy Project Map #: 18 Survey Sxn: CAMPO N

GPS Unit : 8 QCB Protocol Survey # 2 of 5 .

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	0900	60°	7 mph	Ø	(clear) patchy overcast drizzle shower
	1000	68°	5	Ø	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END					clear patchy overcast drizzle shower

Habitat On-site (circle): (open soils), hilltops, ridges, (rock outcrops), soil crusts, clay soils, (old roads), various (nectar sources)

Butterfly Species	Tally	Total
A. Sara		6
P. Sisymbrii		1
E. brizo		3
A. Virgulti		3

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
18		Goldfields
		Composites

TOTAL NUMBER OF QCB DETECTED: ∅ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Pocwell Add'l Person: Eugene Pablo Date: 4/8/10

Project: Campo Wind Energy Project Map #: 16 H. Completed Survey Sxn: Partially

GPS Unit : 10 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	13:30	72°	2/5	0	clear	patchy	overcast	drizzle	shower
	14:35	75°	0/0	0	clear	patchy	overcast	drizzle	shower
	16:25	72°	4/6	0	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, ~~hilltops, ridges~~, rock outcrops, ~~soil crusts~~, clay soils, ~~old roads~~, ~~various nectar sources~~

Butterfly Species	Tally	Total
White ?	𝍸	5
Southern Blue	𝍸 II	7
Dusky-wing	𝍸 I	6
Blue ?	IIII	4
Lady ?	III	3
Behrs Metalmark	II	2
DEPOT		

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Amsinckia
		Mustard?
		Erodium
		LesThenia
		Layia
		Nemophilia
		Caenothus
		Phacelia 2 species
		Arahis
		Eryptantha
		Salvia columbariae
		lupinus
		Eschscholzia
		Plagiobothrys
OPEP01	Excluded Polygon	Sage, Oak
OPEP02	"	"
OPIP01	Included Polygon	Has native vegetation included

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Eugene Pablo Date: 4/8/10

Project: ~~Manzanita~~ Campo Wind Energy Project Map #: 15 K completed Survey Sxn: _____

GPS Unit : 10 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	8:45	63°	5/7	0	(clear)	patchy	overcast	drizzle	shower
	9:55	67°	10/13	0	(clear)	patchy	overcast	drizzle	shower
	11:30	71°	3/7	0	(clear)	patchy	overcast	drizzle	shower
	12:40	71°	6/9	0	(clear)	patchy	overcast	drizzle	shower
	13:10	74°	5/9	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), ~~hilltops~~, ~~ridges~~, (rock outcrops), ~~soil crusts~~, clay soils, (old roads), ~~various nectar sources~~

Butterfly Species	Tally	Total
Sara's Orange Tip	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 I	31
Chalcedon	III	3
Perplexing Hairstreak	𝍸 𝍸 𝍸 𝍸 𝍸	25
Marble	𝍸 III	9
White?	𝍸 𝍸 I	11
Behrs Metalmark	𝍸 𝍸 III	13
Southern Blue	𝍸 𝍸 𝍸 𝍸 𝍸 I	26
Blue?	𝍸 𝍸 IIII	14
Lady?	𝍸	5
Painted Lady	II	2
Dusky-Wing	II	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Amsinckia
		Lupinus
		Erodium
		Eschscholzia
		Cryptantha
		Ceanothus
		Layia
		Mustard?
		Dichelostemma
		Phacelia 2 species
		Mimulus
		Salvia columbariae
		Castilleja
		Nemophila
QPC501		Caulanthus similans
		Arabis
		Penstemon
		Monardella
		Plagiobothrys

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVE FLIETNER Add'l Person: ~~Louis~~ Louis Date: 4/8/10

Project: Campo Wind Energy Project Map #: 4/12 (Campo 6) Survey Sxn: _____

GPS Unit : 1 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
~~START~~	0900	57	3-6	0	clear	patchy	overcast	drizzle	shower
START	0930	61	3-6	0	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1620	70	0-2	0	clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Funereal dusky wing	5	6
Cabbage white	30	30
~~Skipper~~ Lady sp.	8	8
Echo blue	3	3
Arman blue	6	6
Sulphur	1	1
Brown elfin	3	3
Behrs metal mark	15	15
Sara orange tip	4	4
Properties (?) Dusky wing	1	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		cryptantha
		Dens menz
		Lupinus bicolor
		Lyath cul.
		Amsinck menz
DFHL01	point	1 coast horned lizard
		Lomatium dasycarpum
		Esch cal.
		annual forbs

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID FLIETNER Add'l Person: ERIN BERGMAN Date: 4/9/10

Project: Campo Wind Energy Project Map #: Campo R-25 Survey Sxn: ______

GPS Unit: 8 QCB Protocol Survey # ~~1~~ 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	1020	69	0	0	(clear) patchy overcast drizzle shower
END	1235	73	0	0	(clear) patchy overcast drizzle shower
START	1430	74	~~0~~5-8	0	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END	1550	73	3-6	0	(clear) patchy overcast drizzle shower

Habitat On-site (circle): open soils, hilltops, ridges, (rock outcrops), soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
Pearly marble		~~12~~ 15
Acmon blue		3
Propertius dusky wing		2
Sara orange tip		~~3~~ 8
Painted lady		3
Behr's metalmark		12
cloudless sulfur ~~bright yellow butterfly~~		1
Funereal dusky wing		2
Perplexi ~~Bramble~~ hairstreak		1
Anise swallowtail		2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		last cal
		erys cap
		Camis sp.
		Nemo menz
		esch cal
		cryp int
		Plagio botrys
DFHL02	point ~~DFCL02~~	DFCL02 coast horned lizard 1
		gilia sp.
		Salvia columbarian

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: Ø Date: 9 APRIL, 2010

Project: Campo Wind Energy Project Map #: 16 Survey Sxn: CAMPO H

GPS Unit : 5 QCB Protocol Survey # 12 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1430	74	3->5	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1500	73	1->4	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1600	72	1->6	CLEAR	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle) (open soils) hilltops, (ridges), (rock outcrops), soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
BEHR'S METALMARK	TALLY IN FIELD NOTEBOOK	57
DESERT ORANGETIP	"	4
CALIFORNIA MARBLE	"	6
PERPLEXING HAIRSTREAK	"	17

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Mike Coulter Add'l Person: Ø Date: 9 April, 2010

Project: Campo Wind Energy Project Map #: 16 Survey Sxn: CAMPO-L

GPS Unit : 5 QCB Protocol Survey # 12 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0930	67	Ø→2	CLEAR	clear	patchy	overcast	drizzle	shower
	1000	74	Ø→4	CLEAR	clear	patchy	overcast	drizzle	shower
	1100	72	Ø→5	CLEAR	clear	patchy	overcast	drizzle	shower
	1200	76	Ø→2	CLEAR	clear	patchy	overcast	drizzle	shower
	1300	77	1→4	CLEAR	clear	patchy	overcast	drizzle	shower
	1400	73	3→7	CLEAR	clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
California Marble	Tally in Field Notebook	52
Perplexing Hairstreak	"	40
Funereal Duskywing	"	38
Behr's Metalmark	"	97
Sara Orangetip	"	2
Painted Lady	"	5
Brown Elfin	"	11
California Tortoiseshell	"	1
Desert Orangetip	"	7

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCHL01	POINT	JUVENILE HORNED LIZARD
MCHL02	POINT	ADULT HORNED LIZARD
MCC001	POINT	HOSTPLANT LOCATION

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: BRIAN LOHSTROH Add'l Person: S. Innecken, Misty Date: 4/13/10

Project: Campo Wind Energy Project Map #: 16, 17, 19 Survey Sxn: N

GPS Unit : #1 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1040	62	2-5	0	(clear)	patchy	overcast	drizzle	shower
	1200	67	2-3	0	(clear)	patchy	overcast	drizzle	shower
	1300	64	0-3	0	(clear)	patchy	overcast	drizzle	shower
	1430	66	0-6	0	(clear)	patchy	overcast	drizzle	shower
	1520	62	3-8	30	clear	(patchy)	overcast	drizzle	shower
	1640	59	3-8	30	clear	(patchy)	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Common white	II	2
west Coast Lady	II	2
perplexing Hair Streak	~~IIII~~ ~~IIII~~ ~~IIII~~ II	17
Acmon Blue	II	2
Dusky wing	~~IIII~~ ~~IIII~~ I	11
Behr's metal mark	~~IIII~~ ~~IIII~~ ~~IIII~~ ~~IIII~~ ~~IIII~~ ~~IIII~~ II	32
Spring white	I	1
Brown Elfin	III	3
Gabbs checkerspot	I	1
Painted Lady	III	III
pearly Marble	~~IIII~~ III	8
Southern Blue	I	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		BUSH
		WREN
		CAQU
		SPTO
		CORA
		AMCR
		ORJY
		BHGR
		ATFL
		CALT
		SCJA
		BGGN
		HOWR
		RTHA
		BEWR
		NOHA
BLGV01		Gerea viscida x 10 indiv.
BLCP01		Lathyrus splendens x 2
BLDB02		Linanthus bellus x 10
BLPJ01		Caulanthus simulans x 100
BLDB03		Linanthus bellus x 30
BLDB04		L. bellus x 100s
BLDB05		L. bellus x 10s
BLDB06		L. bellus x 100s
BLNH01		Northern harrier ♀
BLPJ02		Caulanthus simulans x 30

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Dorothy Mack Date: 4/13/10

Project: Campo Wind Energy Project Map #: 9 Campo Survey Sxn: ______

GPS Unit : 8 QCB Protocol Survey # 2 of 5.

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	13:30	62°	3/4	25	clear (circled) patchy overcast drizzle shower
	14:40	61°	4/7	25°	clear (circled) patchy overcast drizzle shower
	15:50	58°	1/3	20°	clear (circled) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
	15:50				clear patchy overcast drizzle shower
END					clear patchy overcast ~~drizzle shower~~

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources (circled: open soils, hilltops, ridges, rock outcrops, soil crusts, old roads, various nectar sources)

Butterfly Species	Tally	Total
Behrs Metalmark	~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ||||	29
Blue ?	||||	4
Marble	|||	3
Painted Lady	||||	4
Orange ?	|	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Cryptantha
		Pectocarya
		Manzanita
		Erodium
		Nemophila
		Eschescholzia
		Viola
		Lasthenia
		Layia
		Lupinus
		Arabis
		Ericameria

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Habitat Assessment
Field Data Sheet

Recorder: Dale Powell Add'l Person: Darlene Mack Date: 4/13/10

Project: Campo Wind Energy Project Map #: 1 GPS Unit : 8

START Time: 10:30 Temperature: 64° Wind Speed (mph)/Direction: 0 %Cloud Cover: 15%

END Time: 12:10 Temperature: 60° Wind Speed (mph)/Direction: 2/4 — %Cloud Cover: 30%

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS/GENERAL SPECIES LIST
		Acmon Blue III
		Blue IIII

Quino Checkerspot Butterfly Habitat Assessment
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS/GENERAL SPECIES LIST
		Manzanita
		Ceanothus
		Erodium
		Nemophila
		Cryptantha
		Lasthenia
		Layia
		Lupinus
		Viola

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Mike Coulter Add'l Person: Ø Date: 13 APRIL 2010

Project: Campo Wind Energy Project Map #: TILE 5 Survey Sxn: CAMPO "C"

GPS Unit : GARMIN 2 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1000	58	Ø->3 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	58	Ø->3	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	56	Ø->2	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	65	Ø->1	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1400	67	1->2	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1500	66	Ø->3	CLEAR	(clear)	patchy	overcast	drizzle	shower
END	1600	63	1->5	CLEAR	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) (hilltops) (ridges) (rock outcrops) soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
BEHRS METALMARK	IN FIELD NOTEBOOK	34
CALIFORNIA MARBLE	"	13
QUINO CHECKERSPOT BUTTERFLY	"	1
FUNEREAL DUSKYWING	"	18
BROWN ELFIN	"	2
ACMON BLUE	"	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCQB04	Point	SOMEWHAT DRAB INDIVIDUAL ON THE BEST- LOOKING
		HILLTOP IN CAMPO C.

TOTAL NUMBER OF QCB DETECTED: 1 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Park LaLoste Add'l Person: Georgina Date: 4/14/10

Project: ~~Manzanita~~ Campo Wind Energy Project Map #: 8 Survey Sxn: F

GPS Unit : 1 QCB Protocol Survey # _____ of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0930	65	3A-7m	5	(clear)	patchy	overcast	drizzle	shower
	130	70	3A-6m	75	clear	patchy	(overcast)	drizzle	shower
Left Ridge	230	67	4A 8m	90	clear	patchy	(overcast)	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	300	66	4A 8m	80	clear	patchy	(overcast)	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
* QCB - viewed through Binos - as I approached it, it flew off, effort to refind were negative after 45 mins - no Pics - I would not report it yet - should maybe try to refind later today + Tomorrow -		1
Acmon Blue	////	4
Perplexing Hairstreak	//// //// //// //// ///	23
California Marble	//// //// //// //// //// ////	30
Brown elfin	///	3
Painted Lady	///	3
Behrs Metalmark	//// //// //// //// //// //// 100+	100+
Fun Dusky wing	////	5

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
ELAQCB01	Point	QCB Spotting but no Pics - recommend revisit
		Soon For confirmation.
		Lastheria Californica
		Erodium sp.
		Plagiobothrys sp.
		Ceanothus sp.
		Lupinus sp.
		Mimulus Brevipes
		Layia Glandulosa
		Amsinkia menziesii
		Eschscholzia Californica
		Camissonia sp.
		Trogopogon polycholius
		Amsinckia acaulis
		Arabis sp.
		Baby Blue eyes.
		Solanum parryii
		Sanicula arguta
		Chia.

TOTAL NUMBER OF QCB DETECTED: _____ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Gretchen Cummings Add'l Person: Gene Date: 4/14/10

Project: Campo Wind Energy Project Map #: 12 Survey Sxn: G

GPS Unit : 2 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0945	60.3°F	1.0/2.2	20%	clear	(patchy)	overcast	drizzle	shower
1125		68.7°F	3.2/3.8	25%	clear	(patchy)	overcast	drizzle	shower
[illegible]		[illegible]	[illegible]	[illegible]	clear	(patchy)	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1345	70.0°F	2.6/3.9	40%	clear	(patchy)	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, (ridges), rock outcrops, soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
Callophrys dumosa	𝍸 𝍸	10
Apodemia mormo virgulti	𝍸 𝍸 𝍸 II	17
Erynnis sp. (no white)	𝍸 II	7
Vanessa cardui	IIII	4
Papilio eurymedon	I	1
Euchloe hyantis	IIII	4
Anthocharis sara	IIII	4
Pontia sisymbrii	II	2
Sphygid moth	II	2
Icaricia acmon	𝍸 I	6
Colias harfordii	I	1
Celastrina ladon echo	I	1

Map/GPS label	Point/Polygon Type	Comments / Species List
		Plagiobothrys sp.
		Spotted Towhee
		Cryptantha sp.
		California Thrasher
		Descurainia sp.
		Anna's Hummingbird
GCHL01	Sensitive species Horned Lizard	Horned Lizard
		Lupinus sp
		Lasthenia californica
		Arabis
		American Robin
		Red-tailed Hawk
		Black-chinned Sparrow
		Lupinus bicolor
		California Poppy
		Northern Flicker
		Amsinckia menzeisii
		Western Scrub Jay
		Nemophila menzeisii
		Bushtit
		Gilia sp.
		Black-throated Grey Warbler
		Oak Titmouse
		White-crowned Sparrow

Total # of QCB Detected 0 Individuals

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Gretchen Cummings Add'l Person: Gene Date: 4/14/10

Project: Campo Wind Energy Project Map #: 11 Survey Sxn: 6

GPS Unit : 2 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1420	77°F	2.6/6.2	70%	clear	(patchy)	overcast	drizzle	shower
	1600	74°F	0.8/1.9	80%	clear	(patchy)	overcast	drizzle	shower
				[illegible]	clear	(patchy)	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1645	69°F	1.3/2.1	70%	clear	(patchy)	overcast	drizzle	shower

Habitat On-site (circle): (open soils) hilltops, ridges, (rock outcrops) soil crusts, clay soils, (old roads) (various nectar sources)

Butterfly Species	Tally	Total
Pontia sisymbrii	III	3
Vanessa cardui	I	1
Apodemia mormo virgulti	III	3
Sphygid moth	I	1
Anthocharis sara	I	1
Euchloe hyantis	IIII	6
Blue Undifferentiated	I	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Amsinckia menziesii
		Spotted Towhee
		Cryptantha sp.
		Plagiobothrys
		Lupinus bicolor
		Lasthenia californica
		Descurainia sp.
GCLA01	Sensitive Species Horned Lark	heard Horned Lark
		California Thrasher
		Lark Sparrow
		Anna's Hummingbird
		cf. Ericameria pinifolia
		Arabis
		Phacelia sp.
		Trichostemma sp.

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Margie Mulligan Luis Connelly Date: 4/14/10

Project: Campo Wind Energy Project Map #: 5 Survey Sxn: _____

GPS Unit : 5 + Margie's Personal QCB Protocol Survey # 1 of ~~2~~ 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1015	63°	0/~~2~~	0	(clear)	patchy	overcast	drizzle	shower
	1205	64°	0/6	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) hilltops, ridges, rock outcrops, soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
Acmon Blue	~~IIII IIII IIII~~ I	~~16~~
Behr's Metalmark	~~IIII~~ ~~IIII~~ IIII	~~14~~
Lady?	I	I
Perplexing Hairstreak?	II	2
Southern Marble	II	2
Blue?	I	I
Funeral Duskywing	I	I

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
	Nectar Sources:	Ceanothus leucodermis
		C. greggi var. perplexans
		Amsinkia menziesii
		Eschscholtzia californica
		Lupinus concinnus
		Erodium cicutarium
		Cryptantha micrantha

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Maggie Mulligan, Louis Connelly Date: 4/14/10

Project: Campo Wind Energy Project Map #: 9-J Survey Sxn: ______

GPS Unit : 5 + Margie's personal QCB Protocol Survey # 2 of 5.

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	13:00	72°	1/3	0	(clear) patchy overcast drizzle shower
	15:30	62°	7/10	75	sunny clear patchy overcast drizzle shower
	16:45	70°	3/5	50	cumulus clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END					clear patchy overcast drizzle shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), (soil crusts), clay soils, old (roads), (various nectar sources)

Butterfly Species	Tally	Total
Behrs Metalmark	IIII IIII IIII IIII IIII IIII IIII IIII IIII IIII IIII II IIII	58
Marble	IIII IIII IIII IIII I	21
Sara Orange Tip	III	3
Dusky wing	IIII IIII	9
Pale Swallowtail	II	2
Spring White	II	2
Perplexing Hairstreak	I	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
	Nectar Sources:	Lasthenia gracilis Caulanthus simulans
		Phacelia parryi
		Lupinus bicolor
		L. concinnus
		L. truncatus
		Cryptantha sp.
		Ceanothus leucodermis
		Layia glandulosa
		Eschscholtzia californica
MMCS01	sensitive plant pt	Caulanthus simulans →
MMCS02	"	
MMCS03	"	flowering along ridge 1000s of them
MMCS04	"	and some fruiting
MMCS05	"	
MMCS06	"	
MMCS07	"	
MMCS08	"	
MMGV01	"	Geraea viscida - 1 vegetative plant
		- in a drainage of ridge
DPEP01	Excluded Polygon	Not closed. Closed canopy chaparral

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Margie Mulligan, Luis Connolly Date: 4/14/10

Project: Campo Wind Energy Project Map #: 12 - S5 Survey Sxn: _____

GPS Unit: 5 + Margie's Personal QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	9:45	62°	0/2	0	(clear)	patchy	overcast	drizzle	shower
	10:05	65°	0/2	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, ridges, rock outcrops, soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
—		0

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
	Nectar Source:	Lupinus concinnus
		Cryptantha micrantha
		Lasthenia gracilis
		Cercocarpus betuloides
		Malacothrix californica
		Eschscholzia californica
		Amsinkia menziesii
		Erodium cicutarium

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Luis Connolly Date: 4/15/10

Project: Campo Wind Energy Project Map #: 16 - I and H Survey Sxn: 2

GPS Unit : 2 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	61°	8/11	0	(clear)	patchy	overcast	drizzle	shower
	1015	66°	11/14	0	(clear)	patchy	overcast	drizzle	shower
	1125	68°	7/11	0	(clear)	patchy	overcast	drizzle	shower
	1410	72°	4/7	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): ~~open soils~~, hilltops, ridges, rock outcrops, soil crusts, clay soils, ~~old roads~~, various nectar sources

Butterfly Species	Tally	Total
Acmon Blue	II	2
Behr's Metalmark	~~HHT~~ ~~HHT~~ ~~HHT~~ ~~HHT~~ ~~HHT~~	65
White ?	I	1
Marble	HHT	5
Sara's Orangetip	~~HHT~~ I	6
Blue ?	III	3
Dusky wings	~~HHT~~ I	6

Between 9-10 no butterflies were observed even though the weather conditions were adequate.

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Lasthenia
		Erodium
		Manzanita
		Eschscholzia
		Descurainia
		Crypthantha
		Caenothus
		Lupinus
		Penstemon
		Phacelia
		Arabis
		Salvia columbaria
		Dichelostemma
		Viola
		Amsinckia
		Mimulus
		Nemophilia
DPHL01	Point	San Diego Horned Lizard
DPCS01	Point	Caulanthus ~~[illegible]~~ simulans
DPEP01	Excluded Polygon	Closed Canopy Chaparral
DPEP02	"	"
~~DPEP03~~	~~"~~	~~"~~
DPIN01	Include Polygon	Resurveyed rough terrain
DPIN02	"	
DPIN03	"	
↑		
Included		

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: R. Connelly Date: 15 APRIL 2010

Project: Campo Wind Energy Project Map #: 27 Survey Sxn: CAMPO - R

GPS Unit : 3 QCB Protocol Survey # 2 ? of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	0900	64	6	Ø	(clear) patchy overcast drizzle shower
	1000	67	3	Ø	(clear) patchy overcast drizzle shower
	1100	64	9	Ø	(clear) patchy overcast drizzle shower
	↓				clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END					clear patchy overcast drizzle shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), soil crusts, clay soils, old roads, various (nectar sources)

Butterfly Species	Tally	Total
Vanessa cardui		1
V. virginiensis		1
Erynnis species		5
Euchloe h. lotta		2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
27		Goldfields
		Sugar bush
		Cryptantha
		Ceanothus

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: Ø Date: 15 APRIL, 2010

Project: Campo Wind Energy Project Map #: TILE 14 Survey Sxn: CAMPO-K

GPS Unit : GARMIN GO QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	67	1→5 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1000	68	1→8 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	71	Ø→7 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	71	Ø→8 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	70	2→0 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1400	71	Ø→3 MPH	50% COVER	clear	(patchy)	overcast	drizzle	shower
~~END~~	1500	70	1→4 MPH	90% COVER	clear	patchy	(overcast)	drizzle	shower

Habitat On-site (circle): (open soils) (hilltops) (ridges) (rock outcrops) soil crusts, clay soils, (old roads) (various nectar sources)

END 1530 HRS, 72°F, WIND = 1→4 MPH, 100% COVER

Butterfly Species	Tally	Total
PERPLEXING HAIRSTREAK	TALLY IN FIELD NOTEBOOK	41
PAINTED LADY	"	1
BEHR'S METALMARK	"	158
FUNEREAL DUSKYWING	"	20
ACMON BLUE	"	9
SOUTHERN BLUE	"	11
DESERT ORANGETIP	"	1
CALIFORNIA MARBLE	"	33
CALIFORNIA TORTOISESHELL	"	1
SPRING WHITE	"	5
PALE TIGER SWALLOWTAIL	"	5

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCJEWELFLOWER2 01	POINT	SMALL BUT DENSE POPULATION

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: ~~0~~ Date: 16 APRIL, 2010

Project: Campo Wind Energy Project Map #: TILE 5 Survey Sxn: CAMPO - A + C

GPS Unit : GARMIN 7 QCB Protocol Survey # 2 of 5 .

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	67	0->3	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1000	60	2->5	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	70	0->3	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	73	0->3 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	74	1->4 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1400	76	0->3	CLEAR	(clear)	patchy	overcast	drizzle	shower
END	1500	73	2->5	CLEAR	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

1530, 0->3 MPH, CLEAR, 73°F.

Butterfly Species	Tally	Total
BEHR'S METALMARK	IN FIELD NOTEBOOK	120
PERPLEXING HAIRSTREAK	"	25
PAINTED LADY	"	2
BROWN ELFIN	"	8
CALIFORNIA MARBLE	"	19
SPRING AZURE	"	2
GABB'S CHECKERSPOT	"	1
ARROWHEAD BLUE	"	33
ACMON BLUE	"	35
FUNEREAL DUSKYWING	"	10
ALFALFA BUTTERFLY	"	2
GREAT PURPLE HAIRSTREAK	"	1
SPRING WHITE	"	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCHL05	POINT	ADULT HORNED LIZARD
MCHL06	POINT	JUVENILE HORNED LIZARDS
MCSH01	POINT	MATING SPADEFOOT TOADS

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Eugene Pablo Date: 4/16/10

Project: ~~Manzanita~~ Campo Wind Energy Project Map #: 16 Survey Sxn: Campo 6

GPS Unit : 1 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1510	75	4/7	0	clear	patchy	overcast	drizzle	shower
	1700	70	3/6	0	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, ~~rock outcrops~~, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
White?	I	1
Behr's Metalmark	IIII II	7
Blue?	II	2
Dusky wing?	IIII III	8
Southern Blue	I	1
Painted Lady	I	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
DPHL 01	POINT	San Diego Horned Lizard
		Manzanita
		Lasthenia
		Erodium
		Layia
		Lupinus
		Cryptantha
		Ceanothus
		Amsinckia
		Mimulus
		Eschscholzia
		Phacelia
		Arabis
		Descurainia
		Hirschfeldia
		Nemophila
		Plagiobothrys
DPTP01	Polygon	Open area along ~~[illegible]~~ arroyo
DPEP01	"	Closed Canopy Chaparral

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Eugene Pablo, Raymond Connolly, Bonnie Hendricks Date: 4/16/10

Project: Manzanita Wind Energy Project Map #: 24 R Campo Survey Sxn: Camp R

GPS Unit : 1 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	9:45	60°	2/4	0	(clear)	patchy	overcast	drizzle	shower
	10:55	[illegible]	5/8	0	(clear)	patchy	overcast	drizzle	shower
	12:00	78°	10/13	3	(clear)	patchy	overcast	drizzle	shower
	14:00	72°	5/8	3	(clear)	patchy	overcast	drizzle	shower
	15:45	72°	3/5	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Dehe Metalmark	𝍸 𝍸 𝍸 𝍸 ||	22
Marble	𝍸 𝍸 |||	14
Pale Swallowtail	||	3
Checkerspot	𝍸 𝍸 𝍸 𝍸 𝍸	25
Sara's Orangetip	𝍸 𝍸 |||	14
Acmon Blue	𝍸 ||	7
Blue?	𝍸 ||	8
Gabb's	𝍸 ||	7
White?	𝍸 |	6
Dusky wing	𝍸 𝍸	10
Perplexing Hairstreak	|	1
Southern Blue	||	3
Painted Lady	||	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Mazanita
		Lasthenia
		Layia
		Erodium
		Lupinus
		Cryptantha
		Ceanothus
		Amsinckia
		Mimulus
		Eschscholzia
		Phacelia
		Arabis
		Descurainia
		Nemophila
		Plagiobothrys
	Excluded	
DPEP01	Polygon	Closed Canopy Chaparral
DPEP02	"	"
DPEP03	"	"
DPEP04	"	"
DPIP01	Included Polygon	Open Chaparral
DPIP02	"	"

TOTAL NUMBER OF QCB DETECTED: _____ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Bonnie Hendrickson Add'l Person: Raymond escost Date: 4/16/10

Project: Campo Wind Energy Project Map #: 24 & 19 Survey Sxn: Campo R

GPS Unit: Garmin 3 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	9:15	59.5°	2.2/4.4	0	clear	patchy	overcast	drizzle	shower
	10:20	71.5°	1.7/4.3	0	clear	patchy	overcast	drizzle	shower
	11:50	72.0°	1.2/2.5	0	clear	patchy	overcast	drizzle	shower
	12:30	73.0°	2.0/3.0	0	clear	patchy	overcast	drizzle	shower
	1:45	73.5°	6.2/10.3	0	clear	patchy	overcast	drizzle	shower
	3:15	73.7°	1.4/4.2	0	clear	patchy	overcast	drizzle	shower
END	5:00	67.2°	2.3/5.8	0	clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

END 5:45 66.3° 4.5/8.7 0 clear

Butterfly Species	Tally	Total
Dusky wing (small black w/ white dots on fore wing dorsal)	I	1
Duskywing (Erynnis funeralis or tristis)	III	3
Chalcedon Checkerspot	IIII II	7
Quino!	I	1
Gabb's Checkerspot	IIII IIII II	12
Acmon Blue	IIII I	6
Marbled White	IIII III	8
Southern Blue	II	2
Pygmy Blue	I	1
Sara's Orangetip	IIII IIII II	12
Purplish Hairstreak	III	3
Behr's Metalmark	IIII IIII IIII IIII IIII II	27
Lady sp.	III	3
Duskywing sp.	II	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Bonnie Hendricks 4-16-10

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
BHEP01	Excluded Polygon	Closed Canopy Chaparral
BHIP01	Included Polygon	Open Chaparral
BHQB01	Quino!	Seen nectaring on Layia glandulosa
	10:10	1 photo from far away
	fresh	flew on other side of
	0557013	shrubs Mixed Chaparral
	3610034	lots of nectar, open soils
		within chaparral
		+ AdFa, + CeRo, ErFa
BHAR01	host plant	1 plant in bloom
	Nearby	Antirrhinum sp.
		Photo
BHAR02-4	host plant	Antirrhinum 4 plant
BHNL01	mammal	Desert Woodrat Nest
		built in cactus + surrounding nest,
		Nectaring plants:
		Layia glandulosa
		Lasthenia sp.
		Eschaltzia sp.
		Cryptantha sp.
		Ceanothus spp.
		Amsinckia sp.

TOTAL NUMBER OF QCB DETECTED: (1) INDIVIDUALS

Over

557209
3610368

3610268
557059

The photo was taken at a distance, but the Quino is visible. You can find it near the center of the photo nectaring on white tidy tips (Layia glandulosa). The butterfly is completely covering the flower in the photo, but you can see another tidy tips just above and to the left. The Quino was fresh with bright color and no nicks or tears in the wings. The habitat was mixed chaparral dominated by chamise (Adenostemma fasciculata), mountain mahogony (Cercocarpus betuloides), and buckwheat (Eriogonum fasiculatum) with openings of bare soil and nectaring plants. One climbing snapdragon (Antirrhinum kellogii) plant in bloom was found nearby, see second photo attached.

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Margie Mulligan Add'l Person: _____ Date: 4.17.10

Project: Campo Wind Energy Project Map #: 11-C & 12-C Survey Sxn: _____

GPS Unit : 2 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	67°	0-3	80% Thin	clear	patchy	overcast	drizzle	shower
	1000	70°	0-4	100%	clear	patchy	overcast	drizzle	shower
	1245	79°	1-5	100%	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

saw a perplexing night away

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Perplexing Hairstreak	𝍸 II	7
Dusky wing	𝍸 II	7
Pearly Marble	𝍸 𝍸 𝍸 𝍸 II	22
Pale Swallowtail	IIII	4
Behr's Metalmark	𝍸 I	6
Sara's Orangetip	III	3
Acmon Blue	II	2
Checkered White	I	1
Sulphur sp.	I	1
Lady sp.	I	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MMGV01	Sensitive plant pt	Geraea viscida - 3 vegetative plants
~~AREA~~	Nectar Source	Ericameria linearifolia
		Erodium cicutarium
		Lasthenia gracilis
		Cryptantha micrantha
		Ceanothus greggii perplexans & C. leucodermis
		Marah macrocarpus macrocarpus
		Trichostema parishii
		Pectocarya linearis
		Amsinckia menziesii
		Cercocarpus betuloides
		Penstemon spectabilis
		Lupinus concinnus

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Mike Coffee Add'l Person: Ø Date: 17 April, 2010

Project: Campo ~~Manzanita~~ Wind Energy Project Map #: Tile 1 Survey Sxn: Campo - A

GPS Unit : Garmin 3 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	67	Ø -> 4 MPH	100	clear	patchy	(overcast)	drizzle	shower
	1000	67	Ø -> 2	100	clear	patchy	(overcast)	drizzle	shower
	1100	70	Ø -> 3	100	clear	patchy	(overcast)	drizzle	shower
	1200	73	Ø -> 4	100	clear	patchy	(overcast)	drizzle	shower
	1300	75	Ø -> 5	100	clear	patchy	(overcast)	drizzle	shower
	1320	75	Ø -> 5	100	clear	patchy	(overcast)	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
Behr's Metalmark	Tally in Field Notebook	85
California Marble	"	15
Perplexing Hairstreak	"	8
Acmon Blue	"	8
Funereal Duskywing	"	14
Arrowhead Blue	"	2
Spring White	"	3
Pale Tiger Swallowtail	"	1
Brown Elfin	"	3
Desert Orangetip	"	4
Juba Skipper	"	1
Sara Orangetip	"	7

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MC MORTARHOLE 1	POINT	SEVERAL MORTAR HOLES IN A ROCK
		(NAD 27 CON US) 11S 0560298, 3620234
MCHLO 7	POINT	ADULT HORNED LIZARD

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: — Date: 4/17/10

Project: Campo Manzanita Wind Energy Project Map #: 2 Survey Sxn: Campo D

GPS Unit : 1 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	66°	9/11	90	clear	patchy	overcast	drizzle	shower
	1010	72°	6/8	80% clearing	clear	patchy	overcast	drizzle	shower
	1110	72°	7/9	50%	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Dusky-wing	II	2
Blue?	I	1
Sara's Orangetip	III	3
White?	HH I	6
Behr's Metalmark	I	1

Page 1 of 2

* Can see hazy shadows

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Erodium
		Ceanothus
		Cryptantha
		Amsinckia
		Descurainia
		Nemophila
		Phacelia
		Manzanita
		Plagiobothrys
DPCS001	POINT	Caulanthus simulans all along row
DPCS002	"	"
DPHL001	"	San Diego Horned Lizard

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: – Date: 4/17/10

Project: ~~Manzanita~~ Campo Wind Energy Project Map #: 7 Survey Sxn: Campo D

GPS Unit : 1 QCB Protocol Survey # 2 of 5.

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	11:25	72°	7/9	50%	clear	patchy	overcast (Slight haze)	drizzle	shower
	13:00	78	6/9	50%	clear	patchy	overcast (Slight Haze)	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Painted Lady	ll	2
Dustywing	llll	4
Blue ?,	lll	3
Pale Swallowtail	l	1
Behr's Metalmark	~~llll~~ llll	9
Sara's Orange Tip	~~llll~~ ~~llll~~ ~~llll~~ llll	19
White ?	~~llll~~ ~~llll~~ lll	13
Marble	~~llll~~ ~~llll~~ llll	14

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Erodium
		Ceanothus
		Cryptantha
		Descurainia
		Nemophilia
		Phacelia
		Monzanita
		Amsinckia
		Plagiobothrys

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Margie Mulligan Add'l Person: _____ Date: 4-17-10

Project: Campo Wind Energy Project Map #: 11-H Survey Sxn: _____

GPS Unit : 2 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1300	79°	2-8	100	clear	patchy	(overcast)	drizzle	shower
	1600	80°	2-4	100	clear	patchy	(overcast)	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Pearly Marble	~~HH~~ ~~HH~~ | |	12
Behr's Metalmark	~~HH~~ ~~HH~~ ~~HH~~ ~~HH~~ ~~HH~~ ~~HH~~ ~~HH~~ | | |	38
Funereal Duskywing	| |	2
Checkered White	|	1
Sulphur sp.	|	1
Painted Lady	|	1
Acmon Blue	~~HH~~ ~~HH~~ ~~HH~~ ~~HH~~ | |	22
Sara's Orange Tip	| | |	3

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
☆	Nectar Sources:	Cercocarpus betuloides
		Amsinkia menziesii
		Lianthus bellus
		Lupinus concinnus
		L. bicolor
		Caulanthus simulans
		Cryptantha micrantha
		Plagiobothrys sp.
		Lasthenia gracilis
		Senecio californica
		Anisocoma acaulis
		Lotus strigosus
		Phacelia distans
		Salvia columbariae
		Nemophila menziesii
		Layia glandulosa & platyglossa
		Ceanothus leucodermis & greggii perplexans
		Ericameria linearifolia
MMLB01-04	Sensitive plant pts	Linanthus bellus ≈1000 plants scattered throughout polygon
MMLB05	Sensitive plant pt	Linanthus bellus ≈30 plants
MMHL01	Sensitive lizard pt	Horn lizard - 1
MMHL02	"	"
MMCS01	Sensitive plant pt	Caulanthus simulans - 1 plant
MMAD01	☆ "	Astragalus douglasii var. perstrictus ≈35 plants vegetative
MMDS01	"	Delphinium parishii ssp. subglobosum 50 double check 4 sm budding plants

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: K H Osborne Add'l Person: Georgana Date: 4/8/2010

Project: Campo Wind Energy Project Map #: B(4) / B(8) Survey Sxn:

GPS Unit: #5 QCB Protocol Survey # B-4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	9A	59	2.5/5	0	(clear) patchy overcast drizzle shower
	1120	69	1.7/2.8	0	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
	Zero	72	calm	0	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END	4:25	74	calm	0	(clear) patchy overcast drizzle shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Euchloe hyantis	XXXXXX ~~||||~~ ~~||||~~ |||	73
Boyneis propertius 1		1
Apodemia mormo ~~||||~~ ~~||||~~ XX 1 ←		51
Boynais brizzo	~~||||~~ ~~||||~~ ||	12
Boynais tristis	|	1
Plebejus acmon	1 V IIII	10
Vanessa cardui	~~||||~~ |||	8
A. sara	||||	4
Callophrys perplexa	V ~~||||~~ ~~||||~~ ~~||||~~ ||||	25
Celastrina echo	|||	3
Euproserpinus phaeton	~~||||~~ ~~||||~~ ~~||||~~ ||	17
Heliothis belladona	Heliothis belladona	3
Drasteria tejonica	Drasteria tejonica	3
Drasteria edwardsi		1
Drasteria biformata		1
Abundant Cordylanthus (Quino host) found just off site as indicated on map B4.		

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Abundant Cordylanthus on
		map 13-F on edge of
		oak woodlands & Chaparral
		marked on map.
		2 ♂ Quino hill topping
		off-site on walk
		back as indicated

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

2 maps on one data Sheet

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: K H Osborne Add'l Person: Georgana Date: 4/15/2010

Project: ~~Manzanita~~ campo Wind Energy Project Map #: 8 Survey Sxn: 8

GPS Unit: 9 QCB Protocol Survey # ______ of 5.

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START					clear patchy overcast drizzle shower
8B { 9a		63	2.5-4		(clear) patchy overcast drizzle shower
1030	1130	66	3.9/2-6		(clear) patchy overcast drizzle shower
13F { 1135					clear patchy overcast drizzle shower
200		72	2.4/0-6	haze 10%	(clear) patchy overcast drizzle shower
400		73	calm	haze 10%	(clear) patchy (overcast) drizzle shower
END					clear patchy overcast drizzle shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
P. acmon ~~IIII~~		5
E. tristis II		2
E propertius IIII		4
Euchloe hyantis IIII		4
A mormo ~~IIII~~XX		24
C echo III		3
C. perplexa II		2
Papilio polyxenes I (Black swallow)		1
A. sara IIII		4
* N latitude W. longitude		
E editha ♂ 3:48 pm 32° 41.494 116° 19.728 hill top at project		
♂ #2 357pm 32 41.487 116 19.752 on walk back		
Photographs at ?? and habitat		
		4
V. atalanta I		1
V. cardui IIII		4
V. annabella I		1
Phyciodes Catellus I		1

2c

14, 13
Marie 10
8/4

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Antonette Gutierrez Add'l Person: Phillip Paipa Date: 4/18/10

Project: ~~Manzanita~~ Campo Wind Energy Project Map #: 8,3,4 Survey Sxn: Campo B

GPS Unit : 1 QCB Protocol Survey # 3 of 5.

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	0900	76	0	80	clear patchy (overcast) drizzle shower
	1000	78	0	40	clear (patchy) overcast drizzle shower
	1100	82	0	40	clear (patchy) overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END	1600	84	2mph	30	clear (patchy) overcast drizzle shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, ~~clay~~ soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Common buttorfly	~~HHH~~ III	8
Behr's Metalmark	~~HHH~~ ~~HHH~~ ~~HHH~~ ~~HHH~~ ~~HHH~~ ~~HHH~~ ~~HHH~~ ~~HHH~~ ~~HHH~~ III	48
Acmon Blue	~~HHH~~ IIII	9
Dusky wing	~~HHH~~ ~~HHH~~ I	11
Perplexing hairstreak	II	2
Sara's Orangetip	~~HHH~~ I	6
Ca tortoiseshell	I	1
Pale Swallowtail	I	1
Tiger swallowtail	I	1
Southerblue	II	2

✓

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
AGCH1	Chinese House	x 8 plants
		Erodium cicutarium
		Eucrypta chrysanthemifolia
		Coreopsis californica
		Malacothrix californica
		Malacothrix clevelandii
		Plagiobothrys collinus
		Phacelia
		Nemophila menziesii
		Eriophyllum staechadifolium Pectocarya

TOTAL NUMBER OF QCB DETECTED: ∅ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Louis Connolly Date: 4/18/10

Project: ~~Manzanita~~ Campo Wind Energy Project Map #: 26 Survey Sxn: Campo 9

GPS Unit : 3 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	8:30	66°	0/0	0	Cloudy clear	patchy	overcast	drizzle	shower
	10:00	77°	0/0	0	~~clear~~	patchy	overcast	drizzle	shower
	11:30	80°	~~2~~/4	0	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Pipevine Swallowtail	II	2
Bella's Metalmark	~~HHT~~ ~~HHT~~ ~~HHT~~ ~~HHT~~ ~~HHT~~ ~~HHT~~ ~~HHT~~	70
Marble	~~HHT~~ ~~HHT~~ II	12
White?	IIII	4
Funeral Duskywing	III	3
Duskywing ?	~~HHT~~ ~~HHT~~	10
Sara's Orangetip	~~HHT~~ ~~HHT~~ III	13
Orange ?	I	1
Yellow ?	I	1
Blue ?	IIII	4
Southern Blue	I	1
Acmon Blue	I	1
Pale Swallowtail	I	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Lasthenia
		Castilleja sp (Indian Paintbrush)
		Eriodictyon
		Cryptantha
		Camissonia
		Nemophila
		Arabis
		Dichelostemma
		Lathyrus
		Wall Flower (Erysimum)
		Penstemon
OP BJ01	Point	Black tailed Jack Rabbit

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Louis Connelly Date: 4/18/10

Project: ~~Manzanita~~ Campo Wind Energy Project Map #: 3 Survey Sxn: Campo 9

GPS Unit : 3 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1145	~~80~~°	3/6	0	clear	patchy	overcast	drizzle	shower
	1330	78	4/7	0	clear	patchy	overcast	drizzle	shower
	1430	74°	4/7	0	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, ~~various nectar sources~~

Butterfly Species	Tally	Total
Behr's Metalmark III	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 IIII	43
Gabb's	I	1
Sara's Orangetip	𝍸 III	8
Acmon Blue	𝍸	9
Blue ?	𝍸	5
Marbles	𝍸 𝍸 IIII	9
White's	𝍸 II	7
Common White?	I	1
~~Pale~~ Tailless Yellow?	II	2
Painted Lady	I	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		DeSeavinia
		Lupinus
		Castilleja sp (Indian Paintbrush)
		Erodium
		Cryptantha
		Amsinkia
		Arabis
		Dichlostemma
		Lathyrus
		Penstemon
		Wall Flower (Erysimum?)
DPHLO1	POINT	San Diego Horned Lizard

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Mike Coulter Add'l Person: Ø Date: 18 April, 2010

Project: Campo Wind Energy Project Map #: Tile 20 Survey Sxn: Campo "P"

GPS Unit: Garmin 5 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0844	70	Ø	CLEAR	(clear)	patchy	overcast	drizzle	shower
	0900	71	Ø	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1000	75	Ø	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	77	Ø→2 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	78	Ø→3 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	82	Ø→3 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
END	1400	80	Ø→4 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops); soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
1500 HRS, 76°F, 1→6 MPH, CLEAR		
1600 HRS, 75°F, 3→7 MPH, 40% COVER		
SOUTHERN BLUE	IN FIELD NOTEBOOK	5
ACMON BLUE	"	9
PAINTED LADY	"	3
BEHR'S METALMARK	"	450
CALIFORNIA MARBLE	"	45
ACMON BLUE WITHOUT ANY ORANGE ON WINGS	"	1
SARA ORANGETIP	"	5
PERPLEXING HAIRSTREAK	"	17
FUNEREAL DUSKY WING	"	48
CHALCEDON CHECKERSPOT	"	2
PALE TIGER SWALLOWTAIL	"	1
BROWN ELFIN	"	3
SPRING AZURE	"	6
GABB'S CHECKERSPOT	"	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCMORTARHOLES R	POINT	3 MORTAR HOLES IN A LONG ROCK
MC WW01	POINT	
MCHL08	POINT	TWO JUVENILE HORNED LIZARDS WITHIN 2 FT OF EACH OTHER.

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Philip Paipa Date: 4/19/10

Project: ~~Manzanita~~ Wind Energy Project Map #: 25 Survey Sxn: Campo R

GPS Unit : 13 QCB Protocol Survey # 3 of ~~IV~~ 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1550	76°	3/6	0	(clear)	patchy	overcast	drizzle	shower
	16:35	72°	6/9	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): ~~open soils~~, hilltops, ridges, rock outcrops, ~~soil crusts~~, clay soils, old ~~roads~~, ~~various~~ nectar sources

Butterfly Species	Tally	Total
Southern Blue	III	3
Sara's	II	2
Marble	II	2
Behr's Metalmark	~~IIII~~ I	6
White ?	III	3

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Lasthenia
		Layia
		Cryptantha
		Monzanita
		Lathyrus
		Plagiobothrys

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: Eugene Pabio Date: 19 APRIL 2010

Project: Campo Wind Energy Project Map #: 12 Survey Sxn: CAMPO - E.

GPS Unit : #7 QCB Protocol Survey # 3 of 5 .

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1500	71°	4	Ø	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1630	69°	7-8	Ø	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, ridges, (rock outcrops), soil crusts, clay soils, (old roads), various (nectar sources)

Butterfly Species	Tally	Total
ACmon blue		7
A. Vaqueti		4
Euchloe L. Zotte		2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
12	(only Point)	goldfields
		cryptantha
		Composites.

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: ERIK LaCoste Add'l Person: _____ Date: 4/19/10

Project: Campo Wind Energy Project Map #: 10 Survey Sxn: I

GPS Unit : 10 QCB Protocol Survey # _____ of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1040	64	2M/4max	30	clear	(patchy)	overcast	drizzle	shower
	1215	62	5A/10m	5	(clear)	patchy	overcast	drizzle	shower
	~~1215~~	76	5A/10m	~~0~~	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	330	70	5A/10m	~~0~~	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Southern Blue	II	2
Sara Orangetip	III	3
Behrs metalmark	200+	200+
Spring White	IIII	4
Painted lady	II	2
Pale swallowtail	III	3
Funereal Duskywing	~~HH~~	5
Afranius Duskywing	II	2
California marble	II	2
Acmon Blue	III	4

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
ELCOLHET01	Point	Collinsia Heterophylla – 100–200
ELCOLHET02	Point	Collinsia Heterophylla - 50–100 but there
		are thousands in the same Drainage
		Further east.
		Erodium sp
		Cal Poppy
		Cream cups
		Plagiobothrys
		Lupine sp.
		Gilia capitatum
		Chia
		Dichelostemma capatatum
		Senecio Cal.
		Mimulus Fremontii
		Antirrhinum coronlis
		Lasthenia Cal.

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Natalie Brodie/Evin Bergman Add'l Person: Mike Carriger Date: 19 Apr 2010

Project: Campo Wind Energy Project Map #: 16 Survey Sxn: _____

GPS Unit : #5 QCB Protocol Survey # 3 of 5 .

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1045	65°	4 / 7 mph	40 %	clear	patchy	overcast	drizzle	shower
	1145	72°	4 / 8 mph	10 %	clear	patchy	overcast	drizzle	shower
	1330	74°	2/5	0	clear	patchy	overcast	drizzle	shower
	1445	75°	2/5	0	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1540	73°	3/6	0	clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Behr's metalmark	𝍸 𝍸 𝍸 𝍸 |	23
unidentified white	|	1
unidentified blue	|	1
CA marble	𝍸 𝍸 𝍸 ||||	19
Southern blue	||||	4
Perplexing hairstreak	𝍸 |	6
Funereal Duskywing	𝍸	5
Pale swallowtail	|	1
Acmon blue	𝍸 𝍸 ||	12
Painted lady	|	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Fiddleneck, Goldfields, popcorn flower
AS EB0102		Astragalus
EB01		Campo pea
EB01		Campo pea 2-6
BJEB01		Black tailed jackrabbit
EBHL01		Horned lizard
EBHL02		Horned lizard (big one!)
		Antirrhinum
EB01		Campo pea 11
AS EB0103		Astragalus 3
AS EB0104		Astragalus 4
EB0105		Astragalus 5
EB0106		Astragalus 6
EB0107		Astragalus 7
EB0108		Astragalus 8
EB0109		Astragalus 9

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Natalie Bradic/Erin Bergman Add'l Person: Mike Carriger Date: 19 Apr 2010

Project: Campo Wind Energy Project Map #: 19 Survey Sxn: Campo - M

GPS Unit : #5 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1200	73°	3/6	Ø	(clear)	patchy	overcast	drizzle	shower
	1300	72°	3/10	Ø	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1330	74°	2/5	Ø	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
CA Marble	𝍸 𝍸 𝍸 ||	17
Sara orangetip	||||	4
Funereal Duskywing	𝍸 |	6
Southern blue	|	1
Acmon blue	𝍸 𝍸 𝍸 𝍸 ||||	24
Behrs Metalmark	𝍸 𝍸 𝍸 ||	17
Purplestreak Hairstreak	𝍸 𝍸 ||	12
Unidentified sulfur	||	2
Gulf fritillary (?)	|	1
		84

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		goldfields, popcorn flower, fiddleneck
EB01		Campo pea 7
EB0102		Campo pea 5
EB0103		Campo pea 9
EB0104		Campo pea 10

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Philip Paipa Date: 4/19/10

Project: Campo Wind Energy Project Map #: 23 Survey Sxn: Campo Q

GPS Unit: 13 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	10:45	69°	2/4	20	cirrus ~~clear~~ patchy overcast drizzle shower
	12:15	75°	6/8	0	(clear) patchy overcast drizzle shower
	13:30	79°	5/7	0	(clear) patchy overcast drizzle shower
	15:00	81°	6/9	0	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END					clear patchy overcast drizzle shower

Habitat On-site (circle): (open soils), hilltops, (ridges), (rock outcrops), (soil crusts), clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
Behrs Metal Mark	|||| |||| |||| |||| |||| |||| || ...	102
Sara's Orange Tip	|||| |||| ||||	15
White?	|||| |||| ||	12
Marble	|||| ||||	10
Blue ?	||||	4
Pale Swallowtail	||||	4
Chalcedon	|||	3
Painted Lady	||	2
Gabbs/Quino	|	1
Funeral Duskwing	|||| |||| ||	12
Dusky wing	|||| |||| |||| |||	18

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Lasthenia
		Layia
		Ceanothus
		Phacelia (2)
		Eschscholzia
		Malacothrix
		Plagiobothrys
		Cryptantha
		Nemophila
		Eriogonum

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: NONE Date: 19 APRIL 2010

Project: Campo Wind Energy Project Map #: TILE 30 Survey Sxn: CAMPO - P (NORTH)

GPS Unit : GARMIN 2 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1100	69	0->6 MPH	45%	clear	(patchy)	overcast	drizzle	shower
	1200	70	1->6	5%	(clear)	patchy	overcast	drizzle	shower
	1300	75	0->5	5%	(clear)	patchy	overcast	drizzle	shower
	1400	75	0->4	5%	(clear)	patchy	overcast	drizzle	shower
	1500	76	0->5	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1600	75	2->6	CLEAR	(clear)	patchy	overcast	drizzle	shower
END	1630	75	0->3	CLEAR	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) (hilltops) (ridges) (rock outcrops) soil crusts, clay soils, (old roads) (various nectar sources)

Butterfly Species	Tally	Total
BEHR'S METALMARK	TALLY IN FIELD NOTEBOOK	195
CALIFORNIA MARBLE	"	17
FUNEREAL DUSKYWING	"	25
PERPLEXING HAIRSTREAK	"	2
PAINTED LADY	"	1
CALIFORNIA DOGFACE (FEMALE)	"	1
QUINO CHECKERSPOT BUTTERFLY	"	2
SPRING WHITE	"	2
SOUTHERN BLUE	"	1
DESERT ORANGETIP	"	1
SARA ORANGETIP	"	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCHL10	POINT	
MCQB05	POINT	CHASING MCQB06. PHOTOS TAKEN
MCQB06	POINT	

TOTAL NUMBER OF QCB DETECTED: 2 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: Eugene Pablo Date: 19 April 2010

Project: Campo Wind Energy Project Map #: 15 & 16 Survey Sxn: CAMPO-L

GPS Unit : #7 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1000	70°	4	50	(clear)	patchy	overcast	drizzle	shower
	1130	71°	6	30	(clear)	(patchy)	overcast	drizzle	shower
	1200	73°	5	ø	(clear)	patchy	overcast	drizzle	shower
	1330	76°	3	ø	(clear)	patchy	overcast	drizzle	shower
	1400	76	4	ø	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1500				clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), soil crusts, clay soils, (old roads), various (nectar) sources

Butterfly Species	Tally	Total
Acmon blue		4
C. Augustina		1
E. funeralis		4
E. species		5
C. perplexa		6
Euchloe h. Zotta		11
A. Sara		4
A. Virgulti		15+
Philosora sp.		2
[Hyles lineata]		1
Colias harfordii		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
15 & 16		Cryptantha
		Blue dicks
		baby blue eyes
		Arabis sp.
		Goldfields
		Ceanothus.

TOTAL NUMBER OF QCB DETECTED: ___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: NONE Date: 20 APRIL, 2010

Project: Campo Wind Energy Project Map #: MAP TILE 18 Survey Sxn: CAMPO - N

GPS Unit : GARMIN Z QCB Protocol Survey # R1 of 5 .

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0945	65	1->5 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1000	64	2->6MPH	0%	(clear)	patchy	overcast	drizzle	shower
	1100	68	2->8 MPH	5%	(clear)	patchy	overcast	drizzle	shower
	1200	68	2->5 MPH	5%	(clear)	patchy	overcast	drizzle	shower
	1300	70	0->4 MPH	5%	(clear)	patchy	overcast	drizzle	shower
	1400	72	0->4 MPH	10%	clear	(patchy)	overcast	drizzle	shower
END	1445	70	2->8 MPH	50%	clear	(patchy)	overcast	drizzle	shower

Habitat On-site (circle): (open soils) (hilltops) (ridges) (rock outcrops) soil crusts, clay soils, (old roads) (various nectar sources)

Butterfly Species	Tally	Total
BEHR'S METALMARK	TALLY IN FIELD NOTEBOOK	165
CALIFORNIA MARBLE	"	4
PERPLEXING HAIRSTREAK	"	3
ACMON BLUE	"	7
SOUTHERN BLUE	"	6
HENNE'S CHECKERSPOT	"	1
FUNEREAL DUSKYWING	"	23
SARA ORANGETIP	"	1
WESTERN TAILED BLUE	"	1
PAINTED LADY	"	1
WEST COAST LADY	"	1
DESERT ORANGETIP	"	1
SPRING AZURE	"	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCWW02	POINT	ADULT WHIPTAIL
MCWW03	POINT	ADULT WHIPTAIL

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: Eugene Pavlo Date: 20 April 2010

Project: Campo Wind Energy Project Map #: 11 & 12 Survey Sxn: Campo E.

