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July 9, 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 Manzanita 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 in 2010 for the federally listed endangered Quino checkerspot butterfly (*Euphydryas editha quino*; Quino) for the Manzanita Wind Energy Project (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.

Site Description

The Manzanita Indian Reservation lies along the Tecate Divide north of Interstate 8 (I-8) in eastern San Diego County (Figure 1). The Tecate Divide is a north/south-trending ridgeline that divides the Colorado River Basin watershed from the coastal watershed that drains to the Pacific Ocean. The reservation is located northwest of the community of Manzanita and directly north of Live Oak Springs approximately 2 miles north of Interstate-8 (Figure 2). On-site elevation ranges from approximately 3,400 to 5,000 feet above mean sea level.

The Biological Study Area (BSA), which includes lands both on and off of the Manzanita and Campo Indian Reservations, 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. Paths from cattle grazing exist throughout the buckwheat scrub and chamise chaparral communities. Various large rock outcrops are scattered throughout the site, but are primarily located along the ridgelines. Old roads, utility roads, and recently graded roads span the BSA.

Project Description

The proposed project is comprised of three different parts, described as Part A: Manzanita Wind Power Generation Project; Part B: Crestwood to Boulevard Transmission Line System Improvement Project; and Part C: New Substation on Private Land Project. Each part is described in further detail below.

Part A: Manzanita Wind Power Generation Project

The Manzanita Wind Power Generation Project (Project) consists of the installation of up to 22 wind turbines on the Manzanita Reservation. Each turbine could generate up to 2.5 MW of power. The general alignment for 15 of the turbines follows the Tecate Divide, starting at the approximate mid-point of the reservation's southern boundary and extending north and west to the northern boundary of the reservation. Of the remaining seven proposed turbines, four would extend from north to south approximately 1,000 feet west of the Tecate Divide, and three would extend approximately 3,000 feet south from the northern boundary of the reservation in the northeastern portion of the reservation. There are 25 existing 2.0-MW wind turbines located along the Tecate Divide on the Campo Reservation, immediately south of the Manzanita Reservation and north of I-8.

Road improvements on the Manzanita Reservation would be necessary along the Tecate Divide and other existing roads to gain access to the three turbines proposed in the northeastern portion of the reservation. This work would include both improvements to existing dirt roads and the potential construction of new dirt roads depending on the final project design. In addition, a new access road would be required to access and provide a loop for the four proposed turbines west of the Tecate Divide. Other areas of disturbance would result from lay-down and staging areas during installation.

A buffer of approximately 1,000 feet around proposed turbine locations has been used to provide flexibility for the project design and to determine acreages for biological survey work. Using this methodology, up to 1,600 acres of disturbance could result from implementation of the Project, although the actual impact area will likely be much smaller. Anticipated impacts include disturbance associated with installation of a generation tie line (gen-tie line) that extends approximately 3 miles from the southernmost proposed turbine to the existing Crestwood substation on the Campo Reservation, south of I-8.

Part B: Crestwood to Boulevard Transmission Line System Improvement Project

The Crestwood to Boulevard Transmission Line System Improvement Project (Project) traverses between the existing Crestwood and Boulevard substations. The Project extends for approximately 4.5 miles, following the existing 69-kV line alignment and right-of-way. Additional right-of-way may be required along this transmission line depending on final structure design and placement. Some type of disturbance will likely occur along the length of the transmission line and would be increased in those areas where direction changes occur to allow for pulling sites and staging areas. Specific pulling sites and staging yards

have not yet been identified for the project. However, the BSA includes a 100-foot buffer on either side of the easement, with a 500-foot buffer at angle points in order to accommodate potential staging areas and pulling sites. Up to 150 acres of disturbance could result from implementation of the Project.

Part C: New Substation on Private Land Project

The New Substation on Private Land Project consists of the construction of a new substation or switchyard on private land. This proposed facility will be necessary in conjunction with the wind generation project. The survey area is approximately 5 acres.