GPS Unit : #7 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	59°	3	highclds	(clear)	patchy	overcast	drizzle	shower
	1000	67	1	"	(clear)	patchy	overcast	drizzle	shower
	1100	63	9	"	clear	(patchy)	overcast	drizzle	shower
	1200	64	7	"	clear	(patchy)	overcast	drizzle	shower
	1300	65	9	30	clear	(patchy)	overcast	drizzle	shower
	1400	63	10	50	clear	(patchy)	overcast	drizzle	shower
END	1500	62	9@	40	clear	(patchy)	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), soil crusts, clay soils, (old roads), various (nectar) sources

Butterfly Species	Tally	Total
Erynnis species		7
A. Sara		2
P. Acmon		15+
A. virgulti		15+
V. cardui		1
C. perplexa		1
Philosora		1
[E. pheston]		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
11/12		Goldfields
		Amsonia
		Ceanothus
		Compositae
		Cryptantha
		Baby blue eyes
		[Collinsia - not in flower]

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: B. LOHSTROH Add'l Person: D. Faulkner (Nearby) / Eugene (Escort) Date: 4/20/10

Project: Campo Wind Energy Project Map #: 5, 11, 12 Survey Sxn: C

GPS Unit : #10 QCB Protocol Survey # 3 (?) of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0945	65°F	2-6/12	40%	Hazy clear	patchy	overcast	drizzle	shower
	1045	65	4-10	40%	Hazy clear	patchy	overcast	drizzle	shower
	1200	67	4-8	20%	clear	patchy	overcast	drizzle	shower
	1300	69	6-9/12	40 %	clear	patchy	overcast	drizzle	shower
	1400	64	6-12	40 %	clear	patchy	overcast	drizzle	shower
	1440	67	6-12	50 %	clear	patchy	overcast	drizzle	shower
END	1545	62	8-15	50 %	clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
perplexing Hairstreak		16
Behris Metalmark		26
Funereal Duskywing		3
Grabbs checkerspot		1
Pearly Marble		2
Acmon blue		1
Harford's Sulphur		3
Brown elfin		2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Lego
		BUSH
		SPTO
		WCSP
		WTSW
		BCSP
		BEWR
		SCJa
		sideblotched Lizard, W. whiptail
		cottontail
		Nectar sources
		Anisocoma acaulis, Baeochura, Camissonia
		popcorn flower, erodium, CA poppy,
		Lasthenia californica, Cercocarpus, bet,
		Lotus strigosus, Amsinckia, Filia, Phacelia sp,
		Nemophila, mustards, Menzelia sp, Ceanothus,
		Layia glandulosa
BLRJ01	Rare plant	Caulanthus simulans 1 individuals
BLCP01	"	Lathyrus splendens 1 individual
BLGV01	"	Gerea viscidia 7 individuals
BLGV02	"	" 9 individuals
BLJR01	Rare wildlife	Black tailed jackrabbit

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Margie Mulligan Add'l Person: Shirley Innecken Date: 4.20.2010

Project: Campo Wind Energy Project Map #: 3 Survey Sxn: _____

GPS Unit : 5 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1030	65	2-6	20	clear	(patchy)	overcast	drizzle	shower
	1200	65	4-8 (14)	30	clear	(patchy)	overcast	drizzle	shower
	1400	64	8-13 (15)	50	clear	(patchy)	overcast	drizzle	shower
	1600	66	4-10	50	clear	(patchy)	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), (soil crusts), clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Acmon Blue	See Notebook	12
Behr's Metalmark		100+
Silvery Blue		2
Sara's orangetip		3
Funereal Duskwing		1
Sulphur (Cloudless?) ?		1
Pale Swallowtail		1
Pearly Marble		2
Duskywing		4
Painted Lady		3

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
	Nectar	Phacelia parryi & distans
	Source:	Gilia capitatum
		Cercocarpus betuloides
		Layia glandulosa
		Ceanothus leucodermis
		Streptanthus campestris
		Escholtzia californica
		Coreopsis californica
		Descurainia pinnata
		Collinsia h
		Lotus strigosus
		Ericameria linearifolia
		Caulanthus simulans
		Lupinus bicolor & concinnus & truncatus
SIGE01	bird pt	OWL?
MMSC01	sensitive plant pt	Streptanthus campestris - 5 plants
MMSC02	"	" ~~ridge~~
MMSC03	"	"
MMSC04	"	" - 1 plants
MMDS01	"	Delphinium parishii ssp. subglobosum → common on ridge
MMCS01	"	Caulanthus simulans end pt for ridge

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Louis Connolly Date: 4/20/10

Project: ~~Manzanita~~ Campo Wind Energy Project Map #: 24 Survey Sxn: Campo R

GPS Unit : 13 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1230	66°	7/10	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, ~~hilltops~~, ridges, ~~rock outcrops~~, ~~soil crusts~~, clay soils, ~~old roads~~, various ~~nectar sources~~

Butterfly Species	Tally	Total
Funereal Duskywing	1	1
Sara's Orangetip	III	3
Blue?	11	2
White	11	2
Marble	1	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Salvia columbariae
		Monardella
		Erodium
		Plagiobothrys
		Cryptantha
		others

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Louis Connolly Date: 4/20/10

Project: ~~Manzanita~~ Campo Wind Energy Project Map #: 23 Survey Sxn: Campo Q

GPS Unit : 13 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	9:50	64°	4/6	0	(clear)	patchy	overcast	drizzle	shower
	10:45	66°	4/6	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, ridges, rock outcrops, soil crusts, clay soils, (old roads), various nectar sources

Butterfly Species	Tally	Total
Perplexing Hairstreak	I	1
Marble ?	II	2
White ?	II	2
Lady ?	I	1
Behr's Metalmark	IIII	4
Blue ?	I	1
Emeral Duskywing	II	2
Duskywing ?	II	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Lasthenia
		Plagiobothrys
		Cryptantha
		eTHers
DPHL01	Point	San Diego Horned Lizard

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Louis Connolly Date: 4/20/10

Project: Campo Manzanita Wind Energy Project Map #: 25 Survey Sxn: Campo R

GPS Unit : 13 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	11:00	66	4/6	0	(clear)	patchy	overcast	drizzle	shower
	1320	66	7/10	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): ~~open soils~~, ~~hilltops~~, ~~ridges~~, ~~rock outcrops~~, ~~soil crusts~~, clay soils, ~~old roads~~, ~~various nectar sources~~

Butterfly Species	Tally	Total
Funereal Duskywing	1111	4
Sara's Orangetip	1111 1111	9
Blue?	1111 111	8
White?	1111 11	7
Marble	1111 1	6
Pale Swallow Tail	1	1
Southern Blue	1	1
Painted Lady	1	1
Yellow?	1	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Cryptantha
		Plagiobothrys
		Nemophilia
		Lasthenia
		aThrus
DPTP02 or	Point	San Diego Horned Lizard
DPEP01	Exclude Polygon	Not enough area (My own polygon)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Lorie Connelly Date: 4/20/10

Project: ~~Manzanita~~ Campo Wind Energy Project Map #: 27 Survey Sxn: Campo R

GPS Unit: 13 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1500	67°	8/11	10	~~clear~~	~~patchy~~	overcast	drizzle	shower
	1615	62°	9/14	10	clear	~~patchy~~	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): ~~open soils~~, hilltops, ridges, ~~rock outcrops~~, soil crusts, clay soils, ~~old roads~~, ~~various nectar sources~~

Butterfly Species	Tally	Total
Painted Lady	1	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		LasThenia
		Erodium
		Cryptantha
		Plagiobothrys
		Manzanita
		others

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Mike Carriger Date: 4/23/10

Project: Campo Wind Energy Project Map #: 16 Survey Sxn: Campo G+H (part)

GPS Unit : 5 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1250	58	7/10	10	clear	patchy	overcast	drizzle	shower
	1350	63	8/10	10	clear	patchy	overcast	drizzle	shower
	1505	65	7/10	15	clear	patchy	overcast	drizzle	shower
	1625	60	5/10	10	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Acmon Blue	1	1
Blue?	11	2
Pale Swallowtail	1111	4
Behris Metalmark	1	1
2	1	1
Chalcedon ?	1	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Layia
		Plagiobothrys
		Cryptantha
		Lupinus
		Lasthenia
		Erodium.
		Eschscholzia
		Dichelostemma

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID K. FAULKNER Add'l Person: Josh PAIDA Date: 23 APR 2010

Project: Campo Wind Energy Project Map #: 21, 17 Survey Sxn: CAMPO - N

GPS Unit : #2 QCB Protocol Survey # 3 of 5 .

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1100	59	4	Ø	(clear)	patchy	overcast	drizzle	shower
	1200	60	6	Ø	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1300	61	9	Ø	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), ridges, (rock outcrops), soil crusts, clay soils, (old roads), various (nectar) sources

Butterfly Species	Tally	Total
Euchloe G. Lotta		1
A. SARA		1
Erynnis sp.		2
Apodemia virgulti		

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
#21		Sugar Bush
		Cryptantha
		Amsinkia
		Gold fields
		Blue Dicks.

TOTAL NUMBER OF QCB DETECTED: ∅ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: Josh Paipa Date: 23 April 2010

Project: Campo Wind Energy Project Map #: 18 Survey Sxn: _____

GPS Unit : #2 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1300	61°	9	0	(clear)	patchy	overcast	drizzle	shower
	1400	62	5	10	clear	(patchy)	overcast	drizzle	shower
	1500	65	3	50	clear	(patchy)	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	(patchy)	overcast	drizzle	shower
END	1600	64	4	40	clear	(patchy)	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), soil crusts, clay soils, (old roads), various (nectar) sources

Butterfly Species	Tally	Total
P. Acmon		10+
A. Virginiensis		15+
Erynnis sp.		4
V. virginiensis		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
# 18		Cryptantha.
		Collensia (in flower)
		goldfields
		baby blue eyes
		Composites (white/yellow)
		Buttercups.
		Ceanothus

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: NONE Date: 23 APRIL, 2010

Project: Campo Wind Energy Project Map #: TILES 1 + 5 Survey Sxn: CAMPO A

GPS Unit : GARMIN 7 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1045	60	2 -> 7 MPH	CLEAR	clear	patchy	overcast	drizzle	shower
	1100	61	2 -> 6	CLEAR	clear	patchy	overcast	drizzle	shower
	1200	63	3 -> 7	CLEAR	clear	patchy	overcast	drizzle	shower
	1300	59	3 -> 7	CLEAR	clear	patchy	overcast	drizzle	shower
	1400	61	4 -> 9	CLEAR	clear	patchy	overcast	drizzle	shower
	1415	59	4 -> 9 MPH	CLEAR	clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

B Butterfly Species	Tally	Total
BEHR'S METALMARK	IN FIELD NOTEBOOK	2
ACMON BLUE	"	12
ARROWHEAD BLUE	"	37
PAINTED LADY	"	3
PERPLEXING HAIRSTREAK	"	1
CALIFORNIA MARBLE	"	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Bonnie Hendricks Add'l Person: Luis Connolly Date: 4/23/10

Project: Campo Wind Energy Project Map #: 13 Survey Sxn: Campo F

GPS Unit: Garmin 10 QCB Protocol Survey # 3 of 5.

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	11:55	59.5°	4.3/8.2	0	(clear) patchy overcast drizzle shower
	1:20	62.1	4.3/12.1	0	(clear) patchy overcast drizzle shower
	2:15	65.3	2.6/4.9	0	(clear) patchy overcast drizzle shower
	3:10	61.5	8.0/15.1	10%	(clear) patchy overcast drizzle shower
END	4:15	57.2	4.2/16.1	1%	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END					clear patchy overcast drizzle shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Behrs Metalmark	~~||||~~ |||	8
Perleging hairstreak			1
Marbled White			1
Painted Lady			1
Duskywing (E. funeralis or tristis)	||	2
Blue		

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Nectarine spp.
		Cryptantha spp.
		Lasthenia sp.
		Ercocarpus bet., Ceanothus cun.
		Layia, Eschaltzia, Amsinckia
BHAR03-15	host plant	Antirrhinum kellogii 15 plants in bloom

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Louis Connelly Date: 4/24/10

Project: Campo Wind Energy Project Map #: 16 Survey Sxn: Compo H+I

GPS Unit : 10 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	8:35	63°	0/0	0	(clear)	patchy	overcast	drizzle	shower
	9:45	68°	1/3	0	(clear)	patchy	overcast	drizzle	shower
	11:30	77°	3/6	0	(clear)	patchy	overcast	drizzle	shower
	13:15	77°	4/6	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, ridges, (rock outcrops), (soil crusts), clay soils, old roads, (various nectar sources)

Butterfly Species	Tally	Total
Acmon Blue	𝍸 ||	7
Funeral Duskywing	𝍸 |	6
Blue?	𝍸 |||	9
Pale Swallowtail		
Behr's McTalmark	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 ||||	65
Yellow?	|	1
Mavida	𝍸 𝍸 ||	13
Sara's Orangetip	𝍸 𝍸	10
Duskywing	𝍸 ||	7

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Erodium
		Lasthenia
		Layia
		Lupinus
		Eschscholzia
		Descurainia
		Monzanita
		Phacelia (2 types)
		Salvia columbariae
		Plagiobothrys
		Cryptantha
		Ceanothus
		Dichelostemma
		Amsinckia
		Arabis
DPCS01	Point	Cuviera stimulans
DPHL01	Point	San Diego Horned Lizard
DP HL 02	"	"

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Louis Connolly Date: 4/24/10

Project: Campo Wind Energy Project Map #: 24 Survey Sxn: —

GPS Unit: 10 QCB Protocol Survey # 1 of 5.

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	1340	79°	3/5	0	(clear) patchy overcast drizzle shower
	1540	75°	4/6	0	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END					clear patchy overcast drizzle shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), soil crusts, clay soils, old (roads), various nectar sources

Butterfly Species	Tally	Total
Chalcedona	卌	5
Sara's Orangetip	卌 卌 III	13
Dusky wing	IIII	4
White?	III	3
Blue?	卌 II	7
Perplexing Hairstreak	I	1
Funeral Duskywing	II	2
Acmon Blue	卌 卌 II	12
Marble	II	2
Orange? (Gabbs or Quino - Too far	卌	5
~~Behr's~~ away to ID)		
Behr's Metalmark	卌 III	8

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Erodium
		Lasthenia
		Layia
		Lupinus
		Eschoscholzia
		Descurvria
		Manzanita
		Phacelia
		Salvia columbariae
		Plagio bothyras
		Cryptantha
		Ceanothus
		Dichlostemma
		Amsinckia
		Arabis
DP CH01	Point	Chinese Houses

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Mike Couffer Add'l Person: Ø Date: 24 April, 2010

Project: Campo Wind Energy Project Map #: Tile 12 Survey Sxn: Campo 5

GPS Unit : Garmin 72 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START					clear	patchy	overcast	drizzle	shower
1518		73	2->6 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
1600		73	1->5 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
1623		73	1->3 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
California Marble	Tally in Field Notebook	8
Behr's Metalmark	"	40
Painted Lady	"	3
Southern Blue	"	2
Perplexing Hairstreak	"	22
West Coast Lady	"	2
Spring White	"	2
Pale Tiger Swallowtail	"	3
Brown Elfin	"	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: Ø Date: 24 APRIL, 2010

Project: Campo Wind Energy Project Map #: TILE 11 Survey Sxn: CAMPO C

GPS Unit : GARMIN 72 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1240	70	2->9 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	77	Ø->4 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1320	82	Ø->3 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1400	77	Ø->2 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1500	73	1->9 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	(overcast)	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads*, various nectar sources

Butterfly Species	Tally	Total
CALIFORNIA MARBLE	TALLY IN FIELD NOTEBOOK	9
PALE TIGER SWALLOWTAIL	"	1
BEHR'S METALMARK	"	84
ORANGE SULPHUR	"	1
PERPLEXING HAIRSTREAK	"	60
FUNEREAL DUSKYWING	"	5
QUINO CHECKERSPOT BUTTERFLY	"	1
PAINTED LADY	"	4
BROWN ELFIN	"	1
SARA ORANGETIP	"	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCQB07	POINT	BADLY WORN INDIVIDUAL ON OLD ROAD.
		(NAD 83) 11S 0560710, 3617216
MCHL11	POINT	

TOTAL NUMBER OF QCB DETECTED: 1 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Mike Couffer Add'l Person: Ø Date: 24 April, 2010

Project: Campo Wind Energy Project Map #: Tile 19 Survey Sxn: Camp O

GPS Unit : Garmin 2 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	66	Ø	CLEAR	clear	patchy	overcast	drizzle	shower
	1000	70	Ø	CLEAR	clear	patchy	overcast	drizzle	shower
	1100	73	Ø→3MPH	CLEAR	clear	patchy	overcast	drizzle	shower
	1200	71	Ø→3	CLEAR	clear	patchy	overcast	drizzle	shower
	1210	71	Ø→3	CLEAR	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
California Marble	Tally in Field Notebook	6
Acmon Blue	"	7
Perplexing Hairstreak	"	9
Arrowhead Blue	"	2
Behr's Metalmark	"	100
Southern Blue	"	3
Funereal Duskywing	"	4
Painted Lady	"	1
Common Sootywing (Pholisora catullus)	"	2
Spring White	"	2
Harford's Sulphur	"	1
Orange Sulphur (Alfalfa Butterfly)	"	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCBJ01	POINT	
MCLA07	POINT	
MCWW01	POINT	

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: Ø Date: 25 APRIL, 2010

Project: Campo Wind Energy Project Map #: MAP TILE 11 Survey Sxn: CAMPO 6

GPS Unit: GARMIN 1 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1150	80	Ø->4 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	80	Ø->4 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	85	Ø->1 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1400	78	Ø->4 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1500	75	3->7 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1515	75	3->7 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, (ridges), (rock outcrops), soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
BEHR'S METALMARK	TALLY IN FIELD NOTEBOOK	105
CALIFORNIA MARBLE	"	8
PERPLEXING HAIRSTREAK	"	29
PAINTED LADY	"	7
FUNEREAL DUSKYWING	"	5
PALE TIGER SWALLOWTAIL	"	3
SOUTHERN BLUE	"	4
SARA ORANGETIP	"	5
ORANGE SULPHUR	"	1
SPRING WHITE	"	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCLA NESTING	POINT	HORNED LARK CHASING OFF OTHER BIRDS IN THE AREA.
MCLA OB	POINT	NEST ASSUMED TO BE IN THE VICINITY OF THIS POINT.
MCLAOX	POINT	

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE GOUFFER Add'l Person: Ø Date: 25APRIL, 2010

Project: Campo Wind Energy Project Map #: TILE 12 Survey Sxn: CAMPO G

GPS Unit : GARMIN 1 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0830	76	Ø	CLEAR	(clear)	patchy	overcast	drizzle	shower
	0900	74	Ø→1 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1000	77	Ø→1 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	78	Ø→3 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1130	79	Ø→2 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
CALIFORNIA MARBLE	IN FIELD NOTEBOOK	6
FUNEREAL DUSKYWING	"	5
SOUTHERN BLUE	"	2
PERPLEXING HAIRSTREAK	"	40
BEHR'S METALMARK	"	114
SPRING WHITE	"	12
PAINTED LADY	"	5
BROWN ELFIN	"	2
PALE TIGER SWALLOWTAIL	"	1
RED ADMIRAL	"	1
ACMON BLUE	"	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Louis Connolly Date: 4/25/10

Project: Campo Wind Energy Project Map #: 14 Survey Sxn: Comp K

GPS Unit : 10 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1215	79°	3/5	0	(clear)	patchy	overcast	drizzle	shower
	1410	77°	5/7	0	(clear)	patchy	overcast	drizzle	shower
	1615	77°	3/6	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, (ridges), (rock outcrops), (soil crusts), clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
Sara's Orange Tip	𝍸 𝍸 𝍸 ||	17
Pale Swallowtail	𝍸 𝍸 ||	12
Acmon Blue	𝍸 ||	7
Blue ?	𝍸 |	6
Marble	𝍸 𝍸 |	11
Behrs Metalmark	𝍸 𝍸 𝍸 𝍸	25
White ?	𝍸 𝍸 ||	12
Perplexing Hairstreak	𝍸	5
Painted Lady	𝍸 |	6
Orange ?	|||	3
Chalcedon ?	|	1
common Hairstreak	|	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Lotus scoparius
		Phacelia (2 Types)
		Eschscholzia
		Cryptantha
		Plagiobothyris
		Monzanita
		Ceanothus
		Dichlostemma
		Erodium
		Layia
		Penstemon
		Lupinus (3 types)
		Castilleja (Indian Paintbrush)
DPHL01	Point	San Diego Horned Lizard
DPCS01	Point	Coulterthus simulans
02	"	"
03	"	"

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Louis Connelly Date: 4/25/10

Project: Campo Wind Energy Project Map #: 13 Survey Sxn: Campo F

GPS Unit : 10 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	8:40	69°	0	0	(clear)	patchy	overcast	drizzle	shower
	10:10	74°	3/5	0	(clear)	patchy	overcast	drizzle	shower
	11:05	76°	4/5	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, ridges, (rock outcrops), soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
Painted Lady	HH	5
Marble	1	2
White?	IIII	4
Blue?	HH I	6
Behr's Metalmark	HH HH HH IIII	19
Yellow?	1	1
Funeral Duskywing	1	1
Sara's Orangetip	II	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Castilleja sp. (Indian Paint Brush)
		Plagiobothrys
		Lasthenia
		Cryptantha
		Eriodictyon
		Arabis
		Eschscholzia
		Amsinckia
		Ceanothus
		Manzanita
		Nemophila
		Lupine
		Phacelia
		Salvia columbariae
DPBS01	Point	Black-Tailed Jack Rabbit

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Natalie Brodie Add'l Person: Phillip Paipa Date: 26 April 2010

Project: Campo Wind Energy Project Map #: 19 Survey Sxn: Campo - N

GPS Unit : SM 13 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0930	~~70~~ 69	calm	0	(clear)	patchy	overcast	drizzle	shower
	1030	72°	calm	0	(clear)	patchy	overcast	drizzle	shower
	1130	76°	2/4	0	(clear)	patchy	overcast	drizzle	shower
	1235	75°	calm	0	(clear)	patchy	overcast	drizzle	shower
	1340	76°	calm	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1520	74°	calm	0	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
CA Marble	𝍸 𝍸 𝍸 |||	18
Perplexing Hairstreak	𝍸 𝍸 ||||	17
Behrs Metalmark	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	55
Southern blue	|	1
Acmon blue	𝍸 |	4
Brown elfin	|	1
Anise swallowtail	||	2
Sara orangetip	𝍸 ||||	9
Painted lady	𝍸	5
Funereal Duskywing	||||	4
unidentified sulfur	||	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		goldfields, popcorn flower, groundpink
NBHL01	point	Horned Lizard
NBHL02		Horned Lizard
NBCH01		Collinsia concolor, ~20 individuals 2x3 m area
NBCH02		Collinsia concolor, ~~80~~ individuals (100+)
NBCH03		Collinsia concolor, 100+ individuals 5x7m

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Bo Willey Date: 4/26/10

Project: Campo Wind Energy Project Map #: 23 Survey Sxn: Campo 9

GPS Unit : 1 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	8:30	72°	0/0	0	(clear)	patchy	overcast	drizzle	shower
	10:25	78°	4/7	0	(clear)	patchy	overcast	drizzle	shower
	11:30	83°	2/4	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): ~~open soils~~, ~~hilltops~~, ridges, ~~rock outcrops~~, ~~soil crusts~~, clay soils, ~~old roads~~, ~~various nectar sources~~

Butterfly Species	Tally	Total
Sara's Orange Tip	~~HH~~ ~~HH~~ ~~HH~~ ~~HH~~ ~~HH~~ III	28
Behr's Metalmark I ~~HH~~ ~~HH~~ ~~HH~~ ~~HH~~	~~HH~~ ~~HH~~ ~~HH~~ ~~HH~~ ~~HH~~ ~~HH~~ ~~HH~~	56
Acmon Blue	IIII	4
Blue?	~~HH~~ IIII	9
Marble	~~HH~~ III	8
Painted Lady	IIII	4
?	I	1
Perplexing Hairstreak	II	2
Duskywing	IIII	4
Funereal Duskywing	I	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Eriodictyon
		Layia
		Lasthenia
		Lupinus
		Manzanita
		Penstemon
		Cryptantha
		Plagiobothrys
		Lotus
		Nemophila
		Dichelostemma
		Caenothus
		Phacelia
		Castilleja

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David Faulkner Add'l Person: Josh Date: 26 April 2010

Project: Campo Wind Energy Project Map #: 8 Survey Sxn: F (no D)

GPS Unit : 9 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1400	87°	2 mph	5	clear	(patchy)	overcast	drizzle	shower
	1500	80°	6	5	clear	(patchy)	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1600	75°	5	>5%	clear	(patchy)	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
(GPS died for 1hr)		
A. Vinculi		11
Euchloe hyatti		4
E. harfordii		1
A. Sara		1
E. brizo		1
V. Cardui		1
P. Atmon		6

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
8		Collinsia
		cryptanthe
		Castilleja
		goldfields

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: Josh Date: 26 April 2010

Project: Campo Wind Energy Project Map #: 15 Survey Sxn: Campo - K

GPS Unit : #9 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	75°	Ø	Ø	(clear)	patchy	overcast	drizzle	shower
	1000	77°	2 mph	Ø	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1100	79°	4 mph		clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, (ridges), (rock outcrops), soil crusts, clay soils, old roads, various (nectar) sources

Butterfly Species	Tally	Total
V. Cardui		2
A. Sara		2
E. propertius		3
A. Virginiensis		4
So. blue		1
C. augustinus		2
*E. chalcedona (Checker sp.)		2
P. Acmon		7
C. perplexa		2
E. funeralis		3
Euchloe h. Lotta		1
Papilio eurymedon		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
15		Blue dicks
		cryptanth
		Ceanothus
		goldfields

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: Josh A Date: 26 April 2010

Project: Campo Wind Energy Project Map #: 11 Survey Sxn: CAMPO - 11

GPS Unit : #9 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1100	79°	4	Ø	(clear)	patchy	overcast	drizzle	shower
	1200	83°	Ø	Ø	clear	patchy	overcast	drizzle	shower
	1300	83°	Ø	5%	clear	(patchy)	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1400	87°	2	5%	clear	(patchy)	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), ridges, (rock outcrops), soil crusts, clay soils, (old roads), various (nectar sources)

Butterfly Species	Tally	Total
A. Sara		2
C. perplexa		2
E. funeralis		2
V. cardui		5
V. virginiensis		1
A. vigilata		25+
P. Acmon		3
C. harfordii		1
Euchloe h. Lotta		2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
11		Collensia
		Goldfields
		Antirrhinum
		Ceanothus
		Baby blue eyes.

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: Ø Date: 26 APRIL, 2010

Project: Campo Wind Energy Project Map #: TILE 23 Survey Sxn: CAMPO Ø

GPS Unit : GARMIN 10 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1335	83	Ø→2 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1400	82	Ø→3 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1500	80	2→4 MPH	5%	(clear)	patchy	overcast	drizzle	shower
	1600	79	2→6 MPH	5%	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources)

Butterfly Species	Tally	Total
CALIFORNIA MARBLE	TALLY IN FIELD NOTEBOOK	7
PAINTED LADY	"	9
BEHR'S METALMARK	"	170
CALIFORNIA SOOTYWING	"	1
FUNEREAL DUSKYWING	"	14
QUINO CHECKERSPOT BUTTERFLY	"	1
POSSIBLE 2ND QUINO, BUT DID NOT POSITIVELY IDENTIFY.		

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCWW0a	POINT	
MCQB08	POINT	"MIDDLE-AGED" QUINO AT (NAD83) 11S 0560671, 3611605

TOTAL NUMBER OF QCB DETECTED: 1 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: Ø Date: 26 APRIL, 2010

Project: Campo Wind Energy Project Map #: 2 AND 7 Survey Sxn: CAMPO D

GPS Unit : GARMIN 10 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0845	72	1->5 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	0900	73	Ø->3	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1000	72	Ø->3	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	80	Ø->6	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1130	82	Ø->2 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), ridges, rock outcrops, soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
CALIFORNIA MARBLE	TALLY IN FIELD NOTES	8
PAINTED LADY	"	12
BEHR'S METALMARK	"	116
DESERT ORANGETIP	"	1
FUNEREAL DUSKYWING	"	4
ACMON BLUE	"	1
PALE TIGER SWALLOWTAIL	"	1
WEST COAST LADY	"	1
BROWN ELFIN	"	1
CALIFORNIA SOOTYWING	"	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCHL11	Point	Juvenile

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: S. Rink Escort: ~~Add'l Person:~~ Bodo Stokes (Kenny) Date: 4/27/10

Project: Campo ~~Manzanita Wind Energy Project~~ Map #: 8F, 8B Survey Sxn: ______

GPS Unit: 2 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	0912	~70	1-2/5	2-5	clear (patchy) overcast drizzle shower
	1030	70	2-3/5	3-5	clear (patchy) overcast drizzle shower
	1130	71	2-3/5	5-7	clear (patchy) overcast drizzle shower
	1230	73	3-4/5	10-12	clear (patchy) overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END					clear patchy overcast drizzle shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Acmon Blue	~~TTH~~	(5)
Behr's metalmark	~~THH THH THH THH THH THH~~	(30)
Pontia sp.	~~THH~~ III	(8)
W. C. Lady	~~THH THH~~ III	(13)
Sarah Orangetip	II	(2)
Duskywing "	IIII	(4)

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
SRCOCO1	pt.	col. concolor (n=1)
	pt.	col. concolor (n=5)
	pt.	col. concolor (n=10)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: NONE Date: 27 APRIL, 2010

Project: Campo Wind Energy Project Map #: MAP TILE 34 Survey Sxn: CAMPO - R2

GPS Unit: GARMIN 3 QCB Protocol Survey # ~~2~~ 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1200	81	Ø→3 MPH	5%	(clear)	patchy	overcast	drizzle	shower
	1300	80	7→13 MPH	5%	(clear)	patchy	overcast	drizzle	shower
	1400	75	3→7 MPH	10%	(clear)	patchy	overcast	drizzle	shower
	1500	76	Ø→2 MPH	10%	(clear)	patchy	overcast	drizzle	shower
	1600	76	Ø→4 MPH	10%	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
BEHR'S METALMARK	IN FIELD NOTEBOOKS	20
GABB'S CHECKERSPOT	"	7
ORANGE SULPHUR	"	1
ACMON BLUE	"	17
PAINTED LADY	"	4
CALIFORNIA MARBLE	"	1
HENNE'S CHECKERSPOT	"	40
FUNEREAL DUSKYWING	"	7
PALE TIGER SWALLOWTAIL	"	3
CALIFORNIA SOOTYWING	"	4
QUINO CHECKERSPOT BUTTERFLY	"	3

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCQB09	Point	UPPER LEFT WINGTIP MISSING (NAD83) 11S 0556986, 3609928
MCHL12	Point	
MCQB10	Point	BOTH WINGTIPS INTACT. (NAD83) 11S 0556995, 3609943
MCHL13	Point	
MCQB11	Point	(NAD83) 11S 0557077, 3610140
		59 NUMBERED POINTS ARE COLLINSIA LOCATIONS.

TOTAL NUMBER OF QCB DETECTED: 3 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: Ø Date: 27 APRIL 2010

Project: Campo Wind Energy Project Map #: # 24 Survey Sxn: CAMPO - R1

GPS Unit : GARMIN 3 QCB Protocol Survey # B4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0848	72	Ø	CLEAR	(clear)	patchy	overcast	drizzle	shower
	0900	73	Ø→2	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1000	76	1→5	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	77	Ø→3	CLEAR	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) hilltops (ridges) (rock outcrops) (soil crusts) clay soils (old roads) (various nectar sources)

Butterfly Species	Tally	Total
BEHRS METALMARK	IN FIELD NOTEBOOK	350
PAINTED LADY	"	7
CALIFORNIA MARBLE	"	5
SPRING WHITE	"	2
RED ADMIRAL	"	1
SARA ORANGETIP	"	2
PERPLEXING HAIRSTREAK	"	2
GABB'S CHECKERSPOT	"	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
NONE		

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Phillip Rapp Date: 4/27/10

Project: Campo Wind Energy Project Map #: 23 Survey Sxn: Campo 9

GPS Unit : 1 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	8:45	74°	2/4	0	(clear)	patchy	overcast	drizzle	shower
	11:15	77°	3/8	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) ~~hilltops~~, ridges, ~~rock outcrops~~, soil crusts, clay soils, ~~old roads~~, ~~various~~ nectar sources

Butterfly Species	Tally	Total
Sara's Orangetip	𝍸 𝍸 𝍸 𝍸	20
Yellow ?	I	1
Painted Lady	𝍸 I	4
Orange	I	1
Behr's Metalmark	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	160
Mourning Cloak	𝍸 𝍸 𝍸 𝍸	20
Orange ?	I	1
Yellow ?	I	1
Funeral Dusky wing	II	2
Duskywing	𝍸 𝍸 𝍸 𝍸	20
White ?	𝍸 𝍸 𝍸	15
Acmon Blue	𝍸 III	8

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Lasthenia
		Layia
		Plagiobothrys
		Lasthenia
		Erodium
		Manzanita
		Collinsia
		Penstemon
		Nemophilia
		Cryptantha
		Plagiobothrys

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Phillip Paipa Date: 4/27/10

Project: Campo Wind Energy Project Map #: 24 Survey Sxn: Camp R

GPS Unit : 1 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	11:40	74°	5/7	0	clear	patchy	overcast	drizzle	shower
	13:45	72°	6/9	0	clear	patchy	overcast	drizzle	shower
	1500	74°	5/8	0	cirrus clear	patchy	overcast	drizzle	shower
	1555	73°	7/10	0	cirrus clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, ~~hilltops~~, ~~ridges~~, rock outcrops, soil crusts, clay soils, ~~old roads~~, ~~various~~ nectar sources

Butterfly Species	Tally	Total
Pale Swallowtail	1	1
Behrs Metalmark	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	60
Sara's Orangetip	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	23
Marble	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	7
Checkerspot	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	7 (35)
Gabb's Checkerspot	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	41
Yellow ?	𝍸 𝍸 𝍸 𝍸 𝍸	5
Dusky wing	𝍸 𝍸 𝍸 𝍸 𝍸	25
Funeral Dusky wing	𝍸 𝍸 𝍸	7
Peppkxing	1	1
Ramon Blue	𝍸 𝍸	5
Quino Checkerspot. 11S0557051, 3610098	1	1
I caught the QCB flying near Callirhoe and other nectaring plants Andrew Fisher, Phillip Paipa, & Willey observed the QCB as I held the butterfly.		

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Lasthenia
		Layia
		Phacelia
		Coreopsis
		Eriodictyon
		Manzanita
		Collinsia
		Penstemon
		Nemophilia
		Plagiobothrys
		Cryptantha

TOTAL NUMBER OF QCB DETECTED: 1 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Margie Mulligan Add'l Person: Erin Bergman Date: 4.27.2010

Project: Campo Wind Energy Project Map #: 9-J Survey Sxn: _____

GPS Unit : 13 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0920	67°	0-4	1%	(clear)	patchy	overcast	drizzle	shower
	1200	78	4-8	10%	(clear)	patchy	overcast	drizzle	shower
	1515	78	2-6	20%	clear	(patchy)	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils,) (hilltops,) (ridges) (rock outcrops,) (soil crusts,) clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
GABB'S CHECKERSPOT (1 female & 2 males)	III	3
Sara's Orangetip	See Field	2
Behr's Metalmark	Notebook for	155
Pearly Marble	Tallies	8
Pale Swallowtail		9
Painted Lady	(all landed)	4
Spring Azure	photo	1
Funereal Duskywing		2
Duskywing unknowns		6
Acmon Blue		14
Sulphur sp.		1
Spring White		1
Gray Marble	photo	1
Sleepy Duskywing		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
	Nectar Plants	Emmenanthe pendulifera
		Anisocoma acaulis
		Phacelia parryi
		Lotus scoparius brevialatus
		Ceanothus leucodermis & greggii perplexans
		Salvia columbariae
		Lupinus concinnus & bicolor
		Caulanthus simulans & heterophyllus
		Streptanthus campestris
		Cryptantha spp.
		Gilia capitatum
		Lotus argophyllus var. argophyllus
		Layia glandulosa
		Phacelia distans &
MMDS01		Delphinium parishii subglobosum
MMDS02		"
MMSC01		Streptanthus campestris
MMSC02		"
MMSC03		"
MMSC04		"
MMSC05		"

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID K. FAULKNER Add'l Person: CARL Date: 27 April 2010

Project: Campo Wind Energy Project Map #: 15 Survey Sxn: CAMPO - L

GPS Unit : #5 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	65°	1	Ø	(clear)	patchy	overcast	drizzle	shower
	1000	73°	2	Ø	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1100	73°	4	Ø	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) (hilltops) (ridges) (rock outcrops) soil crusts, clay soils, (old roads), various (nectar sources)

Butterfly Species	Tally	Total
A. Virginiensis		25+
A. Sara		4
P. Acmon		3
V. Cardui		1
Erynnis brizo		1
Euchloe hyantis lotta		2
C. Augustina		5

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
15-L		Cryptantha
		Goldfields
		Cemottens
		Amsinckia
		Collensia
		Baby blue eyes

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: CARL Date: 27 APR 2010

Project: Campo Wind Energy Project Map #: 16 Survey Sxn: Campo L

GPS Unit : #5 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1100	73°	2	∅	(clear)	patchy	overcast	drizzle	shower
	1200	77°	2	∅	(clear)	patchy	overcast	drizzle	shower
	1300	77°	8	10%	clear	(patchy)	overcast	drizzle	shower
	1400	75°	10	50%	clear	(patchy)	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1500	73	11	∅	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) (hilltops) (ridges) (rock outcrops) soil crusts, clay soils, (old roads), various (nectar) sources

Butterfly Species	Tally	Total
Apodemia virgulti		25+
P. Acmon		8
A. Sara		3
Vanessa sp.		1
Vanessa atlanta (R. Admiral)		1
Euchloe h. lotta		2
V. Cardui		3
[Hemiargus ammis]		1
Callophrys augustinus		2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
16		Collensia
		Cryptantha
		Blue dicks
		Baby Blue eyes
		Wall flower
		goldfields
		Ceanothus

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Mike Coulter Add'l Person: Dale Powell Date: 30 April, 2010

Project: Campo Wind Energy Project Map #: Tile 24 Survey Sxn: Campo - Rd

GPS Unit : Garmin 13 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1300	62	2->4 mph	60%	clear	patchy	overcast	drizzle	shower
	1400	61	2->7 mph	50%	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Gabbs Checkerspot	In field notebook	1
Sara Orangetip	"	1
Pale Tiger Swallowtail	"	1
Dale and I hiked south along the Campo Rd ridgetop in order to determine the validity of the habitat assessment in this area. We also drove to the south end of this survey polygon to inspect habitat and access. We found that in this area, the large expanse of excluded habitat is valid, and need not be surveyed for the butterfly. See also Dale Powells data sheet.		

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCHLIS	POINT	HORNED LIZARD ON ROAD
OTHER POINTS REPRESENT COLLINSIA SP. LOCATIONS ALONG ROOTE.		

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Pownell Add'l Person: Mike Coulter, Kevin Lewis Connolly Date: 4/30/2010

Project: Campo Wind Energy Project Map #: 24 Survey Sxn: Campo R

GPS Unit : 6 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky					
START	1300	63°	4/6	50	clear	patchy	overcast	drizzle	shower	Map 24 Campo R
	1405	61°	4/7	50	~~clear~~	patchy	overcast	drizzle	shower	
	1550	55°	5/9	75	clear	patchy	overcast	drizzle	shower	
					clear	patchy	overcast	drizzle	shower	
					clear	patchy	overcast	drizzle	shower	
					clear	patchy	overcast	drizzle	shower	
END					clear	patchy	overcast	drizzle	shower	

Habitat On-site (circle): ~~open soils~~, ~~hilltops~~, ~~ridges~~, ~~rock outcrops~~, ~~soil crusts~~, clay soils, ~~old roads~~, ~~various nectar sources~~

Butterfly Species	Tally	Total
Funereal Duskywing	1	1
Gabbs	1	1
Sara's Orangetip	1	1
White?	1	1
Pale Swallowtail	1	1
Painted Lady	1	1
Behr's Metalmark	11	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Cryptantha
		Plagiobothrys
		Collinsia (See Mike Coutters Notes)
		Cacaothus
		Layia
		Lasthenia
		etc.
		↑
		Abundant
	Habitat survey and possible protocol survey along north south ridgeline on Map 24. (Western area), ~557004, ~3609668 to 3608868	
	Inspected same ridge southinto Map 27 (See Mike Coutter's notes) (Mike noted Collinsia - observed)	
OPIP01	Exclude Polygon	Open area
OPHL01	POINT	San Diego Horned Lizard

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID K. FAULKNER Add'l Person: Youngbird Date: 30 APRIL 2010

Project: Campo Wind Energy Project Map #: 14 Survey Sxn: Campo-K

GPS Unit : #5 QCB Protocol Survey # 4 of 5 .

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1100	63°	2	30	clear	(patchy)	overcast	drizzle	shower
	1200	65°	1	40	clear	(patchy)	overcast	drizzle	shower
	1300	67°	5	50	clear	patchy	(overcast)	(drizzle)	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1400	62	9	50	clear	patchy	(overcast)	(drizzle)	shower

Habitat On-site (circle): open soils, (hilltops), (ridges), (rock outcrops), soil crusts, clay soils, (old roads), various (nectar) sources

Butterfly Species	Tally	Total
A. Virgulti		6
P. eurymedon		2
P. Acmon		8
V. Cardui		2
P. Lupini		1
Southern Blue (L. Australis)		1
Erynnis Sp.		1
[Stopped @ 1400 - no legs, cool, rain, etc.]		

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
#14	CAMPO-K	Blue dicks
		Cryptantha
		goldfields
		baby blue eyes
		yellow yArrow
		Collensia - only a few scattered plants.

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Bonnie Hendricks Add'l Person: Erin Bergman Date: 4/30/10

Project: Campo Wind Energy Project Map #: 1, 5 Survey Sxn: A (Campo)

GPS Unit: Garmin 3 QCB Protocol Survey # 4 of 5

	TIME (24-hour)	Temp (F°):	Wind (avg/max)	% CC	Sky				
START	11:30	64.7	3.7/7.0	60	clear	(patchy)	overcast	drizzle	shower
	12:15	57.0	4.4/8.8	80	clear	patchy	(overcast)	drizzle	shower
START	13:45	66.4	3.7/9.7	30	clear	(patchy)	overcast	drizzle	shower
	1:50	67.6	5.1/7.5	40	clear	(patchy)	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	2:30	57.7	5.2/8.3	90	clear	patchy	(overcast)	drizzle	shower

Habitat On-site (circle): open soils, hilltops/ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Painted Lady	I	1
Beachy Marble White	II	2
Nectaring Plants:		
Cryptantha sp.	*	
Malacothrix calif.		
Lasthenia sp.		
Nemophila menziesii		
Layia glandulosa		
Eschscholzia greggii		
C. concordiana		

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Handsicks 4-30-10

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
EBASD001	Population/ Rare Plant	(1 plant)
EBASD002	" "	1 plant
EBASD003	" "	4 plants
" 04	" "	6 "
" 05	" "	150 "
" 06	" "	75 "
" 07	" "	13 "
" 08	" "	25 "
" 09	" "	23 "
" 10	" "	4 "
" 11	" "	30 "
13	" "	3 "
14	" "	3 "
15	" "	5 "
16	" "	6 "

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Mike Connyer Date: 5/1/10

Project: Campo Wind Energy Project Map #: 27 Survey Sxn: Campo R

GPS Unit : 6 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1445	67°	7/9	5	(clear)	patchy	overcast	drizzle	shower
	1605	65°	6/7	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Orange?	\	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Lasthenia
		Phacelia
		Cryptantha

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Mike Corrigan Date: 5/2/10

Project: Campo Wind Energy Project Map #: 24 + 25 Survey Sxn: Campo R

GPS Unit : 6 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	62	62°	4/6	0	clear	patchy	overcast	drizzle	shower
	6	65°	5/7	0	clear	patchy	overcast	drizzle	shower
	1330	66°	6/9	0	clear	patchy	overcast	drizzle	shower
	1425	67°	6/8	0	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Sara's Orangetip	𝍸 𝍸 𝍸 𝍸 𝍸	25
Southern Blue	𝍸 𝍸	5
Blue	𝍸 I	6
Lady?	IIII	5
West Coast Lady	I	1
Behrs Metalmark	𝍸 𝍸	10
Marble ?	𝍸 I	5
White ?	IIII 𝍸	10
Gabbs Checkerspot	IIII	5
Chalcedon	𝍸 𝍸 𝍸	15
Acmon Blue	III	3
Funeral Duskywing	II	2
Duskywing	I	1
I lost the small MAP TILE maps for 24-25		

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Lasthenia
		Phycella 2 Types
		Loyid
		Manzanita
		Cryptantha
		Plagio bothrys
		Erodium
		Arabis
		Dichlostemma
		Mimulus
		Lotus
		Lupinus
		Ceanothus
		Amsinckia
		Eschaltzia
DP CH 01	Point	Collinsia
" 02	"	"
" 03	"	"
" 04	"	"
" 05	"	"
DP BJ 01	Point	Black-Tailed Jack Rabbit

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: ANDREW FISHER Date: 1 MAY, 2010

Project: Manzanita Wind Energy Project Map #: TILE 24 Survey Sxn: CAMPO RD

GPS Unit : GARMIN 3 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0930	63	Ø->3 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1000	64	2->5	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	67	Ø->4	5%	(clear)	patchy	overcast	drizzle	shower
	1200	68	Ø->3	5%	(clear)	patchy	overcast	drizzle	shower
	1300	72	Ø->5	5%	(clear)	patchy	overcast	drizzle	shower
	1400	73	Ø->5	CLEAR	(clear)	patchy	overcast	drizzle	shower
END	1500	68	2->5	CLEAR	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) (hilltops) (ridges) (rock outcrops) soil crusts, clay soils, old roads, (various nectar sources)
1600 HRS, 68°F, 2->5 MPH, CLEAR

Butterfly Species	Tally	Total
ACMON BLUE	IN FIELD NOTEBOOK	20
GABB'S CHECKERSPOT	"	27
BEHR'S METALMARK	"	6
SOUTHERN BLUE	"	9
FUNEREAL DUSKYWING	"	14
HENNE'S CHECKERSPOT	"	28
PALE TIGER SWALLOWTAIL	"	1
QUINO CHECKERSPOT BUTTERFLY	"	21

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCQB12	POINT	(NAD 83) 11S 0557061, 3610108 (3180 FT EL)
AFQB01	POINT	FIRST OBSERVED BY ANDREW FISHER (NAD83) 11S 0557076, 3610089 (3192 FT ELEV.)
AFTUVUNEST01	POINT	NEED TO BE CHECKED BY RAPTOR BIOLOGIST
NUMBERED COORDINATES REPRESENT COLLINSIA LOCATIONS ALONG ROUTE.		
QUINO DETECTED BY ANDREW FISHER WAS IMMEDIATELY VERIFIED BY MIKE COUFFER. THIS QUINO WAS A FRESHER QUINO THAN THE INITIAL QUINO OF THE DAY.		

TOTAL NUMBER OF QCB DETECTED: 2 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: BRIAN LOHSTROH Add'l Person: LOUIS Date: 5/1/10

Project: Campo Wind Energy Project Map #: 14, 15 Survey Sxn: K

GPS Unit : #5 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0930	64	0-3	0	(clear)	patchy	overcast	drizzle	shower
	1130	64	6-10	10	clear	(patchy)	overcast	drizzle	shower
	1300	65	5-13	5	clear	(patchy)	overcast	drizzle	shower
	1400	72	2-8	1	(clear)	patchy	overcast	drizzle	shower
	1520	69	0-10	1	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1550	67	0-10	3	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Acmon Blue	(used field book)	8
Perplexing Hairstreak		7
Behr's Metal Mark		23
Painted Lady		9
West Coast Lady		2
Sara's Orangetip		5
Funereal Dusky Wing		5
Pearly Marble		2
Pale Swallowtail		9
Silvery Blue		3
Sleepy dusky Wing		2
Gabb's checkerspot		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
BLSC01	Rare plant point	Streptanthus campestris ~50 individuals
BLCH01	Host plant point	chinese houses ~ 30 individuals
BLCH02	"	" ~ 100s individuals
		Nectar sources: Mimulus cardinalis, popcorn fl,
		erodium, Lotus humatus, CA poppy,
		chaenactis glabruscula, phacelia parryi, distans
		Desert dandelion, Amsinkia, Penstemon parishii
		ceanothus, Gilia capitatum, Cirsium
		occidentalis, camomastemia, yucca whip,
		Emmenanthe penduliflora, Lotus scoparius
		Eriophyllum wallacei, Antirhinum nuttallianum
		Senecio californica
		Cath
		Scja
		SpTo
		BCSP
		BHGR
		La2b
		wren
		WTSW
		CaQu
		Bush
		COPH
		NoFL
		Oati
		Lego
		Granite night lizard (Xantusia) X2
		Side blotch Lizard
		W. Fence Lizard
		Granite Spiny Lizard
		CA kingsnake, Ringneck snake, Gopher snake

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Margie Mulligan Add'l Person: _____ Date: 5/18 2010

Project: Campo Wind Energy Project Map #: 1 Survey Sxn: _____

GPS Unit : 1 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	60°	2-6	0%	(clear)	patchy	overcast	drizzle	shower
	1200	66°	4-10	40%	clear	(patchy)	overcast	drizzle	shower
	1300	67°	8-12	25%	clear	(patchy)	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Behr's Metalmark	See notebook	19
Acmon Blue		3
Sara's Orangetip		1
Silvery Blue		1
Funeral Duskwing		2
Perplexing Hairstreak		2
Pearly Marble		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
Nectar Source:		Ceanothus leucodermis & cuneatus
		Lasthenia gracilis
		Layia glandulosa
		Eschscholtzia californica
		Malacothrix californica
		Trichostemma lanatum
		Eriophyllum wallacei
		Uropappus lindleyi
		Phacelia distans
		Lupinus concinnus & L. bicolor
		Leptosiphon lemmoni
		Aniscoma acaulis
MMDS01	Sensitive plant pt	Delphinium parishii subglobosum 10 plants
MMLS01	"	Lathyrus splendens 1 on shrub
MMCH01	Host plant pt	Collinsia heterophylla ≈10 plants
MMCH02	"	" ≈15 plants
MMCH03	"	" ≈10 plants
MMGV01	~~Cuscuta~~ Sensitive plant pt	Geraea viscida 6 plants
MMEP01		Houses
MMEP02		This is a tall grassland now w/ ~~2~~ dogs.

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Margie Mulligan Add'l Person: _____ Date: 5/1/2010

Project: Campo Wind Energy Project Map #: 5 Survey Sxn: _____

GPS Unit : 1 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1300	67°F	8-12	25%	clear	(patchy)	overcast	drizzle	shower
	1530	67°F	6-8	25%	clear	(patchy)	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) (hilltops) ridges, rock outcrops, soil crusts, clay soils, (old roads), various nectar sources

Butterfly Species	Tally	Total
Acmon Blue		6
Behr's Metalmark		9
Pearly Marble		1
Painted lady		2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
Nectar Source:		Layia glandulosa
		Lasthenia gracilis
		Collinsia heterophylla
		Anisocoma acaule
		Lupinus bicolor & L. concinnus
		Lotus strigosus
		Ceanothus leucodermis
		Platystemon californicus
		Erysium capitatum capitatum
		Gilia capitatum capitatum
		Amsinkia menziesii
		Ceanothus leucodermis
		Phacelia distans
		Leptosiphon lemmonii
		Aniso coma acaule
MMDS02	sensitive plant pt	Delphinium parishii subglobosum
MMAD01	↓	Astragalus douglasii perstrictus
MMAD02		"
MMAD03		"
MMAD04		"

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Kenny Stokes Date: 5/2/10

Project: Campo Wind Energy Project Map #: 1 Survey Sxn: Campo A

GPS Unit : _____ QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1230	67°	4/6	0	clear	patchy	overcast	drizzle	shower
	1330	70°	5/7	0	clear	patchy	overcast	drizzle	shower
	1615	72°	4/7	0	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Southern Blue	𝍸 𝍸 III	13
Marble ?	III	3
Behr's Metalmark	𝍸 III	8
Blue ?	𝍸	5
Pale Swallowtail	I	1
Sara's Orangetip	𝍸 II	7
Lady ?	II	2
West Coast Lady	I	1
White ?	𝍸 II	7

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Layia
		Lasthenia
		Cacnothus
		Brodiaea
		Manzanita
		Collinsia
		Dichlostemma
		Lupinus
DPHL01	Point	San Diego Horned Lizard
DPCH01	Point	Collinsia
" 02	"	"
" 03	"	"
" 04	"	"
" 05	"	"

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: NONE Date: 2 MAY, 2010

Project: Campo Wind Energy Project Map #: TILE 17 Survey Sxn: CAMPO N

GPS Unit : GARMIN 1 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1020	60	Ø->3 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	66	Ø->3 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	64	Ø->7 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, (ridges), (rock outcrops), soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
ACMON BLUE	IN FIELD NOTEBOOK	8
PERPLEXING HAIRSTREAK	"	8
PAINTED LADY	"	5
BEHR'S METALMARK	"	10
FUNEREAL DUSKYWING	"	5

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)

TOTAL NUMBER OF QCB DETECTED: _____ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: NONE Date: 2 MAY, 2010

Project: Campo Wind Energy Project Map #: TILE 18 Survey Sxn: CAMPO-N

GPS Unit : GARMIN 1 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1200	64	Ø->7 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	73	Ø->3	CLEAR	clear	patchy	overcast	drizzle	shower
	1400	76	Ø->2	CLEAR	clear	patchy	overcast	drizzle	shower
	1500	74	Ø->6	CLEAR	clear	patchy	overcast	drizzle	shower
	1600	71	2->8	CLEAR	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
PAINTED LADY	IN FIELD NOTEBOOK	9
BEHR'S METALMARK	"	90
GABB'S CHECKERSPOT	"	2
SARA ORANGETIP	"	7
SOUTHERN BLUE	"	5
SPRING WHITE	"	2
FUNEREAL DUSKYWING	"	9
DESERT ORANGETIP	"	2
PALE TIGER SWALLOWTAIL	"	3
GRAY HAIRSTREAK	"	3
HENNE'S CHECKERSPOT	"	1
WEST COAST LADY	"	3
RED ADMIRALS	"	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCWW04	Point	
MCHL16	Point	
MCWW0X	Point	

TOTAL NUMBER OF QCB DETECTED: _____ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: F. Dettmers Add'l Person: B. Willey Date: 5/3/10

Project: Campo Wind Energy Project Map #: Tik 5 Survey Sxn: _____

GPS Unit : SM 13 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	900	68.9	2-4 mph	0%	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1330	77°	2-4	0	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Apodemia mormo	IIII IIII IIII IIII IIII IIII	46
Callophrys Dumetorum	II	2
Icaricia Acmon	III	3
Vanessa Cardui	IIII/III	9
Glaucopsyche lygdamus	II	2
Pontia protodice (Checkered white)	IIII/	5
Erynnis funeralis	1	1
Colias harfordii	1	1
Anthocharis Sara	1	1

Page 1 of 2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
FDCOLTE 01	0560455 3620122	POP 3. NW Facing Slope. DG Soil. Buckwheat Scrub OAK.
" 02	|	
" 03	|	
" 04	|	
" 05	0560440 3620142	Pop 200+. Just South of Deep drainage on North Facing Bank
" 06	0560115 3619210	Pop 15 W. Facing Slope in Buckwheat + Ceanothus
		Buckwheat scrub. -
		Collinsia - Mapped/GPS.
		Gold fields.
		Ceanothus.
		Chamise Chaparral -
		Manzanita, Mexican/Big berry
		surveyed from I-8 North to just
		south of Via Postal Camino. and East
		of Crestwood Rd

TOTAL NUMBER OF QCB DETECTED: ____________ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Andrew Pigniolo Add'l Person: _____ Date: 5/3/10

Project: Campo Wind Energy Project Map #: 11 Survey Sxn: B

GPS Unit : 7 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1300	74	0-2	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
	1400	76	0-2	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1530	77	0-2	0	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Behr's Metalmark	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	46
Painted Lady	𝍸 I	6
Sara's Orange Tip	II	2
Marble	II	2
Perplexing Hairstreak	IIII	4
Common White	I	1
Gabb's Checkerspot	I	1
Acmon blue	IIII	4
Unident Skipper	I	1
		67

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
APCC08	Point	30+ Collinsia concolor
APCC09	Point	10+ " "

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Andrew Pigniolo Add'l Person: _____ Date: 5/3/10

Project: Campo Wind Energy Project Map #: 8 Survey Sxn: 6

GPS Unit : 7 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0915	60	2-6	0	(clear)	patchy	overcast	drizzle	shower
	1015	66	2-6	0	(clear)	patchy	overcast	drizzle	shower
	1115	69	2-6	0	(clear)	patchy	overcast	drizzle	shower
	1215	69	2-4	0	(clear)	patchy	overcast	drizzle	shower
	~~1315~~				clear	patchy	overcast	drizzle	shower
	~~1415~~				clear	patchy	overcast	drizzle	shower
END	~~1500~~ 1245	68	0-4	0	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Behr's Metalmark	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	26
Painted Lady	𝍸 𝍸	11
Dusky wing Skipper	11	2
Perplexing hairstreak	11	2
Sarah Orangetip	111	3
Acmon blue	𝍸 𝍸	11
Common white	1	1
Unident Blue	1	1
		57

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
01+APCC01	Point	1 Collinsia concolor
APCCCR02	Point	2 Collinsia concolor + 5+ Corethrogyne filaginifolia var. rigidus
APCC03	Point	2 " "
APBJ04	Point	1 Black tailed jackrabbit
APCC05	Point	15+ collinsia concolor
APCC06	Point	20+ " "
APCC07	Point	20+ collinsia concolor

TOTAL NUMBER OF QCB DETECTED: _____ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID FLIETNER Add'l Person: JOHN BOSTICK Date: 5-3-10

Project: Campo Wind Energy Project Map #: 19 Survey Sxn: 0

GPS Unit : 12 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	0830	64	5-9	0	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END	1600	77	3-5	0	(clear) patchy overcast drizzle shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Behrs metalmark	[illegible]	60
Acmon blue	[illegible]	17
Perplexing hairstreak	[illegible]	7
Pearly marbled ~~white~~	[illegible]	5
lady	[illegible]	15
Sara orange tip	[illegible]	8

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Last cal
		Caem bigt
		Crypt int
		Esch cali
		Lup cand
		Plagiobothrys
		Amsi menz
		G. lin
		Salvia colum
typo		Lotus scop
DFLA01	point	1 Coast live oak
~~APCH01~~	point	~30 Collinsia heter
		Phacelia distans
DFLA01	point	1 Lathyrus splendens growing in Q. agrifolia

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: Lewis C. Date: 3 May 2018

Project: Campo Wind Energy Project Map #: 11 Survey Sxn: Campo H

GPS Unit : #5 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	67°	5	Ø	(clear)	patchy	overcast	drizzle	shower
	1000	71°	4	Ø	(clear)	patchy	overcast	drizzle	shower
	1100	75°	2	Ø	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1200	76°	3	Ø	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), soil crusts, clay soils, (old roads), various (nectar) sources

Butterfly Species	Tally	Total
P. lupini		1
A. virguliti		25+
P. acmon		6
V. cardui		2
C. Augustinus		1
A. sara		3
Erynnis sp.		2
Euchloe hoffita		1
E. proportius		2
Leptotes marina		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (~~NECTAR~~ SOURCES, GENERAL WILDLIFE LIST)
#11, H	Marked as #1.	11S 0560117 Collins CA. UTM 3616770 - 100's of Plants
		Compositae
		Cryptantha
		CHiA

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: L. Connoley Date: 3 May 2010

Project: Campo Wind Energy Project Map #: 16 Survey Sxn: Campo H

GPS Unit : #5 QCB Protocol Survey # 4 of 5 .

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	1200	76°	3	Ø	(clear) patchy overcast drizzle shower
	1300	78°	1	Ø	(clear) patchy overcast drizzle shower
	1400	78°	2	Ø	clear patchy overcast drizzle shower
	1500	83°	1	Ø	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END	1600	79	4	Ø	(clear) patchy overcast drizzle shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), soil crusts, clay soils, (old roads), various (nectar) sources

Butterfly Species	Tally	Total
P. Acmon		25+
A. virgulti		25+
P. protodice		3
P. eurymedon		1
A. sara		12
Erynnis sp.		1
Colias harfordii		1
V. cardui		5
V. annabella		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
16	Marked as #3	Rare mustard - Southern Jewell flower — 11S 559957 UTM 3616131 — 20+ plants.
	Marked as #4	Collensia — 11S 559968 UTM 3616189 — 10+
		Cryptantha
		goldfields

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE GOUFFER Add'l Person: NONE Date: 3 MAY, 2010

Project: Campo Wind Energy Project Map #: TILES 18 AND 19 Survey Sxn: CAMPO - N

GPS Unit : GARMIN 3 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0835	67	3->6 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	0900	70	3->8	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1000	72	3->10	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	74	4->8	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	77	Ø->3	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	80	Ø->4	CLEAR	(clear)	patchy	overcast	drizzle	shower
END	1400	81	Ø->4 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) hilltops (ridges) (rock outcrops) soil crusts, clay soils (old roads) (various nectar sources)

1500 HRS, 80°F, Ø->3 MPH, CLEAR

Butterfly Species	Tally	Total
ACMON BLUE	IN FIELD NOTEBOOK	18
BEHR'S METALMARK	"	225
FUNEREAL DUSKYWING	"	10
PAINTED LADY	"	5
WEST COAST LADY	"	2
SOUTHERN BLUE	"	5
SARA ORANGETIP	"	4
GABB'S CHECKERSPOT	"	5
SPRING WHITE	"	3
PALE TIGER SWALLOWTAIL	"	2
ORANGE SULPHUR	"	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCHL18 050310	POINT	
MC GARMIN 06	POINT	FOUND GARMIN # 6 LOST BY > OTHER BIOLOGIST APPROX.
		ONE MONTH AGO. UNIT TURNS ON AND IS IN GOOD CONDITION
ALL NUMBERED	POINTS REPRESENT	COLLINSIA LOCATIONS ALONG TRACK ROUTE >.

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Kevin Bryant Date: 5/3/10

Project: Campo Wind Energy Project Map #: 16 Survey Sxn: Campo I

GPS Unit : 6 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	8:30	65°	7/9	0	(clear)	patchy	overcast	drizzle	shower
	9:50	67°	7/10	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, ridges, (rock outcrops), soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
Lady?	1	1
Behr's Metalmark	𝍸 |||	8
White?	|||	3
Blue?	||||	4

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Castilleja
		Layia
		Lasthenia
		Erodium.
		Deseuveuxia
		Salvia columbariae
		Cryptantha
		Plagiobothrys
		Amsinckia
		Dichelostemma
		Ceanothus
		Lupinus
		Chaenactis
		~~Amsinckia~~ Melocothrix
		Astragalus
DPCH01	Point	Collinsia
V	"	"
10	"	"
DPJF01	Point	C. concolor/is
DPJF02	"	C. "
DPJF03	"	C. "

TOTAL NUMBER OF QCB DETECTED: 2 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Kevin Date: 5/3/10

Project: Campo Wind Energy Project Map #: 10, 15 Survey Sxn: Campo I

GPS Unit : 6 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	9:50	67°	2/10	0	clear	patchy	overcast	drizzle	shower
	11:15	75°	4/7	0	clear	patchy	overcast	drizzle	shower
	1430	78°	5/8	0	clear	patchy	overcast	drizzle	shower
	1600	81°	4/6	0	clear	patchy	overcast	drizzle	shower
	1640	79°	7/11	0	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Pale Swallowtail	𝍸 𝍸 𝍸 𝍸 I	26
Acmon Blue	𝍸 III	8
Blue?	𝍸 𝍸 𝍸 𝍸 I	26
Behrs Metalmark	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	78
Sara's Orangetip	𝍸 𝍸 𝍸 𝍸 II	22
White?	IIII III	8
Marble	III	3
Orange? (Lady)	IIII	4
Funeral Dusky wing?	II	2
Dusky wing	𝍸 III	8
Orange? (Checkerspot?)	I	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Lotus
		Camissonia
		Astragalus
		Layia
		Lasthenia
		Erodium
		Descurainia
		Salvia columbariae
		Amsinckia
		Lupinus
		Caenothus
		Plantago erecta
		Cryptantha

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: BRIAN LOHSTROH Add'l Person: BOE/Escart Date: 5/4/10

Project: Campo Wind Energy Project Map #: 11, 12, 16 Survey Sxn: G

GPS Unit : 7 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0840	68	0-1	0	(clear)	patchy	overcast	drizzle	shower
	1040	78	0-4	0	(clear)	patchy	overcast	drizzle	shower
	1300	80	3-8	0	(clear)	patchy	overcast	drizzle	shower
	1420	83	3-8	0	(clear)	patchy	overcast	drizzle	shower
	1515	79	4-8	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Behr's Metalmark		39
common sooty wing		3
Sara Orangetip		5
Painted Lady		3
Acmon Blue		5
Spring Azure		2
Southern Blue		3
Chalcedon checkerspot		1
common white		1
Hartfordi Sulphur		3
Dearly marble		3
Perplexing hairstreak		2
Pale Swallowtail		2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
BLHL01		Juv Horned Lizard
BLCH01		chinese houses ~10 ind.
BLLB01		Linanthus bellus 100s ind.
BLCH02		chinese houses ~5 ind.
BLCH03		" 5 ind.
BLLB02		Linanthus bellus 500 ind.
BLHL02		Juv Horned Lizard
BLLB03		Linanthus bellus 500 ind
BLCH04		chinese houses 100 ind.
BLCH05		chinese houses 100 ind.
BLLB06		Linanthus bellus 500 ind
BLLB07		Linanthus bellus 500 ind
BLCH06		chinese houses 50 ind
BLCH07		chinese houses 100 ind
BLHL03		Adult horned Lizard
BLLB08		Linanthus bellus 300 ind
BLCH09		chinese houses 30 ind
BLCH10		chinese houses 50 ind
BLHL 04		Juv horned Lizard
BLCH11		chinese houses 30 ind
BLCH12		" 20 ind
BLCH08		chines houses 300 ind.
		Calt, CAQU, Oati, Wind, ATFL, Eust, CORA
		Scja, Yewa, BCSP, coHu, LaSP SpTO
		Coth, BHGR, BEWR, Lego, WeBB

Nectar Sources: CA poppy, erodium, Ceanothus, Cammissonia, Lastrenia, Penstemon chia, Linanthus bellus mustards, Centranthifolia, spectabilis; Desert dandelion, phacelia distans, parryii; popcorn flower, Linanthus SP, Lemmonii; Lupinus spp, Layia glaberata, Mimulus guttatus, Lotus heermanii, mimulus fremontii, Anisocoma acaulis, senecio californica, trichostemma, Gilia capitatum, Eriophyllum spp. Delphium parryii ssp subglobulosum

TOTAL NUMBER OF QCB DETECTED: ∅ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: ~~Kevin~~ None Date: 5/4/10

Project: ~~Manzanita~~ Campo Wind Energy Project Map #: 7 Survey Sxn: Campo D

GPS Unit : 6 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0850	68°	4/3	0	(clear)	patchy	overcast	drizzle	shower
	1020	71°	6/7	0	(clear)	patchy	overcast	drizzle	shower
END	1115	78°	8/13	0	(clear)	patchy	overcast	drizzle	shower
START	1155	75°	7/12	0	(clear)	patchy	overcast	drizzle	shower
~~STOP~~	1325	78°	5/9	0	(clear)	patchy	overcast	drizzle	shower
	1520	76°	9/13	0	(clear)	patchy	overcast	drizzle	shower
END	1545	76°	8/11	0	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): ~~open soils~~, ~~hilltops~~, ~~ridges~~, ~~rock outcrops~~, soil crusts, clay soils, ~~old roads~~, ~~various nectar sources~~

Butterfly Species	Tally	Total
Behr's Metalmark	~~𝍸~~ ~~𝍸~~ ~~𝍸~~ ~~𝍸~~ ~~𝍸~~ ~~𝍸~~ ~~𝍸~~ ~~𝍸~~ ~~𝍸~~ ~~𝍸~~ ~~𝍸~~	55
Sara's Orange Tip	~~𝍸~~ 𝍸	9
White?	~~𝍸~~	5
Funeral Duskywing	𝍸	3
Dusky wing	𝍸	4
Blue?	1	1
Orange?	1	1
Lady?	1	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Erodium
		Lasthenia
		Layia
		Ericameria
		Arabis
		Plagiobothrys
		Cryptantha
		Descurainia
		Phacelia
		Dichelostemma
		Nemophila
		Anisocoma
		Penstemon
DPCH11	Point	Collinsia
↓	〃	〃
030	〃	〃

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: None Date: 5/4/10

Project: ~~Manzanita~~ Campo Wind Energy Project Map #: 2 Survey Sxn: Campo D

GPS Unit : 6 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	11:20	78°	8/12	0	(clear)	patchy	overcast	drizzle	shower
	12:45	75°	7/12	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, (ridges), rock outcrops, soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
Dusky-wing sp.	II	2
Funeral Dusky-wing	I	1
Pale Swallow Tail	I	1
Behr's Metalmark	IIII III	8
Sulphur ?	I	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Erodium
		Cryptantha
		Plagiobothrys
		Caenothus
		Descurainia
		Phacelia

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: Daniel Date: 4 May 2010

Project: Campo Wind Energy Project Map #: 11, 12 Survey Sxn: Campo E

GPS Unit : #2 QCB Protocol Survey # 4(?) of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	70°	0	0	(clear)	patchy	overcast	drizzle	shower
	1000	74°	5	0	(clear)	patchy	overcast	drizzle	shower
	1100	77°	4	0	(clear)	patchy	overcast	drizzle	shower
	1200	80°	6-7	0	(clear)	patchy	overcast	drizzle	shower
	1300	83°	8	0	(clear)	patchy	overcast	drizzle	shower
	1400	80°	7	0	(clear)	patchy	overcast	drizzle	shower
END	1500 1600	80° 78°	7 8	0 0	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) (hilltops) (ridges) (rock outcrops) soil crusts, clay soils, (old roads) various (nectar) sources

Butterfly Species	Tally	Total
P. lupini		2
V. cardui		4
P. acmon		25+
Erynnis propertius		2
C. perplexa		1
A. virgulti		25+
Phiclossa catulla		5
Erynnis funeralis		4
A. sara		2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
12E.	Mark #2	Collinsia, ~50 plants.
		11S 0561218 UTM 3618090
12E	No Mark.	Horned-lizard: 11S 0561238 UTM 3617987
		Nectar: Cryptantha
		Goldfields
		Ceanothus

TOTAL NUMBER OF QCB DETECTED: ____Ø____ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID FLIETNER Add'l Person: JOHN ~~PICKLEY~~ BOSTICK Date: 5/4/10

Project: Campo Wind Energy Project Map #: 19 Survey Sxn: P

GPS Unit : 10 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
~~START~~	8:20	58	0-2	0	clear	patchy	overcast	drizzle	shower
START	8:50	66	2-4	0	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
		~~75~~			clear	patchy	overcast	drizzle	shower
END	10:30	~~75~~	3-5	0	clear	patchy	overcast	~~drizzle~~	~~shower~~

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Acmon blue	::	4
Behr's metalmark	::	4
Sara orange tip	II	~~7~~ 8

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Last cal
		Crypt Int
		Cedros
		Phacelia dist
		Malacothrix
		Lup conc.
		gilia
		Camis cal
		Linanthus
		Salv col
		Layia glandl
		Phacelia minor

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID FLIEVER Add'l Person: JOHN BASTICK Date: 5/4/10

Project: Campo Wind Energy Project Map #: 20 Survey Sxn: P

GPS Unit : 10 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1100	77	0-3	0	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1630	83	7+10	0	clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Behrs metalmark	𝍸 𝍸 𝍸 𝍸 𝍸 — — —	200
Perp hairstreak	𝍸 𝍸 𝍸	33
Sara orangetip	𝍸 𝍸	18
Painted lady	𝍸	12
Acmon blue	𝍸	6
Gabb's checkerspot		1
Pearly marble	𝍸	3
funereal dusky wing	𝍸	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Lust cal
		Eesch cal
		Crypt int
		Camis bist
		Salv colum
		Gilia capit
DFCH01	point	~ ~~50~~ 100 Collinsia
		Lotus stri
		Amsinck menz
		Lepidium [illegible]
		Phacelia mina
		Linanthus lemmonii
DFCH02	point	~200 Collinsia
		Croom puff [illegible]
DFCH03	"	
		Cal hetero
DFHL01	"	horned lizard
		Chaenactis glab
		Mimulus (yellow)
		Emmenanthe pend
		Linanthus [illegible]
DFCS01	point	1 Caulanthus simulans
		Coreopsis caly
CH3 → CH12 points →		1 GPSed representative Collinsia
	polygon	locations - these should just
		be made into a polygon

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: NONE Date: 4 MAY, 2010

Project: Campo Wind Energy Project Map #: TILE 21 Survey Sxn: CAMPO-N

GPS Unit : GARMIN 9 QCB Protocol Survey # ?4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1100	78	3->5 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	76	7->14	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	81	Ø->6	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1400	81	3-8	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1500	81	Ø->5	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1530	80	Ø->5	CLEAR	(clear)	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) (hilltops) (ridges) (rock outcrops) soil crusts, clay soils, (old roads) (various nectar sources)

Butterfly Species	Tally	Total
SARA ORANGETIP	IN FIELD NOTEBOOK	5
HENNE'S CHECKERSPOT	"	14
PALE TIGER SWALLOWTAIL	"	5
FUNEREAL DUSKYWING	"	11
SOUTHERN BLUE	"	3
BEHR'S METALMARK	"	7
CHECKERED WHITE	"	2
CALIFORNIA MARBLE	"	2
ACMON BLUE	"	4
PERPLEXING HAIRSTREAK	"	4
PAINTED LADY	"	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCHL19 050410	POINT	MEDIUM-SIZED HORNED LIZARD
NUMBERED	POINTS REPRESENT	COLLINSIA LOCATIONS COLLECTED ALONG
ROUTE.		

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: NONE Date: 4 MAY, 2010

Project: Campo Wind Energy Project Map #: TILE 16, 19 Survey Sxn: CAMPO M

GPS Unit : GARMIN 9 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0840	70°	Ø->2	CLEAR	clear	patchy	overcast	drizzle	shower
	0900	69	Ø->2	CLEAR	clear	patchy	overcast	drizzle	shower
	1000	73	Ø->3	CLEAR	clear	patchy	overcast	drizzle	shower
	1015	73°F	Ø->2 MPH	CLEAR	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): ~~open soils~~ hilltops, ridges, ~~rock outcrops~~, soil crusts, clay soils, old roads, ~~various nectar sources~~

Butterfly Species	Tally	Total
BEHRS METALMARK	IN FIELD NOTEBOOK	95
ACMON BLUE	"	1
BROWN ELFIN	"	1
SPRING WHITE	"	1
CHECKERED (COMMON WHITE)	"	2
PAINTED LADY	"	5
FUNEREAL DUSKYWING	"	7
SARA ORANGETIP	"	1
CALIFORNIA MARBLE	"	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Natalie Brodie Add'l Person: Dede Date: 4 May 2010

Project: Campo Wind Energy Project Map #: 11 Survey Sxn: Campo - C

GPS Unit : Garmin 3 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	0900	64°	calm	Ø	(clear) patchy overcast drizzle shower
	1005	68°	2/5	Ø	(clear) patchy overcast drizzle shower
	1110	70°	6/11	Ø	(clear) patchy overcast drizzle shower
	1200	75°	5/10	Ø	(clear) patchy overcast drizzle shower
	1305	73°	4/9	Ø	(clear) patchy overcast drizzle shower
	1415	73°	4/12	Ø	(clear) patchy overcast drizzle shower
END	1515	69°	6/13	Ø	(clear) patchy overcast drizzle shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Sara orangetip	𝍸 𝍸	10
Behrs metalmark	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 ll	62
Acmon blue	𝍸 lll	8
CA Marble	𝍸	5
Painted lady	llll	4
Funereal Duskywing	lll	3
Perplexing Hairstreak	lll	3
unidentified sulfur	lll	3
Striated Queen	l	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		goldfields, popcorn flower, groundpink
~~[illegible]~~ NPCP01		~~[illegible]~~ Please disregard - <u>not</u> campo pea
NBCH01		Collinsia sp., 10+ individuals
NBCH02		Collinsia sp., 5+ plants
NBAR01		Antirrhinum, 10+ individuals
NBCH03		Collinsia sp 5 individuals on road margin
NBCH04		Collinsia sp. 25+
NBCD01		Cordylanthus 5+
NBCD02		Cordylanthus 15+
NBHL01		Horned lizard
NBCD03		Cordylanthus 45+
NBCH05		Collinsia sp. 1+
NBCD04		Cordylanthus 25+

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Antonette Gutierrez Add'l Person: Lawrence Date: 5/4/2010

Project: Manzanita Wind Energy Project Map #: Campo 8 Survey Sxn: F

GPS Unit : 1 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1115	76	1.5/3	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1300	78	25/10	0	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), ridges, (rock outcrops), soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
Acmon blue	𝍸 II	7
Behr's Metalmark	𝍸 𝍸 𝍸 I	16
Common White	I	1
Painted Lady	III	3
Sara's Orangetip	II	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
Campo 8/AGCH3	Chinese Houses	plant pop 50-100 litter
F8/ABBJ1	Black-tailed Jackrabbit	Chinese
F8/AGCH5	Chinese Houses	plant pop 10-50 road side
F8/AGCH6	" "	" " 50-100 roadside
F8/AGCH7	Chinese Houses	" " 10-50 road side
		Lasthenia californica
		Cryptantha
		Ground pink
		Buckwheat
		Plagiobothrys
		Tidy tips
		Calystegia lemmonii
		Salvia columbariae

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Margie Mulligan Add'l Person: _____ Date: 5.4.10

Project: Campo Wind Energy Project Map #: 4 Survey Sxn: _____

GPS Unit : 13 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1345	80	2-5	0	clear	patchy	overcast	drizzle	shower
	1530	80	3-6	0	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle) open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Painted Lady		1
Sara's Orangetip		4
Pale Swallowtail		2
Pearly Marble		1
Behr's Metalmark		12
Dusky wing		2
Acmon Blue		1
Buckeye		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MMLB03	Sensitive plant pt	Linanthus bellus 50 plants
MMDP06	"	Delphinium parishii subglobosum 10 plants
MMDP07	"	" 5
MMDP08	"	" 25
MMDP09	"	" 10
MMDP10	"	" 5
MMDP11	"	" 20
MMAD05	"	Astragalus douglasii parishii 1 plant
Nectar Source:		Dendromecon rigida
		Leptosiphon lemmonii
		Lasthenia gracilis
		Salvia columbariae
		Eschscholtzia californica
		Coreopsis californicus
		Layia glandulosa
		Phacelia distans
		Lotus strigosus
		Delphinium parishii subglobosum
		Linanthus bellus
		Mimulus guttatus
		Lupinus bicolor
		Minuartia douglasii

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Kenny Stokes Date: 5/2/10

Project: Campo Wind Energy Project Map #: 25 Survey Sxn: Campo R

GPS Unit : 6 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1055	59°	4/6	80	(clear)	patchy	overcast	drizzle	shower
	1200	62°	5/7	80	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): ~~open soils,~~ hilltops, ridges, rock outcrops, soil crusts, clay soils, ~~old roads, various nectar sources~~

Butterfly Species	Tally	Total
White?	II	2
Lady?	II	2
Behr's Metalmark	𝍸 𝍸 𝍸	15
Blue?	II	2
Dark?	I	1
Sara's Metalmark	I	1
Yellow?	I	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Layia
		Lasthenia
		Cacnothrus
		Bradium
		Menzanita

TOTAL NUMBER OF QCB DETECTED: _____ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Margie Mulligan Add'l Person: _____ Date: 5.4.10

Project: Campo Wind Energy Project Map #: 5 Survey Sxn: _____

GPS Unit : 13 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	75°F	0-2	0	(clear)	patchy	overcast	drizzle	shower
	1200	80°F	3-6	0	(clear)	patchy	overcast	drizzle	shower
	1330	80°F	4-6	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), (soil crusts), clay soils, old roads, (various nectar sources)

Butterfly Species	Tally	Total
Spring White		1
Perplexing Hairstreak		2
Behr's Metalmark		23
Pale Swallowtail		3
Funeral Duskywing		1
Duskywing		2
Sleepy Duskywing		1
Pearly Marble		2
Checkered White		2
Sara's Orangetip		2
Buckeye		2
Painted Lady		2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MMCH01	Nectar pt	Collinsia heterophylla
MMCH02	Nectar pt	"
MMCH03	Nectar pt	"
MMCH04	"	"
MMCH05	"	"
MMAD01	Sensitive plant pt	Astragalus douglassii perstictus 1 plant
MMAD02	"	" 1 plant
MMAD03	Sensitive plant pt	" 2 plants
MMAD04	"	" 30 plants
MMDS01	"	Delphinium parishii subglobosum 3 plants
MMDS02	"	" 50 plants
MMGV01	"	Gorazia viscida 30 plants
MMGV02	"	" 3 plants
MMLB01	"	Linanthus bellus 50 plants
MMLB02	"	" 30 plants
→		Delphinium & Linanthus common along entire ridge.
Nectar Source:		Anisocoma acaule
		Ericameria linearifolia
		Lasthenia gracilis
		Platystemon californicus
		Layia glandulosa
		Phacelia distans
		Leptosiphon lemmonii
		Lupinus concinnus & L. bicolor
		Delphinium parishii subglobosum
		Linanthus bellus
		~~Linanthus grandiflorus~~
		Collinsia heterophylla
		Malacothrix californica
		Salvia columbariae

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Aubrey Helgoth Add'l Person: Lawrence Date: 4-5-10

Project: ~~Manzanita~~ Campo Wind Energy Project Map #: Campo 1 Survey Sxn: ~~4~~ 13

GPS Unit : 1 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	900	72	0	0	clear	patchy	overcast	drizzle	shower
	1000	76	0/2	0	clear	patchy	overcast	drizzle	shower
stop	1100	78	2/5	0	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
start	1300	78	2.5/10	0	clear	patchy	overcast	drizzle	shower
END	~~3~~ 400	78	2.5/10	0	clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Behr's Metalmark	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	35
Mournful Duskywing	1	1
Umid blue	1	1
Umid Sulphur	1	1
~~Pus~~ Funereal Duskywing	1	1
Painted Lady	11	2
Sara's Orangetip	11	2
Acmon blue	𝍸 1	4

Page 1 of 2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		SPTO, CATH, PSFL, COBU, NOFL, WREN, CAQU,
		Cryptantha WESJ.
		gilia
		Eriogypta
		False Dandelion
AGNL 1	Woodrat nest	In oak
AGNL 2	woodrat nest	in dead chamise
AGCATH 1	California Thrasher	In chamise
AGHL 1	Horned Lard	in chamise chap
AGCH 1	Chinese Houses	plant pop 10-50 loads on hilltop
AGNL 4	~~Beats~~ Woodrat nest	Rock outcrop
AGCH 2	Chinese Houses	10-50

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Bo Willey Date: 5/5/10

Project: ~~Manzanita~~ Campo Wind Energy Project Map #: 22-23 ~85% complete Survey Sxn: Campo 9

GPS Unit : 6 complete QCB Protocol Survey # 4 Varies of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1145	76°	4/7	8	(clear)	patchy	overcast	drizzle	shower
	1400	78°	3/5	0	(clear)	patchy	overcast	drizzle	shower
	1515	78°	3/6	6	(clear)	patchy	overcast	drizzle	shower
	1625	78°	5/8	6	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): ~~open soils~~, ~~hilltops~~, (ridges), rock outcrops, ~~soil crusts~~, clay soils, ~~old roads~~, various nectar sources

Butterfly Species	Tally	Total
Sara's Orangetip	𝍸 I	6
Behr's Metalmark	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	45
Pale Swallowtail	𝍸	5
White?	IIII	4
Blue?	II	2
Orange? (Checkerspot)	I	1
Brown Elfin	II	2
West Coast Lady?	I	1
Checkered White	I	1
Yellow?	I	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Erodium
		Collinsia
		Penstemon
		Astragalus
		Penstemon
		Lasthenia
		Layia
		Cryptantha
		Sisyrin
		Phacelia
		Delphinium
		Lotus
		Plagiobothrys
		Mimulus
QPHL01	Point	San Diego Horned Lizard
" 02		
" 03		
" 04		
" 06		

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Mike Couffer Add'l Person: None Date: 5 May, 2010

Project: Campo Wind Energy Project Map #: Tile 21 Survey Sxn: Campo N

GPS Unit : Garmin 12 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900 HRS	68	1-4 MPH	CLEAR	clear	patchy	overcast	drizzle	shower
	1000	73	2→6	CLEAR	clear	patchy	overcast	drizzle	shower
	1100	76	1→4	CLEAR	clear	patchy	overcast	drizzle	shower
	1130	73	5→13 MPH	CLEAR	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
ACMON BLUE	IN FIELD NOTEBOOK	7
CHECKERED WHITE	"	1
BEHR'S METALMARK	"	3
PERPLEXING HAIRSTREAK	"	2
SARA ORANGETIP	"	5
PALE TIGER SWALLOWTAIL	"	2
FUNEREAL DUSKYWING	"	1
JUBA SKIPPER	"	1
GABB'S CHECKERSPOT	"	1
SPRING AZURE	"	1
SOUTHERN BLUE	"	1
PAINTED LADY	"	3
HENNE'S CHECKERSPOT	"	2
CALIFORNIA MARBLE	"	2
HARFORDS SULPHUR	"	1
CALIFORNIA SOOTYWING	"	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
NUMBERED	POINTS REPRESENT	COLLINSIA SP. LOCATIONS. NUMBERS
1 -> 385	FOLLOW ALL LOGGED	TRACKS ON THIS MAP AND CAMPO Q, MAP
FILE 23.		

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Natalie Brodie Add'l Person: Daniel Date: 5 May 2010

Project: Campo Wind Energy Project Map #: 7 Survey Sxn: F

GPS Unit : 2 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1130	75°	7/11	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1230	76°	6/11	0	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Behrs metalmark	卌 卌 |	11
Sara orangetip	||	2
Acmon blue	1	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		goldfields, popcorn flower,
NBCH10		Collinsia sp. 30+
NBCH11		Collinsia sp. 25+ on rock outcrop

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Natalie Brodie Add'l Person: Daniel Date: 5 May 2010

Project: Campo Wind Energy Project Map #: 13 Survey Sxn: F

GPS Unit : 2 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1330	72°	4/9	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1435	75°	5/10	6	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), ridges, (rock outcrops), soil crusts, clay soils, old roads, (various nectar sources)

Butterfly Species	Tally	Total
Behrs Metalmark	𝍸	2
Sulfur	1	1
Painted lady	1	1
Pale Swallowtail	𝍸	5
Sara orangetip	𝍸	4
Propertius Duskywing	1	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		goldfields, fiddleneck, phacelia, popcorn flower
NBHL01		horned lizard
NBHL02		horned lizard.

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Viviane Marquez-Waller Add'l Person: Phillip Date: 5/5/10

Project: Campo Wind Energy Project Map #: 5 Survey Sxn: 5 Campo A

GPS Unit : # 5 C/M Garmin QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	9:15	70.7	2.6/4.3	Ø	(clear)	patchy	overcast	drizzle	shower
	10:15	69.0	2.1/4.4	Ø	(clear)	patchy	overcast	drizzle	shower
	11:40	72.0°	3.8/5.4	Ø	(clear)	patchy	overcast	drizzle	shower
	12:55	75.5°	5.3/6.8	Ø	(clear)	patchy	overcast	drizzle	shower
	1:55	75.1°	6.2/8.5	Ø	(clear)	patchy	overcast	drizzle	shower
	~~2:55~~				clear	patchy	overcast	drizzle	shower
END	2:55	74.9°	7.6/9.8	Ø	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) (hilltops) (ridges) (rock outcrops) soil crusts, clay soils (old roads) (various nectar sources)

Butterfly Species	Tally	Total
Behr's Metalmark	𝍸 𝍸	24
Painted Lady	𝍸 𝍸 𝍸 𝍸	4
Southern Blue	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	9
Funereal Duskywing	𝍸 𝍸	2
Cabbage White	𝍸	1
Common White	𝍸 𝍸	2
Acmon Blue	𝍸 𝍸	2
Grey Hairstreak	𝍸	1
Sulphur sp.	𝍸 𝍸	2
Buckeye, Common	𝍸	1
Gabb's Checkerspot	𝍸	1
Perplexing Hairstreak	𝍸	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
VMCH01		3 plants in chamise chaparral opening
VMCH02		7 plants near hilltop
VMCH03		about 10 plants
VMMD01		scat Mule Deer
		Collinsia heterophylla
		Cryptantha sp.
		erodium cicutarium
		Scrub jay
		Crow
		amsinckia intermedia
		Black-chinned Sparrow
		Spotted Towhee
		Goldfields ++++
		Chia
		Lupine sp.
		Annual lotus
		Peppergrass sp.
		Nemophila
		(#5)
		Note: GPS tracklog may have
		been turned off in morning -

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Natalie Brodie Add'l Person: Daniel Date: 5 May 2010

Project: Campo Wind Energy Project Map #: 1 Survey Sxn: A

GPS Unit : Garmin 2 QCB Protocol Survey # 45 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	68°	3/7	0	(clear)	patchy	overcast	drizzle	shower
	1015	69°	3/9	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1100	72°	4/10	0	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Acmon blue	|||	3
Behrs Metalmark	𝍸 𝍸 ||	17
Sara orangetip	||	2
Funereal Duskywing	|	1
Propertius Duskywing	|	1
Painted lady	|	1
Perplexing Hairstreak	|	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		gold fields, popcorn flower,
NBCH01		Collinsia sp., 5+
NBCH02		Collinsia sp. 6+
NBCH03		Collinsia sp. 60+, scattered throughout
NBCH04		Collinsia sp. 100+
NBCH05		Collinsia sp. 200+ interspersed w/ goldfields
NBCH06		Collinsia sp. 150+
NBCH07		Collinsia sp. 50+
NBCH08		Collinsia sp. 50+ scattered
NBAR01		Antirrhinum sp. 5+ individuals
NBCH09		Collinsia sp ~~5~~ 100+ scattered

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Margie Mulligan Add'l Person: Shirley Ivnkeken Date: 5.5.10

Project: Campo Wind Energy Project Map #: J-9 Survey Sxn:

GPS Unit : 1 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	76°	4	0%	clear	patchy	overcast	drizzle	shower
	1200	80°	6-10	3%	clear	patchy	overcast	drizzle	shower
	1500	81°	5-9	5%	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle) open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Pearly Marble		1
Behr's Metalmark		50+
Spring Azure		2
Acmon Blue		16
Pale Swallowtail		8
Spring ~~Azure~~ White		2
Sara's Orangetip		5
Painted Lady		2
Gabb's Checkerspot		3
Funereal Duskywing		3
Duskywing		7

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
Nectar Source:		Malacothrix cleveland ii
		M. californica
		Escholtzia californica
		Anisocoma acaule
		Mimulus aurantiacus
		Ericameria linearifolia
		Salvia columbariae
		Gilia capitatum c.
		Eriophyllum confertiflorum
		E. wallecei
		Phacelia distans
		Collinsia heterophylla
		Penstemon cleveland ii
		Layia glandulosa
		Chaenactis glabriscula & C. artemisiifolia
		Lupinus truncatus, concinnus, bicolor, hirsutissimus
MMCH01-06	Nectar plant pt	Collinsia heterophylla
MMHL01	Sensitive Lizard pt	Horn Lizard 1
MMDS01	Sensitive plant pt	Delphinium parishii subglobosum 100 plants
MMDS02	"	" 10 plants
MMDS03		" 30 plants
MMDS04		" 50 plants
MMSC01		Streptanthus campestris 15 plants
MMSC02		" 10 plants
MMSC03		" 5 plants

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: K H Osborne   Add'l Person: Lewis Connell   Date: 5/5/2010

Project: Campo Wind Energy Project   Map #: Campo-L   Survey Sxn: L

GPS Unit : #10   QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	906	70	calm	0	(clear) patchy overcast drizzle shower
908.					clear patchy overcast drizzle shower
1015		77	1.5/5.8	0	(clear) patchy overcast drizzle shower
140		72	8.5/14	0	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END	357	71	9.9/14.7	0	(clear) patchy overcast drizzle shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Plebejus acmon	ll	2
I. augustinus (Brown Elfin	ll	2
A. mormo	llllK XX	34
A. cerva	~~llll~~	5
V cardui	ll	2
Hesperia juba	l	1
Glaucopsyche lygdamus	l	1
Erynnis brizo	l	1
Philotes catalus	llll	4
Plebejus lupini l	llll	4
Erynnis funeralis	l	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
	Cordylanthus	0559605/3614716 general area 30x30 m
	"	of abundant Cordylanthus rigidus.
	"	0559468/3615121 = hundreds C. rigidus.
	"	0559853/3615103 = ~50 Collinsia
#5	QCB Host (thousands)	0559496/3615156 to = ~ten thousand C. rigidus 0559345/3615126
#6	4 clumps thousand	0559265/3615122 to = ~ one thousand C. rigidus 0559319/3615123
7	Cordylanthus	0558997/3614961 to = ~200 C. rigidus 0558995/3614903
	Collinsia	0560010/3614974 ~ 100 Collinsia in 2 M²
	"	0560002/3614963 ~ " " 1 M²
	"	0559800/3614717 ~ " " 1 M²
	"	0559850/3614653 ~ 200 " " in 110 M²
	"	0559538/3614573 ~ 500 " " in 100 M²

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: NONE Date: 5 MAY, 2010

Project: Campo Wind Energy Project Map #: MAP TILE 23 Survey Sxn: CAMPO Q

GPS Unit : GARMIN 12 QCB Protocol Survey # ~~4~~ 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1200	82	1→7 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	77	2→10	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1400	78	3→10	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1500	78	3→10	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1548	77	3→13	5% COVER	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): ~~open soils~~, (hilltops) (ridges) rock outcrops, soil crusts, clay soils, (old roads) (various nectar sources)

Butterfly Species	Tally	Total
SPRING WHITE	IN FIELD NOTEBOOK	2
HARFORD SULPHUR	"	1
BEHR'S METALMARK	"	107
FUNEREAL DUSKYWING	"	8
CALIFORNIA MARBLE	"	2
ACMON BLUE	"	2
SARA ORANGETIP	"	3
PAINTED LADY	"	1
SPRING AZURE	"	2
WEST COAST LADY	"	1
SOUTHERN BLUE	"	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCHL20	POINT	
MCHL21	POINT	
NUMBERED POINTS REPRESENT		COLLINSIA SP. LOCATIONS. NUMBERS 1→385
FOLLOW ALL LOGGED TRACKS ON		THIS MAP AND CAMPO N, MAP TILE 21
MC CORIZANT SP.	POINT	A SPINEFLOWER NOT CURRENTLY FLOWERING,
		BUT IF A SPECIAL STATUS SPINEFLOWER
		IS IN THE AREA, THIS LOCATION SHOULD BE
		CHECKED.

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Fawell Add'l Person: Bo Willy Date: 5/5/10

Project: ~~Manzanita~~ Campo Wind Energy Project Map #: 21 Survey Sxn: Campo 9

GPS Unit : 6 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	845	72°	3/5	0	clear	patchy	overcast	drizzle	shower
	1015	72°	5/6	0	clear	patchy	overcast	drizzle	shower
	1120	73°	9/13	0	clear	patchy	overcast	drizzle	shower
	1135				clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Sara Orangetip	11	2
Acmon Blue	1	1
Dusky wing	11	2
Funereal Duskywing	111	3
Behrs Metalmark	1	1
White?	11	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Dichelostemma
		Erodium
		Collinsia
		Penstemon
		Astragalus
		Lasthenia
		Layia
		Cryptantha
		Cirsium
		Phacelia
		Delphinium
		Lotus
		Plagiobothrys
		Eschscholzia
		Ericameria
		Mimulus
DPSF01	Point	C. campestris
001	~ Point	Collinsia
↓		"
		"
011		"

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Erik LaCostz Add'l Person: — Date: 5/5/10

Project: Campo Wind Energy Project Map #: ~~14~~ 14,15 Survey Sxn: K

GPS Unit : 7 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0845	64	3-6	0	(clear)	patchy	overcast	drizzle	shower
	1100	71	4-8	0	(clear)	patchy	overcast	drizzle	shower
	1130	72	8-12	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	2 30	76	6-10	10	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Chalcedon checkerspot	1111 1	6
Acmon Blue	1111	5
Persp Hairstreak	11	2
Behrs Metalmark	1111 1111 1111 1111 1111 100+	100+
Southern Blue	1111	5
Sara orangetip	1111	5
Pale Swallowtail	1111 1111	10
Dark Duskywing	1	1
Funereal Duskywing	1111 111	8
Cal Marble	1	1
Brown Elfin	1	1
Painted lady	111	3

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
ELCOHE01	P.	Collinsia 10-20 individuals.
ELCOHE02	P	Collinsia 300-400 individuals.
		erodium sp
		Plagiobothrys sp
		Mustard sp.
		Lupine sp.
		AMSMEN
		Cammisonia sp.
		LASCAL
		KETANT
		YUCWHI
		ERICON
		Phacelia sp
		SALCOL
		Chanactis
		PHATAN
		ESCCAL
		DICCAP
		MIMAUR
		UROLIN
		LAYGIA
		LOTARG
		PENCLE
		CASFOL
		DELHES
		Lupinus excubitas
		CAU HET
		LINDIA
		ERILAN.

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: KH Osborne Add'l Person: Lawrence Date: 5/6/2010

Project: Campo Wind Energy Project Map #: 17, 19, 18 Survey Sxn: N

GPS Unit: 61 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	905	67	1.8/4.4	0	(clear)	patchy	overcast	drizzle	shower
~~1030~~	1030	71	1.5/4.4	0	(clear)	patchy	overcast	drizzle	shower
~~102~~	102	73	3.7/13.5	0	(clear)	patchy	overcast	drizzle	shower
Railroad	300	75	4.3/9.3	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	355	74	4/9.2	0	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
P. acmon	III	3
A. mormo	VIIIXXXXXXX	68
P. catalus	I	1
A. sara	IIII IIII	9
I.E. agustina	IIII	5
C. perplexa	II	2
C. sabbus	III (2 ♀) photographed	3
E. bvizzo	III	3
P. eurymedon	~~IIII~~	5
V. cardui	II	2
P. lupini	II	2
E. Lunaris	II	2
E. twistis	I	1
P. protodice	I	1
C.Z. cesonia	I	1
E. hayanis (pearly)	I	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
KOCol01	QCB Host Collinsia track around	@ 0559807/3613966 walked around ~500 M² w/ 1000 plants
KOCol02	Collinsia	2 plants
KOCol03	"	~ 1000 Collinsia ~ 400M²
KOCol04	"	~ 100 in 1 M²
KOCol05	"	~ 200 in 50 M²
KOCol06	"	~ 500 in 50 M²
KOCol07	"	~ 5000 in 50 M² N facing slope

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Toby Bostick Date: 5/6/10

Project: ~~Manzanita~~ Campo Wind Energy Project Map #: 23 Survey Sxn: Campo 9

GPS Unit : 6 QCB Protocol Survey # Varies of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	8:30	60°	2/4	0	(clear)	patchy	overcast	drizzle	shower
	9:45	730	1/3	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): ~~open~~ soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, ~~old roads~~, ~~various nectar sources~~

Butterfly Species	Tally	Total
Behr's Metalmark	~~HH~~ ~~HH~~ |||	13
Southern Blue	||	2
Acmon Blue	||	2
Checkered White	|	1
White	||	2
Pale Swallowtail	|	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Erodium
		Lasthenia
		Layia
		Lupinus
		Eryptantha
001	~Point	Collinsia
↓		
005		

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell (Campo) Add'l Person: John Bostick Date: 5/6/10

Project: ~~Manzanita~~ Wind Energy Project Map #: 25 Survey Sxn: Campo R

GPS Unit : 6 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	1010	~~74~~ °	3/5	0	(clear) patchy overcast drizzle shower
	1215	78 °	6/9	0	(clear) patchy overcast drizzle shower
	1430	76 °	4/6	0	(clear) patchy overcast drizzle shower
	1515	77°	7/9	0	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END					clear patchy overcast drizzle shower

Habitat On-site (circle): ~~open soils~~, ~~hilltops~~, ~~ridges~~, ~~rock outcrops~~, ~~soil crusts~~, clay soils, ~~old roads~~, ~~various nectar sources~~

Butterfly Species	Tally	Total
Gabb's Checkerspot	II	2
Sara's Orange Tip	𝍸 𝍸	10
Behr's Metalmark	𝍸 𝍸 𝍸 𝍸	20
Pale Swallowtail	II	2
Brown Elfin	I	1
Lady?	𝍸	5
Southern Blue	II	2
White?	III	3
Blue?	𝍸 𝍸 II	12
Acmon Blue	𝍸 I	6
Perplexing Hairstreak	I	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Layia
		Lasthenia
		Lupinus
		Camothus
		Erodium
		Phacelia
		Cryptantha
		Dichelostemma
		Mimulus
		Salvia columbariae
		Gnaphalium
		Chaenactis
DPBJ01	Point	Black-Tailed Jack Rabbit
7	Point	Collinsia
↓		
10		

TOTAL NUMBER OF QCB DETECTED: _____ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Natalie Brodie Add'l Person: Phillip Date: 6 May 2010

Project: Campo Wind Energy Project Map #: 19 Survey Sxn: Campo - P

GPS Unit : Garmin 12 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1345	75°	3/5	0	(clear)	patchy	overcast	drizzle	shower
	1500	74°	3/6	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1540	73°	3/7	5	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Funereal Duskywing	𝍸 I	6
Acmon blue	𝍸	5
checkered white	I	1
unidentified skipper (common?)	I	1
Behrs metalmark	II	2
Painted lady	I	1
Spring azure	II	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		gold fields, popcorn flower, gilia

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: NONE Date: 6 MAY, 2010

Project: Campo Wind Energy Project Map #: TILE 24 Survey Sxn: CAMPO RD

GPS Unit : GARMIN 13 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0830	69	Ø	CLEAR	(clear)	patchy	overcast	drizzle	shower
	0900	70	1->3	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1000	71	1->3	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	73	1->5	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	76	Ø->5	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	81	Ø->4	CLEAR	(clear)	patchy	overcast	drizzle	shower
END	1400	83	Ø->3	CLEAR	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, (hilltops), (ridges), rock outcrops, soil crusts, clay soils, old roads, various nectar sources

1500 HRS, 77°F, 1->5 MPH, CLEAR

Butterfly Species	Tally	Total
GABBS CHECKERSPOT	IN FIELD NOTEBOOK	14
HENNE'S CHECKERSPOT	"	61
ACMON BLUE	"	65
PAINTED LADY	"	7
BEHR'S METALMARK	"	11
SARA ORANGETIP	"	21
SOUTHERN BLUE	"	6
PALE TIGER SWALLOWTAIL	"	6
SPRING AZURE	"	8
CALIFORNIA SOOTYWING	"	2
WEST COAST LADY	"	1
SPRING WHITE	"	6

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCQB13	Point	
MCQB14	Point	THIS WAS A VERY SMALL, FRESH QUINO POSSIBLY OBSERVED
MCHL22	Point	BY ANTONETTE GUTIERREZ EARLIER IN THE MORNING.
MCHL23		
MCQB15	Point	

TOTAL NUMBER OF QCB DETECTED: 3 INDIVIDUALS

7

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Natalie Brodie Add'l Person: Phillip Date: 6 May 2010

Project: Campo Wind Energy Project Map #: 20 Survey Sxn: P

GPS Unit : Garmin 12 QCB Protocol Survey # 4 of 5.

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	0930	69°	2/5	Ø	(clear) patchy overcast drizzle shower
	1100	73	4/7	Ø	(clear) patchy overcast drizzle shower
	1230	75°	3/5	Ø	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END	1315	75°	4/7	Ø	(clear) patchy overcast drizzle shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Behrs metalmark	~~𝍸~~ 𝍸 ~~𝍸 𝍸 𝍸~~ 𝍸 𝍸 𝍸 ǁ	42
Funereal Duskywing	ǀǀǀǀ	4
Painted lady	ǀ	1
Acmon blue	ǀǀ	2
unidentified white	ǀ	1
Gabbs checkerspot	ǀǀ	2
Perplexing hairstreak	ǀǀ	2
Sara orangetip	ǀǀǀ	3
Sulfur	ǀ	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
NBCH01		Collinsia sp. 35+
		goldfields, popcorn flower, gilia cap.,
NBCH02		Collinsia sp. 5+
NBCH03		Collinsia sp. 15+, scattered
NBCH04		Collinsia sp. 30+, scattered w/in patches of goldfields
NBHL01		~~Horned~~ Lizard
NBHL02		Horned lizard
NBCH05		Collinsia sp. 40+, Antirrhinum sp. scattered (15+)
NBAR01		Antirrhinum sp. 20+
NBAR02		Antirrhinum sp. 5+

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Margie Mulligan Add'l Person: _____ Date: 5.6.2010

Project: Campo Wind Energy Project Map #: 19-0 Survey Sxn: _____

GPS Unit : 2 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	62°	4-7	0%	(clear)	patchy	overcast	drizzle	shower
	1200	72°	3-6	0%	(clear)	patchy	overcast	drizzle	shower
	1430	75°	4-8	0%	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, ridges, rock outcrops, soil crusts, clay soils, (old roads), various nectar sources

Butterfly Species	Tally	Total
Pale Swallowtail		1
Painted Lady		1
Acmon Blue		21
Sara's Orangetip		6
Funereal Duskywing		2
Behr's Metalmark		32
Checkered White		4
Sulphur sp.		2
Duskywing		2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
Nectar		Cryptantha spp.
Source:		Eschscholtzia californica
		Amsinkia menziesii
		Lasthenia gracilis
		Trichostemma lanatum
		Lupinus bicolor
		L. concinnus
		Astragalus douglasii perstrictus
		Marah macrocarpus m.
MMCH01	~~Host~~plant pt	Collinsia concolor
MMGV01	Sensitive plant pt	Geraea viscida 30 plants
MMGV02	"	" 1 plant
MMAD01	"	Astragalus douglasii perstrictus 50 plants
MMADP02	"	" 40 plants
MMADP03	"	" 2 plants
MMADP04	"	" 1 plant
MMADP05	"	" 25 plants
MMADP06	"	" 1 plant

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Margie Mulligan Add'l Person: _____ Date: 5.7.2010

Project: Campo Wind Energy Project Map #: 11-H Survey Sxn: _____

GPS Unit : 5 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	65°F	6-10	0%	(clear)	patchy	overcast	drizzle	shower
	1200	74°F	0-4	0%	(clear)	patchy	overcast	drizzle	shower
	1245	76°F	2-4	0%	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), ridges, (rock outcrops), (soil crusts), clay soils, old roads, (various nectar sources)

Butterfly Species	Tally	Total
Behr's Metalmark		37
Funeral Duskywing		2
Acmon Blue		11
Pearly Marble		1
Checkered White		3
Painted Lady		3
Sara's Orange Tip		3

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
Nectar plants:		Cryptantha spp.
		Plagiobothrys spp.
		Salvia columbariae
		Mimulus aurantiacus
		Ceanothus leucodermis
		Uropappus lindleyi
		Leptosiphon lemmonii
		Lupinus concinnus
		Collinsia concolor
		Amsinkia menziesii
		Layia glandulosa
MMCH01	~~Host plant pt~~	Collinsia
MMCH02		"
MMCH03		"
MMCH04		"
MMCH05		"
MMDS01 MMDS02		Delphinium parishii subglobosum ~~15~~ 20 plants
MMDS03		" 25 plants
MMDS04		35 plants
MMDS05		25 plants
MMDS06		20 plants
MMDS07		10 plants
MMDS08		~~25~~ plants
MMDS09		25 plants
MMDS10		10 plants
MMSC01		~~Chlorogalum~~ Streptanthus campestris 25 plants
MMSC02		10 plants

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Margie Mulligan Add'l Person: _____ Date: 5.7.2010

Project: Campo Wind Energy Project Map #: 16-H Survey Sxn: _____

GPS Unit : 5 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1300	79°	2-4	0	(clear)	patchy	overcast	drizzle	shower
	1530	82°	2-5	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Behr's Metalmark		17
Pale Swallowtail		3
Acmon Blue		12
~~Checkerspot~~ Chalcedon Checkerspot		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MMCH06	Host plant pt	Collinsia
MMCH07		
MMCH08		
~~MMCH09~~		
MMCH10		
MMCH11		
MMCH12		
MMADO1	Sensitive plant pt	Astragalus douglasii porstictus 5 plants
MMADO2	↓	" 10 plants
MMDP01		15 plants
MMDP02		10 plants
MMDP03		10 plants
Nectar		Phacelia parryi
Source:		Salvia columbariae
		Chaenactis glabriscula
		C. artemisiifolia
		Cryptantha spp.
		Gilia capitatum c.
		Lupinus truncatus
		L. bicolor
		L. concinnus
		Lasthenia gracilis
		Collinsia concolor
		Layia glandulosa

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID S. FAULKNER Add'l Person: Thomas Date: 7 May 2010

Project: Campo Wind Energy Project Map #: 16 Survey Sxn: CAMPO G

GPS Unit : #2 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1300	80	3	0	(clear)	patchy	overcast	drizzle	shower
	1400	80	4	0	(clear)	patchy	overcast	drizzle	shower
	1500	80	3	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1600	78	6		(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), soil crusts, clay soils, (old roads), various (nectar) sources

Butterfly Species	Tally	Total
A. Virgulti		3
A. Sara		3
P. Acmon		1
V. Cardui		2
E. Propertius		1
E. H. Lotta		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
16 "G"	11S 0560572 UTM 3616257	Collinsia ~100+ plants
	11S0560562 UTM 3615515	Collinsia ~ 100+ plants
		Blue Dicks
		Cryptantha

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: Thornes Date: 7 May 2010

Project: Campo Wind Energy Project Map #: 11 Survey Sxn: CAMPO G

GPS Unit : #2 QCB Protocol Survey # 5 of 5.

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	1100	76	6	∅	(clear) patchy overcast drizzle shower
	1200	80	3	∅	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END	1300	80	3	∅	(clear) patchy overcast drizzle shower

Habitat On-site (circle): (open soils) (hilltops) ridges, (rock outcrops) soil crusts, clay soils, (old roads), various (nectar) sources

Butterfly Species	Tally	Total
A. virgulti		25+
P. Acmon		7
A. SARA		2
P. protodice		1
E. funeralis		2
E. hyantis 2ath		2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
11 "G"	11S 0560359 UTM 3616924	Collinsia ~50 plants potential larval host
	11S 0560647 UTM 3616926	Horned Lizard. Juvenile
	11S 056774 UTM 3616771	Collinsia ~25 plants
	11S 0560718 UTM 3616418	Collinsia ~100 plants.

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: Thomas Date: 7 May 2010

Project: Campo Wind Energy Project Map #: 12 Survey Sxn: Campo G

GPS Unit : #2 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	69	3	ø	(clear)	patchy	overcast	drizzle	shower
	1000	72	7	ø	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1100	76	6	ø	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, (ridges), (rock outcrops), soil crusts, clay soils, (old roads), various (nectar) sources

Butterfly Species	Tally	Total
P. Acmon		6
A. Vialis		5
E. funeralis		6
A. Sara		3

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
12	11S 0561129 UTM 3617395	Collensia ~50 plants potential larval HOST
12	11S 0561368 UTM 3617481	Collensia ~30 plants
		Cryptantha
		Goldfields
		Collensia

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: NONE Date: 7 MAY, 2010

Project: Manzanita Wind Energy Project Map #: MAP TILE 24 Survey Sxn: CAMPO - R)

GPS Unit : GARMIN 10 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0838	72	Ø -> 7 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	0900	73	Ø -> 8	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1000	75	Ø -> 8	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	76	Ø -> 6	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	83	Ø -> 4	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	88	Ø -> 2	CLEAR	(clear)	patchy	overcast	drizzle	shower
END	1400	80	1 -> 6	CLEAR	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) (hilltops) (ridges) (rock outcrops) soil crusts, clay soils, (old roads) (various nectar sources)

1500HRS, 84°F, 1->4 MPH, CLEAR

Butterfly Species	Tally	Total
ACMON BLUE	IN FIELD NOTEBOOK)	64
SARA ORANGETIP	"	25
HENNE'S CHECKERSPOT	"	54
PALE TIGER SWALLOWTAIL	"	3
CALIFORNIA MARBLE	"	1
PAINTED LADY	"	6
CALIFORNIA SOOTYWING	"	3
FUNEREAL DUSKYWING	"	8
GABB'S CHECKERSPOT	"	13
WEST COAST LADY	"	1
BEHR'S METALMARK	"	2
HARFORDS SULPHUR	"	4
QUINO CHECKERSPOT BUTTERFLY	"	1
SPRING WHITE	"	2
SPRING AZURE	"	8
PERPLEXING HAIRSTREAK	"	2
GORGON COPPER (LYCAENA GORGON)	"	2
SOUTHERN BLUE	"	1
BUCKEYE	"	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCQB16	POINT	DRAB, OLDER INDIVIDUAL, IN A DIFFERENT AREA FROM PREVIOUS INDIVIDUALS

TOTAL NUMBER OF QCB DETECTED: 1 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: John Bostick Date: 5/7/10

Project: ~~Manzanita~~ Campo Wind Energy Project Map #: 15-16 Survey Sxn: Camp

GPS Unit : 6 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1345	79°	5/7	0	~~clear~~	patchy	overcast	drizzle	shower
	1455	78°	6/9	0	~~clear~~	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	~~drizzle~~	~~shower~~

Habitat On-site (circle): ~~open soils~~, hilltops, ridges, ~~rock outcrops~~, soil crusts, clay soils, ~~old roads~~, various nectar sources

Butterfly Species	Tally	Total
Behr's Metalmark	HH	5
Acmon Blue	M	3
Blue ?	HH	4
Southern Blue	I	1
Dusky wing	I	1
Sonora Checkerspot	II	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Layia
		Lasthenia
		Eschscholzia
		Eriodictyon
		Plagiobothrys
		Cryptantha
		Phacelia
		Descurainia

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: John Bostick Date: 5/7/10

Project: ~~Manzanita~~ Campo Wind Energy Project Map #: 18 Survey Sxn: Campo N

GPS Unit : 6 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	8:45	71°	5/6	0	(clear) ~~patchy~~ overcast drizzle shower
	10:00	75°	6/8	0	(clear) patchy overcast drizzle shower
	12:45	78°	5/8	0	(clear) patchy overcast drizzle shower
	13:35	78	4/6	0	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END					clear patchy overcast drizzle shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), ~~(rock outcrops)~~, soil crusts, clay soils, ~~old roads~~, (various nectar sources)

Butterfly Species	Tally	Total
Bairs Mitch Mark	卌 卌 卌 卌 II	22
Lady?	III	3
West Coast Lady	I	1
Blue?	卌 IIII	9
Duskywing	IIII	4
Acmon Blue	卌 卌 I	11
white?	III	3
Saras ~~Orange~~ OrangeTip	卌 I	6

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Layia
		Lasthenia
		Erodium*
		Plagiobothrys (2)
		Descurainia
		Collinsia
		Dichelostemma
		Eschscholzia
		Delphinium
		Cryptantha
		Plagiobothrys
001	Points	Collinsia
↓		
023		

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: JIMMY McMORRAN Date: 8 MAY, 2010

Project: Campo Wind Energy Project Map #: MAP TILE 11 Survey Sxn: CAMPO - C

GPS Unit : GARMIN 2 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1215 HRS	79	4→11	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	77	2→6	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1400	78	4→14	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1500	79	4→9	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1520	78	2→7	CLEAR	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, (ridges), rock outcrops, soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
ACMON BLUE	IN FIELD NOTEBOOK	10
BEHR'S METALMARK	"	25
FUNEREAL DUSKYWING	"	2
PERPLEXING HAIRSTREAK	"	60
SPRING AZURE	"	1
SARA ORANGETIP	"	1
PALE TIGER SWALLOWTAIL	"	1
GABB'S CHECKERSPOT	"	1
GRAY HAIRSTREAK	"	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCHL26	POINT	
MCHL27	POINT	
MCHL28	POINT	
MCHL29	POINT	
MCHL30	POINT	
NUMBERED POINTS REPRESENT		POINTS WHERE COLLINSIA SP. WAS MARKED.

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: JIMMY MCMORRAN Date: 8 MAY, 2010

Project: Campo Wind Energy Project Map #: MAP TILE 5 Survey Sxn: CAMPO - C

GPS Unit : GARMIN 2 QCB Protocol Survey # _____ of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0845 HRS	66	0→3 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	0900	71	0→3	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1000	72	1→4	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	72	1→4	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	74	4→9 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) hilltops (ridges) (rock outcrops) soil crusts, clay soils, (old roads) (various nectar sources)

Butterfly Species	Tally	Total
ACMON BLUE	IN FIELD NOTEBOOK	25
WEST COAST LADY	"	1
BEHR'S METALMARK	"	210
FUNEREAL DUSKYWING	"	7
PERPLEXING HAIRSTREAK	"	15
SPRING AZURE	"	3
CALIFORNIA MARBLE	"	1
SARA ORANGETIP	"	2
SPRING WHITE	"	2
PALE TIGER SWALLOWTAIL	"	4

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCHL24	POINT	
MCHL25	POINT	
NUMBERED POINTS REPRESENT LOCATIONS WHERE COLLINSIA SP. WAS MARKED.		

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: John Bostick Date: 5/8/10

Project: ~~Manzanita~~ Campo Wind Energy Project Map #: 10, 15, 16 Survey Sxn: Campo H+I

GPS Unit : 6 QCB Protocol Survey # 5 of 5.