Background Information

The Quino was added by USFWS to the Federal Endangered Species List 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 semidesert 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.), goldfields (*Lasthenia* spp.), layia (*Layia* spp.), goldenbush (*Ericameria* spp.), onion (*Allium* 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*), Coulter's snapdragon (*Antirrhinum coulterianum*), and Chinese houses (*Collinsia concolor)* as host plants (Pratt 2010). 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 (m) elevational range (Pratt 2010), which is the range coincident with the project site.

After feeding, the early larva enters an obligatory aestival diapause (a 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 protocol surveys, a focused habitat assessment of the entire project site (Parts A, B, and C) was conducted from March 17 to March 19, 2010. Habitat assessments were conducted by project permitted biologists Gretchen Cummings, David Faulkner, Martha Heath, Margie Mulligan, and Dale Powell. These permitted biologists were assisted by project supervised biologists Andrew Fisher and Jimmy McMorran. During habitat assessments, all areas were mapped as suitable, with the exception of developed areas, closed canopy forests or riparian areas, and dense chaparral, as defined by the most current protocol (USFWS 2002). 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."

The final habitat assessment map depicting all excluded habitats is presented on U.S. Geological Survey (USGS) Quad maps at 200% (Figure 3). Host plant locations and vegetation types in excluded areas are also depicted on the habitat assessment map.

The total area determined to be suitable to survey for Quino per the most current USFWS protocol was 1,297 acres.

Focused Adult Quino Surveys

Focused surveys were conducted over the 1,297-acre survey area according to the most current USFWS protocol (USFWS 2002) (Figures 3 and 4). The start date for focused adult Quino surveys was determined based on the following: (1) the first detection of Quino during surveys last year for another project on the Campo Indian Reservation directly adjacent to the proposed project; (2) conditions at the project site this year relative to last year; and (3) conditions at the Jacumba reference site monitored by USFWS. Project biologist 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 last year. Based on this information, Ken Osborne (Quino expert and monitoring biologist for Jacumba reference site) stated that the flight season would likely begin at the Jacumba reference site around the third week of March (Osborne 2010). However, because of colder temperatures at the site in mid-March, which delayed the flight season by at least another week, and the lack of Quino at the Campo Landfill site that was being monitored during that time, it later was agreed by David Faulkner, Michael Klein, and Ken Osborne that the fourth week of March would be an appropriate start date for surveys.

Focused adult surveys commenced on March 24, 2010. Surveys were conducted by Erin Bergman, Adam Behle, Melissa Booker, Michael Couffer, Amanda Gonzalez, Antonette Gutierrez, Martha Heath, Bonnie Hendricks, Kyle Ince, Shirley Innecken, Diana Jensen, Erik LaCoste, Jimmy McMorran, Dale Powell, and Steve Rink. 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)
Adam Behle	#TE-797999
Melissa Booker	#TE-797999
Michael Couffer	#TE-782703
Barbra Calantas	#TE-820658
Gretchen Cummings	#TE-031850
David Faulkner	#TE-838743
Andrew Fisher	#TE-820658 (supervised)
David Flietner	#TE-008031
Amanda Gonzalez	#TE-797999 (supervised)
Antonette Gutierrez	#TE-797999
Martha Heath	#TE-099005
Bonnie Hendricks	#TE-820658
Kyle Ince	#TE-797999
Shirley Innecken	#TE-820658 (supervised)
Diana Jensen	#TE-797999
Gina Krantz	#TE-797999 (supervised)
Erik LaCoste	#TE-027736
Viviane Marquez	#TE-800930
Jimmy McMorran	#TE-820658 (supervised)
Margie Mulligan	#TE-233291
Dale Powell	#TE-006559
Steve Rink	#TE-797999