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	8:30	63°	4/6	0	(clear) patchy overcast drizzle shower
	1025	71°	7/8	0	(clear) patchy overcast drizzle shower
	1210	71°	8/12	0	(clear) patchy overcast drizzle shower
	1430	75°	8/11	0	(clear) patchy overcast drizzle shower
	15 15	77°	11/14	0	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END					clear patchy overcast drizzle shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), (soil crusts), clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
Acmon Blue	||||| ||||| |||||	15
Blue?	||||| ||||| |||||	15
Pale Swallowtail	||||| ||||| ||	12
Behr's Metalmark ||||| ||||| ||||| ||||| ||||| |||||	||||| ||||| ||||| ||||| ||||| ||||| |||||	65
Sara's Orangetip	|||	3
Perplexing Hairstreak			1
Duskywing	|||||		6
Golf Sister?			1
Funeral Duskywing	||||	4
Gorgon Copper	|||	3

0

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Erodium
		layia -
		Lasthenia
		Cryptantha
		etc
QC1	Point	Collinsia
↓	"	"
QC5	"	"
DP5F01	Point	Coreopsis tinctoria
DP5F02	"	" "

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: John Bostick Date: 5/8/10

Project: ~~Manzanita~~ Coampo Wind Energy Project Map #: 16 Survey Sxn: Compo H

GPS Unit : 6 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	15:20	78	5/7	0	(clear)	patchy	overcast	drizzle	shower
	16:20	75	6/9	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Sara's Orangetip	III	3
Behr's Metalmark	IIII	5
Blue?	~~IIII~~ I	6
Acmon Blue	II	2
Yellow?	I	1
Purplestreak Hairstreak	I	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Erodium
		Layia
		Lasthenia
		Cirsium
		etc
016	Point	Collinsia
017	"	"

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Margie Mulligan Add'l Person: _____ Date: 5/11/2010

Project: Campo Wind Energy Project Map #: 13-F Survey Sxn: _____

GPS Unit : 13 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1330	74°	2-4	5	(clear)	patchy	overcast	drizzle	shower
	1545	74°	3-6	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Behr's Metalmark		32
Funereal Duskywing		1
Duskywing		2
Acmon Blue		4
Checkered White		3
Pearly Marble		2
Pale Swallowtail		2
Sara's Orangetip		2
Common Sootywing		3

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MMLB01	Sensitive plant pt	100 plants Linanthus bellus
MMMVCA01	"	20 plants Mucronea californica
~~MMASDP01~~	"	~~Astragalus douglasii parishii 2 plants~~
MMHL01	Sensitive Lizard pt	Horn Lizard
MMHL02	"	Horn Lizard
~~MMASDP02~~	~~Sensitive plant pt~~	~~1 plant Astragalus douglasii parishii~~
Nectar Source:		Erysimum capitatum c.
		Mimulus fremontii
		Cryptantha spp.
		Lotus strigosus
		Layia glandulosa
		Lasthenia gracilis

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Margie Mulligan Add'l Person: _____ Date: 5/11/2010

Project: Campo Wind Energy Project Map #: 7 & 8 Survey Sxn: _____

GPS Unit : 13 QCB Protocol Survey # 6 (Map 8-F) 5 (Map 7-F) of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	65°	0-2	0	(clear)	patchy	overcast	drizzle	shower
	1110	75°	0-5	0	(clear)	patchy	overcast	drizzle	shower
	1300	76°	2-5	3	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, ridges, (rock outcrops), soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
Behr's Metalmark		35
Checkered White		5
Dusky wing		3
Acmon Blue		16
Sara's Orangetip		4
Funeral Duskywing		1
Becker's White		1
Orange Sulfur		1
Pale Swallowtail		1
Common Sootywing		3
Nectar plants: Phacelia brachyloba		
Cryptantha spp.		
Leastrenia gracilis		
Eriophyllum confertiflorum		
Sysimbrium altissimum		
Salvia columbariae		
Rendromecon rigida		
Eschholtzia californica		
Emmenanthe pendulifora		
Lotus strigosus		
Phacelia distans		
Ansiocoma acaule		
Layia glandulosa		
Chaenactis glabriuscula		

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MMCH01	HOST PLANT PT	50 plants Collinsia
02	"	40 plants "
03	"	50 plants "
04	"	50 plants "
05	"	1 plant "
MMDEPS01	Sensitive plant pt	Delphinium parishii subglobosum 10 plants
02	"	" 20 plants
03	"	25
04	"	15
05	"	15
06	"	20
07	"	100
08	"	50
09	"	25
10	"	50
11	"	50
12	"	25
MMGEVI01	"	Geraea viscida 10 plants
02	"	" 3
03	"	" 10
MMLASP01	"	Lathyrus splendens 1 vine
MMLIBE01	"	Linanthus bellus 50 plants
~~MMDEP~~		
MMASDP01	"	Astragalus douglasii parishii 2 plants
MMASP02	"	" 1 plant

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: — Date: 5/12/10

Project: Campo Wind Energy Project Map #: 2, 7 Survey Sxn: Campo D

GPS Unit : 6 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	9 15	67°	4/6	10	clear	patchy	overcast	drizzle	shower
	11 10	71°	5/8	0	clear	patchy	overcast	drizzle	shower
	1340	75°	4/5	0	clear	patchy	overcast	drizzle	shower
	16 00	72°	6/8	0	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Sara's Orangetip	11	7
Behr's Metalmark	55	55
White?	11	7
Blue?	11	11
Pale Swallowtail	4	4
Lady?	3	3
Dark wing?	9	9
Acmon Blue	8	8
Great White Skipper	1	1
Checkered White	2	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Eriodictyon
		Layia
		Lasthenia
		Ceanothus
		Acanthis
		Ericameria
		Dichostema
		Eryptantha
		Plagiobothrys
		Descurainia
		Phacelia (2)
		Salvia columbariae
B01	Point	Collinsia
↓	"	"
024	"	"

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Natalie Brodie Add'l Person: Josh Date: 12 May 2010

Project: Campo Wind Energy Project Map #: 4 Survey Sxn: B

GPS Unit : Garmin 9 QCB Protocol Survey # 6 of 5 .

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	1100	67°	calm	∅	(clear) patchy overcast drizzle shower
	1220	70°	calm	∅	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END	1415	70°	calm/2	∅	(clear) patchy overcast drizzle shower

Habitat On-site (circle): (open soils, hilltops,) ridges, (rock outcrops,) soil crusts, clay soils, (old roads, various nectar sources)

Butterfly Species	Tally	Total
Funereal Duskywing	𝍸	4
Sara orangetip	1	1
Behrs metalmark	𝍸 𝍸 𝍸 𝍸 111	23
Acmon blue	𝍸	4
Spring White	𝍸 𝍸	10
Propertius duskywing	1	1
CA Marble	1	1
Painted lady	11	2
Pale swallowtail	11	2
Tortoiseshell (?)	1	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		groundpink, gold fields, popcorn flower
NBCH05		Collinsia sp. 15+
NBCO01		Cordylanthus 35+, scattered along trail
NBAR01		Antirrhinum cou., 10+ individuals
NBCH06		Collinsia sp. < 10, scattered

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Natalie Bratie Add'l Person: Josh Date: 12 May 2010

Project: Campo Wind Energy Project Map #: 3 Survey Sxn: B

GPS Unit : Garmin 9 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	61°	calm	Ø	(clear)	patchy	overcast	drizzle	shower
	1010	65°	calm	Ø	(clear)	patchy	overcast	drizzle	shower
stop	1100	67°	calm	Ø	clear	patchy	overcast	drizzle	shower
start	1415	70°	calm	Ø	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1435	71°	calm/2	Ø	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, ridges, rock outcrops, soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
Bellis metalmark	𝍸 𝍸 𝍸 I	16
Pale swallowtail	II	2
Brown elfin	I	1
Funereal Duskywing	I	1
Sara orangetip	II	2
Spring white	𝍸	5
Acmon blue	𝍸 I	6
Painted lady	I	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		goldfields popcorn flower
NBCH01		collinsia sp., 20+, sparse scatter
NBCH02		Collinsia sp., 6 individuals
NBCH03		Collinsia sp. 5+
NBCH04		Collinsia sp. 10+ scattered
NBC002		Cordylanthus, 20+ on road edge
NBCH07		Collinsia sp. 35+

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Natalie Brudic Add'l Person: Josh Date: 12 May 2010

Project: Campo Wind Energy Project Map #: 8 Survey Sxn: B

GPS Unit : Garmin 9 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1445	71°	2/5	Ø	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1600	69°	2/6	Ø	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Acmon blue	𝍸 I	6
Spring white	𝍸	5
Behr's metalmark	III	4

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		gold fields. popcorn flower. groundpink

TOTAL NUMBER OF QCB DETECTED: ____ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Viviane Marquez-Walker Add'l Person: John Date: 5/12/16

Project: Campo Wind Energy Project Map #: 16 and 19 Survey Sxn: Campo - M

GPS Unit : Garmin 12 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	10:45	71.4	1.2/1.7	0	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
	12:40	76.3	1.6/4.6	0	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
	14:00	75.8	2.1/5.4	0	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END	15:20	70.5	2.8/4.6	0	(clear) patchy overcast drizzle shower

Habitat On-site (circle): (open soils) (hilltops) ridges, (rock outcrops) soil crusts, clay soils (old roads) (various nectar sources)

Butterfly Species	Tally	Total
Funeral Dusky Wing	//	2
Sara's Orangetip	~~////~~	5
Acmon Blue	~~////~~ ~~////~~ ////	15
Southern Blue	////	4
Behr's Metalmark	//// ////	9
Marbled White	/	1
Lady sp	/	1
Marine Blue	/	1
Blue Species	///	3
Common White	/	1
reference (large scale)		
note: lost 16 Map in field of '16		

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
VMCH01	Collinsia heterophylla	5 plants
VMCH02	" "	≅ 15 plants
VMCH03	" "	≅ 100 plants
VMBJ01	Blacktailed Jackrabbit	one seen here
VMBJ02	"	two seen here
		Cryptantha sp.
		Gold fields
		wooly blue curls
		chia
		ground pink
		brassica sp.
		penstemon sp.
		Spotted towhee
		California towhee
		Blackchinned sparrow
		Raven
		California Thrasher
		Scrub jay
		hummingbird sp.
		red-tailed hawk
		Lazuli Bunting
		Lark Sparrow
		Horned larks
		Turkey vulture

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

area surveyed is marked on map 19M

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Viviane Marquez Add'l Person: John Date: 5/12/10

Project: Campo Wind Energy Project Map #: 19 Survey Sxn: O + P partial (did in error during survey for M)

GPS Unit : Garmin 12 QCB Protocol Survey # _____ of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	8:35	65.3	0.5/1.2	Ø	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
	9:45	69.0°	2.2/2.8	Ø	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	10:45	76.3°	2.3/5.4	Ø	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Acmon Blue	𝍸 𝍸 ||	7
Marine Blue	|	1
Behrs Metalmark	𝍸 ||	7
Sara's Orangetip	|	1
Pale Swallowtail	|	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		American Crow
		Cryptantha sp.
		erodium sp
		California Quail
		Scrub Jay
		Coyote Scat
		Chia
		~~Yucca~~ Goldfields
		California Towhee
		Lesser Goldfinch
		Mourning Dove
		Lupine sp.
		Annual Lotus
		House finch

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: BRIAN Lohstroh Add'l Person: Philip Date: 5/12/10

Project: Campo Wind Energy Project Map #: 21 Survey Sxn: N

GPS Unit : Garmin 1 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1330	76	3-7	0	(clear)	patchy	overcast	drizzle	shower
	1430	74	3-8	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1530	75	3-12	0	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Painted Lady		1
Southern blue		1
Dusky wing SP		1
Acmon blue		5
Hartfordi Sulphur		1
Orange tip (Sara)		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
BLCH08	host plant patch	300+ ind
BLCH09	"	300+ ind
		Lego
		BCSP
		BEWR
		BCSP
		Webb
		Bush
		WBNH
		Lago
		2 bee swarms
		Nectar sources: cryptantha, Dichlostemma
		lotus scoparius, strigosus Phacelia distans,
		Parryi, cheanactis spp encameria
		Emmenanthe, Erio phyllum wallacei
		Gilia spp, chia Paintbrush mimulus Aur
		penstemon, Mimulus [illegible] Scroph col

TOTAL NUMBER OF QCB DETECTED: ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Brian Lohstroh Add'l Person: Philip Date: 5/12/10

Project: Campo Wind Energy Project Map #: 20 Survey Sxn: P

GPS Unit : Garmin 1 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0845	63	0-1	0	(clear)	patchy	overcast	drizzle	shower
	1210	74	0-3	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1300	79	0-4	0	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Behr's Metalmark	~~58~~	58
Painted Lady		2
Acmon		3
Dusky wing		3
Gray hairstreak		1
Pale Swallowtail		1
Sara Orangetip		6
Hartford's Sulpher		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
BLCH01	Host Plant Patch	100+ individuals
BLCH02		30+ "
BLCH03		40+ "
BLCH04		500+ "
BLCH05		500+ "
BLCH06		100+ "
BLCH07		100+ "
BLCH08		NO ADULTS
BLCH09		
BLHL01	horned Lizard	♀
BLHL02	"	♀
		BCSP ACWD BUSH
		CALT SCJA BEWR
		CORA SPTO WREN
		RTHA BTHGR
		Coyote + pup + den
		cottontail CA ground squirrel
		Nectar sources: Ceanothus spp cryptantha
		Delphinium Lotus strigosa, Gilia spp
		Lasthenia Linanthus bellus grandiflorus
		lupine spp, Layia, Senecio 'cal Lotus
		agrophyllus

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: NONE Date: 12 MAY, 2010

Project: Campo Wind Energy Project Map #: TILE 12 Survey Sxn: CAMPO - C

GPS Unit : GARMIN 3 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0845	65	Ø	CLEAR	(clear)	patchy	overcast	drizzle	shower
	0857	67	Ø→1 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	—				clear	patchy	overcast	drizzle	shower
	1400	72	3→5 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1500	73	3→11 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, ridges, rock outcrops, soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
BEHR'S METALMARK	IN FIELD NOTEBOOK	26
CALIFORNIA MARBLE	"	1
SOUTHERN BLUE	"	1
ACMON BLUE	"	7

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCHL31	Point	Juvenile

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: NONE Date: 12 MAY, 2010

Project: Campo Wind Energy Project Map #: TILE 11, 12 Survey Sxn: CAMPO - E

GPS Unit : GARMIN 3 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	67	Ø->1 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1000	71	Ø->2 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	72	1->4 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	74	1->3 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	73	1->4 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1345	72	3->5 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) hilltops, ridges, (rock outcrops), soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
BEHR'S METALMARK	IN FIELD NOTEBOOK	60
SARA ORANGETIP	"	2
ACMON BLUE	"	28
FUNEREAL DUSKYWING	"	3
CALIFORNIA MARBLE	"	1
SPRING WHITE	"	6
CALIFORNIA SOOTYWING	"	4
PALE TIGER SWALLOWTAIL	"	1
WEST COAST LADY	"	1
SPRING AZURE	"	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
NUMBERED	POINTS REPRESENT COLLINSIA SP. LOCATIONS	

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dr. Faulkner Add'l Person: BO Date: 13 May 2010

Project: Campo Wind Energy Project Map #: 14 Survey Sxn: CAMPO K

GPS Unit : #6 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1200	79	4	Ø	(clear)	patchy	overcast	drizzle	shower
	1300	79	4	10	(clear)	patchy	overcast	drizzle	shower
	1400	77	4	10	(clear)	patchy	overcast	drizzle	shower
	1500	76	7	Ø	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1600	76	5	Ø	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), soil crusts, clay soils, (old roads), various (nectar sources)

Butterfly Species	Tally	Total
P. eurymedon		5
A. Virgulti		9
P. Acmon		16
A. Sara		1
V. Cardui		2
E. funalis		2
C. Augustinus		2
P. a. clara		1
C. gabbii		1
S. melinus		1
Echo blue		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
414	8	horned lizard
	9-10	Antirrhinum.
		Nectar: Blue dicks.
		cryptantha
		Goldfields
		Collinsia
		yellow yarrow
		deer weed

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DR. FAULKNER Add'l Person: BO Date: 13 MAY 2010

Project: Campo Wind Energy Project Map #: 15 Survey Sxn: CAMPO K

GPS Unit : #6 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	68	1	Ø	(clear)	patchy	overcast	drizzle	shower
	1000	75	1	Ø	(clear)	patchy	overcast	drizzle	shower
	1100	76	Ø	Ø	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1200	79	4	Ø	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), soil crusts, clay soils, (old roads), various (nectar) sources

Butterfly Species	Tally	Total
Euphydryas fonscalis		3
P. Acmon		15+
A. Virgulti		15+
L. Xanthoides		1
P. eurymedon		2
A. SABA		1
P. protodice		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
15K	Mark 1-3	Antirrhinum > Potential QCB larval hosts
	Mark 4-7	Collensia > Potential QCB larval hosts
		nectar: Deerweed
		Cryptantha
		Blue dicks.
		Collensia

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Margie Mulligan Add'l Person: _____ Date: 5-13-2010

Project: ~~Campo~~ Wind Energy Project Map #: 9-J Survey Sxn: _____

GPS Unit : 2 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	67	2-5	1%	clear	patchy	overcast	drizzle	shower
	1115	78	0-4	10%	clear	patchy	overcast	drizzle	shower
	1515	79	3-6 (8)	15%	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Acmon Blue		55
Sara's Orangetip		5
Western tailed-Blue		1
Pale Swallowtail		12
Behr's Metalmark		72
Gabb's Checkerspot		3
Painted Lady		3
Brown Elfin		1
Sleepy Duskywing		1
Dusky wing		3
Checkered White		3
Gray Hairstreak		1
Gorgon Copper		1
Sulfur (Hartford's ?)		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MMSTCA01	Sensitive plant pt	Streptanthus campestris
MMSTCA02		" 2 plants
03		" 10 plant
04		" 5 plant
05		" 10 plant
06		" 1 plant
07		" 10 plants
MMHL01	sensitive lizard pt	Horn Lizard
MMAC01	Host plant pt	Antirrhinum coulterianum 10 plants

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Natalie Brodie Add'l Person: Phillip Date: 13 May 2010

Project: Campo Wind Energy Project Map #: 1 Survey Sxn: A

GPS Unit: Garmin 9 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	1230	72°	4/8	10-20%	(clear) patchy overcast drizzle shower
	1330	74°	2/8	10-20%	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END	1600	70°	3/6	10-20%	clear (patchy) overcast drizzle shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Behr's metalmark	𝍸𝍸𝍸𝍸𝍸𝍸𝍸 II	37
Funereal Duskywing	𝍸	5
Sara orangetip	I	1
Acmon blue	𝍸𝍸 I	11
Spring azure	I	1
Spring white	II	2
Brown elfin	II	2
Pale swallowtail	II	2
Harford's sulfur	I	1
Painted lady	II	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		goldfields, popcorn flower
NBAR01		Antirrhinum 10+
NBAR02		Antirrhinum 5+
NBAR03		Antirrhinum 25+
NBAR04		Antirrhinum 20+

TOTAL NUMBER OF QCB DETECTED: ___0___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: B. Lohstroh Add'l Person: John (Escort) Date: 5/13/10

Project: Campo Wind Energy Project Map #: 17, 18, 19 Survey Sxn: N

GPS Unit : 1 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0940	74°F	0-1	0		clear	patchy	overcast	drizzle	shower
	1200	78	3-5	20	thin	clear	patchy	overcast	drizzle	shower
	1300	80	0-3	20	thin	clear	patchy	overcast	drizzle	shower
	1400	81	0-3	30	thin	clear	patchy	overcast	drizzle	shower
						clear	patchy	overcast	drizzle	shower
						clear	patchy	overcast	drizzle	shower
END	1530	82	0-9	10	thin	clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Acmon blue		13
Behr's metal mark		23
perplexing hairstreak		2
Pale swallowtail		4
Sara Orangetip		3
Gorgon's copper		2
Common sootywing		1
Southern blue		1
Hartford's sulpher		1
Painted Lady		1
West Coast Lady		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
BLHL01	point	Horned Lizard adult Sunning on Branch
BLHL02	"	Adult Horned Lizard
BLCH01	~~Host~~ Host plant patch	Colinsia patch 100 + individuals
BLCH02	"	" 300 + "
BLCH03	"	" 1000 + "
BLCH04	"	" 100 + "
BLCH05	"	" 100 + "
		SCja BHGR WREN BeWR Webk BGGN
		SPTO BTSP CALT RTHa CoHa Welci
		HOFI CAQU
		W. Whiptail, Coast horned Lizard, W Fence Lizard
		S. Pacific Rattlesnake, CA Toad (dead)
		Cottontail, CA ground squirrel
		Nectar Sources:
		Erodium, Lupinus, penstemons, cryptantha,
		Camissonia, trichostema, Blue dicks,
		Eriophyllum conveniflorum, chia Gilia spp,
		Lotus spp, mimulus bicolor, Pincushion spp,
		Senecio CAlifornia Lepto siphon sp.

TOTAL NUMBER OF QCB DETECTED: ϕ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: B. Lohstroh Add'l Person: John (Escort) Date: 5/13/10

Project: Campo Wind Energy Project Map #: 21 Survey Sxn: N

GPS Unit : 1 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0850	69	0-1	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	0930	72°F	0-1	0	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Painted Lady		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		BCWR
		Scja
		BCSP
		WAVi
		cotton tail, Coyote track
		side-blotched Lizard
		W. Fence Lizard
		Nectar Sources: Eriophyllum wallacei, Cryptantha, Erodium, Lupinus concinus Camissonia

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Natalie Brodie Add'l Person: Phillip Date: 13 May 2010

Project: Campo Wind Energy Project Map #: 13 Survey Sxn: F

GPS Unit: Garmin 9 QCB Protocol Survey # 5 of 5.

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	0850	60°	calm	Ø	(clear) patchy overcast drizzle shower
	1015	65°	calm	Ø	(clear) patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END	1145	69°	2/6	10%	(clear) patchy overcast drizzle shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Behrs metalmark	~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ||||	54
Funereal Duskywing	|||	3
Acmon blue	~~||||~~ ||	7
Painted lady	|	1
Spring white	|	1
Propertius Duskywing	|	1
Sara orangetip	|	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		goldfields, popcorn flower Gilia sp., tidy tips,
		groundpink
NBGH01		Collinsia sp. <50
NBCH02		Collinsia sp. ~30 individuals
NBCH03		Collinsia sp. ~30
NBCØ1		Cordylanthus, 35-40
NBCH04		Collinsia sp. ~30
NBHL01		Horned lizard

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: John Bostick Date: 5/14/10

Project: Campo Wind Energy Project Map #: 26 Survey Sxn: Campo [redacted]9

GPS Unit : 11 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1325	85°	4/6	0	clear	patchy	overcast	drizzle	shower
	1435	80°	5/7	5%	clear	patchy	overcast	drizzle	shower
	1530	75	6/9	10%	clear	patchy	overcast	drizzle	shower
	1600	80°	4/5	5%	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Jaras Dotted Skipper	IIII III	8
Behr's Metalmark	IIII IIII IIII IIII IIII IIII IIII III	38
Acmon Blue	IIII IIII I	11
Blue?	IIII IIII III	13
White?	III	3
Dusky-wing	IIII III	13
Funereal Dusky-wing	IIII	4
Gabb's	II	2
Orange?	I	1
Hoffman's Sulfur	II	2
Southern Blue	II	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Layia
		Lasthenia
		Plagio Borthys
		Cryptantha
		Pterostemon
		Delphinium
		Eschscholzia
		Salvia columbariae
		Chaenactis
		Cirsium.
		Phacelia
006	Point	Collinsia
↓	"	"
0025	"	"
PH602	Point	San Diego Horned Lizard
03	"	
05	"	

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: NONE Date: 14 MAY, 2010

Project: Campo Wind Energy Project Map #: MAP TILE 19 Survey Sxn: CAMPO-N

GPS Unit : GARMIN 3 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1030	77	Ø->3 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	78	Ø->5 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	80	Ø->3 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1230	79	Ø->3 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) hilltops (ridges) (rock outcrops), soil crusts, clay soils, (old roads) (various nectar sources)

Butterfly Species	Tally	Total
ACMON BLUE	IN FIELD NOTEBOOK	3
BEHRS METALMARK	"	50
FUNEREAL DUSKYWING	"	4
RED ADMIRAL	"	1
PERPLEXING HAIRSTREAK	"	3
SARA ORANGETIP	"	4
PALE TIGER SWALLOWTAIL	"	2
SPRING AZURE	"	2
SPRING WHITE	"	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCWW06	POINT	
MCLA09	POINT	
COLLINSIA SP.	MARKED AS NUMBERED POINTS IN GARMIN MEMORY. WHERE POINTS	
CREATE CIRCULAR POLYGONS THAT END AT THE SAME START POINT, THIS REPRESENTS		
A PATCH OF COLLINSIA WITHIN THE CIRCLE.		

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE GOUFFER Add'l Person: NONE Date: 14 MAY, 2010

Project: Campo Wind Energy Project Map #: TILE 5 Survey Sxn: CAMPO - A

GPS Unit : GARMIN 3 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1330	74	Ø→5 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1400	73	Ø→3 MPH	5%	(clear)	patchy	overcast	drizzle	shower
	1500	75	Ø→3 MPH	20%	(clear)	patchy	overcast	drizzle	shower
	1600	75	Ø→1 MPH	20%	(clear)	patchy	overcast	drizzle	shower
	1621	77	Ø→2 MPH	20%	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle) (open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources)

Butterfly Species	Tally	Total
ACMON BLUE	IN FIELD NOTEBOOK	11
FUNEREAL DUSKYWING	"	6
SARA ORANGETIP	"	4
BEHR'S METALMARK	"	49
ARROWHEAD BLUE	"	16
PAINTED LADY	"	4
WEST COAST LADY	"	1
GRAY HAIRSTREAK	"	1
HARFORD SULPHUR	"	2
SPRING WHITE	"	1
SOUTHERN BLUE	"	9

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCHL33	POINT	JUVENILE
MCHL34	POINT	ADULT
COLLINSIA SP. PLANTS MARKED AS NUMBERED POINTS IN GARMIN MEMORY. WHERE POINTS CREATE A ROUGH CIRCLE, THIS REPRESENTS A PATCH OF COLLINSIA WITHIN THE CIRCLE.		

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Mike Couffer Add'l Person: None Date: 14 May, 2010

Project: Campo Wind Energy Project Map #: Tile 19 Survey Sxn: Campo - P

GPS Unit : Garmin 3 QCB Protocol Survey # 60 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0851	75	Ø->2 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	0900	75	Ø	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1000	81	Ø->2MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), soil crusts, clay soils, (old roads), (various nectar sources)

Butterfly Species	Tally	Total
Acmon Blue	In Field Notebook	7
Behrs Metalmark	"	5
Funereal Duskywing	"	2
Painted Lady	"	1
Sara Orangetip	"	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCWW01	POINT	
MCWW02	POINT	
MCWW03	POINT	
MCWW04	POINT	
MCWW05	POINT	
NO COLLINSIA PLANTS WERE OBSERVED OR RECORDED IN THIS SURVEY SECTION		

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Margie Mulligan Add'l Person: _____ Date: 5.14.2010

Project: Campo Wind Energy Project Map #: 10, 15, 16-I Survey Sxn: _____

GPS Unit : 12 QCB Protocol Survey # 6 of 5

	TIME (24-hour)	Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	70°	2-7	0%	(clear)	patchy	overcast	drizzle	shower
	1215	75°	4-6	10%	(clear)	patchy	overcast	drizzle	shower
	1515	79°	4-6	20%	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) (hilltops) (ridges) rock outcrops, (soil crusts) clay soils, old roads, (various nectar sources)

Butterfly Species	Tally	Total
Acmon Blue		42
Pale Swallowtail		7
Sara's Orangetip		4
Spring Azure		7
Brown Elfin		1
Behr's Metalmark		28
Common White		2
Duskywing		4
Sulphur sp.		1
Nectar Plants:		
Chaenactis artemsiifolia & C. glabruscula		
salvia clevelandii		
Emmenanthe pendulifera		
Camissonia californica		
Eschscholtzia californica		
Cryptantha spp.		
Gilia capitata ssp. c.		
Lupinus concinnus, L. truncatus & L. bicolor		
Stylomecon		
Platystemon californicus		

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MMAC01	Host plant pt	Antirrhinum coultenianum 8 plants
02	"	10 plants
03	"	3 plants
MMCH01	Sensitive plant pt	Collinsia concolor 25 plants
02	"	" 10 plants
03	"	" 40 plants
04	"	" 100 plants
05	"	" 30 plants
06	"	" 20 plants
~~MMDP01~~ MMDPS01	"	Delphinium parishii subglobosum
MMDPS02		20 plants
03		25 plants
04		30 plants
05		50 plants
06		100 plants
07		10 plants
08		15 plants
09		20
10		30
11		15
12		10
13		50
14		20
15		10
MMLB01		1500 plants
MMSC01		3 plants
MMSC02		25 plants
MMSC03		5 plants
04		5 plants
05		15 plants
06		10 plants
07		15 plants
08		20 plants
09		5 plants

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: B. Lohstroh Add'l Person: Raymond (Escort) Date: 5/14/10

Project: Campo Wind Energy Project Map #: 11, 12, 16 Survey Sxn: G

GPS Unit : 2 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0850	70	0-4	0	(clear)	patchy	overcast	drizzle	shower
	1015	75	0-4	0	(clear)	patchy	overcast	drizzle	shower
	1140	79	0-7	0	(clear)	patchy	overcast	drizzle	shower
	1320	76	3-6	20 thin	clear	(patchy)	overcast	drizzle	shower
	1430	79	3-5	20 thin	clear	(patchy)	overcast	drizzle	shower
	[illegible]				clear	patchy	overcast	drizzle	shower
END	1500	78	0-2	30	clear	(patchy)	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Behr's metal mark		15
Acmon Blue		18
Pale swallowtail		3
Southern blue		1
Sara orangetip		7
Hartfords sulfer		5
Painted lady		3
Beckers white		2
Dusky wing sp		2
Square spotted blue		$2
Melissa blue		5
checkered skipper		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
BLBB01	host plant patch	cordylanthus 300+ individuals
BLCH01	"	Collinsia concolor 50+ "
BLCH02	"	100+ "
BLCH03	"	200+ "
BLCH04	"	100+ "
	Birds:	BGGN CATH BCSP SPTO NOFL
		BEWR COLT GRPO LASP TUVU
		HOFI SCJA RSHA CORA BHGR
		CAQU OATI
	Herps:	UTST SCOC BUBO-larvae CNTI
	Mammals:	cottontail, Jackrabbit
	Nectars:	Erodium, Malacothrix spp, Lasthenia
		Leptosiphon spp, Layia, collinsia, Cryptantha
		Delphinium, Lotus argophyllus, Amsinkia
		Linanthus, Lupinus spp, Phacelia parryi, distans,
		Gilia spp, Mustards, hypocaris glab.
		Camissonia spp, chia, trichostemma,
		Senecio CAL; Eriophyllum convert, wallacei,
		Circium occidentalis, cheanactis spp,
		Anisocoma acaulis, Dichlostemma capitatum
		CA poppy

TOTAL NUMBER OF QCB DETECTED: ϕ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAN DK. FAULKNER Add'l Person: NONE Date: 14 MAY 2010

Project: Campo Wind Energy Project Map #: 16 Survey Sxn: CAMPO H

GPS Unit : #9 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	1300	74	Ø	Ø	(clear) patchy overcast drizzle shower
	1400	75	4	Ø	(clear) patchy overcast drizzle shower
	1500	77	2	30%	clear (patchy) overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END	1600	74	2	50%	clear (patchy) overcast drizzle shower

Habitat On-site (circle): (open soils), hilltops, ridges, (rock outcrops), soil crusts, clay soils, (old roads), various (nectar) sources

Butterfly Species	Tally	Total
P. ACMON		25+
A. VIRGULTI		12
H. EXIMIA TOWNS.		1
P. PROTODICE		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST ~~(NECTAR~~ SOURCES, GENERAL WILDLIFE LIST)
16 H	MARK: 19	Collensia
	20	" 100's
	21	Antirrhynum 15+
	22	CollensiA
	23	" + Jewel flower (S. campestris)
	24	"
	25	Antirrhynum
	26	CollensiA 100+

TOTAL NUMBER OF QCB DETECTED: 6 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID K. FAULKNER Add'l Person: NONE Date: 14 MAY 2010

Project: Campo Wind Energy Project Map #: 11 Survey Sxn: CAMPO H

GPS Unit : #9 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	69	5	Ø	(clear)	patchy	overcast	drizzle	shower
	1000	74	3	Ø	(clear)	patchy	overcast	drizzle	shower
	1100	78	2	Ø	(clear)	patchy	overcast	drizzle	shower
	1200	80	5	Ø	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1300	74	Ø	Ø	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), ~~hilltops~~, (ridges), (rock outcrops), soil crusts, clay soils, (old roads), various (nectar) sources

Butterfly Species	Tally	Total
A. Vigulti		25+
P. eurydamon		1
P. Acmon		25+
E. funeralis		1
V. Cardui		1
Echo BLUE		1
A. SARA		5
E. Propertius		1
P. protodice		2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
#11 H	MARK #1	Horn Lizard (ADULT)
	2	Horn Lizard (ADULT)
	3	Collonsia 100+
	4	"
	5	"
	6	"
	7,8,9,10	" 1000's
	11	" 100's
	12	"
	13	"
	14	"
	15	Cordylanthus
	16	Collonsia
	17	" 100+
	18	"
		Compositos
		Cryptantha
		Blue dicks
		yellow yarrow

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Mike Coulter, John Bostick Date: 5/14/10

Project: Campo Wind Energy Project Map #: 19 Survey Sxn: Campo N.O.P.

GPS Unit : 11 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	845	740	4/6	0	clear	patchy	overcast	drizzle	shower
	1100	800	3/5	0	clear	patchy	overcast	drizzle	shower
	1230	81°	7/9	0	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): ~~open soils~~, ~~hilltops~~, ridges, rock outcrops, ~~soil crusts~~, clay soils, ~~old roads~~, ~~various nectar sources~~

Butterfly Species	Tally	Total
Mariposa Sulfur	I	1
Behr's Metalmark	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 II	32
Acmon Blue	𝍸 𝍸	10
Pale Swallowtail	I	1
Blue?	𝍸 𝍸	15
Sara's Orangetip	𝍸 II	7
White?	III	3
Duskywing	𝍸	5
Funeral Duskywing	III	3

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Layia,
		Lasthenia
		Plagio bothrys
		Cryptantha
		Pentamon
		Delphinium
		[redacted] Eschscholzia
		Salvia columbariae
		Chaenactis
		Cirsium
		Phacelia
001	Point	Callisto
↓	"	"
004	"	"
DPHL01	"	San Diego Horned Lizard

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dave Fletcher Add'l Person: John Bostick Date: 5-15-10

Project: Campo Wind Energy Project Map #: 16 Survey Sxn: M

GPS Unit : 11 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	~~12:10~~	80	5-8	0	(clear)	patchy	overcast	drizzle	shower
	12:10				clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	15:10	80	4-6	5	(clear)	patchy	overcast	drizzle	~~shower~~

Habitat On-site (circle) (open soils), hilltops, ridges, (rock outcrops), soil crusts, clay soils, old roads, (various nectar sources)

Butterfly Species	Tally	Total
Behrs metalmark	1	
white	1	1
Lupine blue	1	1
Southern (?) blue	2	2
Acmon blue	1	1
(dotted) blue	2	2
Sara orangetip	2	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Esch calif
		Lup cone
		Crypt int
		Malocothrix
		Plagiobothrys
		-Phacelia imbricata ssp patula (not flowering, but of note)
		Lupinus succ
		Linanthus lemmonii
		Delphinium sp.
		Layia glandulosa
		Lasthenia calif
DFOC01	point	1 Castilleja exserta
DFCH01	point	10 Collinsia
		Gilia sp.
DFCH03	point	~~30~~ 50 Collinsia
DFHL03	point	, horned horned lizard

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: ~~Dave F, J~~ Dave Fletner Add'l Person: John Bostick Date: 5-15-10

Project: Campo Wind Energy Project Map #: 19 Survey Sxn: M

GPS Unit : 11 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	8:40	74	6-10	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
	12:10				clear	patchy	overcast	drizzle	shower
END	~~12:10~~	80	5-8	0	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Harford's sulfur	:	2
White	::	4
Sara orange tip	·	1
Behrs metalmark	⊠⊠	20
Southern (?) orange blue	::	4
Funereus dusky wing	⊡	8
Acmon blue	⊠::	14
Painted lady	·	1
Propertius dusky wing	::	3
~~Ottoe~~ Pale swallowtail	:	1
Common scotywing	·	1
Lupine blue	:	2

Page 1 of 2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Cryp int,
		Malo cothrix
		Cam bist
		Dich cap
		Lup trune
		Lotus, str
		Penstemon (purple)
		Salv column
		Lathyrus splendens
DF CP01	point	1 Lathyrus in Quac
DF CP02	point	9 " " " " "
DF CP03	"	~18 " " " " "
DF CP04	"	~3 " " " " "
DF CH01	"	~9 Collinsia
		Linanthus,
		Gilia capitatum
DF CP05	"	4 Lathyrus in Quac
DF CP06	"	3 " " " " "
		Mimulus brev
		Amsinckia menz
		Caulanthus heterophylla

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Bo Wiley Date: 5/15/10

Project: Campo Wind Energy Project Map #: 5 Survey Sxn: Campo C

GPS Unit : 9 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1452	74°	5/10	0	clear	patchy	overcast	drizzle	shower
	1515	81°	5/7	0	clear	patchy	overcast	drizzle	shower
	1415	78°	7/9	8	clear	patchy	overcast	drizzle	shower
	1510	81°	3/4	8	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Harford's Sulfur	I	1
Yellow ?	III	3
Behr's Metalmark	𝍸 𝍸 𝍸 𝍸 𝍸	30
Acmon Blue	III	3
Blue ?	𝍸 𝍸	15
Lady ?	II	2
Sara's Orangetip	II	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Layia
		Lasthenia
		Cryptantha
		Penstemon
		Plagiobothrys
		Erodium
012	Point	Collinsia
↓	"	"
020	"	"

TOTAL NUMBER OF QCB DETECTED: 3 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Bo Wilkey Date: 5/15/10

Project: Campo Wind Energy Project Map #: 11 Survey Sxn: Campo C

GPS Unit : 9 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	8:40	72°	6/8	0	clear	patchy	overcast	drizzle	shower
	10:10	730	7/12	0	clear	patchy	overcast	drizzle	shower
	11:35	76°	7/9	0	clear	patchy	overcast	drizzle	shower
	11:45				clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Harford's Sulfur	I	1
Yellow?	I	1
Sara's Orangetip	III	3
White?	I	1
Checked White	II	2
Behrs Metalmark	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	35
Lady?	I	1
Acmon Blue?	II	2
Blue?	𝍸 I	6
Southern Blue	I	7

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Layia
		Lasthenia
		Cryptantha
		Penstemon
		Plagiobothrys
		Erodium
001	Point	Collinsia
↓	"	"
011	"	"
DPBT01	Point	Black Tailed Jack Rabbit

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: NONE Date: 15 MAY, 2010

Project: Campo Wind Energy Project Map #: TILES 15+16 Survey Sxn: CAMPO-L

GPS Unit : GARMIN 12 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0830	74	4→9 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	0900	74	3→9 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1000	78	Ø→4 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	80	Ø→5 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	76	Ø→6 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	80	Ø→7 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
END	1400	84	Ø→4 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), soil crusts, clay soils, (old roads), (various nectar sources)
1415HRS, 84°F, WIND=Ø→4 MPH, CLEAR

Butterfly Species	Tally	Total
BEHR'S METALMARK	IN FIELD NOTEBOOK	93
ACMON BLUE	"	39
PAINTED LADY	"	1
MARINE BLUE	"	3
CERAUNUS BLUE	"	1
SPRING AZURE	"	6
CALIFORNIA SOOTYWING	"	3
SARA ORANGETIP	"	4
FUNEREAL DUSKYWING	"	6
SPRING WHITE	"	4
HARFORD SULPHUR	"	2
PALE TIGER SWALLOWTAIL	"	2
GORGON COPPER	"	1
PERPLEXING HAIRSTREAK	"	1
SOUTHERN BLUE	"	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
MCHL35	Juvenile (Point)	
All numbered Points Represent Collinsia sp. Locations		

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: John Bostick Date: 5/16/10

Project: Campo ~~Manzanita~~ Wind Energy Project Map #: 6 Survey Sxn: Campo B

GPS Unit : 6 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	15:15	80°	7/9	0	(clear)	patchy	overcast	drizzle	shower
	16:40	81°	5/7	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils,) hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, (various nectar sources)

Butterfly Species	Tally	Total
White 3	M	3
Southern Blue	1	1
Acmon Blue	1	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: John Bostick Date: 5/16/10

Project: ~~Manzanita~~ Campo Wind Energy Project Map #: 2, 7 Survey Sxn: Campo D

GPS Unit : 6 QCB Protocol Survey # 6 of 5

	TIME (24-hour)	Temp (F°):	Wind (avg/max)	% CC	Sky				
START	8:45	71°	8/11	0	(clear)	patchy	overcast	drizzle	shower
	9:50	76°	6/10	0	(clear)	patchy	overcast	drizzle	shower
	11:30	78°	6/9	0	(clear)	patchy	overcast	drizzle	shower
	12:55	81°	5/6	0	(clear)	patchy	overcast	drizzle	shower
	14:50	79°	4/7	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): ~~open soils~~, (hilltops), ~~ridges~~, (rock outcrops), (soil crusts), (clay soils), (old roads), (various nectar sources)

Butterfly Species	Tally	Total
Behrs Metalmark	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	30
Lady?	𝍸	2
Pale Swallowtail	𝍸	1
Blue?	𝍸 𝍸	7
Sulfur?	𝍸	2
Sara's Orangetip	𝍸	2
White	𝍸	3
Acmon Blue	𝍸	3

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
DPHL01	Point	San Diego Horned Lizard

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: Lewis C. Date: 16 May 2010

Project: Campo Wind Energy Project Map #: 11/12 E Survey Sxn: CAMPO E

GPS Unit : #5 QCB Protocol Survey # 6 of 5 .

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	70	4	∅	(clear)	patchy	overcast	drizzle	shower
	1000	75	5	∅	(clear)	patchy	overcast	drizzle	shower
	1100	77	5	∅	(clear)	patchy	overcast	drizzle	shower
	1200	75	7	∅	(clear)	patchy	overcast	drizzle	shower
	1300	73	6	∅	(clear)	patchy	overcast	drizzle	shower
	1400	81	3	∅	(clear)	patchy	overcast	drizzle	shower
END	1500	80	4	∅	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils,) hilltops, ridges, (rock outcrops,) soil crusts, clay soils, (old roads,) various (nectar) sources

1600 77 8 ∅ ○

Butterfly Species	Tally	Total
Plebejus Acmon		25+
Apodemia virgulti		25+
Anthocharis Sara		4
Celastrina echo		2
Erynnis funeralis		2
Colias harfordii		2
Pontia protodice		6
Leptotes marina		1
Euphilotes bernardino		1
Papilio eurymedon		1
Plebejus melissa		1
* Eurema nicippe		1
Vanessa cardui		2
Brephidium exilis		1
Euptoieta claudia *		1
*UNUSUAL		

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
#11,12 E	MARK: 1.	Collensia (100+)
	2.	" (100+)
	3.	" (~50)
	4	" (100's)
	5.	HORNED LIZARD
		NECTAR: CRYPTANTHA
		BLUE DICKS
		GOLDFIELDS
		MISC. COMPOSITES
		COLLENSIA

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID FLETCHER Add'l Person: JOSH PAPA Date: 5-17-10

Project: Campo Wind Energy Project Map #: 20 Survey Sxn: P

GPS Unit : 6 (2) QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
~~START~~	10:40	69	3-5	100	clear	patchy	(overcast)	drizzle	shower
START	11:20	73	2-4	100	clear	patchy	(overcast)	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	16:00	68	3-6	10	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Acmon blue	::	2
Funereal dusky wing	::.	3
Behrs metalmark	⊠⊠	20
Marine blue	::	4
Melissa blue	⊠	10
Sara orange-tip	·	
~~Western tailed blue~~	←	
Dainty Sulfur	·	1
Checkered White	·	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
		Last cal
		Cryt int
		Salv col
		Cam.s bist
		Mimulus brevipes
		Esch calif
		Filago calif
C4 → C14 X		popns of Collinsia – probably can join to form polygon
DFHL01	point	Horned lizard
		Chaenactis glab
		Erysimum cap
		Eriophyllum wallacei
		Linanthus dianth
		Delphinium
		Eriastrum sap
		Lotus scop
		Camissonia campestris
		Phacelia minor
		Layia glandl
		Calycopsis calif? (10-12 rays)

TOTAL NUMBER OF QCB DETECTED: ___0___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: _____ Date: 17 May 2010

Project: Campo Wind Energy Project Map #: 7 Survey Sxn: F

GPS Unit : SM #13 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1500	68	8	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1600	66	11	0	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) hilltops, ridges, ~~rock outcrops~~, soil crusts, clay soils, ~~old roads~~, various (nectar) sources

Butterfly Species	Tally	Total
A. m. Uhleyulti		2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST ~~(NECTAR~~ SOURCES, GENERAL WILDLIFE LIST)
7 F		Cryptantha
		Gold fields

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID K. FAULKNER Add'l Person: _____ Date: 17 MAY 2010

Project: Campo Wind Energy Project Map #: 8 Survey Sxn: CAMPO - B

GPS Unit : SM # 13 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1400	75	8	50	clear	(patchy)	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1500	68	8	0	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, ridges, (rock outcrops), soil crusts, clay soils, (old roads), various (nectar sources)

Butterfly Species	Tally	Total
A. Morma Virgulti		8
P. Acmon		2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
8-B		Cryptanth
		Blue Dicks
		Goldfields

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID K. FAULKNER Add'l Person: _____ Date: 17 MAY 2010

Project: Campo Wind Energy Project Map #: 13 Survey Sxn: CAMPO F

GPS Unit : SM #13 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1100	68	5	100	clear	patchy	(overcast)	drizzle	shower
	1200	69	5	100	clear	patchy	(overcast)	drizzle	shower
	1300	72	4	100	clear	patchy	(overcast)	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1400	75	8	50	clear	(patchy)	overcast	drizzle	shower

Habitat On-site (circle): (open soils), hilltops, (ridges), (rock outcrops), soil crusts, clay soils, (old roads), various (nectar) sources

Butterfly Species	Tally	Total
P. Acmon		3
A. Virgulti		4
L. Marina		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
13 F	MARKS # 255	Collensia
	256	"
	257	" 100's
	258	
	259	Horned Lizard (juvenile)
	260 - 264	Collensia
		Cryptantha
		Blue Dicks
		Goldfields

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: David K. Faulkner Add'l Person: _____ Date: 17 May 2010

Project: Campo Wind Energy Project Map #: 12 Survey Sxn: C

GPS Unit : SM # 13 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1000	69	5	100	clear	patchy	(overcast)	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils), (hilltops), (ridges), (rock outcrops), soil crusts, clay soils, old roads, various (nectar) sources

Butterfly Species	Tally	Total
P. Acmon		2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
12C		Cryptantha
		Goldfields

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: ERIN BERGMAN Date: 17 MAY, 2010

Project: Campo Wind Energy Project Map #: TILE 24 Survey Sxn: CAMPO - R

GPS Unit: GARMIN 12 QCB Protocol Survey # 6 of 6

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1000	69	Ø->5 MPH	100	clear	patchy	overcast	drizzle	shower
	1100	69	Ø->3 MPH	100	clear	patchy	overcast	drizzle	shower
	1200	74	Ø->3 MPH	100	clear	patchy	overcast	drizzle	shower
	1300	70	Ø->2 MPH	100	clear	patchy	overcast	drizzle	shower
	1400	73	Ø->3 MPH	80	clear	patchy	overcast	drizzle	shower
	1500	70	2->8 MPH	20	clear	patchy	overcast	drizzle	shower
END	1545	69	2->5 MPH	20	clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
ACMON BLUE	IN FIELD NOTEBOOK	140
BEHR'S METALMARK	"	7
HENNE'S CHECKERSPOT	"	48
SARA ORANGETIP	"	32
GABB'S CHECKERSPOT	"	6
CALIFORNIA SOOTYWING	"	2
BROWN ELFIN	"	10
MARINE BLUE	"	6
FUNEREAL DUSKYWING	"	9
PALE TIGER SWALLOWTAIL	"	3
SPRING AZURE	"	9
RED ADMIRAL	"	1
PERPLEXING HAIRSTREAK	"	2
PAINTED LADY	"	1
DAINTY SULPHUR	"	1
GORGON COPPER	"	5

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
NUMBERED	POINTS REPRESENT	COLLINSIA AND COULTER'S SNAPDRAGON LOCATIONS.

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Lawrence Moore Date: 5/17/10

Project: Campo Wind Energy Project Map #: 26 Survey Sxn: Campo

GPS Unit : 11 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	10:50	60°	3/5	100	clear	patchy	(overcast)	drizzle	shower
	12:10	65°	6/8	100	clear	patchy	(overcast)	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): ~~open soils~~, hilltops, ridges, rock outcrops, soil crusts, clay soils, ~~old roads~~, various nectar sources

Butterfly Species	Tally	Total
Hoffman's Sulphur	1	1
Common Blue		1
Too Cold		

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)

TOTAL NUMBER OF QCB DETECTED: 7 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Lawrence Moore Date: 5/17/10

Project: Campo Wind Energy Project Map #: 22 Survey Sxn: Campo 9

GPS Unit : 11 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	11:25	67°	6/8	100	Slight shadows clear	patchy	overcast	drizzle	shower
	13:00	67°	5/10	100	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): ~~open soils~~, hilltops, ridges, rock outcrops, soil crusts, clay soils, ~~old roads~~, ~~various~~ nectar sources

Butterfly Species	Tally	Total
Behr's Metalmark	1	1
Too Cold		

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: NONE Date: 19 MAY, 2010

Project: Campo Wind Energy Project Map #: TILE 24, 25 Survey Sxn: CAMPO-R2

GPS Unit: GARMIN II QCB Protocol Survey # C6 of 6

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0840	68	Ø→1 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	0900	69	Ø→1 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1000	71	Ø→1 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	85	Ø→2 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	84	Ø	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	82	Ø→1 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) hilltops (ridges) (rock outcrops) soil crusts, clay soils (old roads) (various nectar sources)

Butterfly Species	Tally	Total
ACMON BLUE	IN FIELD NOTEBOOK	140
HENNE'S CHECKERSPOT	"	43
SARA ORANGETIP	"	24
PALE TIGER SWALLOWTAIL	"	4
GABB'S CHECKERSPOT	"	13
GORGON COPPER	"	13
CALIFORNIA SISTER	"	1
HARFORD'S SULPHUR	"	3
PAINTED LADY	"	1
BEHR'S METALMARK	"	6
MARINE BLUE	"	2
SPRING AZURE	"	8
FUNEREAL DUSKYWING	"	5
SPRING WHITE	"	2
CALIFORNIA MARBLE	"	1
CLOUDLESS SULPHUR	"	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
NUMBERED POINTS REPRESENT COLLINSIA POINTS.		

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: John Bostick Date: 5/19/10

Project: Campo Wind Energy Project Map #: 23 Survey Sxn: 6

GPS Unit : 6 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0930	67°	0/0	0	~~clear~~	patchy	overcast	drizzle	shower
	1045	82°	4/6	0	~~clear~~	patchy	overcast	drizzle	shower
	1230	84°	5/8	0	~~clear~~	patchy	overcast	drizzle	shower
	1240 end				clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END					clear	patchy	overcast	drizzle	~~shower~~

Habitat On-site (circle): ~~open soils~~, hilltops, ~~ridges~~, ~~rock outcrops~~, ~~soil crusts~~, clay soils, ~~old roads~~, various nectar sources

Butterfly Species	Tally	Total
Sara's Orangetip	~~HH~~ |	6
Gorgon Copper	||	2
Behr's Metalmark	|||| ~~HH~~ ~~HH~~ ~~HH~~	20
Checkered White	||	2
White ?	|||	3
Acmon Blue	||||	4
Marina Blue	|||	3
Sulfur ?	||||	4
Blue ?	~~HH~~ |||	9
Duskywing	~~HH~~ ~~HH~~	10
Funeral Duskywing	~~HH~~	5
Martha - Mike Coutts		

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
001	Point	Antirrhinum coulterianum (100's)
DPH101	Point	San Diego Horned Lizard

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Brian Lohstroh Add'l Person: Daniel Date: 5/19/10

Project: ~~Manzanita~~ Campo Wind Energy Project Map #: 21 Survey Sxn: N

GPS Unit : 6 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1230	74	0-5	0	(clear)	patchy	overcast	drizzle	shower
	1300	78	3-10	1	(clear)	patchy	overcast	drizzle	shower
	1400	81	0-5	1	(clear)	patchy	overcast	drizzle	shower
	1500	83	0-6	1	(clear)	patchy	overcast	drizzle	shower
	1530	86	0-5	1	(clear)	patchy	overcast	drizzle	shower
	↓			1	clear	patchy	overcast	drizzle	shower
END	↓				clear	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Orangetip (sara)		3
Dusky wing sp		4
Marine Blue		3
Painted Lady		1
White sp.		1
Chalcedon checkerspot		1
Acmon Blue		2
Sulphur sp.		1
Funereal Duskywing		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
BLSC01	Rare Plant	Streptanthus campestris
	Birds:	BCSP LEGO BEWR WTSW
		WREN SPTO CISW ASFL
		LEGO SCJA COMA CALT
		MODO WBNH HOFI NUWO
		RSHa
	Herps:	side blotched Lizard, W. Whiptail
		W. Fence Lizard
	Nectar Sources	Lupines cryptantha
		eriodictyon ~~sp~~ eriophyllum wallacei
		Gilia SP Lotus scoparius,
		Lotus argophyllus, cheanactis,
		Mimulus SPP, phacelia SPP
		Lasthenia pentstemon, yucca

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Brian Lohstroh Add'l Person: Daniel Date: 5/19/10

Project: ~~Manzanita~~ Campo Wind Energy Project Map #: 20 Survey Sxn: P

GPS Unit : 6 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	845	66	0-1	0	(clear)	patchy	overcast	drizzle	shower
	1000	70	0-3	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1230	74	0-5	0	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources

Butterfly Species	Tally	Total
Acmon blue		9
Orange tip		7
Behr's metalmark		18
Square spotted blue		2
Pale swallowtail		2
Marine blue		9
Dusky wing sp.		1
Gabb's checkerspot		2
Funereal Duskywing		1
Gorgon's copper		1
Western Tailed blue		1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
BLCH01	Host plant	500 individuals Collinsia concolor
	Birds:	BCSP ATFL HOFI CALT
		BEWR CORA SCJA BUSH
		OATI CAQU BTHGR BHCO
		RSHA SPTO THVU MODO
		CATH BGGN WREN
	Herps:	side blotched Lizard, W. Whiptail
		W. Fence Lizard, Granite spiny Lizard
	Mammals:	Co Hontail
	Nectar Sources:	Lupines, wallflower, cheanactis
		Lasthenia, Delphinium, Gilia sp.,
		Layia erodium, Amsonia spp,
		cryptantha, Penstemon, collinsia,
		Camissonia spp, Eriophyllum wallacei
		Linanthus bellus, chia

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE GOUFFER Add'l Person: NONE Date: 20 MAY, 2010

Project: Campo Wind Energy Project Map #: TILE 13 Survey Sxn: CAMPO - F

GPS Unit : GARMIN II QCB Protocol Survey # 6 of 6

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0848	71°	3→14 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	0900	73°	2→4 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1000	78°	2→6 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	77°	2→6 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	75°	1→5 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	80°	3→6 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
END	1315	80°	3→5 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower

Habitat On-site (circle): (open soils) (hilltops) (ridges) (rock outcrops) soil crusts, clay soils, (old roads) (various nectar sources)

Butterfly Species	Tally	Total
BEHR'S METALMARK	IN FIELD NOTEBOOK	33
CLOUDLESS SULPHUR	"	2
SPRING WHITE	"	4
ACMON BLUE	"	10
MARINE BLUE	"	23
GRAY HAIRSTREAK	"	1
PAINTED LADY	"	2
FUNEREAL DUSKYWING	"	3
PALE TIGER SWALLOWTAIL	"	5
SPRING AZURE	"	9
BROWN ELFIN	"	3
ANISE SWALLOWTAIL	"	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
ALL NUMBERED	POINTS REPRESENT	COLLINSIA LOCATIONS.

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

APPENDIX C

SUMMARY OF BUTTERFLY SPECIES OBSERVED DURING FOCUSED QUINO CHECKERSPOT BUTTERFLY SURVEYS FOR THE CAMPO WIND ENERGY PROJECT

APPENDIX C
SUMMARY OF BUTTERFLY AND MOTH SPECIES OBSERVED DURING FOCUSED QUINO CHECKERSPOT BUTTERFLY SURVEYS FOR THE CAMPO WIND ENERGY PROJECT

Common Name	Species Name	Survey Week						
		1	2	3	4	5	6	Total
Papilionidae								
Anise swallowtail	*Papilio zelicaon*	0	2	2	0	0	1	**5**
Western tiger swallowtail	*Papilio rutulus*	1	2	1	0	0	0	**4**
Pale swallowtail	*Papilio eurymedon*	8	18	36	85	50	68	**265**
Black swallowtail	*Papilio polyxenes*	0	1	0	0	0	0	**1**
Pieridae								
Cabbage white	*Pieris rapae*	0	47	0	0	1	0	**48**
Spring (California) white	*Pontia sisymbrii*	73	29	24	10	14	41	**191**
Checkered (common) white	*Pontia protodice*	39	7	9	20	21	22	**118**
Becker's white	*Pontia beckerii*	0	0	0	0	1	2	**3**
California (pearly) marble	*Euchloe hyantis*	47	411	201	49	13	4	**725**
Gray marble	*Euchlo lanceloata*	0	4	0	1	0	0	**5**
Desert (Felder's) orangetip	*Anthocharis cethura*	0	10	3	2	0	0	**15**
Sara orangetip	*Anthocharis sara sara*	364	214	170	243	130	168	**1289**
White species	Species unknown	12	43	57	63	11	29	**215**
Marble species	Species unknown	7	87	83	40	0	1	**218**
Orange sulphur	*Colias eurytheme*	0	2	3	3	1	0	**9**
Harford's sulphur	*Colias harfordii*	1	0	7	6	5	27	**46**
California dogface	*Zerene eurydice*	0	0	1	0	1	0	**2**
Cloudless (senna) sulphur	*Phoebus sennae marcellina*	0	0	0	0	0	3	**3**
Sleepy orange	*Eurema nicippe*	0	0	0	0	0	1	**1**
Dainty sulphur	*Nathalis iole*	0	0	0	0	0	2	**2**
Sulphur species	Species unknown	6	3	11	16	5	12	**53**
Orange species	Species unknown	0	14	10	9	0	1	**34**
Daniadae								
Queen	*Danaus gilippus*	0	0	0	1	0	0	**1**
Nymphalidae								
Quino checkerspot	*Euphydryas editha quino*	0	2	4	6	1	0	**13**
Henne's checkerspot	*Euphydryas chalcedona hennei*	1	10	12	136	122	92	**373**
Gabb's checkerspot	*Chlosyne gabbii*	3	23	4	98	39	27	**194**
Checkerspot species	Species unknown	0	1	2	0	0	0	**3**
Red admiral	*Vanessa atalanta*	0	0	1	3	0	2	**6**
Painted lady	*Vanessa cardui*	124	65	90	132	37	34	**482**
West coast lady	*Vanessa annabella*	0	2	4	24	5	2	**37**
American lady	*Vanessa virginiensis*	0	2	2	0	0	0	**4**
Lady species	*Vanessa* species	11	28	1	27	8	9	**84**
Common buckeye	*Junonia coenia*	0	0	0	3	2	0	**5**
California sister	*Adelpha bredowii californica*	0	0	0	0	0	1	**1**
California patch	*Chlosyne californica*	0	0	0	0	0	1	**1**
California tortoiseshell	*Nymphalis californica*	22	1	1	0	0	1	**25**
Gulf fritillary	*Agraulis vanillae*	0	0	1	0	0	0	**1**
Variegated fritillary	*Euptoieta claudia*	0	0	0	0	0	1	**1**
Lycaenidae								
Behr's/Mormon metalmark	*Apodemia mormo virgulti*	89	1226	2404	2206	1009	1074	**8008**
Great copper	*Lycaena xanthoides*	0	0	0	0	0	1	**1**

Common Name	Species Name	Survey Week						
		1	2	3	4	5	6	Total
Gorgon copper	*Lycaena gorgon*	0	0	0	0	5	16	**21**
Brown elfin	*Callophrys augustinus*	37	40	15	11	9	20	**132**
Perplexing (bramble) hairstreak	*Callophrys dumetorum*	297	351	205	47	34	8	**942**
Gray hairstreak	*Strymon melinus*	1	0	0	3	2	5	**11**
Great purple hairstreak	*Atlides halesus*	0	1	0	3	0	0	**4**
Hairstreak sp.	Species unknown	0	0	1	0	0	0	**1**
Southern (silvery) blue	*Glaucopsyche lygdamus australis*	9	55	41	51	29	28	**213**
Arrowhead blue	*Glaucopsyche piasus*	0	36	39	0	0	16	**91**
Melissa blue	*Lycaeides melissa*	0	0	0	0	0	16	**16**
Lupine blue	*Plebejus lupines*	0	0	0	3	6	3	**12**
Acmon blue	*Icaricia acmon acmon*	94	167	192	281	322	760	**1816**
Bernardino blue	*Euphilotes Bernardino*	0	0	0	0	0	7	**7**
Echo blue/Spring azure	*Celastrina ladon echo*	5	12	7	3	26	33	**89**
Western tailed blue	*Everes amyntula*	0	1	1	0	0	2	**4**
Marine blue	*Leptotes marina*	0	0	0	1	0	55	**56**
Ceraunus blue	*Hemiargus ceraunus*	0	0	0	0	0	1	**1**
Pygmy blue	*Brephidium exilis*	0	1	0	0	0	1	**2**
Blue species	Species unknown	22	49	64	48	46	79	**308**
Hesperiidae								
Funereal duskywing	*Erynnis funeralis*	31	127	199	103	72	109	**641**
Mournful duskywing	*Erynnis tristis*	0	3	0	1	1	0	**5**
Pacuvius duskywing	*Erynnis pacuvius*	1	0	0	0	0	0	**1**
Sleepy duskywing	*Erynnis brizo*	23	27	1	5	4	1	**61**
Propertius duskywing	*Erynnis propertius*	0	10	3	5	2	6	**26**
Afranius duskywing	*Erynnis afranius*	0	0	2	0	0	0	**2**
Duskywing species	*Erynnis* species	30	120	79	70	28	56	**383**
Small-checkered skipper	*Pyrgus scriptura*	0	0	0	0	0	1	**1**
Northern white skipper	*Heliopetes ericetorum*	0	0	0	0	0	1	**1**
Common sootywing	*Philosora catalus*	0	0	5	13	16	11	**45**
Skipper species	Species unknown	2	2	0	1	1	0	**6**
Juba skipper	*Hesperia juba*	0	1	0	1	1	0	**3**
Sachem	*Atalopedes campestris*	0	0	0	0	0	1	**1**
Moth Species								
Sphyngid moth	Species unknown	4	4	0	0	0	0	**8**
	Euproserpinus phaeton	1	37	1	0	0	0	**39**
	Litocola sexigueta	1	0	0	0	0	0	**1**
	Leptarctia	1	0	0	0	0	0	**1**
	Alypia ridingsa	1	0	0	0	0	0	**1**
	E. Phaeton sphinx	9	0	0	0	0	0	**9**
	Heliothis belladona	0	3	0	0	0	0	**3**
	Drasteria tejonica	0	3	0	0	0	0	**3**
	Drasteria edwardsi	0	1	0	0	0	0	**1**
	Drasteria biformata	0	1	0	0	0	0	**1**
	Hyles lunesta	0	0	1	0	0	0	**1**
	Hemoris affinis	0	0	1	0	0	0	**1**
Moth species	*Adela* species	0	0	0	0	1	0	**1**
Moth species unknown	Species unknown	17	49	3	0	0	0	**69**

APPENDIX D

WEEKLY FLOWERING PLANT OBSERVATIONS FOR CAMPO WIND ENERGY PROJECT

APPENDIX D
WEEKLY FLOWERING PLANT OBSERVATIONS FOR CAMPO WIND ENERGY PROJECT

Scientific Name	Common Name	Survey Week					
		1	2	3	4	5	6
Achillea millefolium	common yarrow						x
Adenostoma fasciculatum	chamise	x	x	x	x	x	x
Amsinckia menzesii var. *intermedia*	rancher fiddleneck	x	x		x	x	
Anisocoma acaulis	scale-bud		x	x	x	x	x
Antirrhinum coulterianum	Coulter's snapdragon	x	x		x	x	x
Antirrhinum nutallianum ssp. *nutallianum*	snapdragon			x			
Arabis pulchra var. *pulchra*	beautiful rock-cress	x	x	x	x		
Arctostaphylos spp.	manzanita	x	x	x	x		
Artemesia tridentata ssp. *tridentata*	big sagebrush	x	x	x	x	x	x
Astragalus douglasii* var. *perstrictus	**Jacumba milkvetch**		x		x	x	x
Baccharis salicifolia	mulefat		x				
Camissonia spp.	sun-cup	x		x	x	x	x
Caulanthus heterophyllus var. *heterophyllus*	San Diego jewelflower		x				x
Caulanthus simulans	**Payson's jewelflower**	x	x	x	x		
Castilleja ssp.	Indian paintbrush			x	x	x	
Ceanothus cuneatus var. *cuneatus*	buck brush	x		x	x		
Ceanothus greggii var. *perplexans*	cup-leaf-lilac		x		x		
Ceanothus leucodermis	chaparral whitethorn		x	x	x		
Cercocarpus betuloides var. *betuloides*	birch-leaf mountain mahogany	x	x	x			
Chaenactis artemisiifolia	white pincushion					x	x
Chaenactis glabriuscula var. *glabriuscula*	yellow pincushion					x	x
Cirsium occidentale var. *californicum*	California thistle				x	x	x
Claytonia parviflora spp.	miner's-lettuce	x		x			
Collinsia concolor	Chinese houses	x	x	x	x	x	x
Cordylanthus rigidus ssp. *setigerus*	dark-tip bird's beak	x	x		x	x	x
Coreopsis californica var. *californica*	California coreopsis		x	x	x	x	x
Cryptantha spp.	cryptantha	x	x	x	x	x	x
Delphinium parishii* ssp. *subglobosum	**oceanblue larkspur**		x	x	x	x	x

Scientific Name	Common Name	Survey Week					
		1	2	3	4	5	6
Dendromecon rigida	bush poppy		x			x	x
Descurainia pinnata ssp. *glabra*	tansey mustard	x	x	x	x	x	
Dichelostemma capitatum	blue dicks		x	x	x	x	x
Emmenanthe penduliflora var. *penduliflora*	whispering bells				x	x	x
Eriastrum sp.	woolly star						x
Ericameria linearifolia	interior goldenbush		x	x		x	
Ericameria sp.	goldenbush		x	x	x	x	x
Eriogonum fasciculatum	buckwheat		x	x		x	
Eriophyllum confertiflorum var. *confertiflorum*	long-stem golden yarrow						x
Eriophyllum wallacei	Wallace's woolly daisy	x			x	x	x
Erodium cicutarium	filaree	x	x	x	x	x	x
Erysimum capitatum ssp. *capitatum*	western wallflower		x	x	x	x	x
Eschscholzia californica	California poppy	x	x	x	x	x	x
Eucrypta chrysanthemifolia var. *bipinnatifida*	spotted hideseed			x			
Filago californica	California filago						x
Geraea viscid	**stickey geraea**		x	x		x	x
Gilia capitata	ball gilia				x	x	x
Gilia spp.	gilia	x		x	x	x	x
Hesperoyucca whipplei	chaparral candle				x	x	
Hirschfeldia incana	short-pod mustard		x				
Lasthenia gracilis	common goldfields	x	x	x	x	x	x
Lathyrus splendens	**Campo pea**		x	x	x		x
Layia glandulosa	white layia		x	x	x	x	x
Lepidium spp.	pepperweed					x	
Leptosiphon lemmonii	Lemmon's linanthus				x	x	x
Linanthus bellus	**desert beauty**	x	x	x	x	x	x
Lomatium dasycarpum ssp. *dasycarpum*	woolly fruit lomatium		x				
Lotus agrophyllus var. *agrophyllus*	silver-leaf lotus				x	x	x
Lotus scoparius	deer weed			x	x	x	x
Lotus strigosus	bishop's lotus		x	x	x	x	x
Lotus sp.	lotus	x	x		x	x	x
Lupinus bicolor	miniature lupine		x	x	x	x	x
Lupinus concinnus	bajada lupine		x	x	x	x	x
Lupinus hirsutissimus	stinging lupine					x	
Lupinus truncatus	collar lupine					x	x
Lupinus spp.	lupine	x	x	x	x	x	x

Scientific Name	Common Name	Survey Week					
		1	2	3	4	5	6
Malacothrix clevelandii	Cleveland's malacothrix			x		x	
Malacothrix californica	California dandelion	x	x	x	x	x	
Malacothrix spp.	dandelion			x	x		x
Marah macrocarpus var. *macrocarpus*	wild cucumber	x	x	x		x	
Minuartia douglasii	Douglas's sandwort					x	x
Nemophila menziesii var. *integrifolia*	baby blue eyes	x	x	x	x	x	
Paeonia californica	California peony	x	x				
Pectocarya spp.	combseed	x	x				
Phacelia brachyloba	short-lobe phacelia						x
Phacelia distans	white-heliotrope		x	x	x	x	x
Phacelia parryi	Parry's phacelia			x	x	x	x
Phacelia spp.	phacelia		x	x	x	x	x
Plagiobothrys spp.	popcornflower	x	x	x	x	x	x
Platystemon californicus	cream cups		x	x	x	x	x
Rhus ovata	sugar bush		x	x			
Rhus trilobata	basket bush		x				
Quercus x *acutidens*	hybrid Engelmann's scrub oak	x	x				
Salvia apiana	white sage						x
Salvia columbariae	chia	x	x	x	x	x	x
Senecio californicus	California butterweed	x	x	x	x	x	x
Sisymbrium altissimum	tumble mustard						x
Sisyrinchium bellum	blue-eyed grass	x					
Streptanthus campestris	**southern jewelflower**			x	x	x	x
Trichostemma parishii	mountain blue curls		x		x	x	x
Uropappas lindleyi	silver puffs				x	x	
Viola purpurea ssp. *quercetorum*	oak yellow violet	x	x				
Yucca schidigera	Mohave yucca	x		x			x

boldface = a sensitive species

APPENDIX E

VERTEBRATE SPECIES OBSERVED DURING QUINO SURVEYS FOR CAMPO WIND ENERGY PROJECT

APPENDIX E
VERTEBRATE SPECIES DETECTED DURING FOCUSED QUINO SURVEYS FOR CAMPO WIND ENERGY PROJECT

Scientific Name	Common Name
REPTILES	
Order Anura	Frogs and Toads
Family Bufonidae	
Bufo boreas halophilus	western toad
Family Hylidae	
Pseudactis cadaverina	California chorus frog
Family Pelobatidae	
Spea hammondii	western spade-foot toad
Bufo boreas	California toad
Order Squamata	Lizards and Snakes
Family Colubridae	
Diadophis punctatus similis	ring-necked snake
Lampropeltis getula californiae	California king snake
Masticophis taeniatus	striped whipsnake
Pituophis catenifer	gopher snake
Family Phrynosomatidae	
Aspidoscelis tigris	western whiptail lizard
Phrynosoma coronatum blainvillii	**coast horned lizard**
Scleloporus occidentalis	western fence lizard
Scleloporus orcutti	granite spiny lizard
Uta stansburiana	side blotched lizard
Family Viperidae	
Crotalus mitchellii	speckled rattlesnake
Crotalus helleri	southern Pacific rattlesnake
Family Xantusidae	
Xantusia henshawi	granite night lizard
BIRDS	
Order Apodiformes	Hummingbirds and Swifts
Family Apodidae	
Aeronautes saxatalis	white-throated swift
Family Trochilidae	
Calypte anna	Anna's hummingbird
Order Ciconiiformes	Eagles, Hawks, and Kites
Family Accipitridae	
Accipiter cooperii	Cooper's hawk
Buteo lineatus	red-shouldered hawk
Buteo jamaicensis	red-tailed hawk
Circus cyaneus	northern harrier
Family Cathartidae	
Cathartes aura	**turkey vulture**
Family Falconidae	
Falco mexicanus	prairie falcon
Order Columbiformes	Pigeons and Doves

Scientific Name	Common Name
Family Columbidae	
Columba livia	rock pigeon
Zenaida macroura	mourning dove
Order Gruiformes	
Family Rallidae	
Fulica americana	American coot
Order Passeriformes	Song Birds
Family Alaudidae	
Eremophila alpestris actia	**California horned lark**
Family Aegithalidae	
Psaltriparis minimus	bushtit
Family Cardinalidae	
Melanocephalus pheucticus	black-headed grosbeak
Passerrina amoena	lazuli bunting
Family Corvidae	
Aphelocoma californica	western scrub jay
Corvus brachyrhynchos	American crow
Corvus corax	common raven
Family Cuculidae	
Geococcyx californianus	roadrunner
Family Emberizidae	
Aimophila ruficeps	**rufous-crowned sparrow**
Amphispiza bilineata	black-throated sparrow
Chondestes grammacus	lark sparrow
Junco hyemalis	dark-eyed junco
Passerculus sandwichensis	savannah sparrow
Pipilo crissalis	California towhee
Pipilo maculates	spotted towhee
Spizella atrogularis	black-chinned sparrow
Zonotrichia leucophrys	white crowned sparrow
Family Fringillidae	
Carpodacus mexicanus	house finch
Carduelis lawrencei	Lawrence's goldfinch
Carduelis psaltria	lesser goldfinch
Family Hirundinidae	
Petrochelidon pyrrhonota	cliff swallow
Family Icteridae	
Molothrus ater	brown-headed cowbird
Sturnella neglecta	western meadowlark
Family Mimidae	
Toxostoma redivivum	California thrasher
Family Odontophoridae	
Callipepla californica	California quail
Family Paridae	
Baeolophis inomatus	oak titmouse
Family Parulidae	
Dendroica coronata	yellow-rumped warbler

Scientific Name	Common Name
Wilsonia pusilla	Wilson's warbler
Family Picidae	
Colaptes auratus	northern flicker
Picoides nuttallii	Nuttall's woodpecker
Melanerpes formicivores	acorn woodpecker
Family Sittidae	
Sitta carolinensis	white-breasted nuthatch
Family Stumidae	
Stumas vulgaris	European starling
Family Sylviidae	
Chamaea fasciata	wrentit
Polioptila caerulea	blue-gray gnatcatcher
Family Turidae	
Sialia mexicana	western bluebird
Family Trochilidae	
Calypte anna	Anna's hummingbird
Family Troglodytidae	
Thryomanes bewickii	Bewick’s wren
Troglodytes aedon	house wren
Family Tyrannidae	
Empidonax difficilis	Pacific slope flycatcher
Myiarchus cinerascens	ash-throated flycatcher
Sayornis nigricans	black phoebe
Tyrannus verticulis	western kingbird
Family Vireoniidae	
Vireo gilvus	warbling vireo
Vireo huttoni	Hutton's vireo
MAMMALS	
Order Carnivora	Carnivores
Family Canidae	
Canis latrans	coyote
Family Felidae	
Puma concolor	mountain lion
Lynx rufus	bobcat
Family Cervidae	
Odocoileus hemionus	mule deer
Order Lagomorpha	Rabbits, Hares, and Pikas
Family Leporidae	
Lepus californicus bennettii	**San Diego black-tailed jackrabbit**
Sylvilagus audubonii	cottontail
Family Sciuridae	Squirrels, Rats, Mice, and Relatives
Spermorphilus beecheyi	California ground squirrel
Family Geomyidae	
Thomomys bottae	Botta’s pocket gopher
Family Muridae	
Neotoma fuscipes	woodrat

boldface = a sensitive species

APPENDIX F

24-HOUR NOTIFICATION LETTERS TO USFWS

APPENDIX F.1
04/08/2010 24-HOUR NOTIFICATION LETTER TO USFWS

AECOM
1420 Kettner Boulevard
Suite 500
San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

April 09, 2010

Ms. Sandra Marquez
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

RE: Notification of the First Quino Checkerspot Butterfly Observation for the Campo Wind Energy Project, San Diego County, California

Dear Ms. Marquez:

AECOM is submitting this notification letter to inform you that three Quino checkerspot butterfly (*Euphydryas editha quino*; Quino) individuals were observed at the proposed Campo Wind Energy project site in southeastern San Diego County, California (Figures 1 and 2). On April 08, 2010, AECOM biologists Andrew Fisher and Jimmy McMorran (both supervised under permit number TE-820658) made the observation during a reconnaissance level survey for avian point count locations. Although the project site exists within U.S. Fish and Wildlife (USFWS) Quino Survey Area 2, Mr. Fisher and Mr. McMorran did not collect the specimen for identification according to the USFWS protocol (2002), per the pre-activity notification letter submitted for the proposed project on March 12, 2010. Additionally, both Mr. Fisher and Mr. McMorran are not individually permitted. The sightings are detailed below.

A total of three distinctly unique Quino individuals were detected and observed during the period of 12:40 to 13:15. All three were observed within 100 feet of each other, in open/red-shank chaparral habitat largely dominated by ceanothus (*Ceanothus* sp.), chamise (*Adenostoma fasciculatum*), with sparsely scattered coast live oak trees (*Quercus agrifolia*) (Photos 1 and 2). Weather consisted of clear skies, winds of 1-3 mph blowing from the east/southeast, and a temperature of 68 degrees Fahrenheit.

One female Quino was observed by Mr. Fisher and Mr. McMorran resting on buckwheat (*Eriogonum fasciculatum*) at 12:40 (Photos 3 and 4). This first Quino had a small nick in its right forewing, but otherwise appeared in a fresh condition. Mr. Fisher and Mr. McMorran observed it resting on the same buckwheat shrub for approximately 10 minutes. The second Quino was observed within 50 feet of the first Quino, basking on the trail. This Quino appeared to be somewhat worn and more faded than the first Quino, and quickly took flight after a few photos were taken from a distance (Photos 5 and 6). A third Quino was detected in close proximity to the second Quino, nectaring on baby blue eyes (*Nemophila menziesii*). It was also a fresh individual, and was noticeably smaller than the first fresh Quino detected. This individual also took quickly took flight after Mr. Fisher was able to take photographs from a distance (Photo 7).

This letter is official notification of this sighting and capture as required by the USFWS protocol for this species. Following this transmittal, a hard copy of this letter including maps will be sent as well. If you have any questions or comments, please contact me at (619) 233-1454.

Sincerely,

Barbra Calantas
Wildlife Biologist

Enclosures: Figure 1 Regional Map
Figure 2 Vicinity Map
Figure 3 Quino Observation Location Map

cc: Eric Porter, USFWS
Alison Anderson, USFWS
Kelly Meyer, Invenergy
Monique LaChappa, Chairwoman, Campo Kumeyaay Nation
Deanna Leon, President, Muht-Hei Inc.
Lisa Gover, Campo EPA
Denise Turner Walsh, Campo Tribal Attorney

Photo 1

Photo 2

Photo 3

Photo 4

Photo 5

Photo 6

Photo 7

USFWS 24-hour Notification of Quino Sighting

Source: ESRI 2009

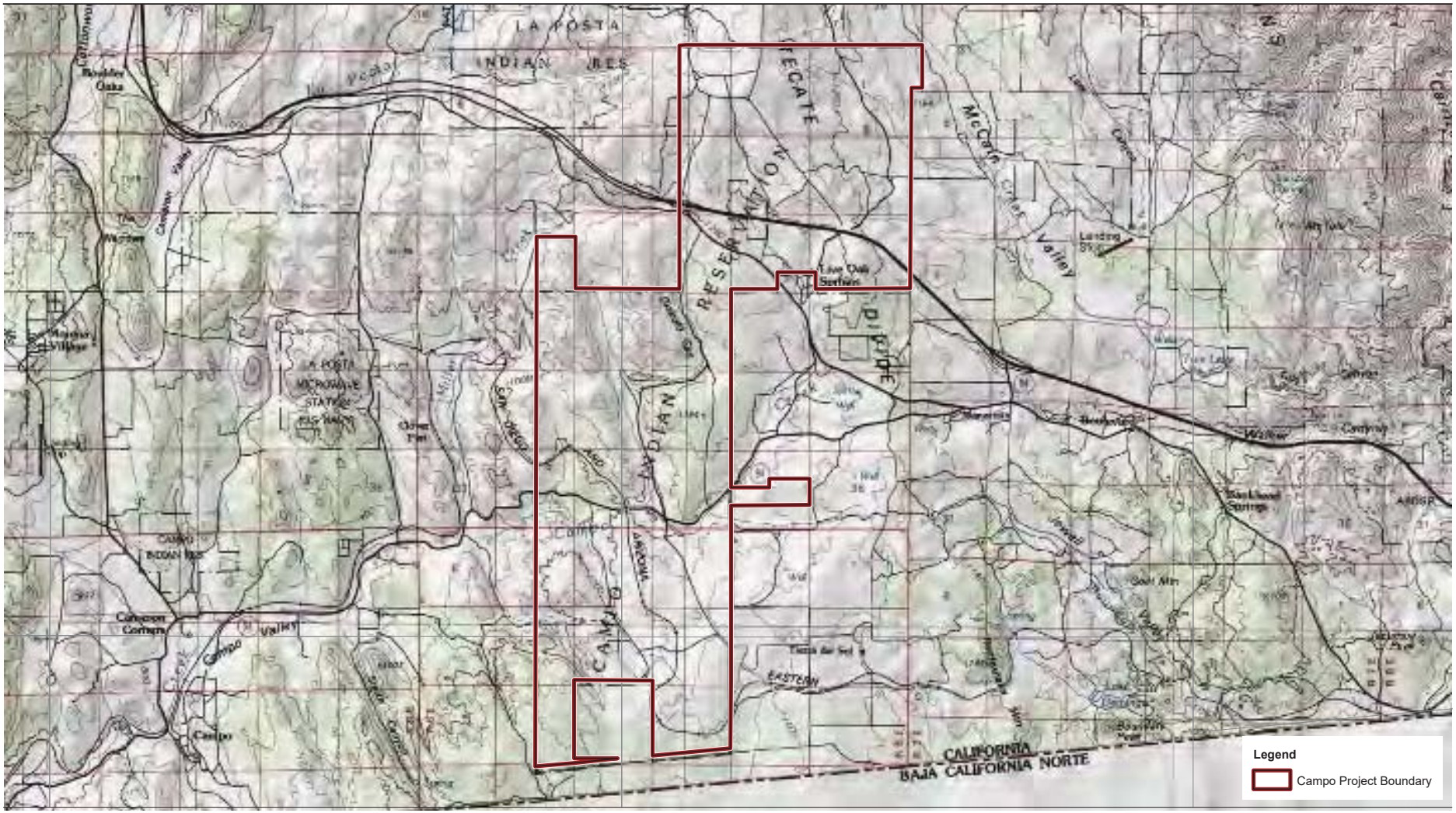
12.8 0 12.8 Miles

Scale: 1 = 805,493.1; 1 inch = 12.7 mile(s)

Figure 1

Regional Map

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_24hr-QCBNotificationFig1Regional_map.mxd, 04/08/10, ShahS2



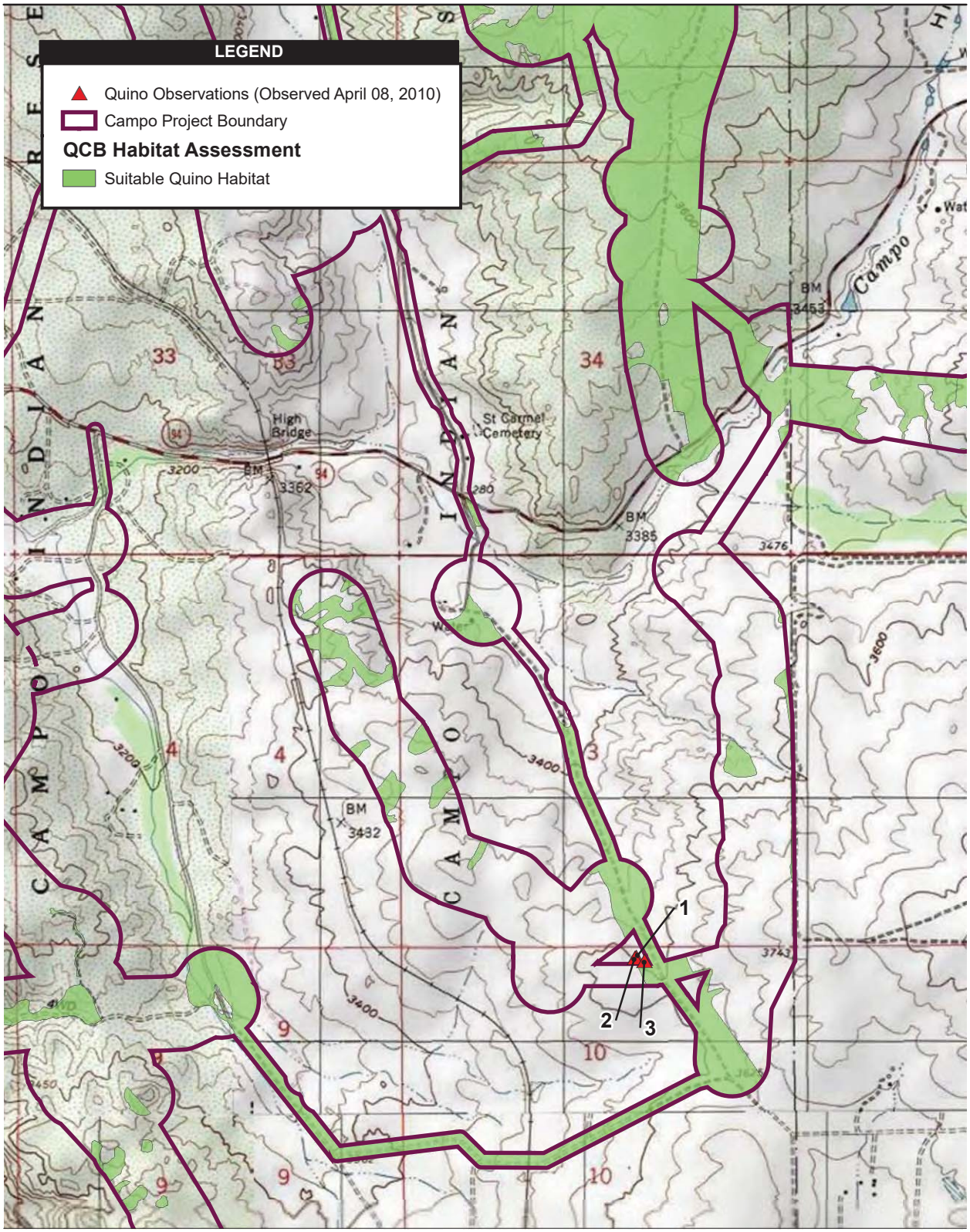
Source: Tierra del Sol 1959; Live Oak Springs 1975; Campo 1959; Cameron Corners 1988

6,500 3,250 0 6,500 Feet

Scale: 1 = 78,000; 1 inch = 6,500 feet

Figure 2
Vicinity Map

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_ 24hrQCBNotification\Fig2Vicinity.mxd, 04/08/10, ShahS2



Source: DigitalGlobe 2008; SDG&E 2010

2,000 1,000 0 2,000 Feet

Scale: 1 = 24,000; 1 inch = 2,000 feet

Figure 3
Quino Detection Location Map

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_ 24hrQCBNotification\QCB_observation_20100408.mxd, 04/08/10, ShahS2

APPENDIX F.2
04/09/2010 24-HOUR NOTIFICATION LETTER TO USFWS

AECOM
1420 Kettner Boulevard
Suite 500
San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

April 12, 2010

Ms. Sandra Marquez
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

RE: Notification of the Second Quino Checkerspot Butterfly Observation for the Campo Wind Energy Project, San Diego County, California

Dear Ms. Marquez:

AECOM is submitting this notification letter to inform you that two Quino checkerspot butterfly (*Euphydryas editha quino*; Quino) individuals were observed at the proposed Campo Wind Energy project site in southeastern San Diego County, California (Figures 1 and 2). On April 09, 2010, David Flietner (TE-008031), a sub-contractor to AECOM and AECOM biologist Erin Bergman (supervised under permit number TE-820658) made the observation during a protocol Quino survey. Although the project site exists within U.S. Fish and Wildlife (USFWS) Quino Survey Area 2, Mr. Flietner and Ms. Bergman did not collect the specimen for identification according to the USFWS protocol (2002), per the pre-activity notification letter submitted for the proposed project on March 12, 2010. The sighting is detailed below.

Two Quino were observed approximately 500 feet southwest of BIA Road 15 on the Campo Reservation (UTM 11S easting:0559472 northing:3612756) (Figure 3) by Mr. Flietner and Ms. Bergman from 13:00 – 13.15. The Quino were detected on an unused or little-used dirt road, an adjacent embankment, and in adjacent open chaparral. The Quino were basking (separately) on open sandy soil within the roadway; as Flietner and Bergman approached to take pictures, the butterflies would fly short distances and alight in other open areas, returning periodically to the same general locations where they were originally observed. Both Quino were in excellent condition, and both observers clearly detected diagnostic markings (abdominal and wing markings; wing shape) on both butterflies. Photos 1 and 2 provide the best images of the butterflies; Photo 3 shows the habitat within the roadway where the Quino alighted.

The surrounding vegetation contains less than 10% shrub cover, consisting of *Adenostoma fasciculata, Rhus ovata, Ceanothus greggii* (in flower*),* and *Cercocarpus betuloides*; a denser stand dominated by *Adenostoma sparsifolium* begins about 50 feet west of the observation point. *Lotus scoparius*, young *Eriogonum fasiculatum* and *Corethrogyne filaginifolia* provide about 20% low (1 – 2 feet tall) cover. Less than 10% herbaceous cover is provided by seedlings of *Erodium cicutarium, Brassica* sp., as well as nectar sources *Plagiobotrys* sp.,

Lasthenia californica, and *Dichelostema capitatum*, which were non-blooming or in early bloom (with most flowers unopened).

This letter is official notification of this sighting and capture as required by the USFWS protocol for this species. Following this transmittal, a hard copy of this letter including maps will be sent as well. If you have any questions or comments, please contact me at (619) 233-1454.

Sincerely,

Barbra Calantas
Wildlife Biologist

Enclosures: Figure 1 Regional Map
Figure 2 Vicinity Map
Figure 3 Quino Observation Location Map

cc: Eric Porter, USFWS
Alison Anderson, USFWS
Kelly Meyer, Invenergy
Monique LaChappa, Chairwoman, Campo Kumeyaay Nation
Deanna Leon, President, Muht-Hei Inc.
Lisa Gover, Campo EPA
Denise Turner Walsh, Campo Tribal Attorney

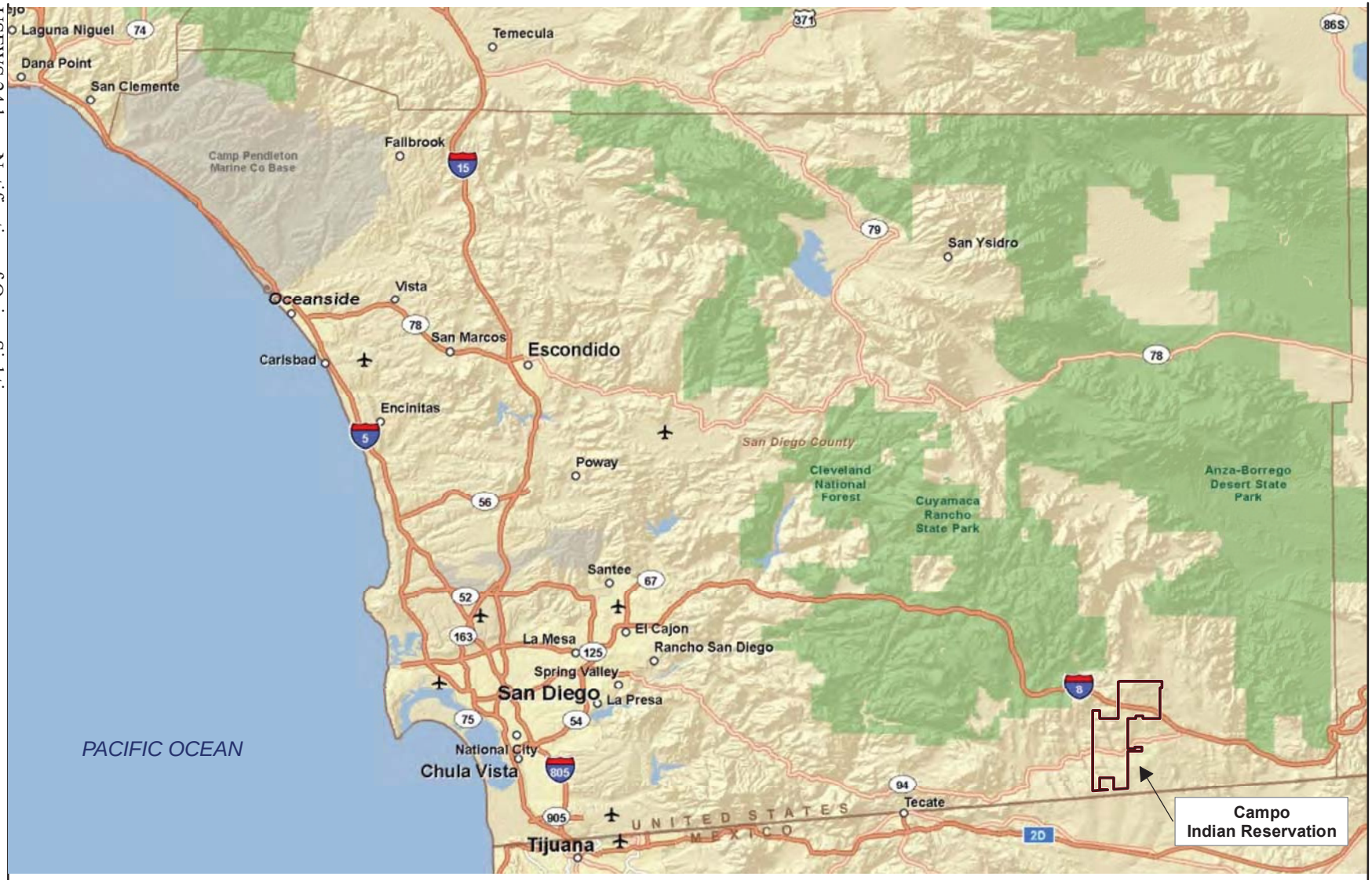
Photo 1

Photo 2

Photo 3

USFWS 24-hour Notification of Quino Sighting

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_24hr\QCBNotification\Fig1Regional_map.mxd, 04/12/10, johnsonaa



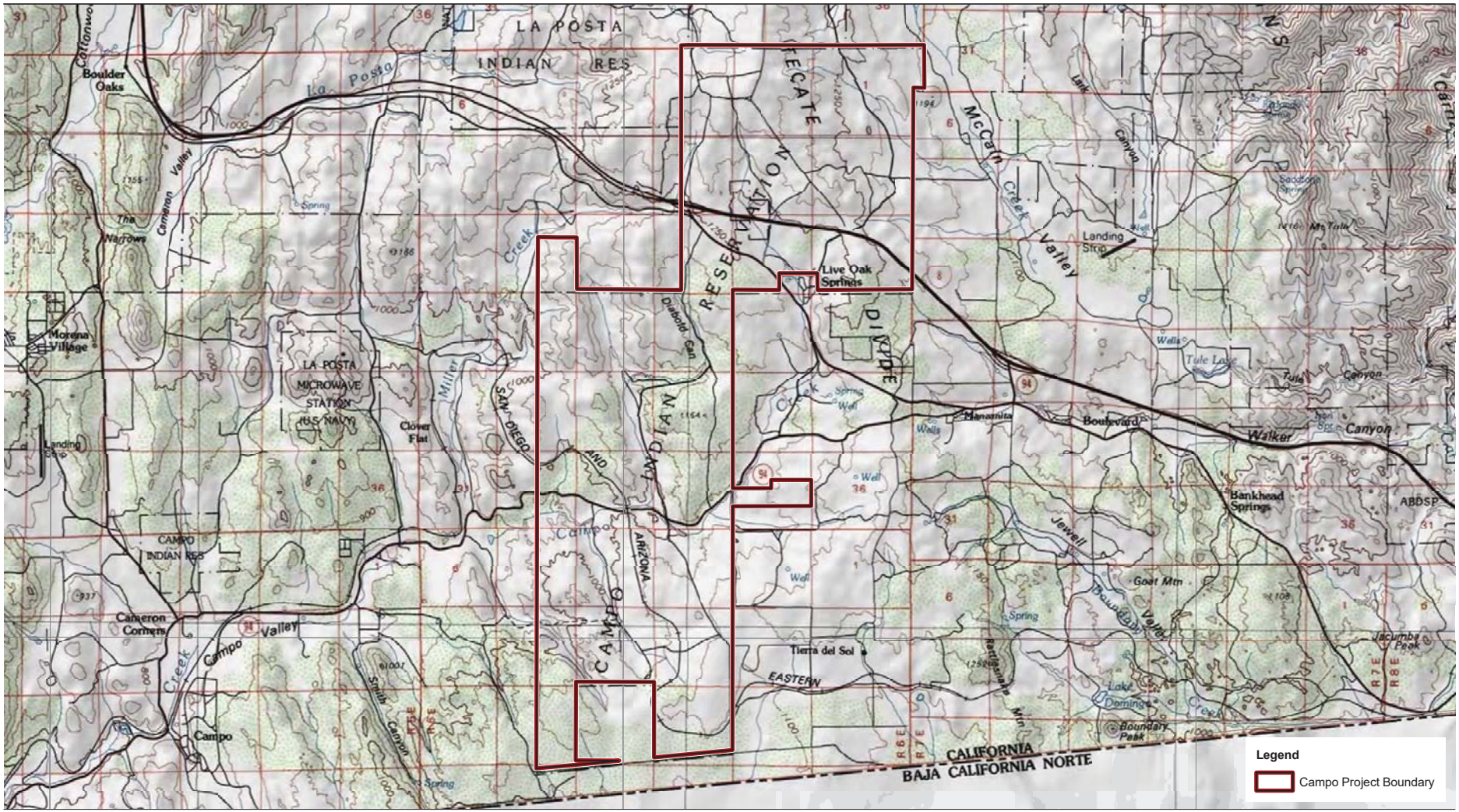
Source: ESRI 2009

12.8 0 12.8 Miles

Scale: 1 = 805,493.1; 1 inch = 12.7 mile(s)

Figure 1

Regional Map



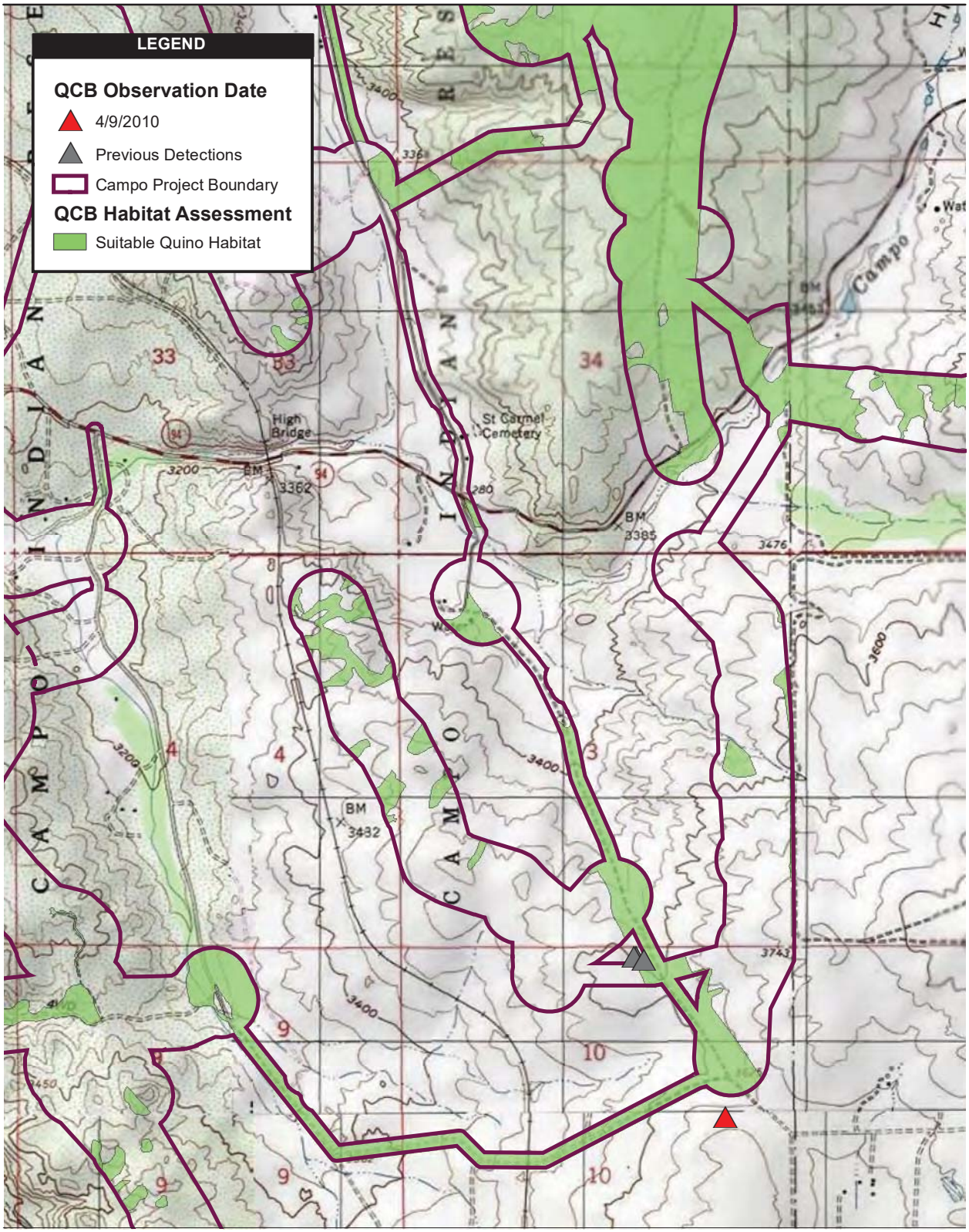
Source: Tierra del Sol 1959; Live Oak Springs 1975; Campo 1959; Cameron Corners 1988

6,500 3,250 0 6,500 Feet

Scale: 1 = 78,000; 1 inch = 6,500 feet

Figure 2
Vicinity Map

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_ 24hrQCBNotification\Fig2Vicinity.mxd, 04/12/10, johnsonaa



Source: DigitalGlobe 2008; SDG&E 2010

2,000 1,000 0 2,000 Feet

Scale: 1 = 24,000; 1 inch = 2,000 feet

Figure 3
Quino Detection Location Map

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_ 24hrQCBNotification\QCB_observation2_20100408.mxd, 04/12/10, johnsonaa

APPENDIX F.3
04/13/2010 24-HOUR NOTIFICATION LETTER TO USFWS

AECOM
1420 Kettner Boulevard
Suite 500
San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

April 14, 2010

Ms. Sandra Marquez
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

RE: Notification of the Third Quino Checkerspot Butterfly Observation for the Campo Wind Energy Project, San Diego County, California

Dear Ms. Marquez:

AECOM is submitting this notification letter to inform you that another Quino checkerspot butterfly (*Euphydryas editha quino*; Quino) individual was observed at the proposed Campo Wind Energy project site in southeastern San Diego County, California (Figures 1 and 2). On April 13, 2010, Consulting Biologist Michael Couffer (permit number TE-782703-8), sub-contractor to AECOM observed a Quino within the project's boundaries during protocol surveys for the species. Although the project site exists within U.S. Fish and Wildlife (USFWS) Quino Survey Area 2, Mr. Couffer did not collect the specimen for identification according to the USFWS protocol (2002), per the pre-activity notification letter submitted for the proposed project on April 2, 2010. The sighting is detailed below.

At 10:30, Mr. Couffer observed a Quino warming itself on bare ground on a hilltop immediately north of Interstate 8, and east of Crestwood Road, at (NAD 83) 11S 0560363, 3619015, at approximately 4295 feet in elevation. Weather at the time was approximately 58 degrees Fahrenheit, with wind speeds around 3 mph and sunny, clear skies. The Quino detected was somewhat drab, with limited fraying of wing edges (Photo 1 and Photo 2). At 12:36 hours, a return visit to the hilltop revealed that this Quino had moved only 8 feet from its initial location. No other Quinos were observed by Mr. Couffer on this date.

This letter is official notification of this sighting and capture as required by the USFWS protocol for this species. Following this transmittal, a hard copy of this letter including maps will be sent as well. If you have any questions or comments, please contact me at (619) 233-1454.

Sincerely,

Barbra Calantas
Wildlife Biologist

Enclosures: Figure 1 Regional Map
Figure 2 Vicinity Map
Figure 3 Quino Observation Location Map

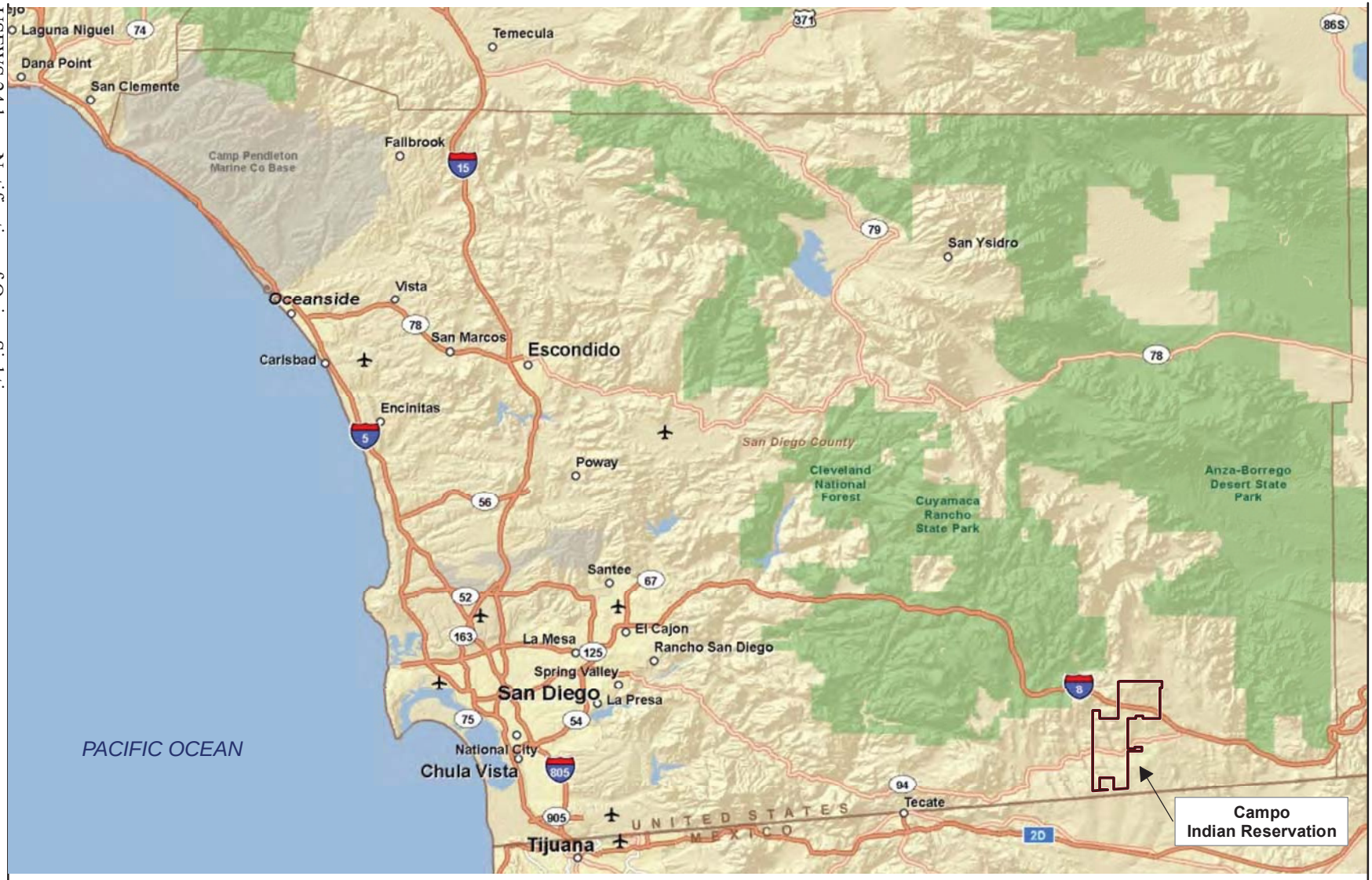
cc: Eric Porter, USFWS
Alison Anderson, USFWS
Kelly Meyer, Invenergy
Monique LaChappa, Chairwoman, Campo Kumeyaay Nation
Deanna Leon, President, Muht-Hei Inc.
Lisa Gover, Campo EPA
Denise Turner Walsh, Campo Tribal Attorney

Photo 1

Photo 2

USFWS 24-hour Notification of Quino Sighting

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_24hr\QCBNotification\Fig1Regional_map.mxd, 04/12/10, johnsonaa



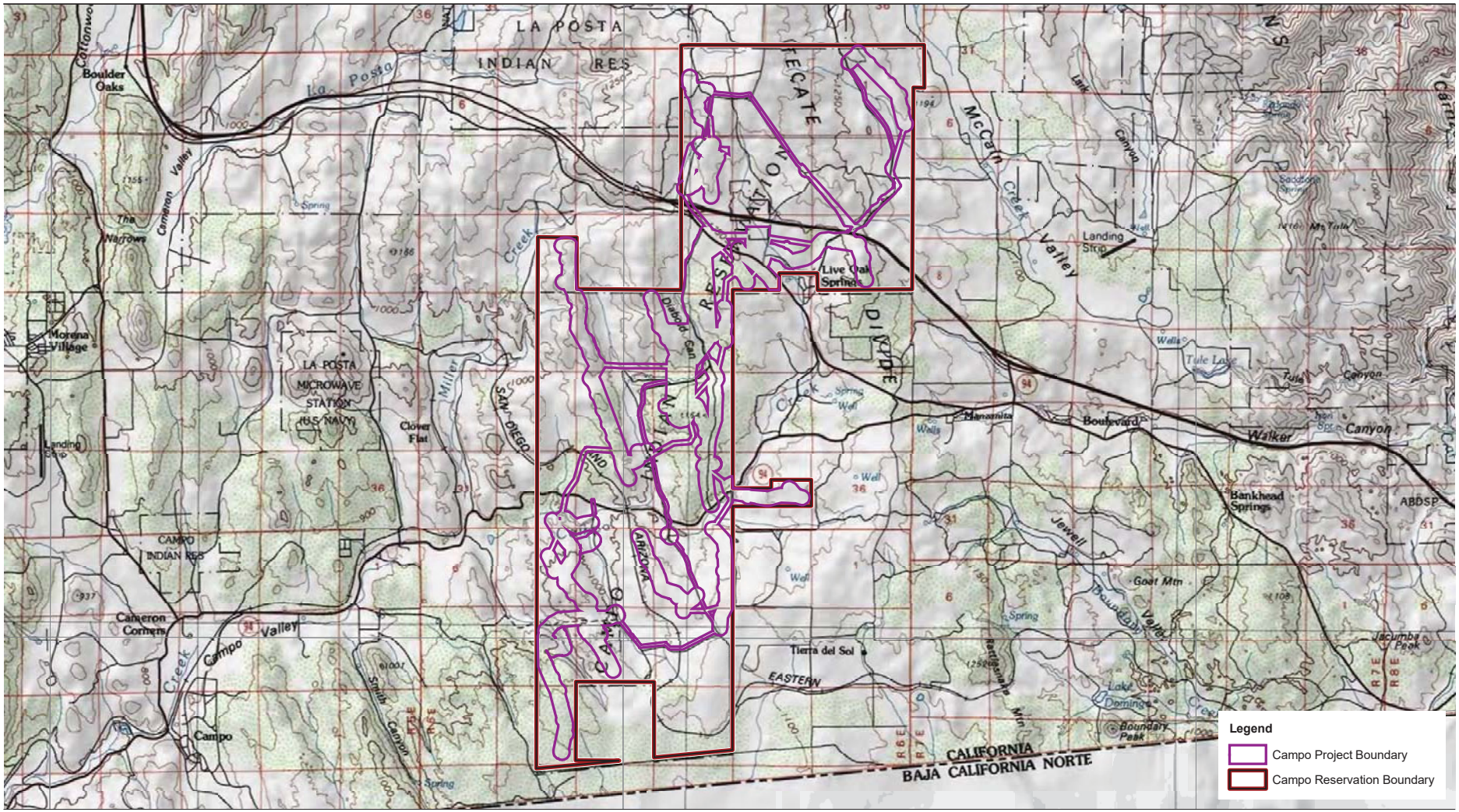
Source: ESRI 2009

12.8 0 12.8 Miles

Scale: 1 = 805,493.1; 1 inch = 12.7 mile(s)

Figure 1

Regional Map



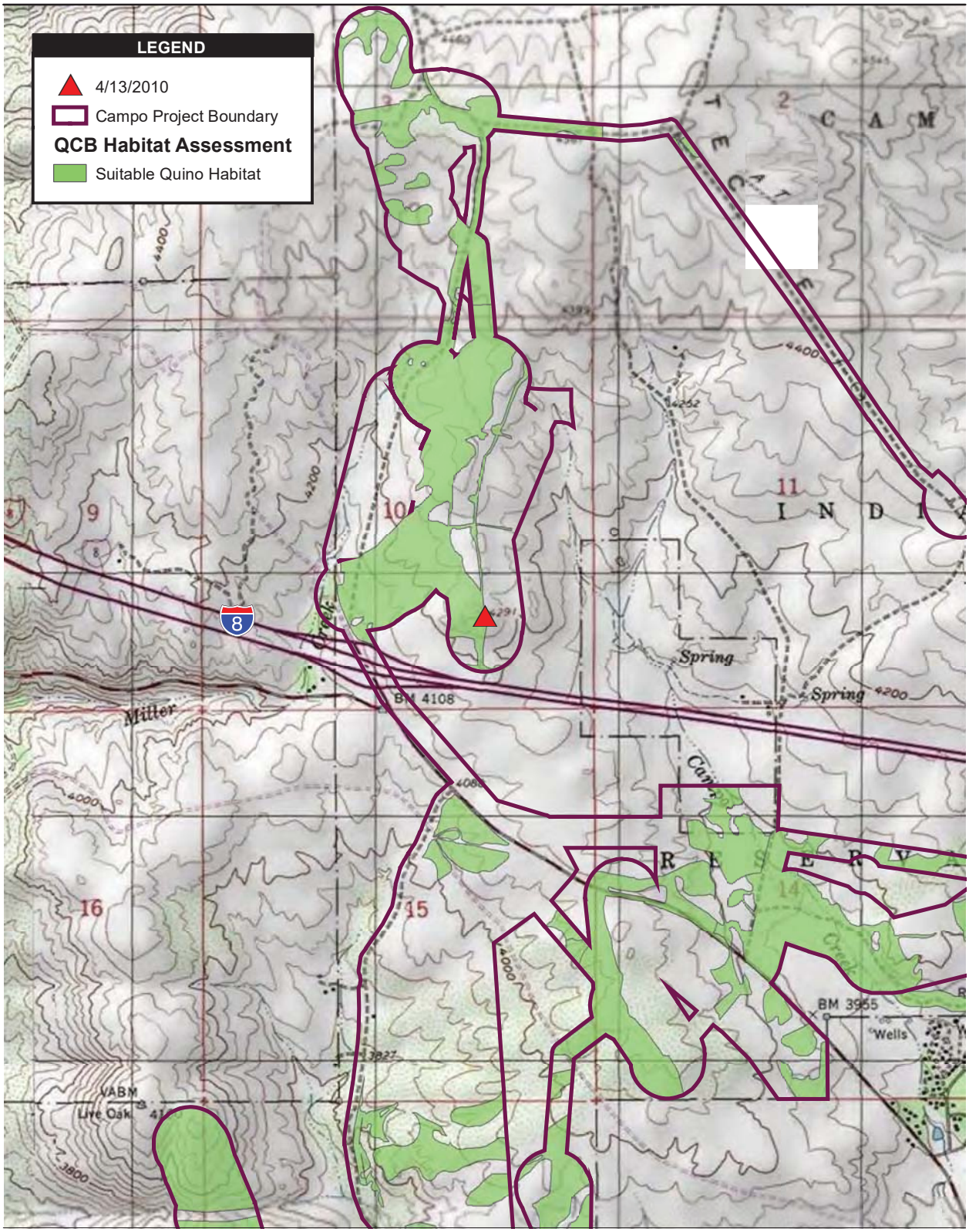
Source: Tierra del Sol 1959; Live Oak Springs 1975; Campo 1959; Cameron Corners 1988

6,500 3,250 0 6,500 Feet

Scale: 1 = 78,000; 1 inch = 6,500 feet

Figure 2
Vicinity Map

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_ 24hrQCBNotification\Fig2Vicinity.mxd, 04/12/10, johnsonaa



Source: DigitalGlobe 2008; SDG&E 2010

2,000 1,000 0 2,000 Feet

Scale: 1 = 24,000; 1 inch = 2,000 feet

Figure 3
Quino Detection Location Map

USFWS 24-hour Notification of Quino Sighting

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_ 24hrQCBNotification\QCB_observation3_20100413.mxd, 04/13/10, johnsonaa

APPENDIX F.4
04/15/2010 24-HOUR NOTIFICATION LETTER TO USFWS

AECOM
1420 Kettner Boulevard
Suite 500
San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

April 16, 2010

Ms. Sandra Marquez
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

RE: Notification of the Fourth and Fifth Quino Checkerspot Butterfly Observations for the Campo Wind Energy Project, San Diego County, California

Dear Ms. Marquez:

AECOM is submitting this notification letter to inform you that additional Quino checkerspot butterfly (*Euphydryas editha quino*; Quino) individuals were observed at the proposed Campo Wind Energy project site in southeastern San Diego County, California (Figures 1 and 2). The fourth Quino observation for this project consisted of two observations on April 15, 2010 and the fifth Quino observation took place on April 16, 2010. On April 15, 2010, AECOM biologists Andrew Fisher and Jimmy McMorran (both supervised under permit number TE-820658-4) incidentally observed two Quino individuals during avian surveys. On the same day, Ken Osborne (permit number TE-837760-6), sub-contractor to AECOM, observed two Quino individuals adjacent to the project's boundaries en route to the project survey area, during protocol surveys for the species. On April 16, 2010, AECOM biologist Bonnie Hendricks (TE-820658-4) observed one Quino within project boundaries. Although the project site exists within U.S. Fish and Wildlife (USFWS) Quino Survey Area 2, these biologists did not collect the specimen for identification according to the USFWS protocol (2002), per the pre-activity notification letter submitted for the proposed project on March 12, 2010. The sightings are detailed below.

On April 15, Mr. Fisher observed a Quino individual at 10:15, at UTM coordinates 11S 0559952, 3609757 (Figure 3a, Quino 1). Weather consisted of clear skies with temperatures of 64.4 degrees Fahrenheit with wind speeds of 3.3 mph blowing from the northeast. The Quino had was identified by its characteristic black abdomen with orange bands, and had worn wings. Prior to Mr. Fisher taking a photograph, the wind blew the Quino away. The habitat in the vicinity of the area consisted of semi-open buckwheat scrub intermixed with scrub oak and chamise (Photo 1). The main nectar source in the area was popcorn flower (*Plagiobotrys* sp.) with few other nectar species present. At 13:15, Mr. Fisher and Mr. McMorran observed another Quino in an area where they both previously detected Quino on April 8, 2010 at UTM coordinates 11S 0560211, 3610530 (Figure 3a, Quino 2). This individual was in a worn condition with slight fraying of wing edges (Photo 2). It was observed nectaring on baby blue eyes (*Nemophila menziesii*). Weather was about 72 degrees Fahrenheit, wind was 3.5 mph on average, and gusted up to 8 mph, with overcast skies.

On April 15, another observation was made by Mr. Osborne. From 15:48 to 15:57, Mr. Osborne was walking towards his vehicle after completing surveys for the day and observed two Quino males adjacent to the project area boundaries (Figure 3b, Quino 3 and 4). These Quino were found at UTM coordinates 11S 0562198, 3617293 and 11S 0562881, 3617289. Following a cleared firebreak along a ridgeline east of the community of Live Oak Springs, Mr. Osborne encountered these two males hilltopping. These butterflies were alternately basking on the ground and very actively chasing or being chased by other butterflies such as *Vanessa carduii* and *Euchloe hyantis*. This prominent, rounded hilltop they were detected is also cleared by the firebreak. Both Quino were in a worn condition, faded in color, but with no nicks or tears in the wings. Photographs were taken, but will be provided at a later date.

The fifth Quino observation for the project was made by Ms. Hendricks on April 16. Ms. Hendricks observed one Quino at 10:10 within the project area at UTM coordinates 11S 0557013, 3610034 (Figure 3c, Quino 5). Weather consisted of clear, sunny skies, with a temperature of 71.5 degrees Fahrenheit and wind speeds of 1.7 mph. This Quino was fresh and crisp. It was detected within mixed chaparral habitat dominated by chamise (*Adenostoma fasciculatum*) and mountain mahogany (*Cercocarpus* sp.). Ms. Hendricks attempted to take a photo of the Quino but was not able to prior to it taking flight.

This letter is official notification of this sighting and capture as required by the USFWS protocol for this species. Following this transmittal, a hard copy of this letter including maps will be sent as well. If you have any questions or comments, please contact me at (619) 233-1454.

Sincerely,

Barbra Calantas
Wildlife Biologist

Enclosures: Figure 1 Regional Map
Figure 2 Vicinity Map
Figures 3a, 3b, 3c Quino Observation Location Maps

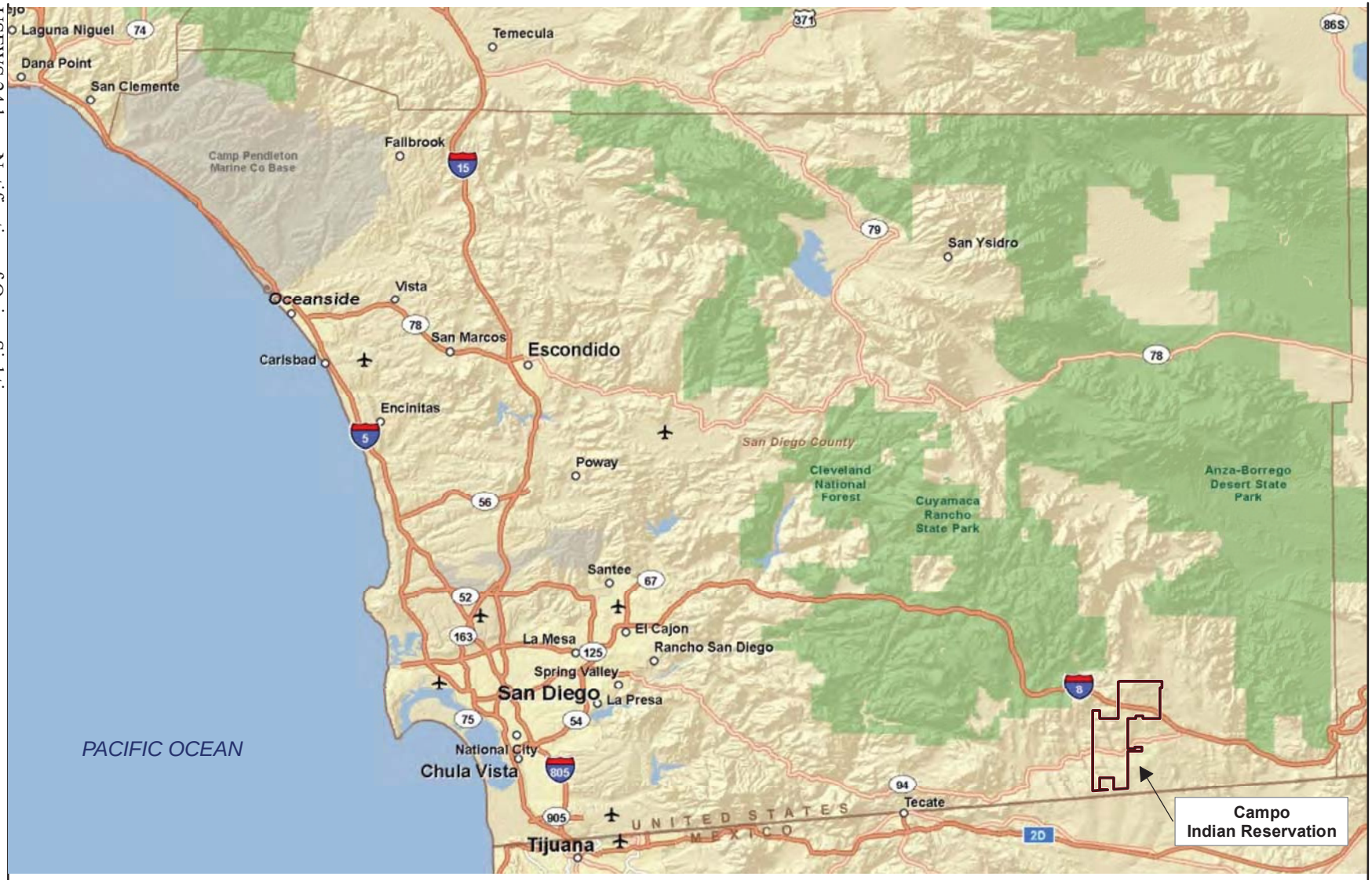
cc: Eric Porter, USFWS
Alison Anderson, USFWS
Kelly Meyer, Invenergy
Monique LaChappa, Chairwoman, Campo Kumeyaay Nation
Deanna Leon, President, Muht-Hei Inc.
Lisa Gover, Campo EPA
Denise Turner Walsh, Campo Tribal Attorney

Photo 1

Photo 2

USFWS 24-hour Notification of Quino Sighting

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_24hr\QCBNotification\Fig1Regional_map.mxd, 04/12/10, johnsonaa



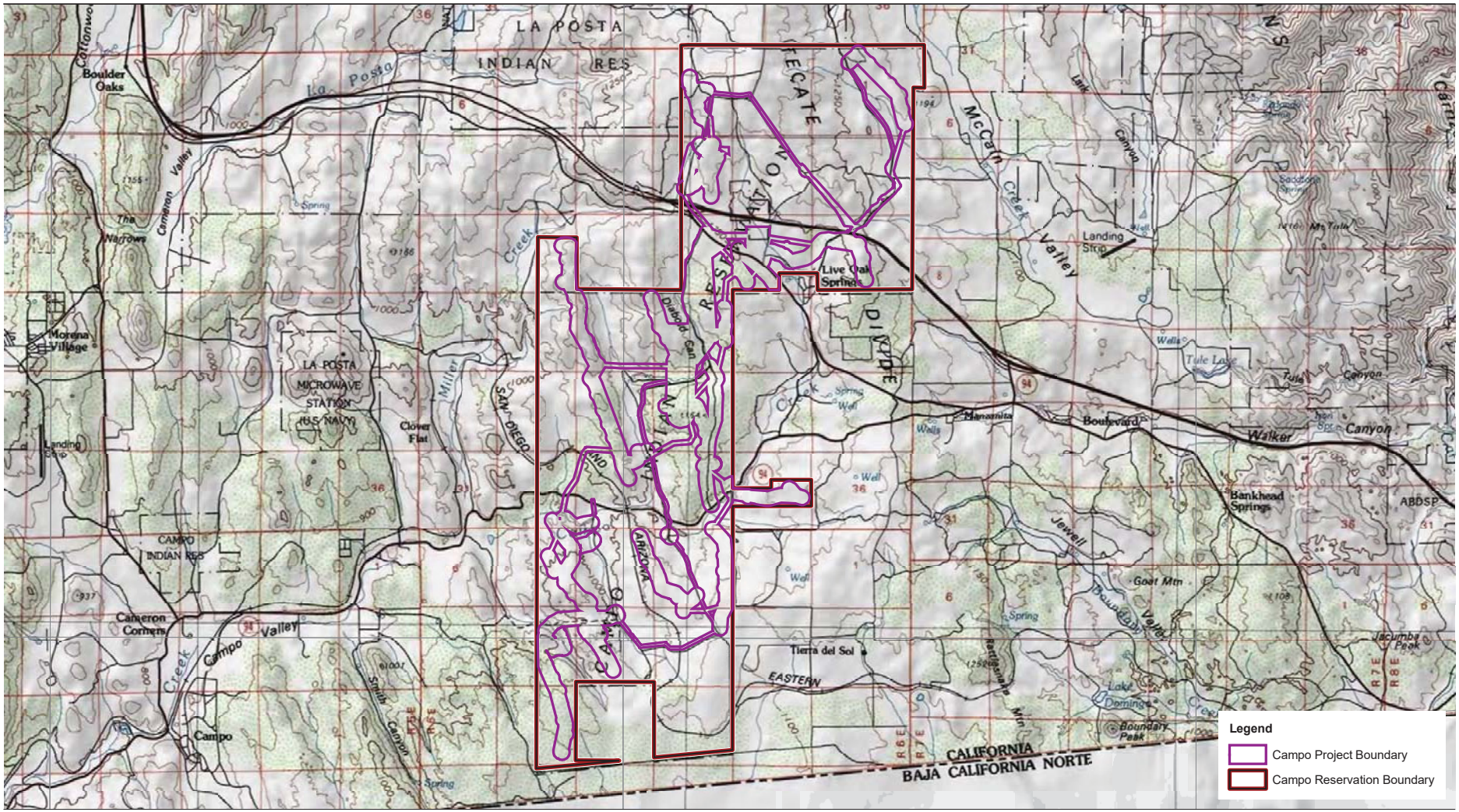
Source: ESRI 2009

12.8 0 12.8 Miles

Scale: 1 = 805,493.1; 1 inch = 12.7 mile(s)

Figure 1

Regional Map



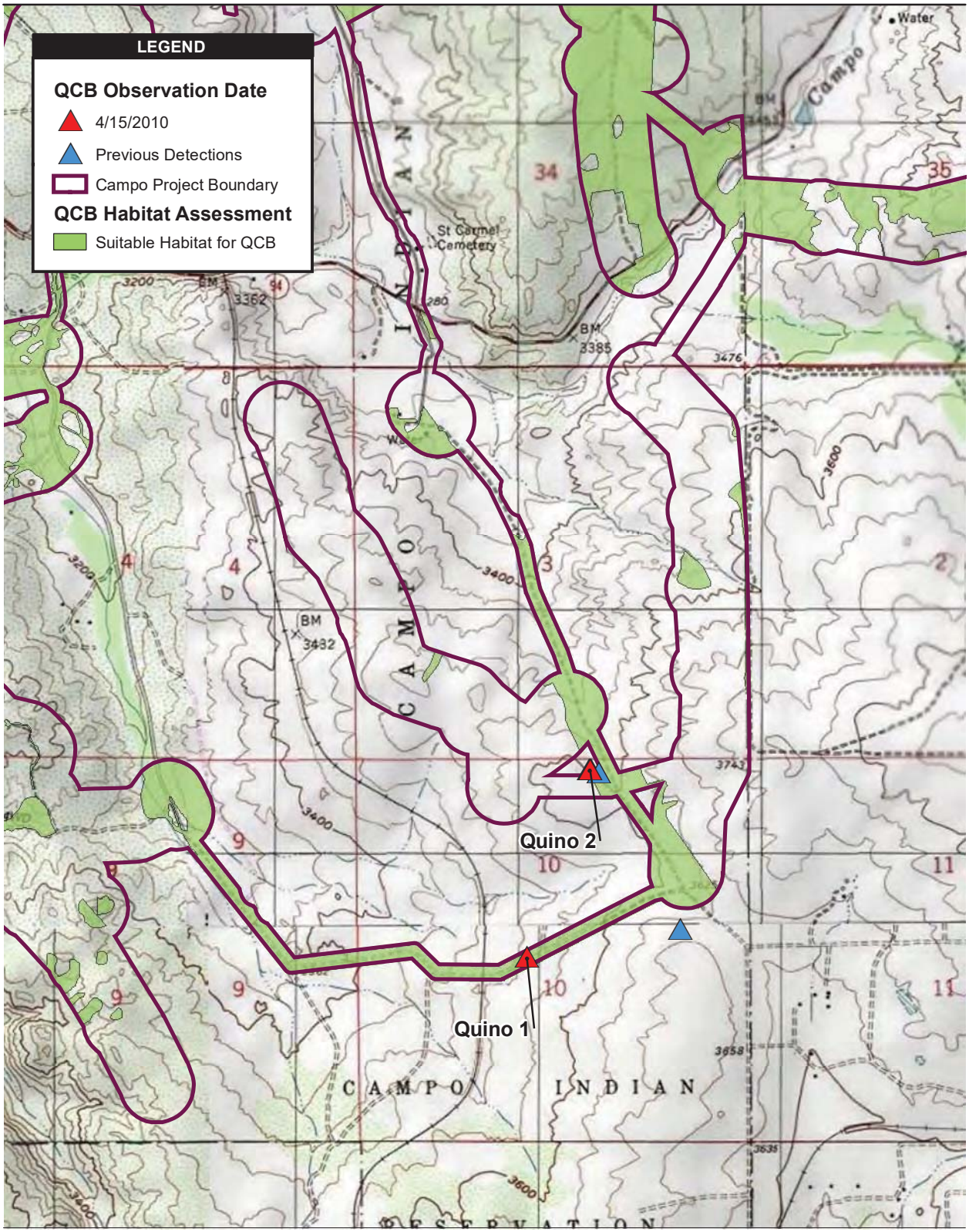
Source: Tierra del Sol 1959; Live Oak Springs 1975; Campo 1959; Cameron Corners 1988

6,500 3,250 0 6,500 Feet

Scale: 1 = 78,000; 1 inch = 6,500 feet

Figure 2
Vicinity Map

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_ 24hrQCBNotification\Fig2Vicinity.mxd, 04/12/10, johnsonaa



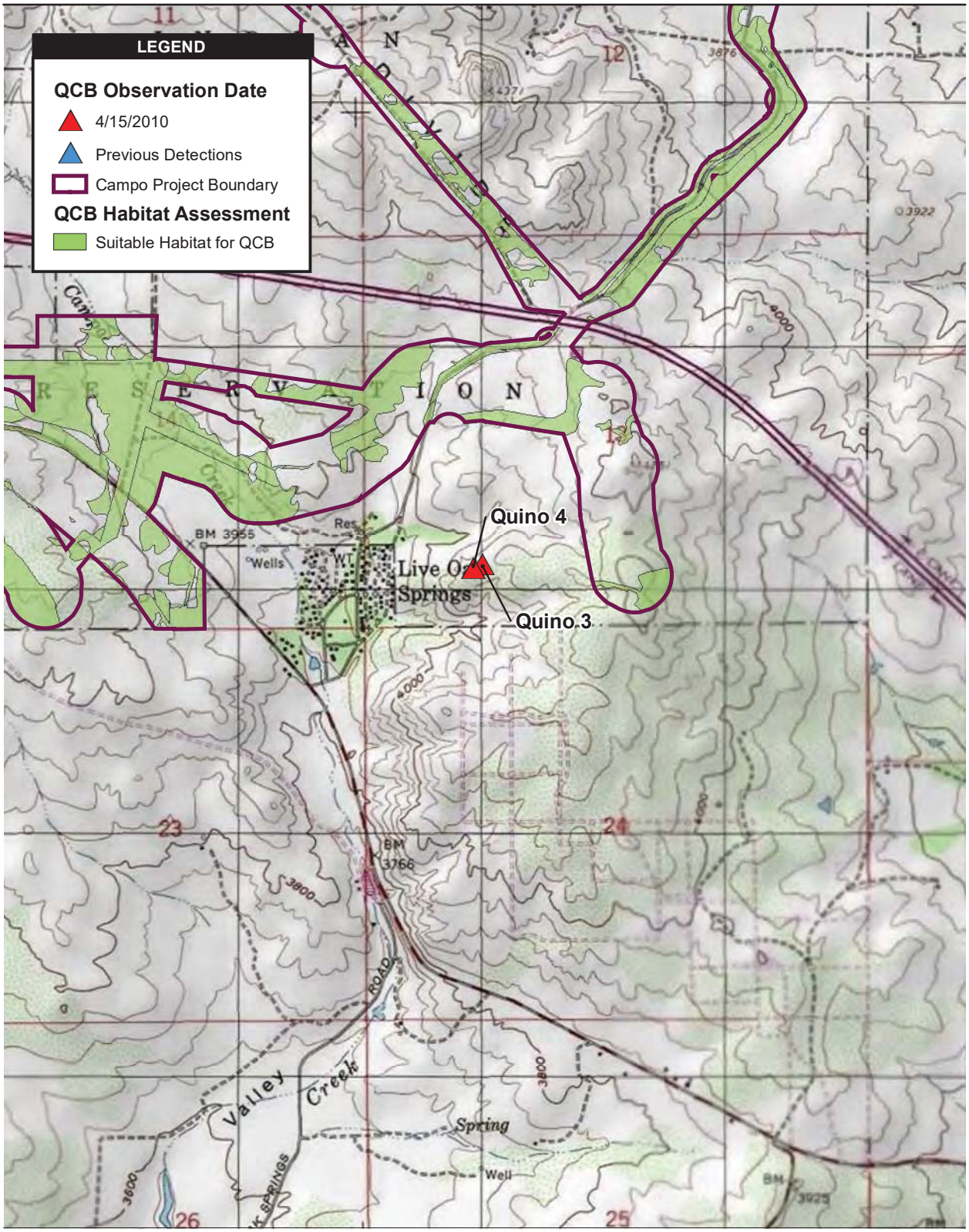
Source: DigitalGlobe 2008; SDG&E 2010

2,000 1,000 0 2,000 Feet

Scale: 1 = 24,000; 1 inch = 2,000 feet

Figure 3a
Quino Detection Location Map

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_ 24hrQCBNotification\QCB_observation4-1_20100415.mxd, 04/16/10, johnsonaa



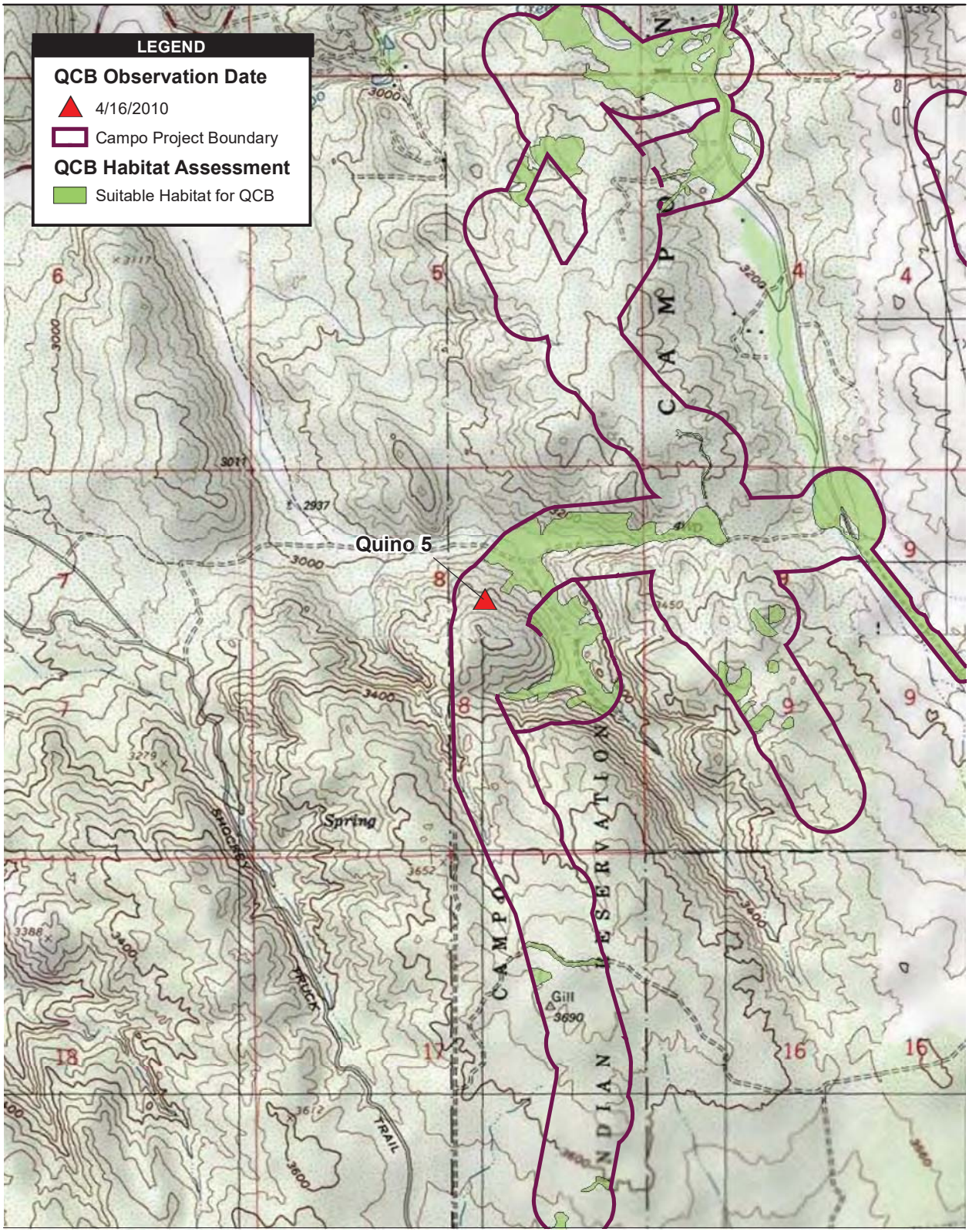
Source: DigitalGlobe 2008; SDG&E 2010

2,000 1,000 0 2,000 Feet

Scale: 1 = 24,000; 1 inch = 2,000 feet

Figure 3b
Quino Detection Location Map

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_ 24hrQCBNotification\QCB_observation4-2_20100415.mxd, 04/16/10, johnsonaa



Source: DigitalGlobe 2008; SDG&E 2010

2,000 1,000 0 2,000 Feet

Scale: 1 = 24,000; 1 inch = 2,000 feet

Figure 3c
Quino Detection Location Map

USFWS 24-hour Notification of Quino Sighting

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_ 24hrQCBNotification\QCB_observation5_20100416.mxd, 04/16/10, johnsonaa

APPENDIX F.5
04/19/2010 24-HOUR NOTIFICATION LETTER TO USFWS

AECOM
1420 Kettner Boulevard
Suite 500
San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

April 19, 2010

Ms. Sandra Marquez
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

RE: Notification of the Sixth Quino Checkerspot Butterfly Observation at the Manzanita Wind Energy Project, San Diego County, California

Dear Ms. Marquez:

AECOM is submitting this notification letter to inform you that two additional Quino checkerspot butterflies (*Euphydryas editha quino*; Quino) were observed immediately adjacent to the proposed Campo Wind Energy project site in southeastern San Diego County, California. On April 19, 2010, Consulting Biologist Michael Couffer (permit number TE-782703-8), sub-contractor to AECOM observed two Quino within the Campo Reservation boundaries during protocol surveys for the species. Although the project site exists within U.S. Fish and Wildlife (USFWS) Quino Survey Area 2, Mr. Couffer did not collect the specimen for identification according to the USFWS protocol (2002), per the pre-activity notification letter submitted for the proposed project on April 2, 2010. The sighting is detailed below.

At 13:45 hours, Mr. Couffer observed two Quinos interacting along the eastern fenced border for the Campo Indian Reservation, adjacent to the Campo Wind Energy project's study area. One Quino was observed chasing another Quino across the reservation border fence and entering reservation land at (NAD 83) 11 South 0562494, 3612598, and 0562502, 3612603 (Figure 3). The elevation was approximately 3,730 feet above lower mean sea level. This location was south of SR 94 (Campo Road), east of the north to south-running portion of Shasta Way, north of the east to west-running portion of Shasta Way, and immediately west of Camino del Monte.

One active male Quino chased a second Quino up and down the reservation border road twice, and then onto reservation land at the above coordinates. The Quino being chased appeared to be in good condition, but was not photographed. The active male Quino kept to a patch of bare ground and scattered popcornflower (*Plagiobothrys* sp.), where it chased all other butterflies and bee flies passing overhead. The two attached photos are of the same individual, which was somewhat drab and had tears in the wings (Photos 1 and 2).

This letter is official notification of this sighting and capture as required by the USFWS protocol for this species. Following this transmittal, a fax and a hard copy of this letter including maps will

be sent as well. If you have any questions or comments, please contact me at (619) 233-1454.

Sincerely,

Barbra Calantas
Wildlife Biologist

Enclosures: Figure 1 Regional Map
Figure 2 Vicinity Map
Figure 3 Quino Observation Location Map

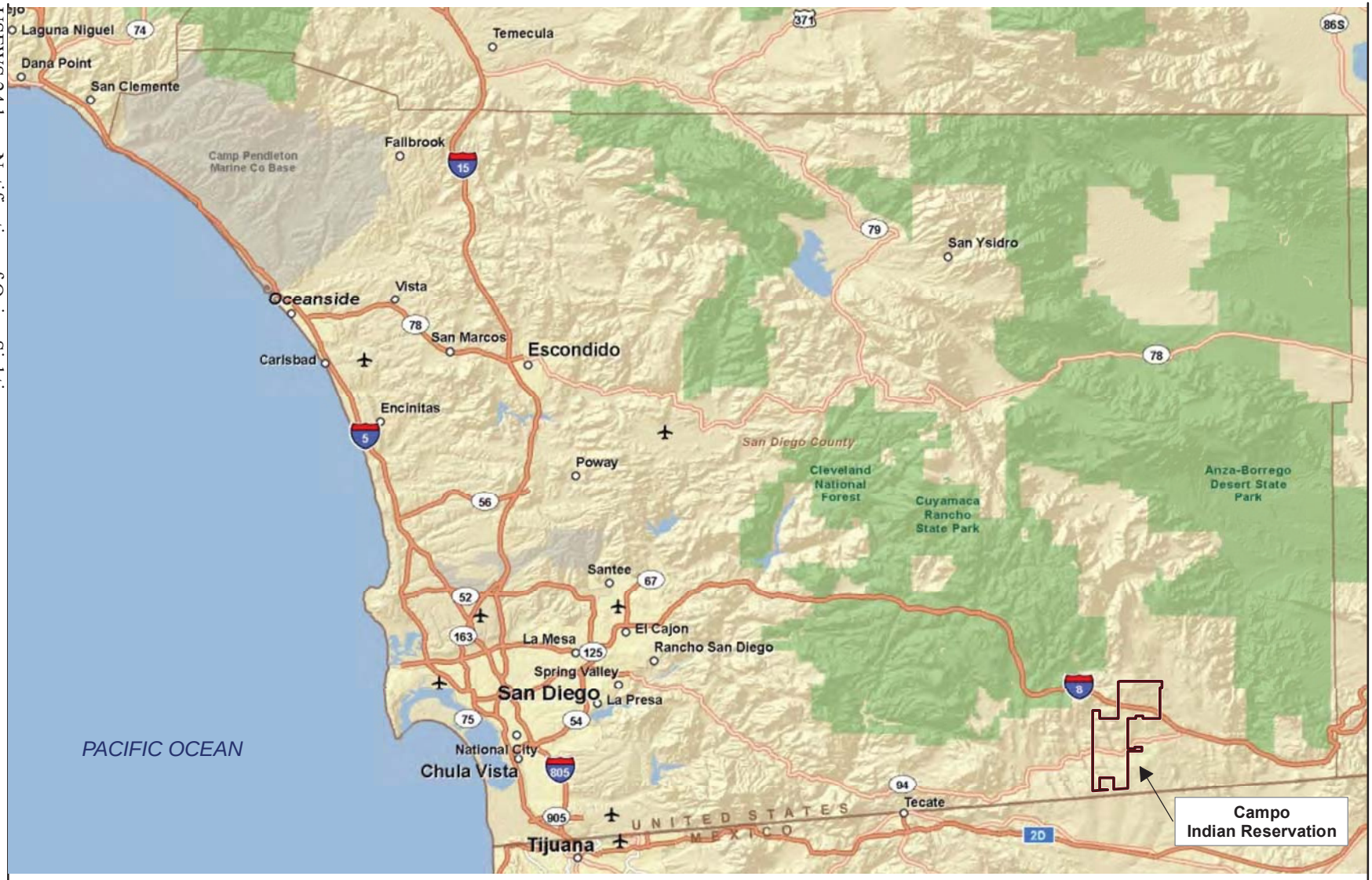
cc: Eric Porter, USFWS
Alison Anderson, USFWS
Kelly Meyer, Invenergy
Monique LaChappa, Chairwoman, Campo Kumeyaay Nation
Deanna Leon, President, Muht-Hei Inc.
Lisa Gover, Campo EPA
Denise Turner Walsh, Campo Tribal Attorney

Photo 1

Photo 2

USFWS 24-hour Notification of Quino Sighting

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_24hr\QCBNotification\Fig1Regional_map.mxd, 04/12/10, johnsonaa



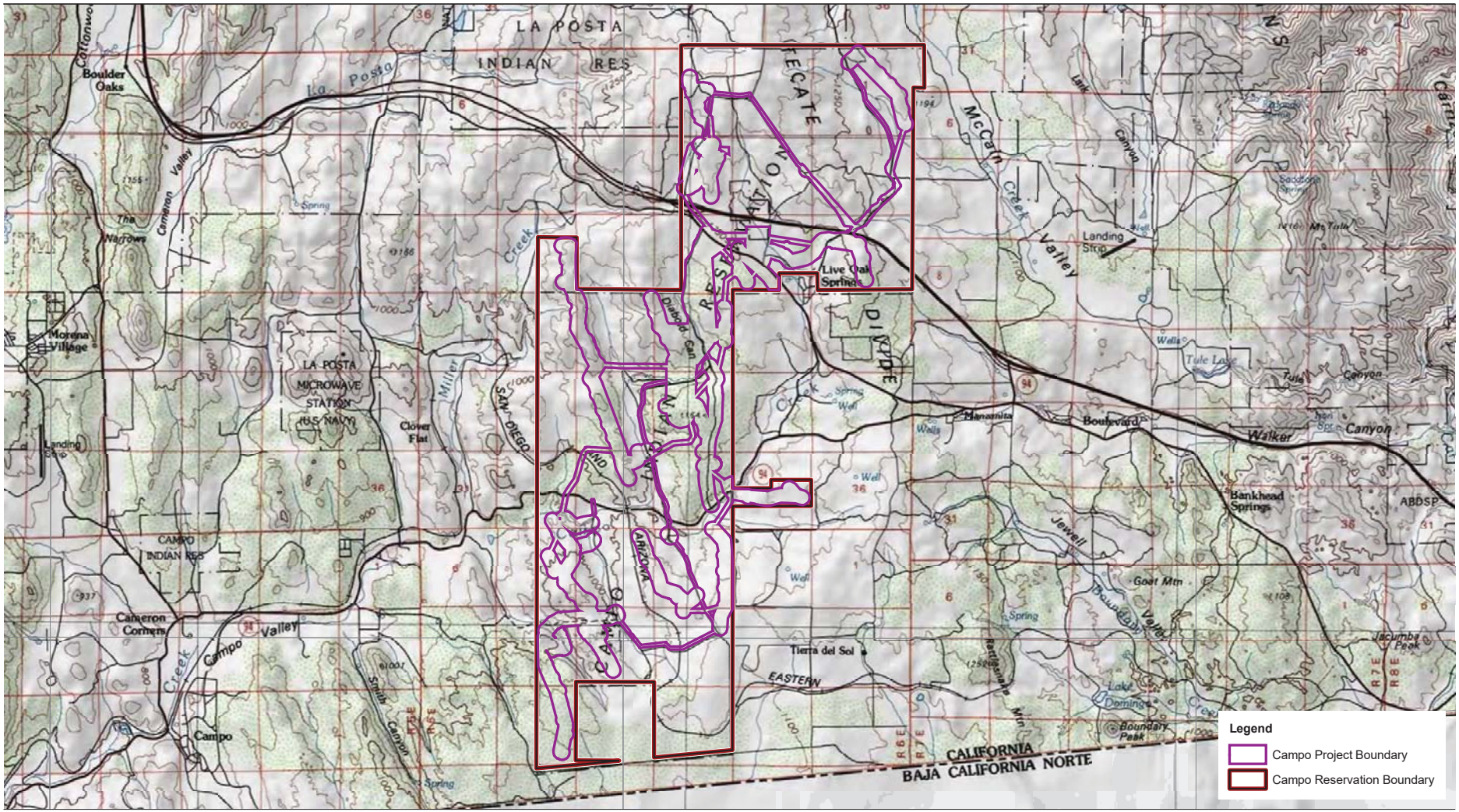
Source: ESRI 2009

12.8 0 12.8 Miles

Scale: 1 = 805,493.1; 1 inch = 12.7 mile(s)

Figure 1

Regional Map



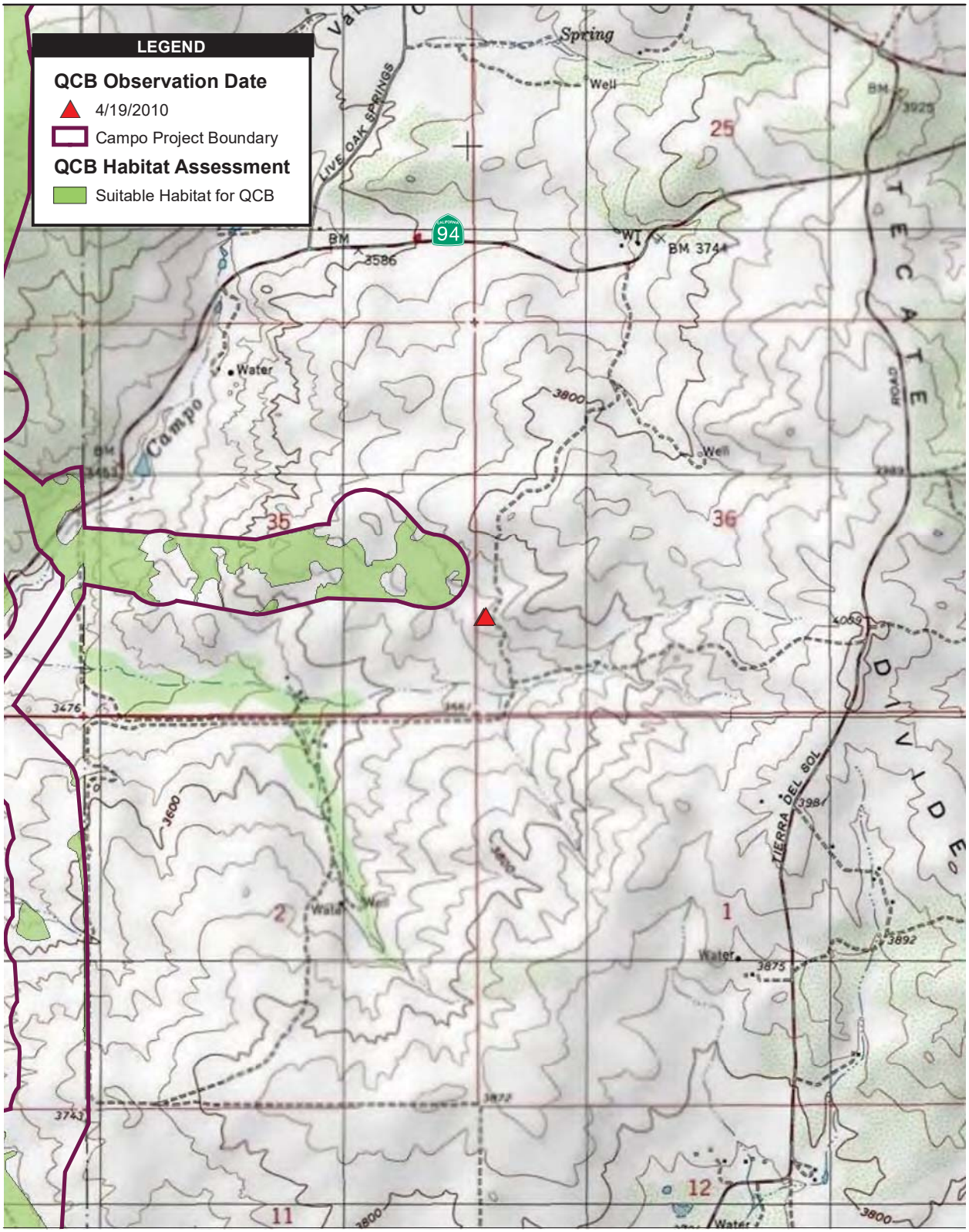
Source: Tierra del Sol 1959; Live Oak Springs 1975; Campo 1959; Cameron Corners 1988

6,500 3,250 0 6,500 Feet

Scale: 1 = 78,000; 1 inch = 6,500 feet

Figure 2
Vicinity Map

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_ 24hrQCBNotification\Fig2Vicinity.mxd, 04/12/10, johnsonaa



Source: DigitalGlobe 2008; SDG&E 2010

2,000 1,000 0 2,000 Feet

Scale: 1 = 24,000; 1 inch = 2,000 feet

Figure 3
Quino Detection Location Map

USFWS 24-hour Notification of Quino Sighting

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_ 24hrQCBNotification\QCB_observation7_20100419.mxd, 04/20/10, johnsonaa

APPENDIX F.6
04/24/2010 24-HOUR NOTIFICATION LETTER TO USFWS

AECOM
1420 Kettner Boulevard
Suite 500
San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

April 26, 2010

Ms. Sandra Marquez
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

RE: Notification of the Seventh Quino Checkerspot Butterfly Observation at the Campo Wind Energy Project, San Diego County, California

Dear Ms. Marquez:

AECOM is submitting this notification letter to inform you that an additional Quino checkerspot butterfly (*Euphydryas editha quino*; Quino) was observed within the proposed Campo Wind Energy project site in southeastern San Diego County, California. On April 24, 2010, Consulting Biologist Michael Couffer (permit number TE-782703-8), sub-contractor to AECOM observed a Quino during protocol surveys for the species. Although the project site exists within U.S. Fish and Wildlife (USFWS) Quino Survey Area 2, Mr. Couffer did not collect the specimen for identification according to the USFWS protocol (2002), per the pre-activity notification letter submitted for the proposed project on April 2, 2010. The sighting is detailed below.

At 13:20 hours, Mr. Couffer observed one Quino approximately 1,312 feet south of Old Highway 80, south of the Golden Acorn Casino, at (NAD 83) 11S 0560710, 3617216 (Figure 3). This location is east of Church Road. The Quino was observed at approximately 4030 feet above lower mean sea level. The species was verified with binoculars, but was not photographed. After the Quino was flushed off bare ground, it landed on a 3-inch-tall popcornflower (*Plagiobothrys* sp.). While approaching closer to photograph the butterfly, it flushed and flew into moderate density chamise chaparral, and was not found again. This was a well-worn, drab individual, that had worn wing edges and faded abdomen stripes.

The butterfly was found on an old, unused dirt road that ran north to south. Because the prevailing winds in the area blow either from the east or from the west, shrubs deflect the wind over the road, causing a long dead air space with abundant bare ground and scattered popcornflowers (Photos 1 and 2). If the road had been oriented east to west, the prevailing winds would blow right down the road much of the time. Photos 1 and 2 are provided in order to attempt to illustrate the quality of this old dirt road as high quality Quino habitat.

This letter is official notification of this sighting and capture as required by the USFWS protocol for this species. Following this transmittal, a fax and a hard copy of this letter including maps will be sent as well. If you have any questions or comments, please contact me at (619) 233-1454.

Sincerely,

Barbra Calantas
Wildlife Biologist

Enclosures: Figure 1 Regional Map
Figure 2 Vicinity Map
Figure 3 Quino Observation Location Map

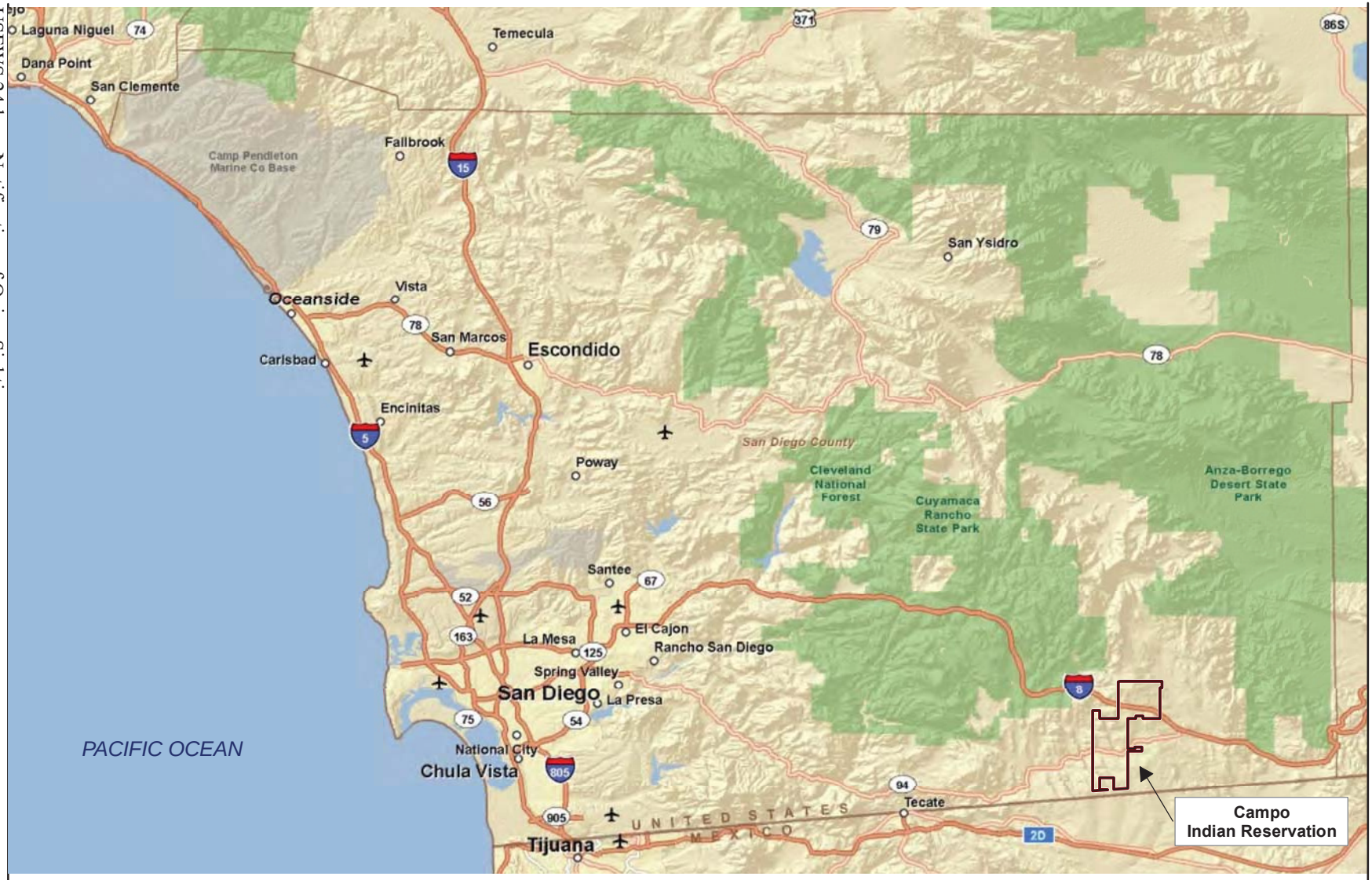
cc: Eric Porter, USFWS
Alison Anderson, USFWS
Kelly Meyer, Invenergy
Monique LaChappa, Chairwoman, Campo Kumeyaay Nation
Deanna Leon, President, Muht-Hei Inc.
Lisa Gover, Campo EPA
Denise Turner Walsh, Campo Tribal Attorney

Photo 1

Photo 2

USFWS 24-hour Notification of Quino Sighting

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_24hr\QCBNotification\Fig1Regional_map.mxd, 04/12/10, johnsonaa



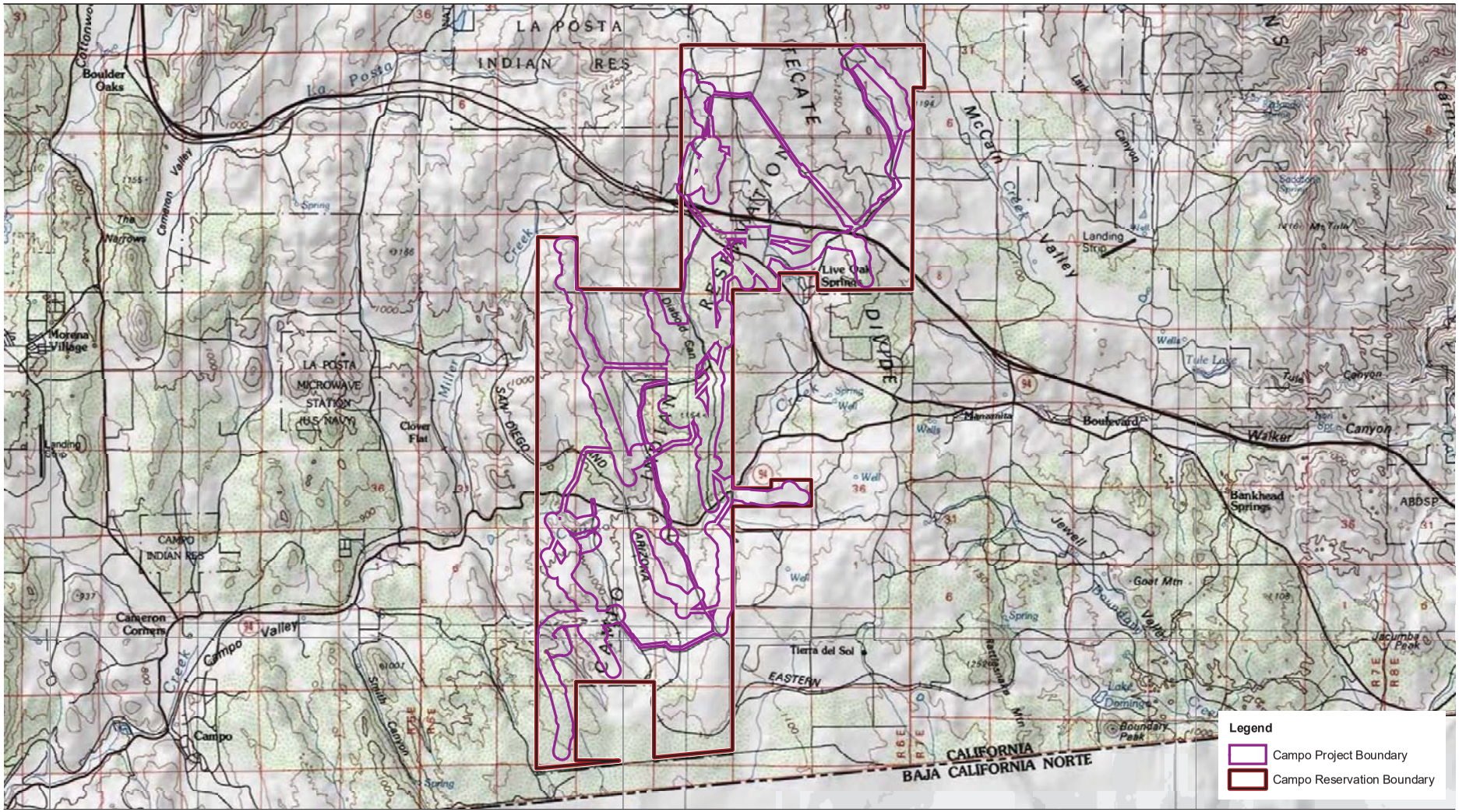
Source: ESRI 2009

12.8 0 12.8 Miles

Scale: 1 = 805,493.1; 1 inch = 12.7 mile(s)

Figure 1

Regional Map



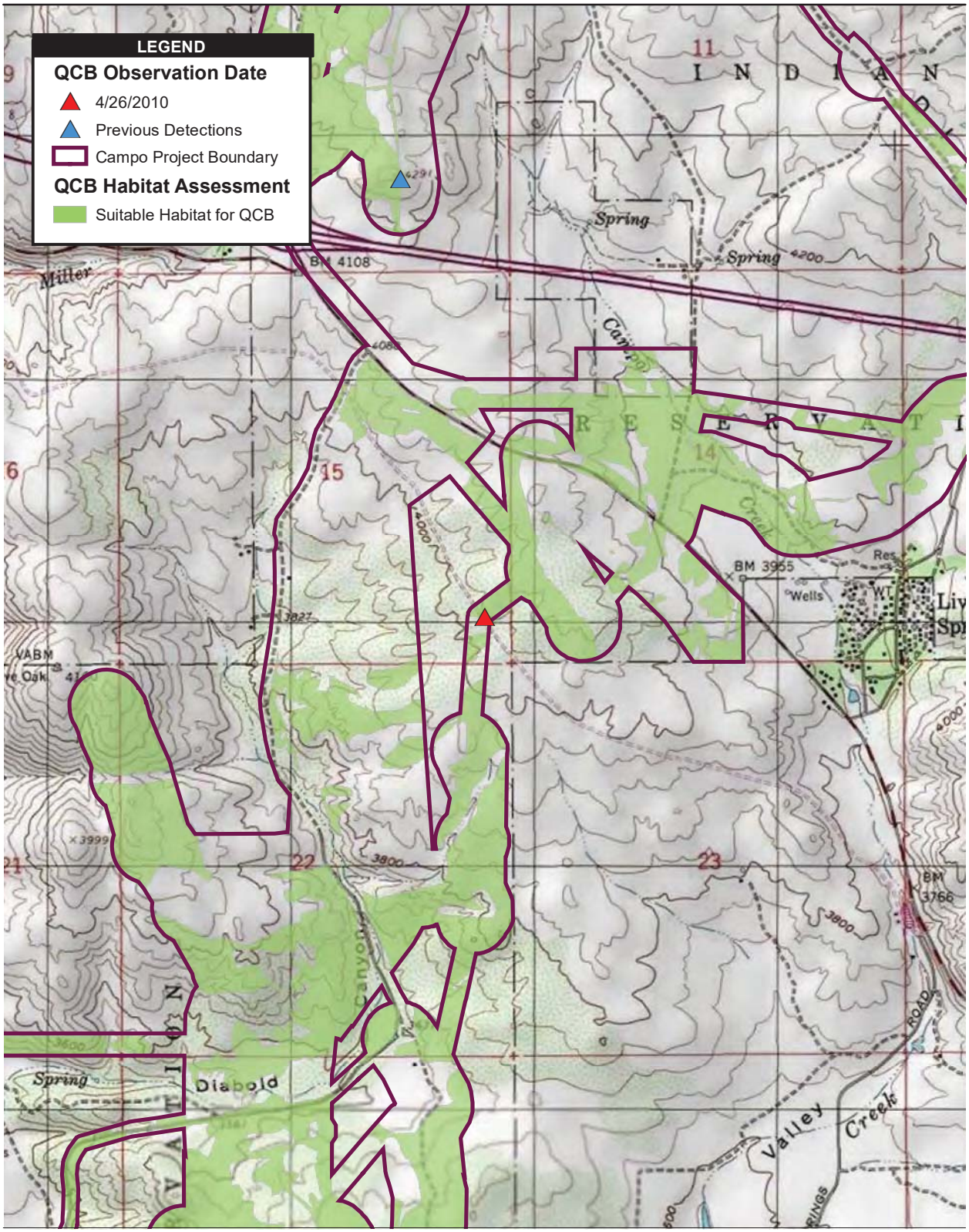
Source: Tierra del Sol 1959; Live Oak Springs 1975; Campo 1959; Cameron Corners 1988

6,500 3,250 0 6,500 Feet

Scale: 1 = 78,000; 1 inch = 6,500 feet

Figure 2
Vicinity Map

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_ 24hrQCBNotification\Fig2Vicinity.mxd, 04/12/10, johnsonaa



Source: DigitalGlobe 2008; SDG&E 2010

2,000 1,000 0 2,000 Feet

Scale: 1 = 24,000; 1 inch = 2,000 feet

Figure 3
Quino Detection Location Map

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_ 24hrQCBNotification\QCB_observation7_20100426.mxd, 04/26/10, johnsonaa

APPENDIX F.7
04/26/2010 24-HOUR NOTIFICATION LETTER TO USFWS

AECOM
1420 Kettner Boulevard
Suite 500
San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

April 27, 2010

Ms. Sandra Marquez
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

RE: Notification of the Eighth Quino Checkerspot Butterfly Observation at the Campo Wind Energy Project, San Diego County, California

Dear Ms. Marquez:

AECOM is submitting this notification letter to inform you that an additional Quino checkerspot butterfly (*Euphydryas editha quino*; Quino) was observed on the proposed Campo Wind Energy project site in southeastern San Diego County, California. On April 26, 2010, Consulting Biologist Michael Couffer (permit number TE-782703-8), sub-contractor to AECOM observed one Quino within the Campo Reservation boundaries during protocol surveys for the species. Although the project site exists within U.S. Fish and Wildlife (USFWS) Quino Survey Area 2, Mr. Couffer did not collect the specimen for identification according to the USFWS protocol (2002), per the pre-activity notification letter submitted for the proposed project on April 2, 2010. The sighting is detailed below.

At 14:13 hours, Mr. Couffer observed one Quino at (NAD 83) 11 South 0560671, 3611605 (Figure 3). The elevation was approximately 3,564 feet above lower mean sea level. This location was south of SR 94 (Campo Road), east of Church Road, northwest of Vista del Cielo, and southwest of Shasta Way. The Quino was not brightly colored but was also not worn, it looked to be in an “in-between” condition. The Quino took flight during an attempt to photograph it.

The Quino was within an extensive sandy inclusion of low density southern mixed chaparral, surrounded on 3 sides by high density chaparral (Photo 1). Nectar sources such as popcornflower were abundant. Large fields of Lasthenia sp. were also present. Collinsia concolor was found to be widely scattered in the area, often growing within buckwheat shrubs (Photo 2).

This letter is official notification of this sighting and capture as required by the USFWS protocol

for this species. Following this transmittal, a fax and a hard copy of this letter including maps will be sent as well. If you have any questions or comments, please contact me at (619) 233-1454.

Sincerely,

Barbra Calantas
Wildlife Biologist

Enclosures: Figure 1 Regional Map
Figure 2 Vicinity Map
Figure 3 Quino Observation Location Map

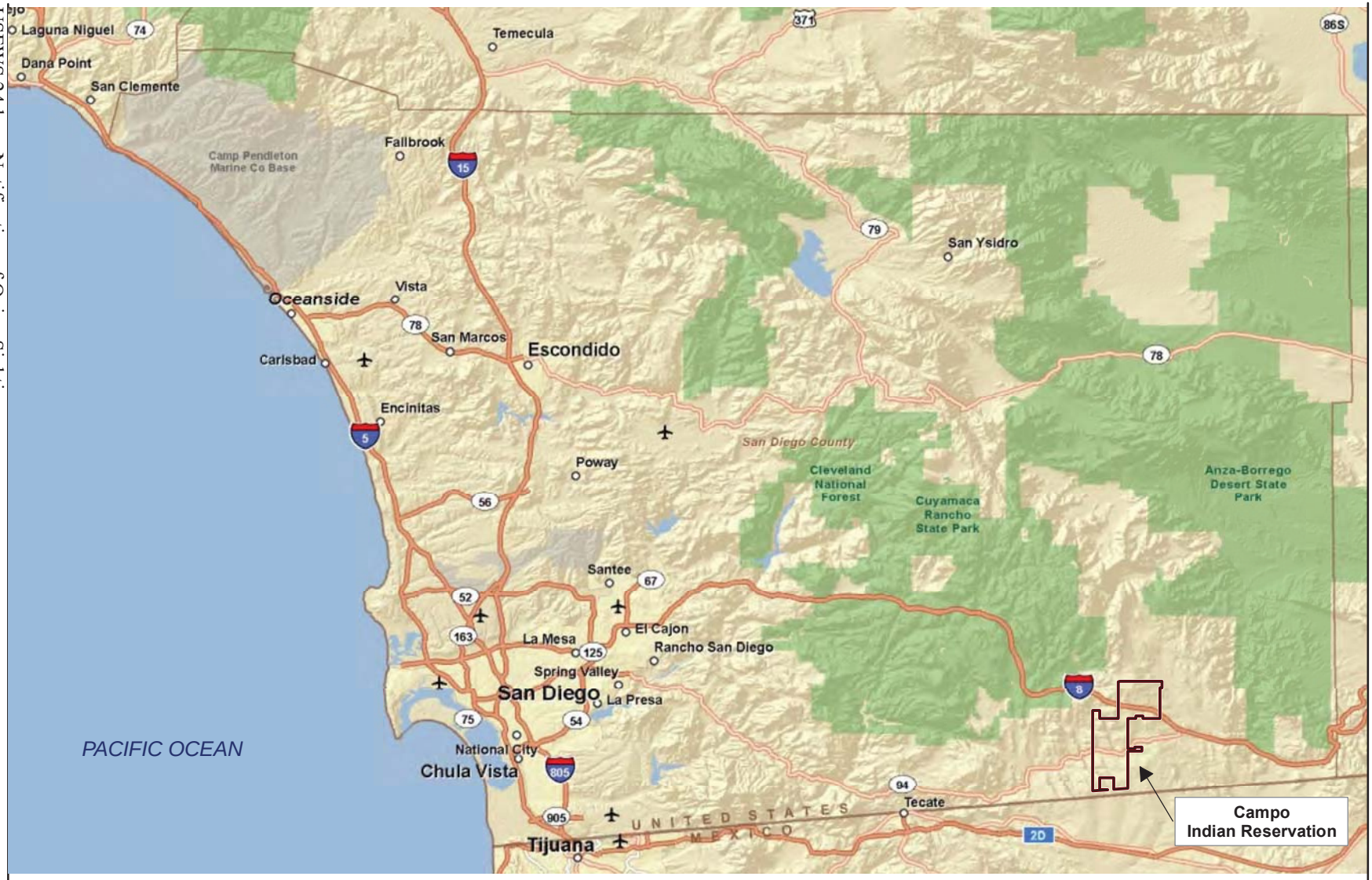
cc: Eric Porter, USFWS
Alison Anderson, USFWS
Kelly Meyer, Invenergy
Monique LaChappa, Chairwoman, Campo Kumeyaay Nation
Deanna Leon, President, Muht-Hei Inc.
Lisa Gover, Campo EPA
Denise Turner Walsh, Campo Tribal Attorney

Photo 1

Photo 2

USFWS 24-hour Notification of Quino Sighting

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_24hr\QCBNotification\Fig1Regional_map.mxd, 04/12/10, johnsonaa



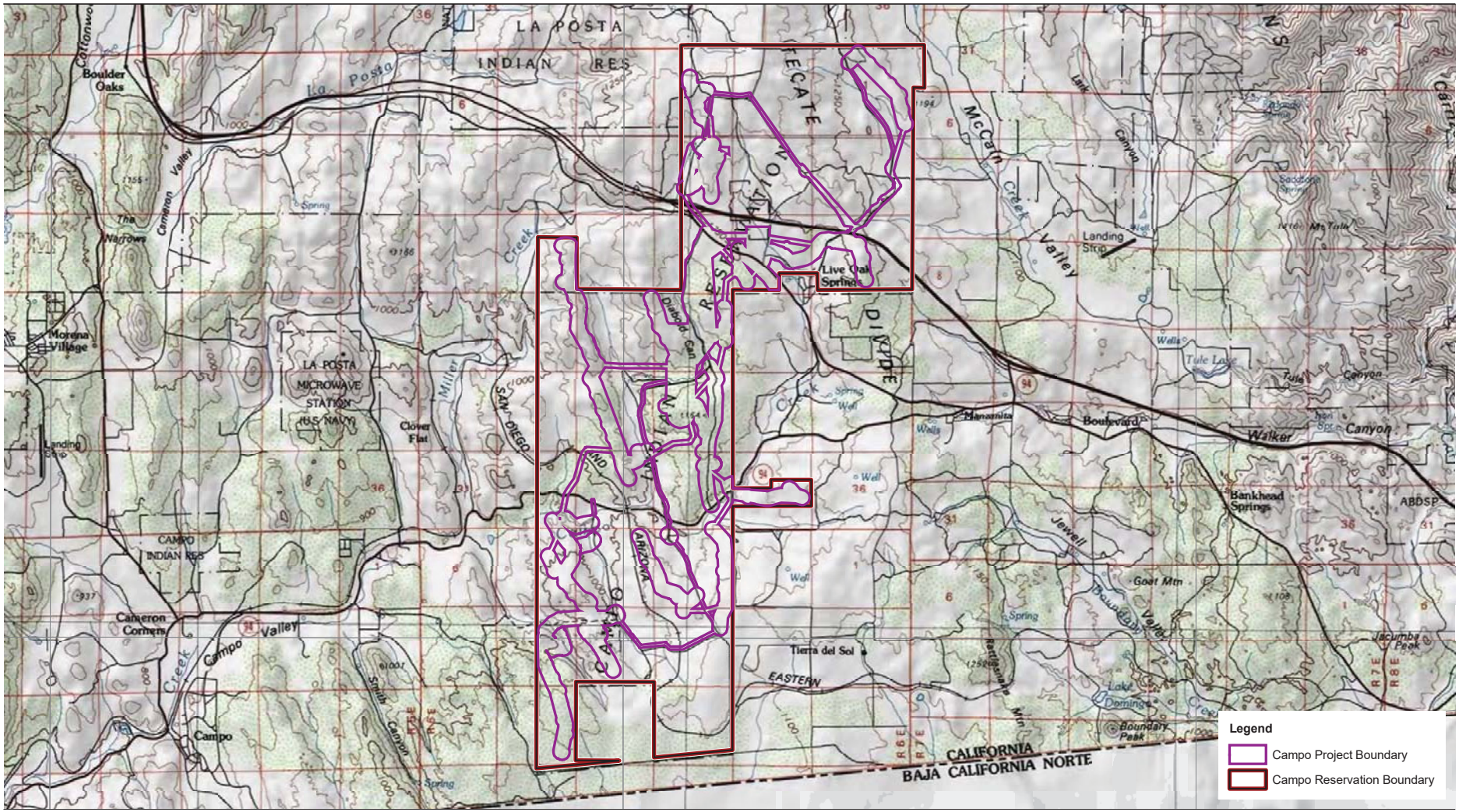
Source: ESRI 2009

12.8 0 12.8 Miles

Scale: 1 = 805,493.1; 1 inch = 12.7 mile(s)

Figure 1

Regional Map



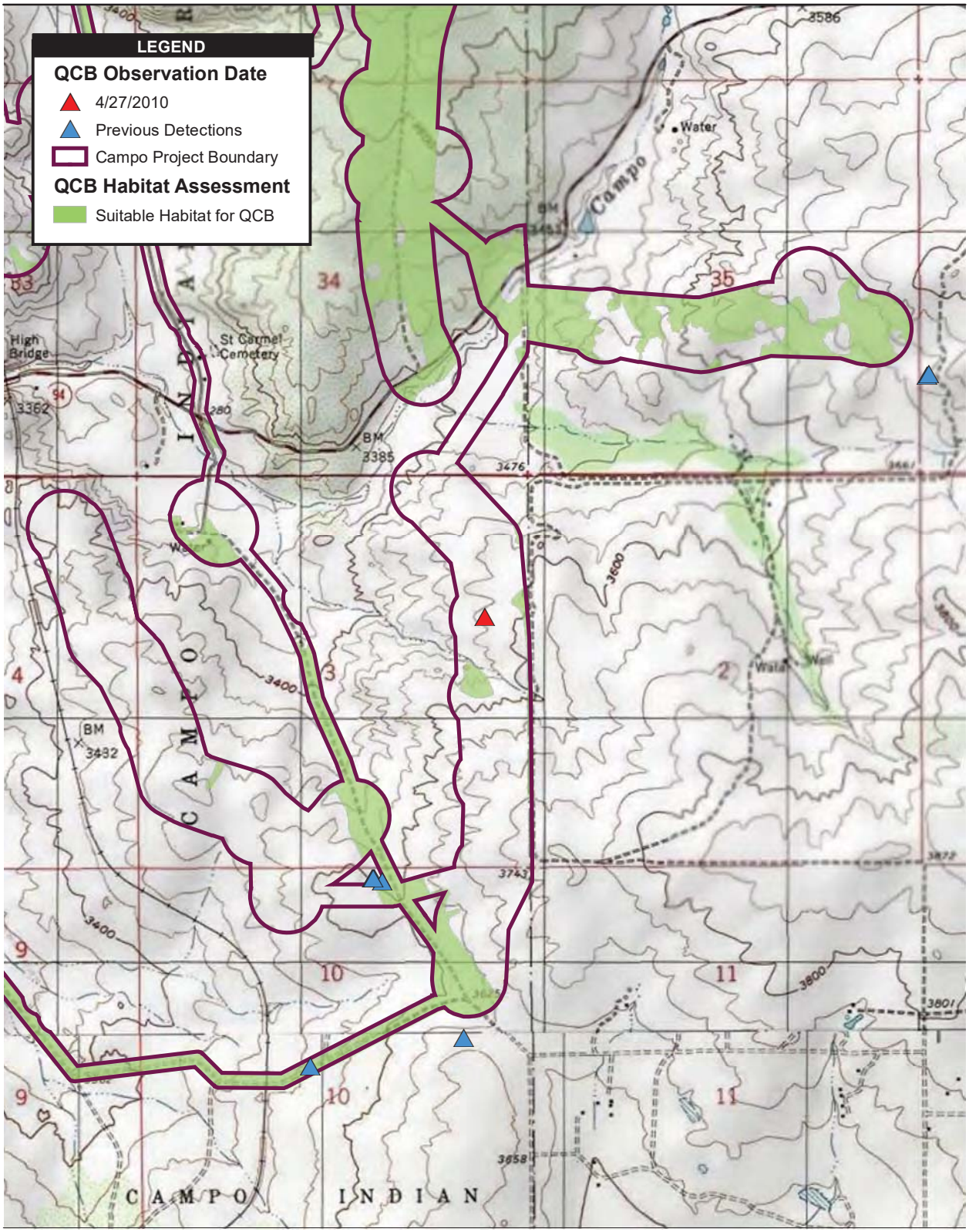
Source: Tierra del Sol 1959; Live Oak Springs 1975; Campo 1959; Cameron Corners 1988

6,500 3,250 0 6,500 Feet

Scale: 1 = 78,000; 1 inch = 6,500 feet

Figure 2
Vicinity Map

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_ 24hrQCBNotification\Fig2Vicinity.mxd, 04/12/10, johnsonaa



Source: DigitalGlobe 2008; SDG&E 2010

2,000 1,000 0 2,000 Feet

Scale: 1 = 24,000; 1 inch = 2,000 feet

Figure 3
Quino Detection Location Map

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_ 24hrQCBNotification\QCB_observation8_20100427.mxd, 04/27/10, johnsonaa

APPENDIX F.8
04/27/2010 24-HOUR NOTIFICATION LETTER TO USFWS

AECOM
1420 Kettner Boulevard
Suite 500
San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

April 29, 2010

Ms. Sandra Marquez
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

RE: Notification of the Ninth Quino Checkerspot Butterfly Observation at the Campo Wind Energy Project, San Diego County, California

Dear Ms. Marquez:

AECOM is submitting this notification letter to inform you that additional Quino checkerspot butterfly (*Euphydryas editha quino*; Quino) individuals were observed on the proposed Campo Wind Energy project site in southeastern San Diego County, California. On April 27, 2010, consulting biologists Michael Couffer (permit number TE-782703-8), and Dale Powell (permit number TE-006559-4), sub-contractors to AECOM, observed four Quino individuals within the Campo Reservation boundaries during protocol surveys for the species. Also, AECOM biologist Andrew Fisher (supervised under TE-820658-4) observed one of Mr. Couffer's Quino at a separate time, independent of Mr. Couffer. Although the project site exists within U.S. Fish and Wildlife (USFWS) Quino Survey Area 2, Mr. Couffer, Mr. Powell, and Mr. Fisher did not collect the specimens for identification according to the USFWS protocol (2002), per the pre-activity notification letter submitted for the proposed project on April 2, 2010. Addtionally, Mr. Fisher is not currently independently authorized for Quino. The sightings are detailed below.

At 12:40 hours, Mr. Couffer observed one Quino nectaring on white layia (*Layia glandulosa*) at (NAD 83) 11 South 0556986, 3609928 (Figure 3; Quino 1), at approximately 3,382 feet above lower mean sea level. The tip of the upper right forewing tip was gone, and this butterfly was drab, but still a strong flyer, and flew off before a photo could be taken. However, earlier that morning at 11:45, Mr. Fisher observed what is highly likely the same Quino 1 that Mr. Couffer while he was conducing an avian survey. Mr. Fisher's Quino was in the same exact location and fit the same physical description as Mr. Couffer's Quino (Photo 1).

At 14:45 hours, Mr. Couffer observed a second Quino was observed nectaring on white layia adjacent to this location at (NAD 83) 11 South 0556995, 3609943 (Figure 3, Quino 2), at approximately 3,372 feet above lower mean sea level. This Quino was a bit drab, and the tip of the upper right wing was intact (Photo 2). The intact wingtip proved that this was a different individual from the Quino previously observed.

From 15:40 to 15:47 hours, Mr. Couffer observed a third Quino. He followed and photographed

it as it nectared on white layia at (NAD 83) 11 South 0557077, 3610140 (Figure 3, Quino 3), at approximately 3,127 feet above lower mean sea level. This Quino lacked the sharp contrast of a newly-emerged individual, but its wing edges were nearly perfect, and it appeared to be in good condition (Photo 3).

At 12:27 hours, Mr. Powell observed a Quino while conducting protocol level surveys when he coincidentally ran into Mr. Fisher in the field. This Quino was found in similar habitat with the same nectar sources abundant, at location (NAD 83) 11 South 0557051, 3610098 (Figure 3, Quino 4). This Quino was in a worn condition, and looked different than the other three Quino previously detected by Mr. Couffer (Photo 4).

The first two Quinos found by Mr. Couffer were found immediately below the crown of a hilltop that rises from approximately 3,000 feet to 3,400 feet in elevation in open chaparral habitat (Photos 5 and 6). The third Quino Mr. Couffer detected was found near the toe of slope of this hill in similar habitat. Purple Chinese houses (*Collinsia concolor*) were observed from the toe of slope to the highest point of the hilltop within both open areas and dense chaparral. Collinsia was found at very low densities as well as at very high densities. The highest densities observed seemed to be near the top of the hill. White layia was found at high densities as well.

The general location was south of SR 94 (Campo Road), north of Tierra del Sol Road, east of Shockey Truck Trail, and west of BIA Road 15.

This letter is official notification of this sighting and capture as required by the USFWS protocol for this species. Following this transmittal, a fax and a hard copy of this letter including maps will be sent as well. If you have any questions or comments, please contact me at (619) 233-1454.

Sincerely,

Barbra Calantas
Wildlife Biologist

Enclosures: Figure 1 Regional Map
Figure 2 Vicinity Map
Figure 3 Quino Observation Location Map

cc: Eric Porter, USFWS
Alison Anderson, USFWS
Kelly Meyer, Invenergy
Monique LaChappa, Chairwoman, Campo Kumeyaay Nation
Deanna Leon, President, Muht-Hei Inc.
Lisa Gover, Campo EPA
Denise Turner Walsh, Campo Tribal Attorney

Photo 1

Photo 2

Photo 3

Photo 4

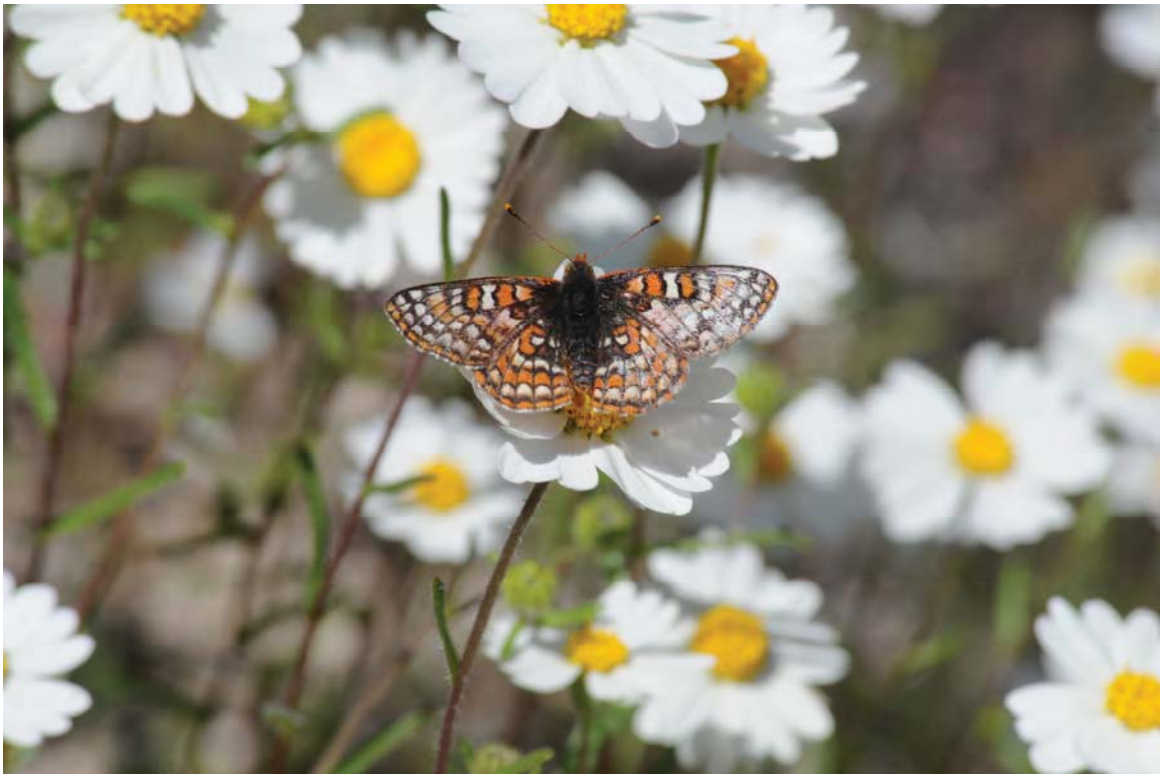


Photo 5

Photo 6

APPENDIX F.9
05/01/2010 24-HOUR NOTIFICATION LETTER TO USFWS

AECOM
1420 Kettner Boulevard
Suite 500
San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

May 2, 2010

Ms. Sandra Marquez
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

RE: Notification of the Tenth Quino Checkerspot Butterfly Observation at the Campo Wind Energy Project, San Diego County, California

Dear Ms. Marquez:

AECOM is submitting this notification letter to inform you that two additional Quino checkerspot butterflies (*Euphydryas editha quino*; Quino) were observed on the proposed Campo Wind Energy project site in southeastern San Diego County, California. On May 1, 2010, Consulting Biologist Michael Couffer (permit number TE-782703-8), sub-contractor to AECOM observed two Quino within the Campo Reservation boundaries during protocol surveys for the species. AECOM biologist Andrew Fisher was in the company of Mr. Couffer, and also observed and photographed the Quino. Although the project site exists within U.S. Fish and Wildlife (USFWS) Quino Survey Area 2, Mr. Couffer did not collect the specimen for identification according to the USFWS protocol (2002), per the pre-activity notification letter submitted for the proposed project on April 2, 2010. The sighting is detailed below.

At 09:58 hours, Mr. Couffer observed one Quino nectaring on white layia (*Layia glandulosa*) at (NAD 83) 11 South 0557061, 3610108, at approximately 3,180 feet above lower mean sea level (Figure 3, Quino 1). This butterfly was drab, but otherwise appeared to be in good condition.

At 10:08 hours, a second Quino was discovered and independently identified by Mr. Fisher as it nectared on white layia at (NAD 83) 11 South 0557076, 3610089, at approximately 3,192 feet above lower mean sea level (Figure 3, Quino 2). Mr. Fisher is not currently permitted to identify Quino; however, within 15 seconds of Mr, Fisher's discovery and identification, Mr. Couffer confirmed Mr. Fisher's identification. Mr. Couffer wishes to add that Mr. Fisher located and correctly identified Quino at a location where both Henne's and Gabb's checkerspots were abundant at the time. This second Quino was a younger individual that had much more defined markings than the first butterfly observed (Photo 1). A representative photograph of the habitat where both Quinos were observed is provided (Photo 2).

These Quinos were found approximately half way up the slopes of a hilltop that rises from approximately 3,000 feet to 3,400 feet in elevation. Purple Chinese houses (*Collinsia concolor*) were observed from the toe of slope to the highest point of the hilltop within both open areas

and dense chaparral. Collinsia was found at very low densities as well as at very high densities. White layia was found at high densities as well. The general location was south of SR 94 (Campo Road), north of Tierra del Sol Road, east of Shockey Truck Trail, and west of BIA Road 15.

This letter is official notification of this sighting and capture as required by the USFWS protocol for this species. Following this transmittal, a fax and a hard copy of this letter including maps will be sent as well. If you have any questions or comments, please contact me at (619) 233-1454.

Sincerely,

Barbra Calantas
Wildlife Biologist

Enclosures: Figure 1 Regional Map
Figure 2 Vicinity Map
Figure 3 Quino Observation Location Map

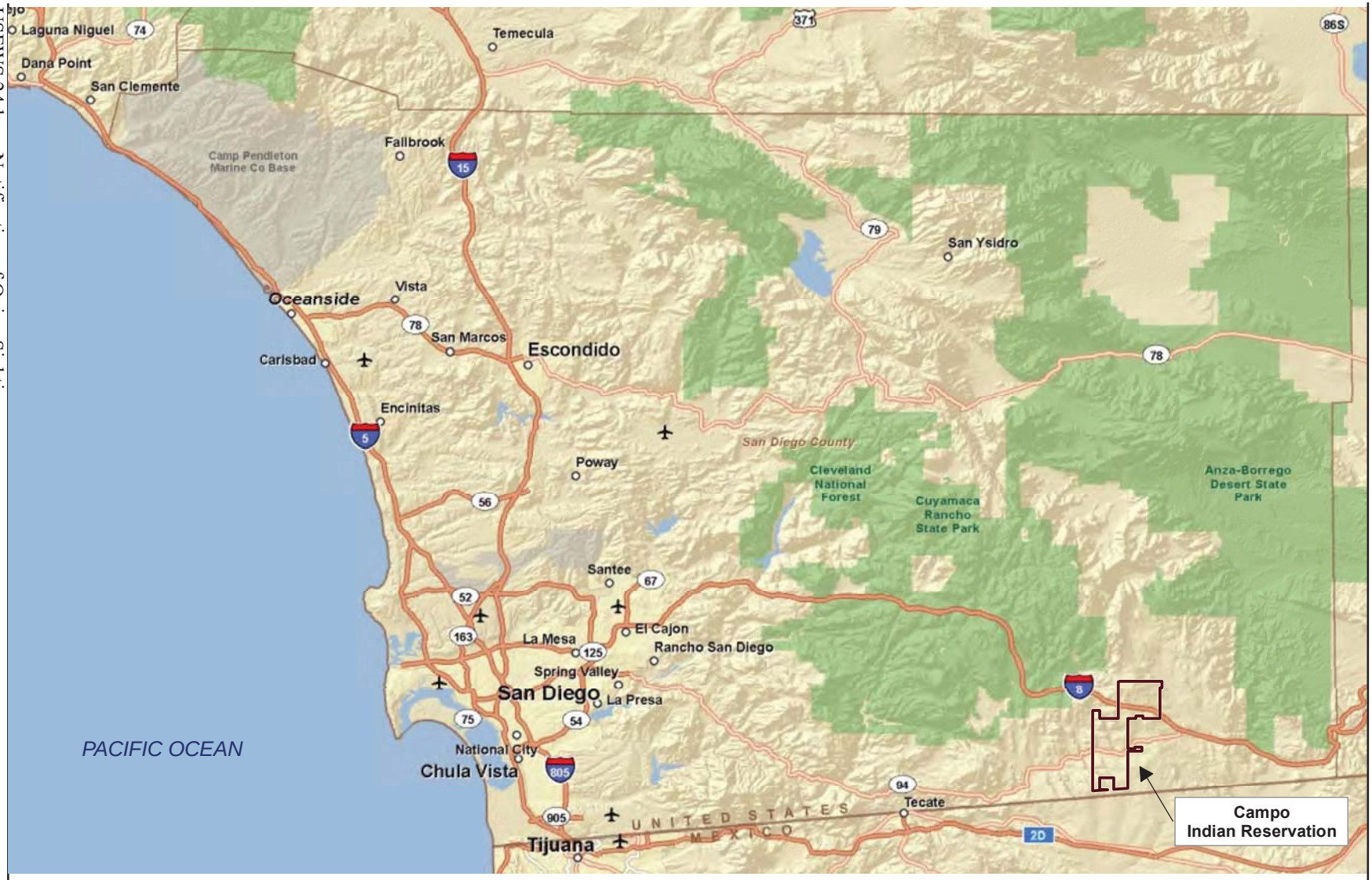
cc: Eric Porter, USFWS
Alison Anderson, USFWS
Kelly Meyer, Invenergy
Monique LaChappa, Chairwoman, Campo Kumeyaay Nation
Deanna Leon, President, Muht-Hei Inc.
Lisa Gover, Campo EPA
Denise Turner Walsh, Campo Tribal Attorney

Photo 1

Photo 2

USFWS 24-hour Notification of Quino Sighting

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_24hr\QCBNotification\Fig1Regional_map.mxd, 04/12/10, johnsonaa



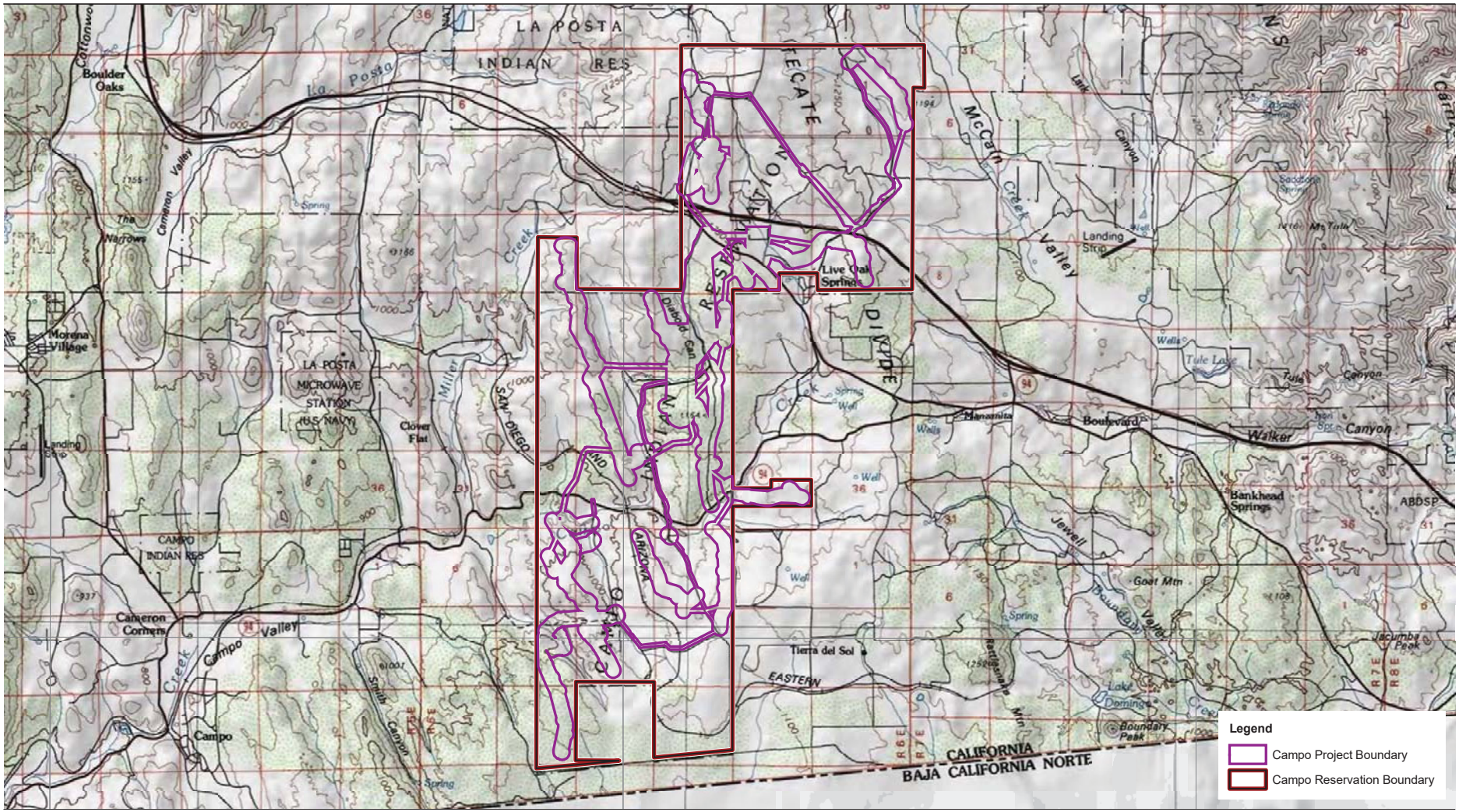
Source: ESRI 2009

12.8 0 12.8 Miles

Scale: 1 = 805,493.1; 1 inch = 12.7 mile(s)

Figure 1

Regional Map



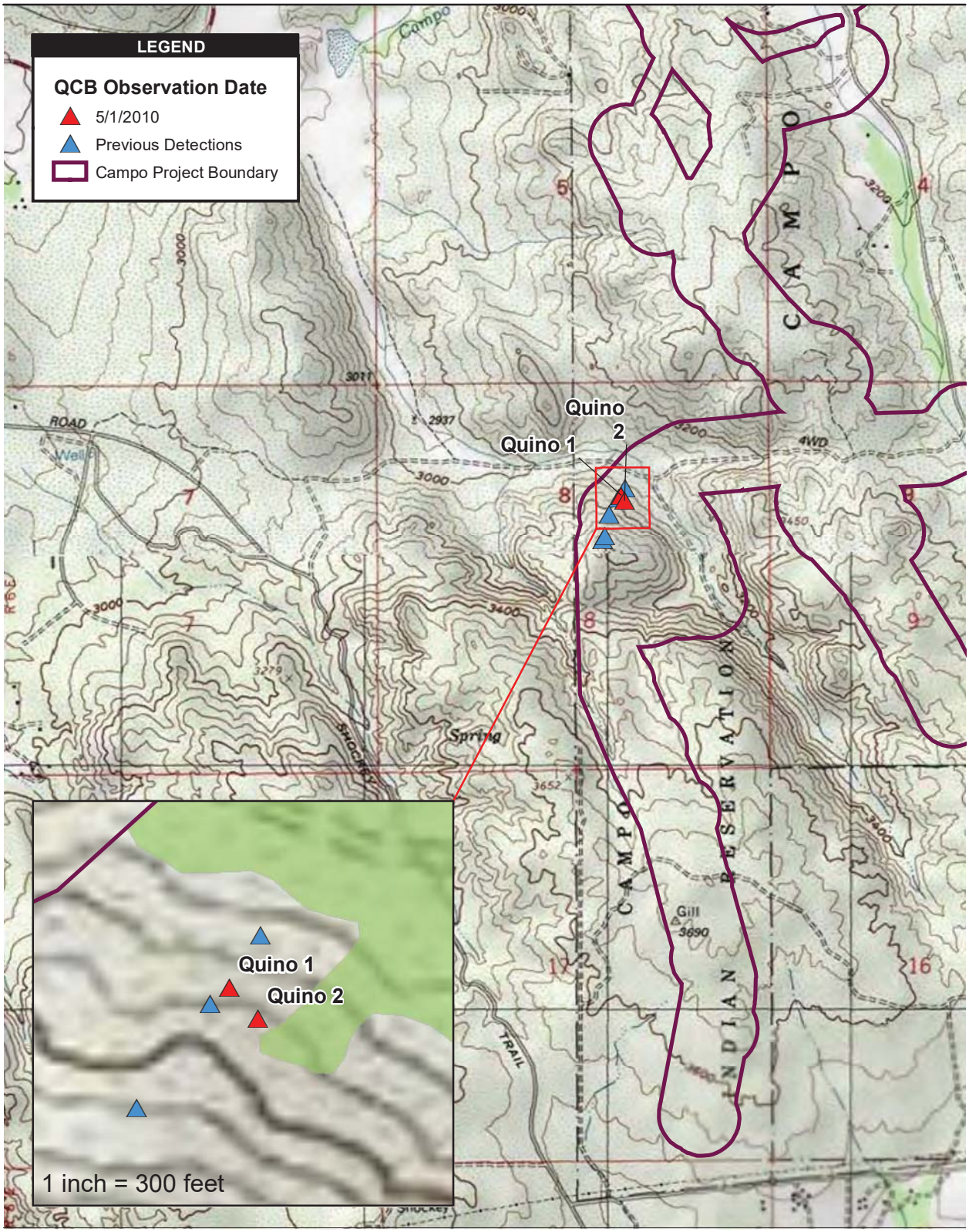
Source: Tierra del Sol 1959; Live Oak Springs 1975; Campo 1959; Cameron Corners 1988

6,500 3,250 0 6,500 Feet

Scale: 1 = 78,000; 1 inch = 6,500 feet

Figure 2
Vicinity Map

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_ 24hrQCBNotification\Fig2Vicinity.mxd, 04/12/10, johnsonaa



Source: DigitalGlobe 2008; SDG&E 2010

2,000 1,000 0 2,000 Feet

Scale: 1 = 3,600; 1 inch = 300 feet

Figure 3
Quino Detection Location Map

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_ 24hrQCBNotification\QCB_observation10_20100503.mxd, 05/03/10, johnsonaa

APPENDIX F.10
05/06/2010 24-HOUR NOTIFICATION LETTER TO USFWS

AECOM
1420 Kettner Boulevard
Suite 500
San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

May 7, 2010

Ms. Sandra Marquez
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

RE: Notification of the Eleventh Quino Checkerspot Butterfly Observation at the Campo Wind Energy Project, San Diego County, California

Dear Ms. Marquez:

AECOM is submitting this notification letter to inform you that three additional Quino checkerspot butterflies (Euphydryas editha quino; Quino) were observed on the proposed Campo Wind Energy project site in southeastern San Diego County, California. On May 6, 1010, Antonette Gutierrez (permit number TE-797999-6), senior biologist at Merkel and Associates, Inc. and Consulting Biologist Michael Couffer (permit number TE-782703-8), sub-contractor to AECOM observed and photographed three Quino within the Campo Reservation boundaries during protocol surveys for the species. Although the project site exists within U.S. Fish and Wildlife (USFWS) Quino Survey Area 2, neither Ms. Gutierrez nor Mr. Couffer collected specimens for identification according to the USFWS protocol (2002), per the pre-activity notification letter submitted for the proposed project on April 2, 2010. The sightings are detailed below.

At 8:45 hours, Ms. Gutierrez observed and photographed a very small Quino nectaring on white layia (Layia glandulosa) at (NAD 83) 11 South 0557058, 3610103 (Figure 3; Quino 1a). The butterfly appeared to be fresh, and in good condition (Photo 1). Mr. Couffer was surveying a different portion of this hill, and did not observe this butterfly at the time.

At 10:28 hours, Mr. Couffer observed an average-sized Quino nectaring on white layia at (NAD 83) 11 South 0557082, 3610091, at approximately 3,180 feet above lower mean sea level (Figure 3, Quino 2). This butterfly was drab, but otherwise appeared to be in good condition. It chased two passing Henne's checkerspots. No photos were taken of this butterfly.

At 10:44 hours, Mr. Couffer observed a very small Quino nectaring on white layia at (NAD 83) 11 South 0557060, 3610100, at approximately 3,173 feet above lower mean sea level (Figure 3, Quino 1b). This butterfly appeared to be quite fresh, and in good condition. From the small size and overall good condition of the butterfly, Mr. Couffer surmised that this was the same Quino observed by Ms. Gutierrez two hours earlier. Please compare the shape and position of the two black spots in the third cell of the upper left wings of the butterflies shown in Photo 1 (Ms. Gutierrez), and Photo 2 (Mr. Couffer). It is highly likely that this is the same Quino, seen independently by two biologists, two hours apart.

At 12:04 hours, Mr. Couffer observed an average-sized Quino again nectaring on white layia at (NAD 83) 11 South 0557193, 3609859 at approximately 3,343 feet above lower mean sea level (Figure 3; Quino 3). This butterfly was somewhat drab, but otherwise appeared to be in good condition. No photos were taken of this butterfly.

Photographs of the habitat where both Quinos were observed are provided (Photos 3 and 4). These Quinos were found approximately on the slopes of a hilltop that rises from approximately 3,000 feet to 3,400 feet in elevation. Chinese houses (Collinsia sp.) were abundant from the toe of slope to the highest point of the hilltop within both open areas and dense chaparral. Collinsia was found at very low densities as well as at very high densities. White layia was found at high densities as well. The general location was south of SR 94 (Campo Road), north of Tierra del Sol Road, east of Shockey Truck Trail, and west of BIA Road 15.

This letter is official notification of this sighting and capture as required by the USFWS protocol for this species. Following this transmittal, a fax and a hard copy of this letter including maps will be sent as well. If you have any questions or comments, please contact me at (619) 233-1454.

Sincerely,

Barbra Calantas
Wildlife Biologist

Enclosures: Figure 1 Regional Map
Figure 2 Vicinity Map
Figure 3 Quino Observation Location Map

cc: Eric Porter, USFWS
Alison Anderson, USFWS
Kelly Meyer, Invenergy
Monique LaChappa, Chairwoman, Campo Kumeyaay Nation
Deanna Leon, President, Muht-Hei Inc.
Lisa Gover, Campo EPA
Denise Turner Walsh, Campo Tribal Attorney

Photo 1

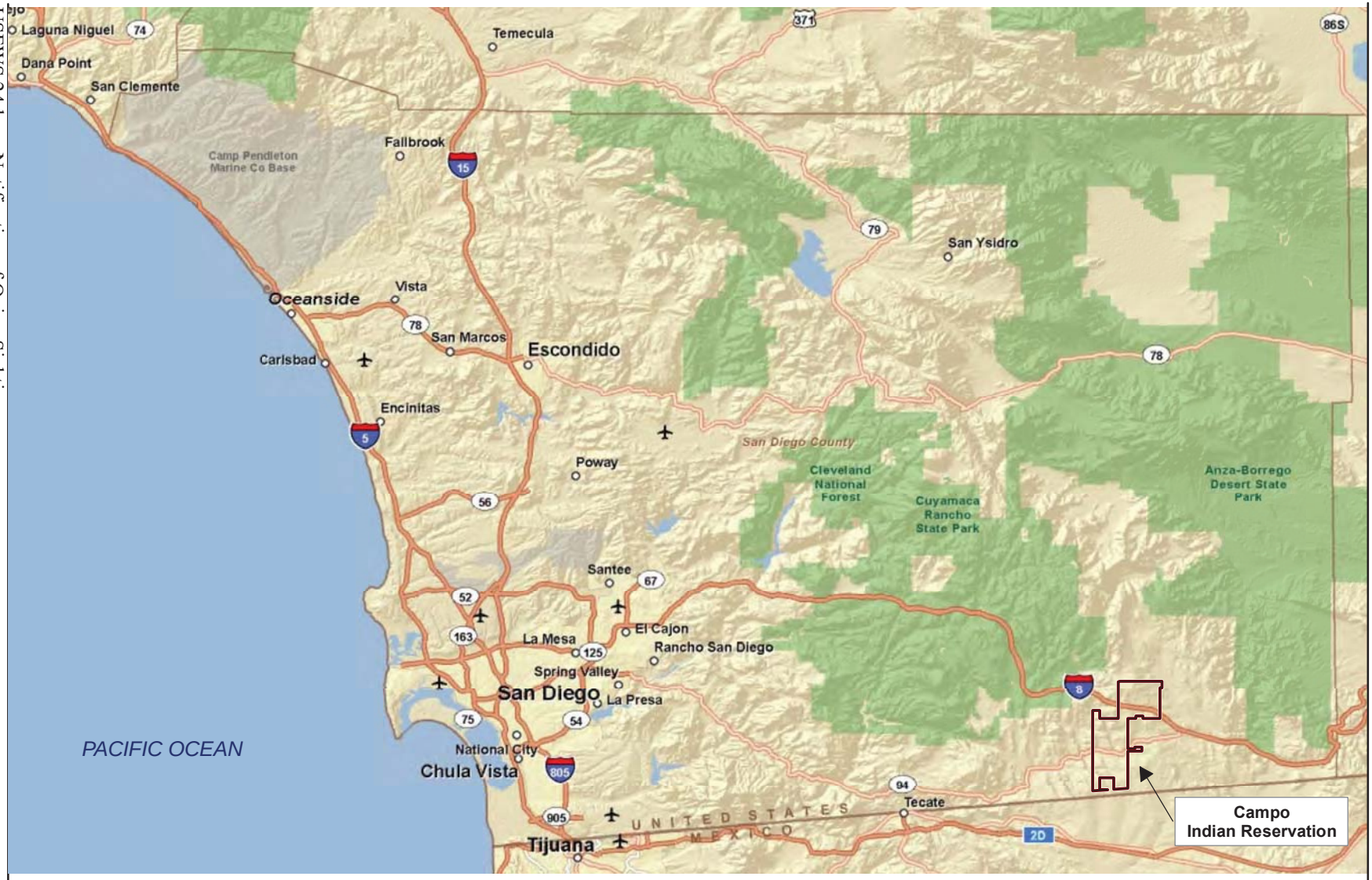
Photo 2

Photo 3

Photo 4

USFWS 24-hour Notification of Quino Sighting

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_24hr\QCBNotification\Fig1Regional_map.mxd, 04/12/10, johnsonaa



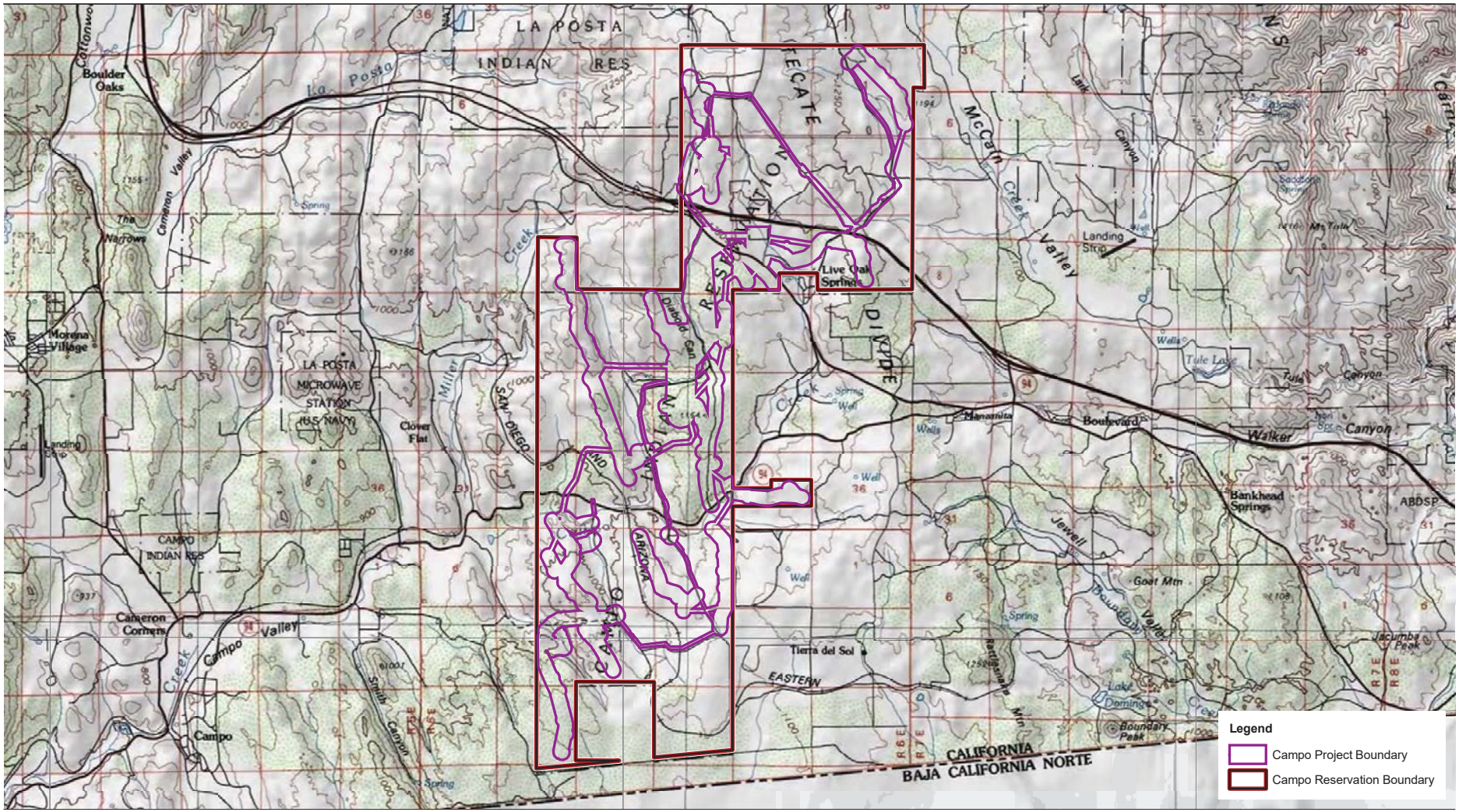
Source: ESRI 2009

12.8 0 12.8 Miles

Scale: 1 = 805,493.1; 1 inch = 12.7 mile(s)

Figure 1

Regional Map



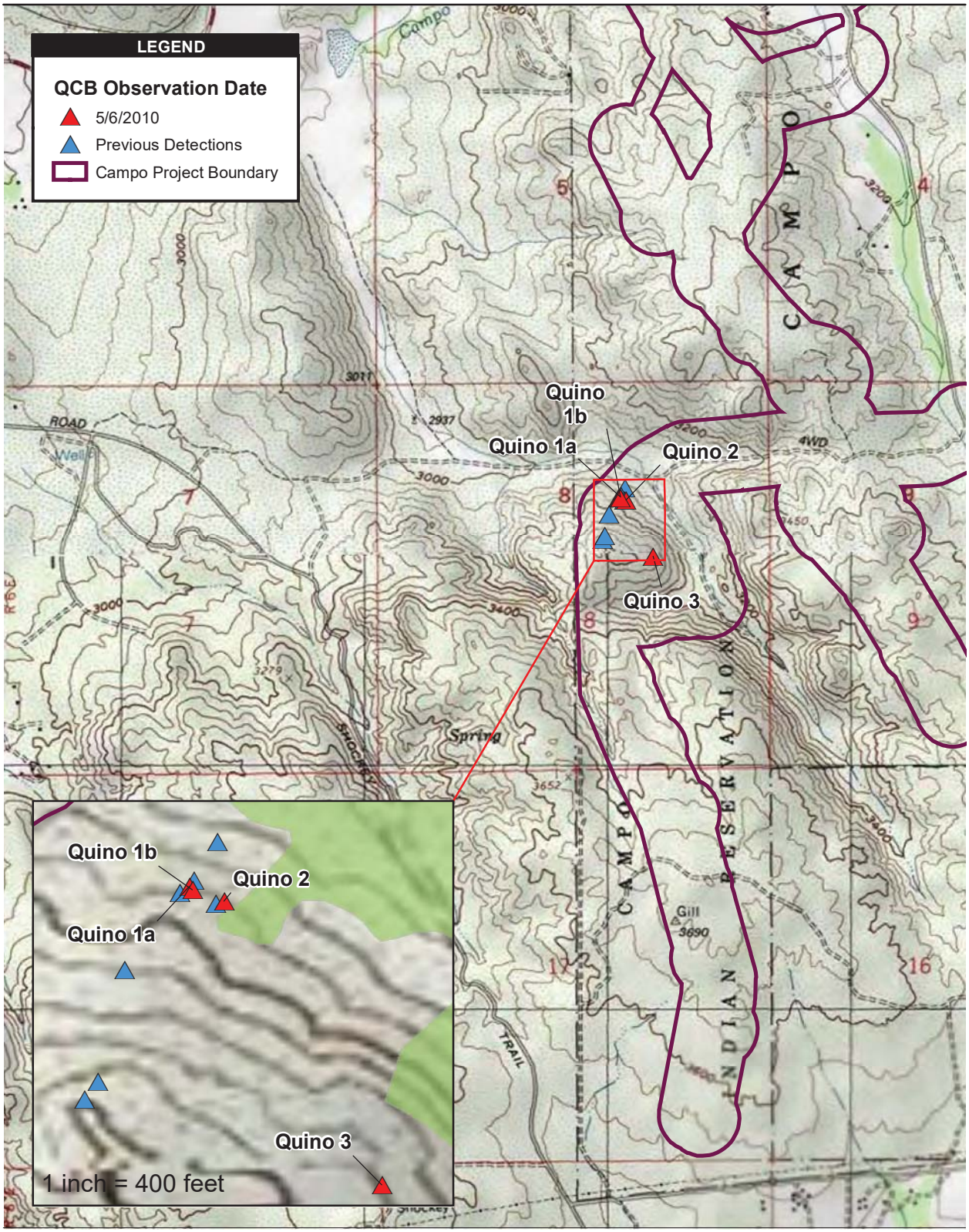
Source: Tierra del Sol 1959; Live Oak Springs 1975; Campo 1959; Cameron Corners 1988

6,500 3,250 0 6,500 Feet

Scale: 1 = 78,000; 1 inch = 6,500 feet

Figure 2
Vicinity Map

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_ 24hrQCBNotification\Fig2Vicinity.mxd, 04/12/10, johnsonaa



Source: DigitalGlobe 2008; SDG&E 2010; AECOM 2010

2,000 1,000 0 2,000 Feet

Scale: 1 = 24,000; 1 inch = 2,000 feet

Figure 3
Quino Detection Location Map

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_ 24hrQCBNotification\QCB_observation11_20100506.mxd, 05/10/10, johnsonaa

APPENDIX F.11
05/07/2010 24-HOUR NOTIFICATION LETTER TO USFWS

AECOM
1420 Kettner Boulevard
Suite 500
San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

May 7, 2010

Ms. Sandra Marquez
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

RE: Notification of the Twelfth Quino Checkerspot Butterfly Observation at the Campo Wind Energy Project, San Diego County, California

Dear Ms. Marquez:

AECOM is submitting this notification letter to inform you that an additional Quino checkerspot butterfly (*Euphydryas editha quino*; Quino) was observed on the proposed Campo Wind Energy project site in southeastern San Diego County, California. On May 7, 2010, Consulting Biologist Michael Couffer (permit number TE-782703-8), sub-contractor to AECOM observed one Quino within the Campo Reservation boundaries during protocol surveys for the species. Although the project site exists within U.S. Fish and Wildlife (USFWS) Quino Survey Area 2, Mr. Couffer did not collect the specimen for identification according to the USFWS protocol (2002), per the pre-activity notification letter submitted for the proposed project on April 2, 2010. The sighting is detailed below.

At 11:25 hours, Mr. Couffer observed one Quino nectaring on white pincushion (*Chaenactis artemisiifolia)*) at (NAD 83) 11 South 0557563, 3610337, at approximately 3,228 feet above lower mean sea level (Figure 3). This butterfly was quite drab, with smooth wing edges. Mr. Couffer was attacked by a bee while stalking the Quino for a photo, and was not able to photograph the buttefly. A photograph of the sighting location is provided (Photo 1).

This Quino was north of a hill and across a drainage ffom the location where several other Quinos have been documented during surveys for this project. This south-facing slope is much dryer, and supports far fewer Chinese houses (*Collinsia* sp.) than the north-facing slope across the drainage where Quino has been more prevalent. The general location was south of SR 94 (Campo Road), north of Tierra del Sol Road, east of Shockey Truck Trail, and west of BIA Road 15.

This letter is official notification of this sighting and capture as required by the USFWS protocol

for this species. Following this transmittal, a fax and a hard copy of this letter including maps will be sent as well. If you have any questions or comments, please contact me at (619) 233-1454.

Sincerely,

Barbra Calantas
Wildlife Biologist

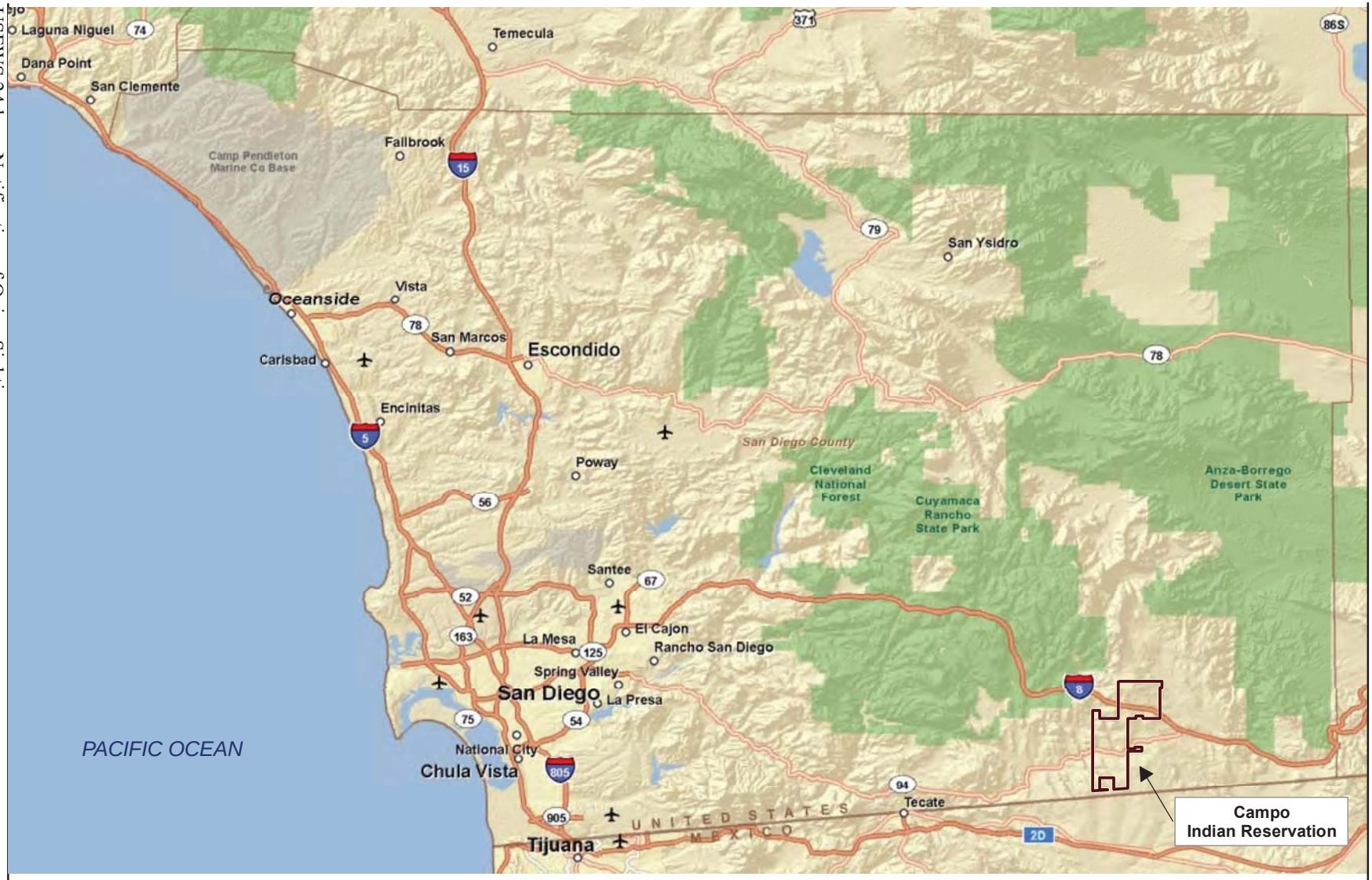
Enclosures: Figure 1 Regional Map
Figure 2 Vicinity Map
Figure 3 Quino Observation Location Map (to be provided on 05/13/2010)

cc: Eric Porter, USFWS
Alison Anderson, USFWS
Kelly Meyer, Invenergy
Monique LaChappa, Chairwoman, Campo Kumeyaay Nation
Deanna Leon, President, Muht-Hei Inc.
Lisa Gover, Campo EPA
Denise Turner Walsh, Campo Tribal Attorney

Photo 1

USFWS 24-hour Notification of Quino Sighting

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_24hr\QCBNotification\Fig1Regional_map.mxd, 04/12/10, johnsonaa



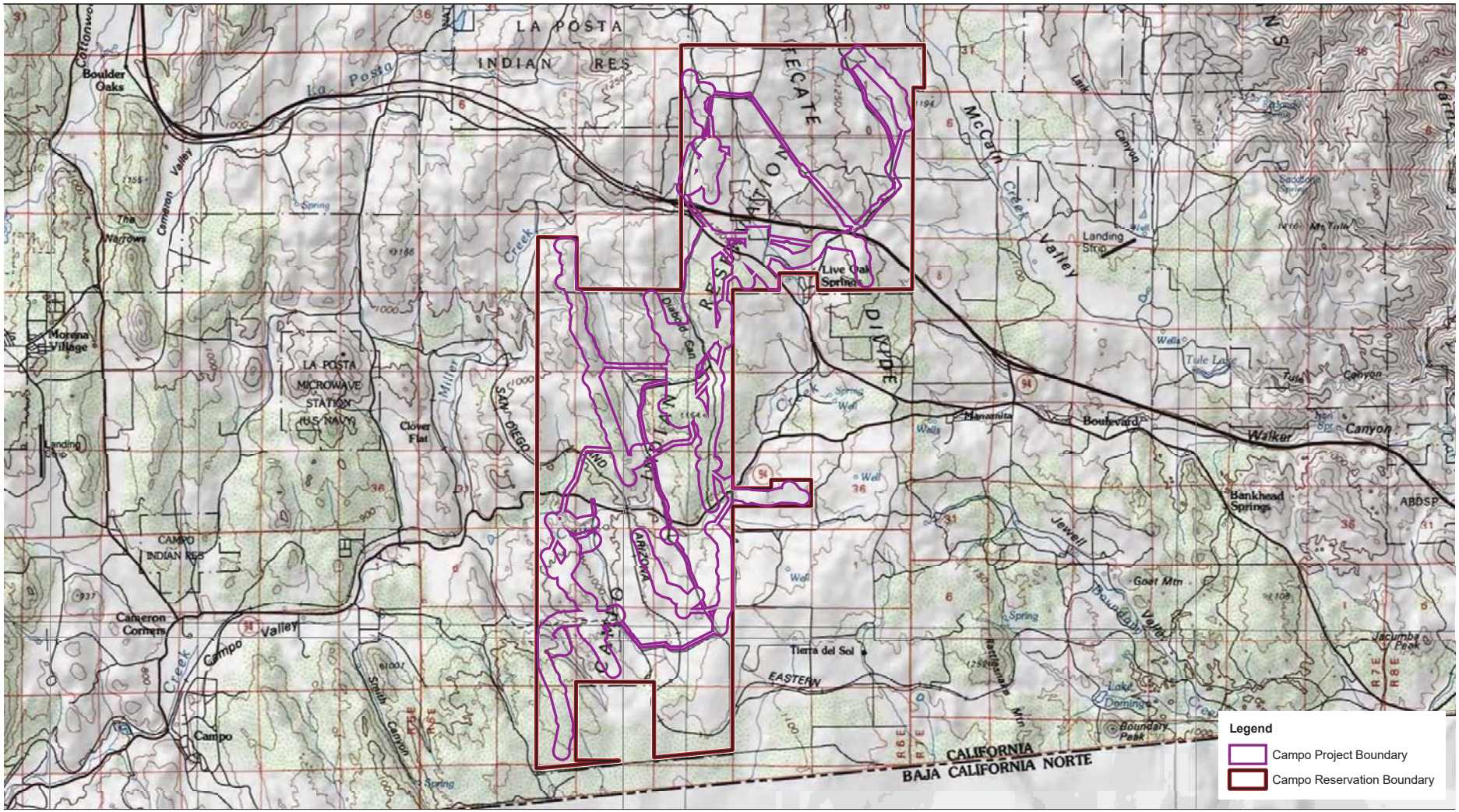
Source: ESRI 2009

12.8 0 12.8 Miles

Scale: 1 = 805,493.1; 1 inch = 12.7 mile(s)

Figure 1

Regional Map



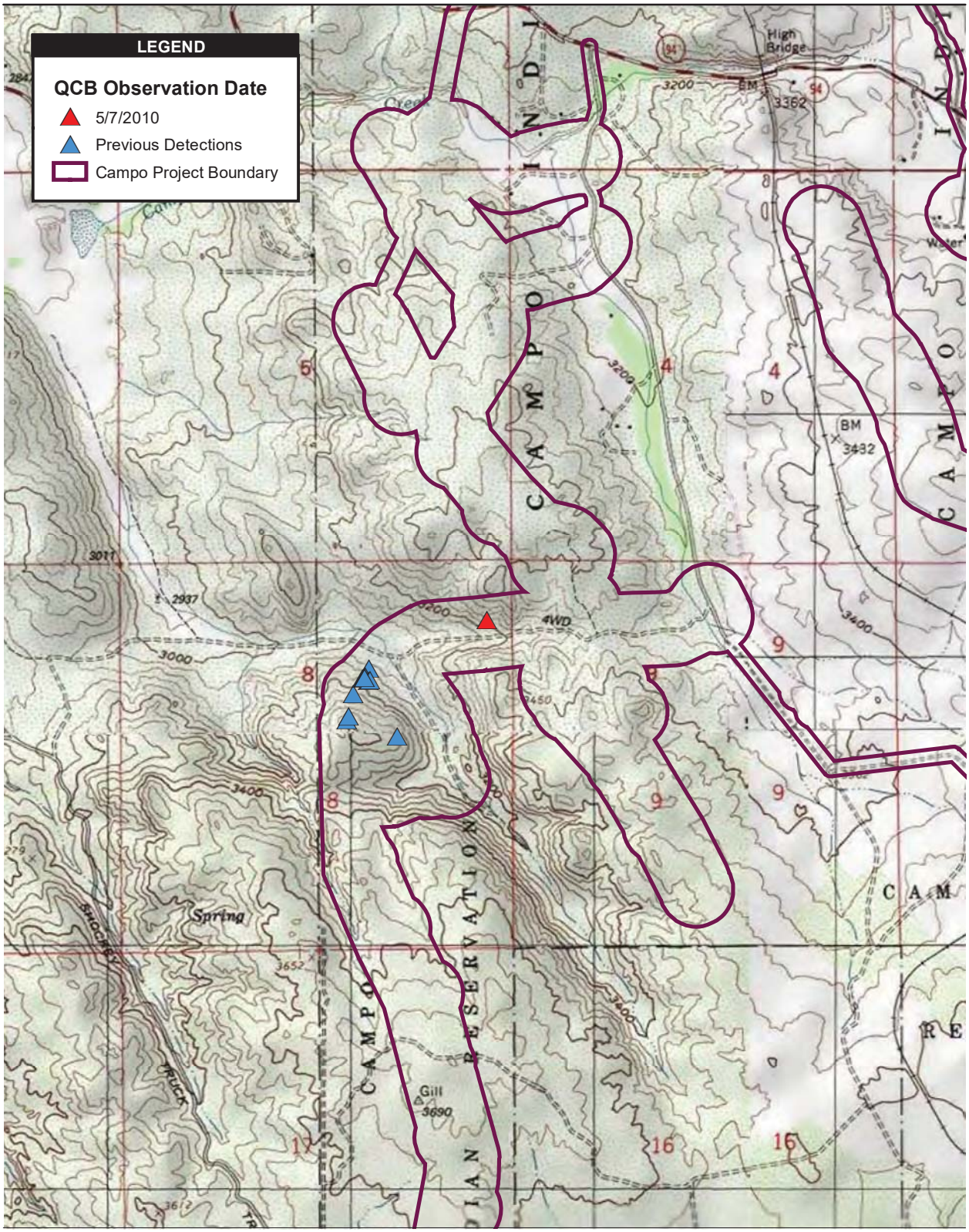
Source: Tierra del Sol 1959; Live Oak Springs 1975; Campo 1959; Cameron Corners 1988

6,500 3,250 0 6,500 Feet

Scale: 1 = 78,000; 1 inch = 6,500 feet

Figure 2
Vicinity Map

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_ 24hrQCBNotification\Fig2Vicinity.mxd, 04/12/10, johnsonaa



Source: DigitalGlobe 2008; SDG&E 2010; AECOM 2010

2,000 1,000 0 2,000 Feet

Scale: 1 = 24,000; 1 inch = 2,000 feet

Figure 3
Quino Detection Location Map

Path: P:\2009\09080183_Campo_wind\6.0 GIS\6.3 Layout\BIO\QCB\USFWS_ 24hrQCBNotification\QCB_observation12_20100507.mxd, 05/10/10, johnsonaa

DUDEK

MAIN OFFICE
605 THIRD STREET
ENCINITAS, CALIFORNIA 92024
T 760.942.5147 T 800.450.1818 F 760.632.0164

July 18, 2011 6759-4.7

U.S. Fish and Wildlife Service
Attention: Recovery Permit Coordinator
6010 Hidden Valley Road
Carlsbad, California 92011

Subject: ***2011 Focused Quino Checkerspot Butterfly Survey for the Jewell Valley Wind Project, San Diego County, California***

Dear Recovery Permit Coordinator:

This letter report documents the Spring 2011 results of a focused survey conducted by Dudek for the federally-listed endangered Quino checkerspot butterfly (*Euphydryas editha quino*; QCB) for the Jewell Valley Wind Project, a proposed wind energy development project in the southeastern portion of the County of San Diego, California.

PROJECT LOCATION AND EXISTING CONDITIONS

The proposed Jewell Valley Wind Project site is approximately 6,660 acres in southeastern San Diego County, approximately 60 miles east of the City of San Diego near the town of Boulevard, CA (Figure 1). The project site includes two components consisting of the Northern Ranch located to the north of Interstate 8 (I-8) and the Southern Ranch located to the south of I-8. The site lies between two major drainage divides: the Tecate Divide to the west, and the In-Ko-Pah Mountains to the east. This area occurs within the Live Oak Springs U.S. Geographic Survey (USGS) topographic quadrangle (Figure 2).

The terrain in the area ranges from valley bottoms to house-sized boulder-covered ridgelines. The elevation ranges across the study area from approximately 3,280 feet above mean sea level (AMSL) to approximately 4,120 feet AMSL.

Soils on site include acid igneous rock land, Calpine coarse sandy loam, Kitchen Creek loamy coarse sand, La Posta loamy coarse sand, La Posta rocky loamy coarse sand, Las Flores loamy fine sand, Loamy alluvial land, Mottsville loamy coarse sand, Riverwash, and Rositas loamy coarse sand.

VEGETATION COMMUNITIES

Nine plant communities and land cover types were mapped within the focused QCB survey area, including: red shank chaparral, semi-desert chaparral, granitic northern mixed chaparral, valley and foothill grassland, field/pasture, open coast live oak woodland, dense coast live oak woodland, upper sonoran subshrub scrub, and freshwater marsh. The acreages of each community type within the project site are shown in Table 1. Descriptions of each vegetation community (with Holland numeric codes) are provided following Table 1. Holland (1986) and Oberbauer (1996) were used to describe vegetation communities on site.

Table 1
Vegetation Communities within the Focused Quino Checkerspot Butterfly Survey Area for the Jewell Valley Wind Project

Vegetation Community	Acreage On Site
Red shank chaparral	427.1
Semi-desert chaparral	264.1
Granitic northern mixed chaparral	263.8
Valley and Foothill Grassland	22.2
Field/pasture	13.8
Open coast live oak woodland	5.8
Upper Sonoran subshrub scrub	3.2
Freshwater marsh	2.6
Dense coast live oak woodland	0.2
Total	1002.8

Red Shank Chaparral (37300)

Red shank chaparral is made up of nearly pure stands of red shank (*Adenostoma sparsifolium*) (Holland 1986). This community is similar to chamise chaparral but is typically taller and somewhat more open (Holland 1986). In the study area, red shank chaparral intergrades with chamise chaparral and scrub oak chaparral. Like chamise chaparral, the understory in red shank chaparral is sparse and composed of flat-topped buckwheat, annual forbs, and brome grasses.

Semi-Desert Chaparral (37400)

Semi-desert chaparral is relatively open, with widely spaced shrubs and openings supporting annuals. This community is similar to mixed chaparral but occurs in areas with hotter, drier summers and colder winters. In the study area, this community is characterized by abundant rock outcrops. Semi-desert chaparral intergrades with flat-topped buckwheat and the other chaparral

communities. Perennial species common to this community include flat-topped buckwheat, silver cholla (*Cylindropuntia echinocarpus*), Mojave yucca, and Mormon-tea (*Ephedra californica*). Scattered occasionally throughout this community are other common chaparral shrubs, including sugarbush, mountain mahogany, and scrub oak. Annual species observed in the openings of this community include goldfields, red-stemmed filaree, golden yarrow (*Eriophyllum confertiflorum*) thread-leafed eriastrum (*Eriastrum filifolium*), chia, desert beauty, Lemmon's linanthus, San Diego gilia, popcorn flower, and red brome.

Granitic Northern Mixed Chaparral (37131)

Granitic northern mixed chaparral is similar to northern mixed chaparral (37130), but with granitic soils. This community consists of broad-leaved sclerophyll shrubs, 2–4 m tall, forming dense, often nearly impenetrable vegetation dominated by Nuttall's scrub oak (*Quercus dumosa*), chamise (*Adenostoma fasciculatum*), and any one of several taxa in *Arctostaphylos* and *Ceanothus*. Plants in this community are typically deep-rooted, with usually little or no understory vegetation, and often considerable accumulation of leaf litter. Granitic northern mixed chaparral is well adapted to repeated fires, to which many species respond by stump sprouting. A dense cover of annual herbs may appear during the first growing season after a fire, followed in subsequent years by perennial herbs, short-lived shrubs and re-establishment of dominance by the original shrub species in this community.

Valley and Foothill Grassland (42000)

Valley and foothill grassland is a native community dominated by large tussocks of perennial native needlegrass (*Nasella* spp.). The habitat is open and typically supports a variety of native and introduced grasses and forbs, often actually exceeding the bunchgrasses in cover. In San Diego County, native perennial herbs such as *Sanicula*, *Sidalcea*, *Sisirynchium*, *Eschscholzia* or *Lasthenia* are present. The percentage cover of native species at any one time may be quite low, but is considered native grassland if 20% aerial cover of native species is present. Other species commonly associated with valley and foothills grassland include wild oat (*Avena fatua*), common goldenstar (*Bloomeria crocea*), ripgut grass (*Bromus diandrus*), foxtail chess (*Bromus madriatensis* ssp. *rubens*), California poppy (*Eschscholzia* spp.), and goldfields (*Lasthenia* spp.).

Open and Dense Coast Live Oak Woodland (71161 and 71162, respectively)

Both open coast live oak woodland and dense coast live oak woodland are generally similar to the coast live oak woodland (71160). Open coast live oak woodland has a canopy with less than 50% cover, while dense coast live oak woodland has a canopy with between 50% and 75% cover. Coast

live oak woodland is an evergreen woodland dominated by coast live oak (*Quercus agrifolia*). The shrub layer is poorly developed, but may include toyon (*Heteromeles arbutifolia*), currant or gooseberry (*Ribes* spp.), laurel sumac (*Malosma laurina*), or dominated by Mexican elderberry (*Sambucus Mexicana*). The herb component is continuous and dominated by ripgut grass and several other introduced taxa. Open coast live oak woodland typically occurs along drainages at desert margin on north-facing slopes or mixed with Engelmann oak (*Quercus engelmannii*). Dense coast live oak woodland mostly occurs at the narrowing of valley flood plains, or valleys with deep alluvium and high perennial groundwater, mostly in riparian habitats.

Field/Pasture (18310)

Field/pasture includes areas of low-intensity agriculture typically involving dry farming or livestock grazing. In the study area, a small area of field/pasture occurs along McCain Valley Road near Interstate 8, where livestock grazing occurs in a floodplain area. In general, this area is characterized by non-native grasses, including *Bromus* and *Hordeum* species, and non-native herbaceous species, including tumble mustard (*Sisymbrium altissimum*) and red-stemmed filaree (*Erodium cicutarium*).

Upper Sonoran Subshrub Scrub (39000)

Upper sonoran subshrub scrub is a low, fairly penetrable scrub of soft-wooded, summer-dormant, drought- tolerant shrubs. Dominance varies among sites, but usually includes interior goldenbush (*Ericameria linearifolia*), interior California buckwheat (*Eriogonum fasciculatum polifolium*), bladderpod (*Isomeris arborea arborea*), or desert tea (*Ephedra californica*), with many annuals derived from nearby grasslands filling the spaces between the shrubs. Upper sonoran subshrub scrub typically occurs in fairly well drained soils derived from sandstone, shale, or even sterile white diatomaceous deposits. In San Diego County this community occurs at high elevations.

Freshwater Marsh (52400)

Freshwater marsh is a wetland habitat type that develops where the water table is at or just above the ground surface, such as around the margins of lakes, ponds, slow-moving streams, ditches, and seepages. It typically is dominated by tall, emergent monocots, such as cattail (*Typha* sp.) and bulrush (*Scirpus* sp.). With elevations on the Jewell Valley study area ranging from 2932–3534 feet AMSL, the freshwater marsh on site could most accurately be described as transmontane freshwater marsh (52420), which occurs from 3500–7500 feet AMSL. Transmontane freshwater marsh differs from coastal and valley freshwater marsh (52410) in having a shorter growing season, confined more strictly to the summer and subject to much lower temperatures in winter, often well below freezing.

Freshwater marsh is considered a wetland community and the marsh on site is under the jurisdiction of the CDFG, pursuant to Section 1601-1603 of the California Fish and Game Code, the ACOE, pursuant to Section 404 of the Clean Water Act, and the RWQCB, pursuant to Section 401 of the Clean Water Act. In addition, this wetland habitat is under the jurisdiction of the County of San Diego.

QUINO CHECKERSPOT BUTTERFLY SURVEY

Methods

The project developer is in the process of developing a site plan that will be based on meteorological data collected from MET facilities to be constructed onsite. Since a site plan was not available at the time Focused QCB surveys were completed, a survey program was developed by Dudek that included surveying specific areas located throughout the project site (Figures 3 and 4). The survey areas were developed by Dudek based on discussions with the project developer that identified potential areas onsite that would likely be most suitable for development and habitat onsite that would likely support QCB.

Focused QCB surveys were conducted over five visits within a 5-week period between March 9 and April 15, 2011. Surveys were conducted by QCB permitted biologists Anita M. Hayworth, Ph.D. (TE781084), Brock A. Ortega (TE813545-5), Jeff D. Priest (TE840619-2), Kam J. Muri (TE051250-0), Tricia Wotipka (TE840619-2), Paul M. Lemons (TE051248-2), Vipul R. Joshi (TE019949-0), Viviane Marquez (TE800930-9) and David Waller (TE025394-2) in accordance with current USFWS protocol (USFWS 2002a, 2002b).

The site was divided into 11 survey polygons, each representing a single day survey effort (i.e., in accordance with USFWS protocol) (Table 2). These survey areas were numbered and assigned to Dudek's permitted biologists. The biologists were provided with 200-scale (1 inch = 200 feet) aerial photographs of each survey polygon. These photographs were used for mapping host plant populations. Binoculars were used to aid in detecting and identifying butterfly and other wildlife species. GPS units also were available for recording locations of host plant populations.

Table 2
2011 Quino Checkerspot Butterfly (QCB) Survey Polygons

Survey Area	Acreage of Survey Area
1	96
2	95
3	93

Table 2
2011 Quino Checkerspot Butterfly (QCB) Survey Polygons

Survey Area	Acreage of Survey Area
4	99
5	84
6	85
7	88
8	93
9	89
10	88
11	93

The survey methods consisted of slowly walking roughly parallel transects throughout all potential habitat within the survey area (i.e., all areas that are not excluded per the survey protocol, generally including sage scrub, open chaparral, grasslands, open or sparsely vegetated areas, hilltops, ridgelines, rocky outcrops, trails and dirt roads). Survey routes were arranged to thoroughly cover the survey area at a rate of no more than 10–15 acres per hour.

Surveys were conducted only during acceptable weather conditions (i.e., surveys were not conducted during fog, drizzle, or rain; sustained winds greater than 15 miles per hour measured 4–6 feet above ground level; temperature in the shade at ground level less than 60° Fahrenheit (F) on a clear, sunny day; or temperature in the shade at ground level less than 70°F on an overcast or cloudy day). Survey times, personnel, and conditions during the QCB survey are shown in Table 3. Photocopies of the surveyor's field notes are included as Appendix A.

Table 3
Schedule of Focused Quino Checkerspot Butterfly Surveys and Environmental Conditions

Survey Area	Date	Time	Range of Conditions			Personnel*
			Temperature Range (°F)	*Percent Cloud Cover (% cc)*	*Wind (miles per hour (mph))*	
Week 1						
1	3/11/11	0805–1400	64–81	0–0	3–5 to 6–10	AMH
2	3/9/11	0946–1530	60–60	0–0	0–10, gusts to 30	BAO
3	3/11/11	1000–1600	63–70	0–0	3–5 to 5–10, gusts to 15	BAO
4	3/11/11	0830–1505	61–80	0–20	3–6 to 4–8, gusts to 15	JDP
5	3/15/11	0850–1500	63–70	0–10	0–4 to 6–10, gusts 10–15	PML
6	3/15/11	1000–1600	68–72	5–15	2–3 to 2–5, gusts 8–15	VRJ
7	3/10/11	0910–1500	64–78	0–0	0–3 to 3–6, gusts 12–20	PML

Table 3
Schedule of Focused Quino Checkerspot Butterfly Surveys and Environmental Conditions

Survey Area	Date	Time	Range of Conditions			Personnel*
			Temperature Range (°F)	*Percent Cloud Cover (% cc)*	*Wind (miles per hour (mph))*	
8 (north half)	3/11/11	0840–1400	60–69	0–5	0–5 to 4–10, gusts 10–15	PML
8 (south half)	3/11/11	0915–1530	68–86	0–0	4–7	TLW
9	3/10/11	0930–1530	64–67	0–0	0–1 to 0–5	VRJ
10	3/14/11	0915–1515	66–80	10–35	3–6 to 6–9	TLW
11	3/11/11	0945–1545	62–64	0–40	7–8 to 5–10	KJM
Week 2						
1	3/18/11	0930–1530	62–65	20–0	5–10, gusts to 15	BAO
2	3/18/11	0945–1515	64–64	20–0	1–3 to 5–10, gusts 10–15	AMH
3	3/15/11	1000–1610	65–70	0–20	5–10, gusts to 15	BAO
4	3/18/11	0930–1600	60–73	60–5	0–3 to 8–12, gusts to 15	JDP
5	3/29/11	1100–1630	66–70	10–10	5–10 to 3–5	BAO
6	3/17/11	0845–1525	64–69	10–40	0–5 to 2–9, gusts 10–14	PML
7	3/17/11	0905–1515	61–72	0–0 hazy	2–3 to 5–8	TLW
8	3/23/11	0945–1600	64–62	0–0	0–2 to 4–6	TLW
9	3/28/11	1100–1700	64–66	0–0	3–8, gusts to 15	VRJ
10	3/18/11	0905–1505	70–68	0–0 hazy	4–6 to 6–9	TLW
11	3/18/11	1000–1600	60–60	50–0	4–8 to 6–10, gusts to 12	KJM
Week 3						
1	3/29/11	0930–1615	64–72	0–80	3–5 to 5–8	AMH
2	3/23/11	1000–1630	60–64	0–15	2–4 to 8–12, gusts 15–25	JDP
2	4/1/11	1420–1720*	81–88	0–0	0–7	VM & DW
3	3/30/11	1015–1630	73–74	2–60	1–5 to 2–6, gusts to 8	JDP
4	4/5/11	1015–1700	67–72	40–80	3–7 to 2–8, gusts 10–14	PML
5	3/31/11	0920–1535	68–77	5–5	0–4 to 4–8, gusts 9–12	PML
6	3/30/11	0900–1500	64–74	10–20	0–4 to 4–8, gusts 9–15	PML
7	3/29/11	0900–1505	64–76	0–20	5–8 to 2–4, morning gusts to 12	TLW
8	4/1/11	0900–1515	74–86	0–0	2–3	TLW
9	3/30/11	1030–1350*	69–77	5–20	0–8	VM & DW
10	3/30/11	1350–1525*	75–76	25–35	0–8	VM & DW
10	4/1/11	1035–1305*	78–89	0–0	0–7	VM & DW
11	3/28/11	1015–1630	60–62	0–0	4–6 to 3–7	KJM
Week 4						
1	4/1/11	0830–1550	64–64	0–0	3–5	AMH
2	4/13/11	1030–1305*	60–67	0–5	0–7, gusts 7–9	VM & DW
3	4/2/11	0915–1530	68–74	50–60	0–5 to 4–9, gusts to 15	JDP

Table 3
Schedule of Focused Quino Checkerspot Butterfly Surveys and Environmental Conditions

Survey Area	Date	Time	Range of Conditions			Personnel*
			Temperature Range (°F)	*Percent Cloud Cover (% cc)*	*Wind (miles per hour (mph))*	
4	4/1/11	0930–1600	74–88	0–0	0–2 to 0–4	JDP
5	4/4/11	0920–1545	64–72	0–0	3–8 to 4–8, gusts 9–15	PML
6	4/11/11	1000–1600	62–65	50–0	2–6 to 1–4, gusts 5–8	PML
7	4/4/11	0930–1545	70–74	0–0	5–8, gusts to 16	TLW
8	4/5/11	1030–1630	70–70	40–60	4–7 to 4–12, gusts to 20	KJM
9	4/1/11	1000–1500	63–66	0–0	3–5, gusts to 10	BAO
10 north	4/10/11	1405–1545*	62–64	0–0	0–7, gusts 7–9.5	VM & DW
11	4/4/11	1030–1630	62–67	0–0	2–4 to 0–2, gusts 6–10	KJM
Week 5						
1	4/12/11	1005–1605	64–68	0–0	4–8 to 5–10	AMH
1	4/15/11	1030–1400	67–69	0–0	5–9	AMH
2	4/15/11	1030–1630	66–69	0–0	5–7 to 4–7, gusts 10–12	KJM
3	4/14/11	1030–1640	61–64	0–0	3–7 to 2–5	KJM
4	4/11/11	0950–1415	62–65	50–0	3–5	AMH
5	4/12/11	0940–1600	60–65	0–0	2–4 to 2–6, gusts 7–10	PML
6	4/13/11	1040–1630	60–62	0–10	3–8 to 4–8, gusts 10–17	PML
7	4/12/11	1020–1625	62–64	0–0	2–6 to 4–7	KJM
8	4/13/11	1405–1630*	56–62	0–20	0–5, gusts 6–11	VM & DW
9	4/11/11	1015–1450*	60–67	15–70	0–7	VM & DW
10	4/14/11	1100–1700	63–65	0–0	3–5 to 2–10	BAO
11	4/10/11	1000–1405*	58–65	0–0	0–6 gusts 9–13	VM & DW

* Survey areas were split up and surveyed simultaneously by Viviane Marquez and David Waller. Survey times shown should be doubled to determine time spent in each survey area.
AMH = Anita M. Hayworth, PhD (TE-781084-6)
BAO = Brock A. Ortega (TE-813545-5)
JDP = Jeffrey D. Priest (TE-840619-2)
KJM = Kam J. Muri (TE-051250-0)
PML = Paul M. Lemons (TE-051248-4)
TLW = Tricia L. Wotipka (TE-840619-2)
VRJ = Vipul R. Joshi (TE-019949-0)
VM = Viviane Marquez (TE-800930-9)
DW = David Waller (TE-025394-2)

RESULTS

No QCB were observed during the 2011 focused survey. Thirty-three (33) butterfly species were observed during the surveys. The weeks in which these butterflies were observed are shown in Table 4.

Table 4
Butterflies Observed on Site

Scientific Name	Common Name	Week				
		1	*2*	*3*	*4*	*5*
Hesperiidae – Skippers						
Erynnis funeralis	Funeral duskywing	X	X	X	X	X
Erynnis propertius	Propertius duskywing	—	—	—	X	—
Erynnis sp.	Duskywing	X	X	X	X	X
Thorybes pylades	Northern Cloudywing	X	—	—	—	—
Nymphalidae – Brush-footed Butterflies						
Agraulis sp.	Fritillary	—	—	X	—	—
Coenonympha californica californica	California ringlet	X	X	—	X	—
Junonia coenia	Buckeye	—	—	—	X	X
Vanessa annabella	West coast lady	X	X	—	—	X
Vanessa cardui	Painted lady	X	X	X	X	X
Vanessa sp.	Lady	X	X	X	X	X
Lycaenidae – Blues and Hairstreaks						
Brephidium exile	Western pygmy blue	—	—	X	—	—
Callophrys perplexa	Perplexing (green) hairstreak	X	X	X	X	X
Glaucopsyche lygdamus australis	Southern blue	X	X	X	X	X
Icaria acmon acmon	Acmon blue	X	X	X	X	X
Incisalia augustinus	Brown elfin	X	X	X	—	—
Leptotes marina	Marine blue	X	—	—	—	—
Philotes sonorensis	Sonoran blue	—	—	X	—	—
Papilionidae – Swallowtails						
Papilio eurymedon	Pale swallowtail	X	X	X	X	X
Papilio rutulus	Western swallowtail	—	X	—	X	—
Papilo zelicaon lucas	Anise swallowtail	—	—	—	—	X
Peiridae – Whites and Sulfurs						
Anthocharis centhura	Felder's orangetip	X	X	X	X	X
Anthocharis sara	Sara orangetip	X	X	X	X	X
Colias eurydice	California dogface	X	X	—	—	—
Colias harfordi	Harford's Sulfur	X	—	X	X	X
Colias sp.	Sulfur	X	X	X	—	X
Euchloe hyantis	Pearly marble	X	—	X	—	—
Euchloe lotta	Desert marble	—	—	X	X	X
Pieris rapae	European cabbage white	—	X	X	—	—
Pontia beckerii	Becker's white	X	—	X	—	—
Pontia protodice	Common white	X	X	X	X	X
Pontia sisymbrii	California white	X	X	X	—	—

Table 4
Butterflies Observed on Site

Scientific Name	Common Name	Week				
		1	*2*	*3*	*4*	*5*
Riodinidae – Metalmarks						
Apodemia virgulti	Behr's metalmark	X	X	X	X	X
Calephelis wrightii	Wright's metalmark	X	—	—	—	—

One species of QCB larval host plant, common owl's-clover (*Castilleja exserta* ssp. *exserta*), was observed within the study area during focused surveys. Occurrences of the larval host plant are shown on Figure 4. Table 5 includes the known and observed adult QCB nectar plants (according to Mattoni et al. 1997, USFWS 2002a, USFWS 2002b, USFWS 2003). Larval host plants are also included in Table 5 and are in bold print.

Table 5
QCB Larval Food and Adult Nectar Plants[1]

Scientific Name	Common Name	Observed During Focused Survey
Apiaceae – Carrot Family		
Lomatium dasycarpum ssp. *dasycarpum*	woolly-fruit lomatium	—
Lomatium utriculatum	common lomatium	—
Asteraceae – Sunflower Family		
Achillea millefolium	yarrow, milfoil	—
Lasthenia californica	common goldfields	X
Lasthenia coronaria	southern goldfields	—
Layia platyglossa	common tidy tips	X
Boraginaceae – Borage Family		
Amsinckia menziesii	rancher's fireweed	—
Amsinckia menziesii var. *intermedia*	rancher's fiddleneck	X
Amsinckia menziesii var. *menziesii*	rigid fiddleneck	—
Cryptantha spp. or *Plagyobothrys* spp.	popcorn flower	X
Fabaceae – Pea Family		
Lotus spp.	deerweed, spanishclover, lotus	X
Hydrophyllaceae – Waterleaf Family		
Eriodictyon crassifolium var. *crassifolium*	thickleaf yerba santa	—
Eriodictyon trichocalyx var. *trichocalyx*	hairy yerba santa	—
Phacelia distans	wild-heliotrope	X
Lamiaceae – Mint Family		
Salvia columbariae	chia	X
Plantaginaceae – Plantain Family		
Plantago erecta[2]	dot-seed plantain	—

Table 5
QCB Larval Food and Adult Nectar Plants[1]

Scientific Name	Common Name	Observed During Focused Survey
Plantago patagonica	woolly plantain	—
Polemoniaceae – Phlox Family		
Gilia angelensis	grassland gilia	—
Gilia capitata ssp. *abrotanifolia*	ball gilia	—
Linanthus spp.	ground pink	—
Polygonaceae – Buckwheat Family		
Eriogonum fasciculatum var. *foliolosum*	California buckwheat	X
Scrophulariaceae – Figwort Family		
Antirrhinum coulterianum	Coulter's snapdragon	—
Castilleja exserta	common owl's-clover	X
Collinsia sp.	Chinese houses	—
Cordylanthus rigidus ssp. *setiger*	dark-tipped bird's-beak	—
Keckiella antirrhinoides var. *antirrhinoides*	yellow bush-penstemon	—
Keckiella cordifolia	climbing bush penstemon	—
Liliaceae – Lily Family		
Allium haematochiton	red-skin onion	—
Allium peninsulare	red-flower onion	—
Allium praecox	early onion	—
Dichelostemma capitatum	blue dicks	X
Muilla clevelandii	San Diego goldenstar	—
Muilla maritima	common muilla	—

1 List derived from Mattoni et al. 1997; USFWS 2002a, USFWS 2002b; USFWS 2003 (for *Euphydras editha*)
2 Plants listed in **bold** print are known QCB larval host plant species.

Dudek certifies that the information in this survey report and attached exhibits fully and accurately represents the work conducted by the QCB permitted biologists who conducted this focused survey.

Please feel free to contact us at 760.942.5147, plemons@dudek.com, or bortega@dudek.com if you have any questions regarding the contents of this report.

Sincerely,

Paul M. Lemons
Permit #TE051248-4

Brock A. Ortega
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Tricia L. Wotipka
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Recovery Permit Coordinator

Subject: 2011 Focused Quino Checkerspot Butterfly Survey for the Jewell Valley Wind Project, San Diego County, California

Vipul R. Joshi	David Waller	Viviane Marquez
Permit # TE019949-0	Permit #TE025394-2	Permit #TE800930-9

Att: Figure 1, Regional Map
Figure 2, Vicinity Map
Figure 3, Biological Resources Map with Quino Survey Areas – North
Figure 4, Biological Resources Map with Quino Survey Areas – South
Appendix A – List of Wildlife Species Observed during the 2011 Jewell Valley QCB Survey
Appendix B – 2011 Jewell Valley QCB Survey Field Notes

cc: Joan Heredia, Enel Green Power North America
David Hochart, Dudek

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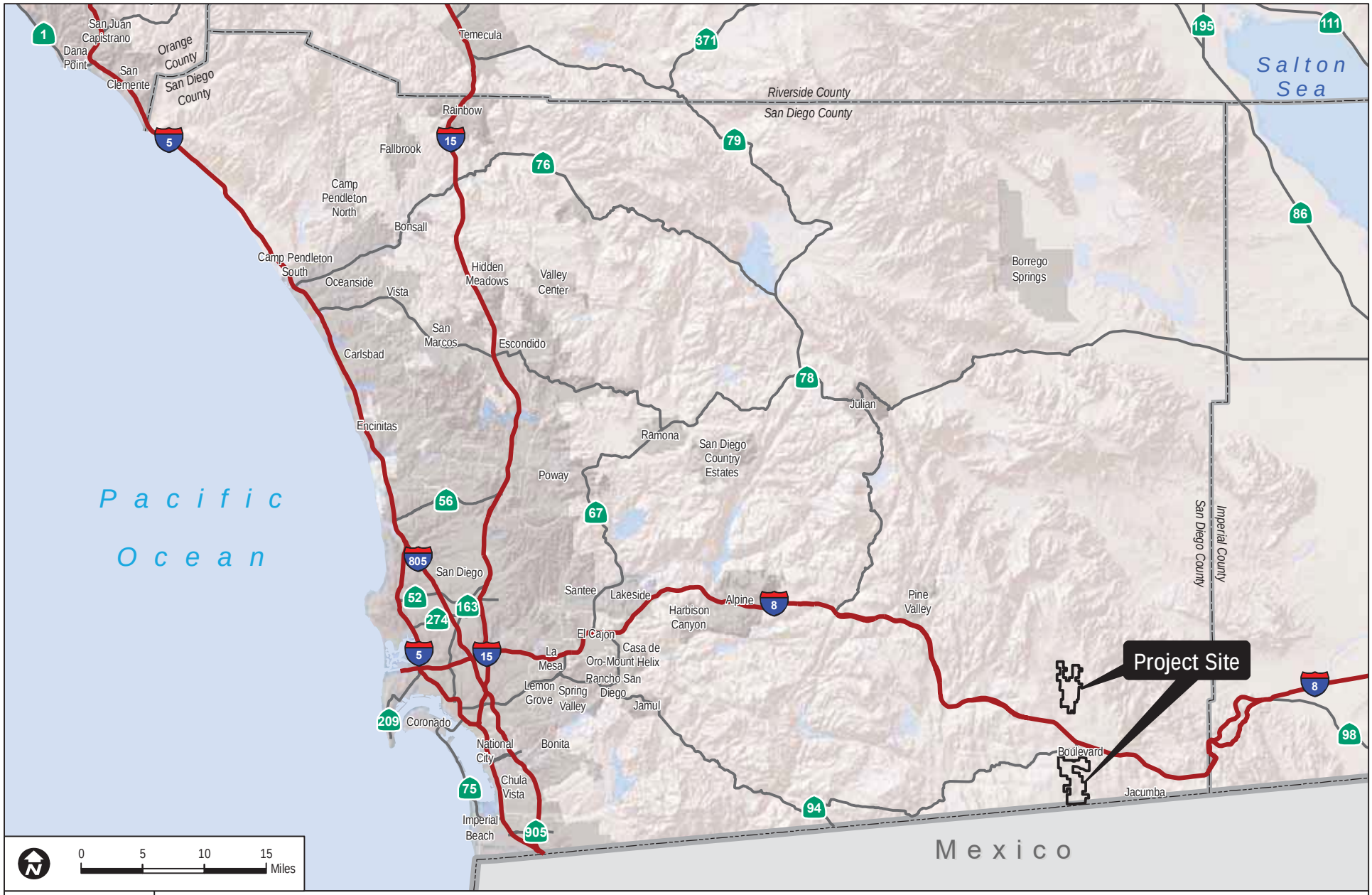


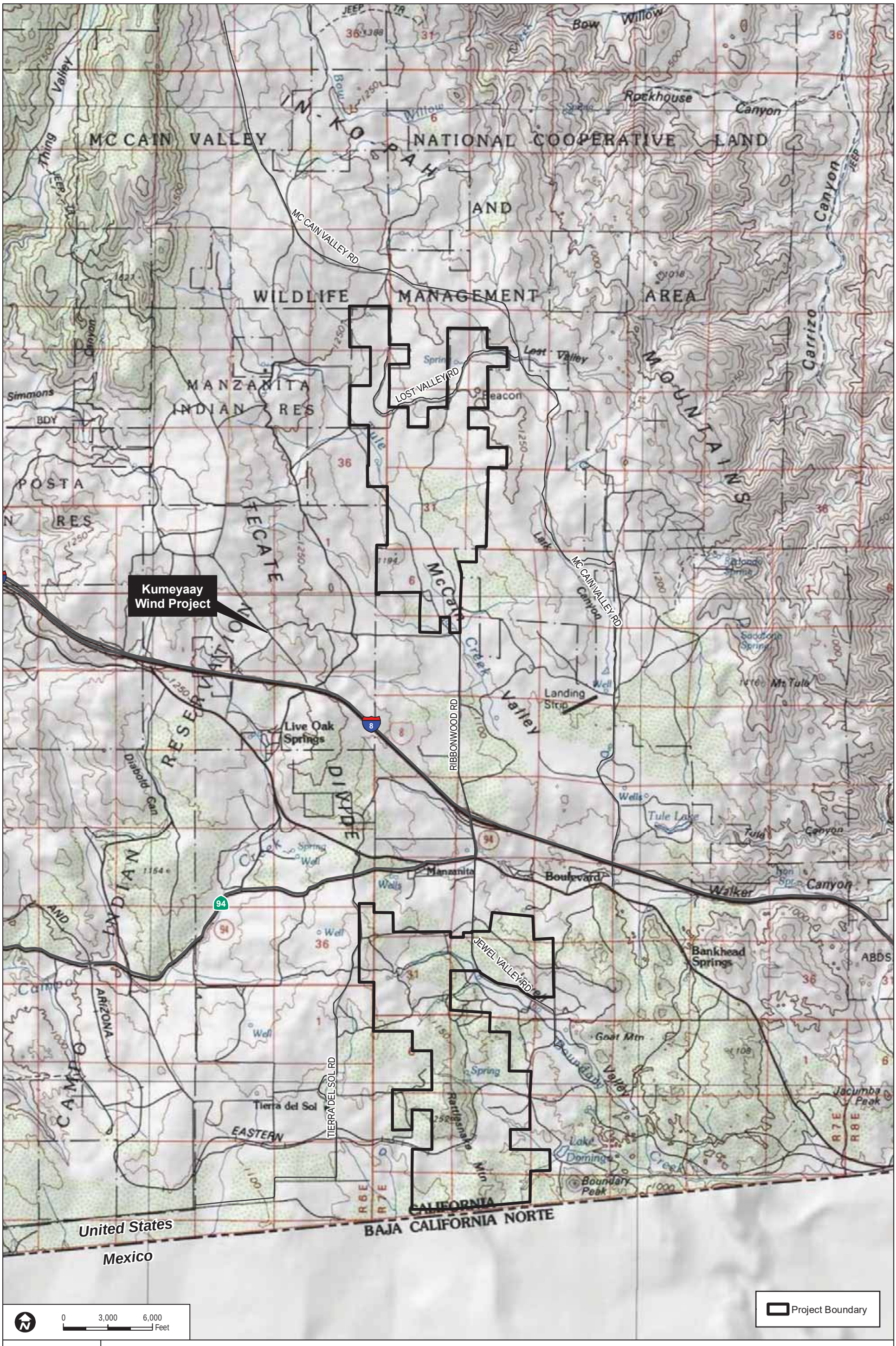
DUDEK

6759-4.7

FIGURE 1

Regional Map

2011 Focused Quino Checkerspot Butterfly Survey Report for the Jewell Valley Wind Project



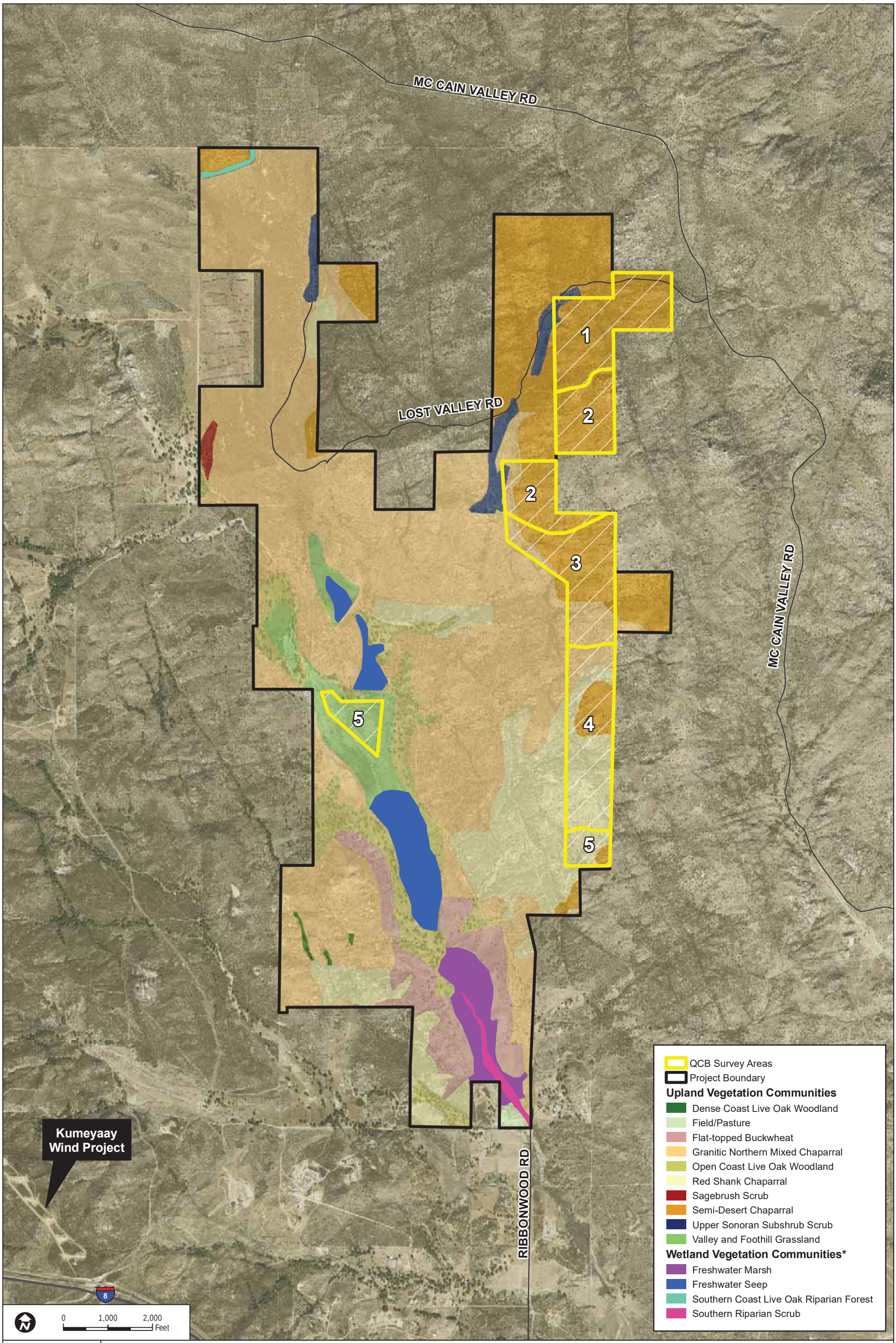
DUDEK

6759-4.7

SOURCE: Digital Globe 2008
SANGIS 2010

FIGURE 2
Vicinity Map

2011 Focused Quino Checkerspot Butterfly Survey Report for the Jewell Valley Wind Project



DUDEK

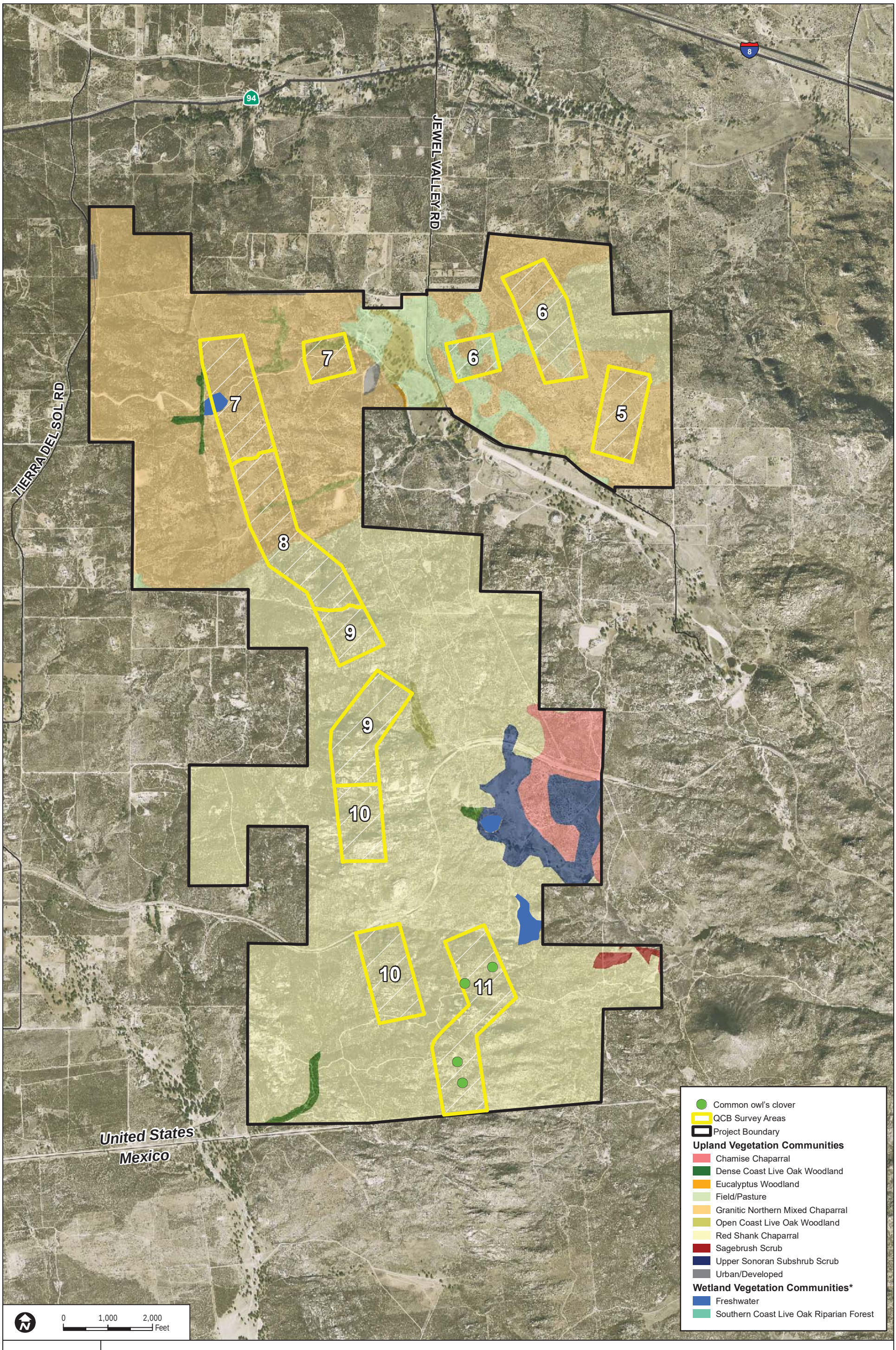
6759-4.7

SOURCE: Digital Globe 2008
SANGIS 2010

FIGURE 3

Biological Resources Map with Quino Survey Areas - North

2011 Focused Quino Checkerspot Butterfly Survey Report for the Jewell Valley Wind Project



DUDEK

6759-4.7

SOURCE: Digital Globe 2008
SANGIS 2010

FIGURE 4

Biological Resources Map with Quino Survey Areas - South

2011 Focused Quino Checkerspot Butterfly Survey Report for the Jewell Valley Wind Project

APPENDIX A

List of Wildlife Species Observed during the 2011 Jewell Valley QCB Survey

APPENDIX A
List of Wildlife Species Observed during the 2011 Jewell Valley QCB Survey

WILDLIFE SPECIES – VERTEBRATES

AMPHIBIANS

***BUFONIDAE* – TRUE TOADS**

Bufo boreas – western toad

***HYLIDAE* – TREEFROGS**

Hyla cadaverina – California treefrog
Hyla regilla – Pacific treefrog

REPTILES

***IGUANIDAE* – IGUANID LIZARDS**

Gambelia wislizenii – long-nosed leopard lizard
Phrynosoma coronatum – coast horned lizard
Sceloporus graciosus – sagebrush lizard
Sceloporus occidentalis – western fence lizard
Sceloporus orcutti – granite spiny lizard
Uta stansburiana – side-blotched lizard

***TEIIDAE* – WHIPTAIL LIZARDS**

Cnemidophorus hyperythrus – orange-throated whiptail

***COLUBRIDAE* – COLUBRID SNAKES**

Coluber constrictor – racer
Masticophis lateralis – California whipsnake
Pituophis melanoleucus – gopher snake

***VIPERIDAE* – VIPERS**

Crotalus atrox – western diamondback rattlesnake
Crotalus ruber – red-diamond rattlesnake
Crotalus oreganus helleri – Southern pacific rattlesnake

BIRDS

***ARDEIDAE* – HERONS**

Ardea alba – great egret

***ANATIDAE* – WATERFOWL**

Anas platyrhynchos – mallard

***CATHARTIDAE* – NEW WORLD VULTURES**

Cathartes aura – turkey vulture

***ACCIPITRIDAE* – HAWKS**

Accipiter cooperii – Cooper's hawk
Buteo jamaicensis – red-tailed hawk
Parabuteo unicinctus – Harris's hawk

***FALCONIDAE* – FALCONS**

Falco sparverius – American kestrel

***PHASIANIDAE* – PHEASANTS AND QUAILS**

Callipepla californica – California quail

***CHARADRIIDAE* – PLOVERS**

Charadrius vociferus – killdeer

***COLUMBIDAE* – PIGEONS AND DOVES**

Zenaida macroura – mourning dove

***CUCULIDAE* – CUCKOOS AND ROADRUNNERS**

Geococcyx californianus – greater roadrunner

***STRIGIDAE* – TRUE OWLS**

Bubo virginianus – great horned owl

***APODIDAE* – SWIFTS**

Aeronautes saxatalis – white-throated swift

***TROCHILIDAE* – HUMMINGBIRDS**

Calypte anna – Anna's hummingbird

***PICIDAE* – WOODPECKERS**

Colaptes auratus – northern flicker
Melanerpes formicivorus – acorn woodpecker
Picoides nuttallii – Nuttall's woodpecker
Picoides scalaris – ladder-backed woodpecker

***TYRANNIDAE* – TYRANT FLYCATCHERS**

Sayornis nigricans – black phoebe
Sayornis saya – Say's phoebe
Tyrannus vociferans – Cassin's kingbird
Tyrannus verticalis – western kingbird

***HIRUNDINIDAE* – SWALLOWS**

Petrochelidon pyrrhonota – cliff swallow

***CORVIDAE* – JAYS AND CROWS**

Aphelocoma californica – western scrub-jay
Corvus brachyrhynchos – American crow
Corvus corax – common raven

***PARIDAE* – TITMICE**

Baeolophus inornatus – oak titmouse

***AEGITHALIDAE* – BUSHTITS**

Psaltriparus minimus – bushtit

***TROGLODYTIDAE* – WRENS**

Campylorhynchus brunneicapillus – cactus wren
Salpinctes obsoletus – rock wren
Thryomanes bewickii – Bewick's wren

***SYLVIIDAE* – GNATCATCHERS**

Polioptila caerulea – blue-gray gnatcatcher

***TURDIDAE* – THRUSHES AND BABBLERS**

Sialia mexicana – western bluebird

***TIMALIIDAE* – LAUGHINGTHRUSH AND WRENTIT**

Chamaea fasciata – wrentit

***MIMIDAE* – THRASHERS**

Mimus polyglottos – northern mockingbird
Toxostoma redivivum – California thrasher

***PTILOGONATIDAE* – SILKY-FLYCATCHERS**

Phainopepla nitens – phainopepla

***LANIIDAE* – SHRIKES**

Lanius ludovicianus – loggerhead shrike

***STURNIDAE* – STARLINGS**

* *Sturnus vulgaris* – European starling

***PARULIDAE* – WOOD WARBLERS**

Dendroica coronata – yellow-rumped warbler
Geothlypis trichas – common yellowthroat
Oporonis tolmiei – MacGillivray's warbler
Vermivora celata – orange-crowned warbler
Wilsonia pusilla – Wilson's warbler

***EMBERIZIDAE* – BUNTINGS AND SPARROWS**

Amphispiza bilineata – black-throated sparrow
Chondestes grammacus – lark sparrow
Junco hyemalis – dark-eyed junco
Melospiza melodia – song sparrow
Pipilo crissalis – California towhee
Pipilo maculatus – spotted towhee
Spizella atrogularis – black-chinned sparrow
Zonotrichia leucophrys – white-crowned sparrow

***ICTERIDAE* – BLACKBIRDS AND ORIOLES**

Agelaius phoeniceus – red-winged blackbird
Icterus bullockii – Bullock's oriole
Icterus parisorum – Scott's oriole
Molothrus ater – brown-headed cowbird
Quiscalus mexicanus – great-tailed grackle
Sturnella neglecta – western meadowlark

***FRINGILLIDAE* – FINCHES**

Carpodacus mexicanus – house finch
Carduelis psaltria – lesser goldfinch

MAMMALS

***LEPORIDAE* – HARES AND RABBITS**

Lepus californicus – black-tailed jackrabbit
Sylvilagus bachmani – brush rabbit
Sylvilagus audubonii – desert cottontail

***SCIURIDAE* – SQUIRRELS**

Ammospermophilus leucurus – white-tailed antelope squirrel
Spermophilus beecheyi – California ground squirrel

***GEOMYIDAE* – POCKET GOPHERS**

Thomomys bottae – Botta's pocket gopher

***HETEROMYIDAE* – POCKET MICE AND KANGAROO RATS**

Dipodomys sp. – kangaroo rat (sign)

***MURIDAE* – RATS AND MICE**

Neotoma lepida – desert woodrat
Peromyscys sp. – mouse

***CANIDAE* – WOLVES AND FOXES**

* *Canis familiaris* – domestic dog
Canis latrans – coyote

***PROCYONIDAE* – RACCOONS AND RELATIVES**

Procyon lotor – common raccoon

***MUSTELIDAE* – WEASELS, SKUNKS, AND OTTERS**

Mephitis mephitis – striped skunk
Mustela frenata – long-tailed weasel

***FELIDAE* – CATS**

Felis concolor – mountain lion

***CERVIDAE* – DEERS**

Odocoileus hemionus – mule deer

WILDLIFE SPECIES – INVERTEBRATES

BUTTERFLIES AND MOTHS

***HESPERIIDAE* – SKIPPERS**

Erynnis funeralis – funereal duskywing
Erynnis propertius – propertius duskywing
Erynnis sp. – Duskywing
Thorybes pylades – Northern Cloudywing

***PAPILIONIDAE* – SWALLOWTAILS**

Papilio eurymedon – pale swallowtail
Papilio rutulus – western tiger swallowtail
Papilo zelicaon lucas – anise swallowtail

***PIERIDAE* – WHITES AND SULFURS**

Anthocharis centhura – Felder's orangetip
Anthocharis sara – Sara orangetip
Colias Eurydice – California dogface
Colias harfordi – Harford's Sulfur
Colias sp. – Sulfur
Euchloe hyantis – Pearly marble
Euchloe lotta – Desert marble
Pieris rapae – European cabbage white
Pontia beckerii – Becker's white
Pontia protodice – Common white
Pontia sisymbrii – California white

***RIODINIDAE* – METALMARKS**

Apodemia mormo virgulti – Behr's metalmark
Calephelis wrightii – Wright's metalmark

***LYCAENIDAE* – BLUES, HAIRSTREAKS, AND COPPERS**

Brephidium exile – western pygmy blue
Callophrys dumetorum perplexa – perplexing (green) hairstreak
Glaucopsyche lygdamus australis – southern blue
Icaria acmon acmon – acmon blue
Incisalia augustinus – brown elfin
Leptotes marina – marine blue
Philotes sonorensis – sonoran blue

***NYMPHALIDAE* – BRUSH-FOOTED BUTTERFLIES**

Agraulis sp. – fritillary
Coenonympha californica californica – California ringlet
Junonia coenia – buckeye
Vanessa annabella – west coast lady
Vanessa sp. – lady
Vanessa cardui – painted lady

* signifies introduced (non-native) species

INTENTIONALLY LEFT BLANK

APPENDIX B

2011 Jewell Valley QCB Survey Field Notes

AMtb

3/11/2011

0805	1100	1400	Jewel Valley
64	75	81	QCB
3-5MPH	8MPH	6-10	Area
Clear	Clear	Clear	

WSJA — deer poop + tracks
CAQU — BUSH
WCSP — BEWR
CORA
CATH
LBBO
RTHA-overhead
WTSW flyover
WREN
SPTO — CATO

Funereal type (skipper) HHt many
Wht + black (skipper) |
blue (marine) |
Brown (Wrights metalmark) |||
White (Becker's) HHt |
moth - underwing w/ yellow spots ~10
Behr's Metalmark HHt |||
S. Blue |||
Acmon Blue |
"underwing" moth ~15
Sanford's |

AMH6

0945
64 grnd
60 air
high wispy (sun's intermittent)
1-3 MPH

Jewel Valley
3/18/2011
Area 2
QCB Survey

WSJA
CAQU
CORA
LEGO
BUSH
PHAI
SPTO
CATO
CATH

Pactreefrog
BTSP
OATI
Kingbird sp (Ca or We- flewby)
WCSP
BELOR
RTHA (on nest in dead tree)
DEJU

Behr's metalmark HHH IIII HH III many
Funereal typer III
Perplexing hairstreak IIII
Blackspotted moth HHH I
Common white I
Western Coast Lady II
pale swallowtail I
skipper all black III
Acmon Blue II

full sun conditions by 1100 then wind picked up but butterflies were active.

Nectar source (Lasth) was abundant between shrubs (photos).

Stopped recording Bmetalmarks they are quite numerous

End
1515
64F
5-10MPH, gusts to 15
Clear

AMH

0930 4:15 pm 3/29/2011
Clear 80%CC Week 3
3-5MPH 5-8mph Jewel Valley
64 72° Area 1

VREN CAQU
CATO CATH
SPTO OATI
YRWA BEWR
WSJA GRRO
BTSP WCSP
CAWR TUVU flyover
BTGW DEJU
striped racer

Sara O.tip ~~||||~~ ||||
White - Becker or common |
Brn Elfin |||
Perplexing ~~||||~~ ||
Behr's m.m. ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ many
Silv. blue ||
white - large ||
Harford's sulfur |
Skipper, large black ~~||||~~ |
Desert marble ~~||||~~ |
Lady sp. |
Pygmy blue ||

AMth

Patches w/ carpet of annuals in bloom. popcorn, Lasth Also patches of erodium. Lot of bare sandy exp. soil Also patches with shrub cover. Some shrub cover is pretty dense w/ shrub oak. In drainage at N. end is patch of redshank/chamise Lots of scrub jays conditions were excellent w/ lots wind, sun, warm temps. Lots of butterfly activity - many Behr's (stopped counting)

196

site
P

AMH

4/1/2011

76 F	83F	Jewel Valley
0830	350	QCB
3-5mph	3-5	week 4
Clear	Clear	

Harford	++++ |||
Sara Otip	+++ |||
black skipper	|| – many
Metalmark, Behr's	+++ || many
Blue, Southern	|||
Desert marble	+++
perplexing	+++ ||
Common white	|||
Pale swallow tail	|
very common – flitting around the bucket	
buckeye	|
Blue (acmon)	+++

NCSP	MODO
WREN	BTSP
CATO	NUWO
SPTO	PIHA
WSJA	Turk overflight – 3 overhead pretty low
DEJU	CATH
CAQU	ROWR
CORA	SCOR
CAWR	WTSW – also pretty low
small yellow (forgot the name)	||

AMth

Alot more whites (common, marble, sara o'tip) also more sulfurs this week. Metal marks are abundant both small & large. first buckeye this week.

Carpet of spring ephemerals in bloom now. Did a second pass thru the areas with the carpets

AMH

- Spp list for QCB survey
  - WREN
  - BEWR
  - BTSP
  - WCSP
  - NOFL
  - TUVU
  - ~~WSSP~~ WSJA
  - CAWR
  - CORA
  - CAFI
  - CAQU
  - CATO
  - SPTO
  - GRRO
  - WTSW