Table 2
Quino Checkerspot Butterfly Survey Schedule

Survey Week	Date	Survey Team
1	3/24/2010 to 4/11/2010	Behle, Bergman, Booker, Couffer, Gutierrez, Heath, Hendricks, Ince, Innecken, Jensen, LaCoste, McMorran, Powell, Rink
2	4/13/2010 to 4/19/2010	Behle, Bergman, Couffer, Faulkner, Flietner, Gonzalez, Gutierrez, Heath, Ince, Innecken, Jensen, Marquez, Rink
3	4/18/2010 to 4/26/2010	Behle, Bergman, Calantas, Flietner, Gutierrez, Heath, Ince, Innecken, Jensen
4	4/26/2010 to 5/6/2010	Behle, Fisher, Flietner, Gutierrez, Heath, Ince, Krantz, LaCoste, Rink
5	5/6/2010 to 5/13/2010	Behle, Couffer, Gutierrez, Heath, Hendricks, Ince, Krantz, LaCoste, Powell, Rink
6	5/14/2010 to 5/20/2010	Behle, Couffer, Gutierrez, Heath, Hendricks, Krantz, LaCoste, Powell, Rink

Results

Six weeks of focused surveys were conducted for the approximate 1,297 acres of the focused survey area, shown in Figures 3 and 4. 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 on the adjacent Campo Wind Generation Project. One of the individuals observed during the fifth week of surveys on the adjacent project site was in good condition with bright wing color and no 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 the blooming stage of potential larval host plants during survey week 5, a sixth week of focused adult Quino surveys was added to the season.

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

A total of 66 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.

Eleven Quino observations were made during the protocol survey period. Five observations were made within Part A of the BSA, and six observations were made within Part B of the BSA. No observations of Quino were made within Part C of the BSA.

The 24-hour notification letters for each Quino detection are included in Appendix F as Appendices F.1 to F.6. All Quino detections for the project are provided in Figure 4. Information for each Quino sighting, including the survey week, date, time, weather conditions, surveyor, and number of Quino individuals detected, is provided in Table 3. Table 3 references the Appendix F section corresponding to each Quino sighting, which includes detailed information for each sighting provided in the corresponding 24-hour notification letter, including weather conditions, habitat conditions, and photographs of the habitat and/or individual(s) detected, as applicable.

Table 3
Quino Checkerspot Butterfly Observations

Observation Number	Survey Week	Date of Observation	Time	Temp.	Wind	% Cloud Cover	Observer/ Permitted Biologist	Date Observation Reported to CFWO[2]	Number of Quino Observed	24-Hour Notification Letter
1	1	04/02/2010	14:19	75.2°F	1.4–2.5 mph	2	Antonette Gutierrez	04/03/2010	1	Appendix F.1.
2	1	04/03/2010	11:50	73.0°F	3–7 mph	0	Michael Couffer	04/04/2010	1	Appendix F.2.
3	1	04/10/2010	13:44	72.0°F	4–7 mph	0	Dale Powell	04/12/2010	1	Appendix F.3.
4	1	04/10/2010	14:00	70.0°F	4–7 mph	0	Michael Couffer	04/12/2010	1	Appendix F.3.
5	1	04/11/2010	13:38	59.0°F	1–8 mph	0	Michael Couffer	04/12/2010	1	Appendix F.3.
6	2	04/16/2010	09:55	64.0°F	2.5–4.3 mph	0	Martha Heath, Shirley Innecken[1]	04/17/2010	1	Appendix F.4.
7	2	04/18/2010	12:20	66-72°F	4.6–10.9 mph	0	Martha Heath	04/19/2010	1	Appendix F.5.
8	2	04/18/2010	12:51	66-72°F	4.6–10.9 mph	0	Martha Heath	04/19/2010	1	Appendix F.5.
9	3	04/18/2010	13:25	66-72°F	3.0 mph	20	Barbra Calantas	04/19/2010	1	Appendix F.5.
10	3	04/20/2010	11:15-11:30	69.0°F	2–5.7 mph	20	Antonette Gutierrez	04/21/2010	2	Appendix F.6.

[1] Supervised to survey under #TE-820658
[2] CFWO = Carlsbad Fish and Wildlife Office

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% 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 Figures 3 and 4.

Discussion

A total of 11 individual Quino observations were made during the flight season. The first detection of Quino this season occurred on April 2, 2010, during the week 1 survey period. Quino were detected during survey weeks 1 through 3. No Quino were detected during survey weeks 4 through 6. Given that the surveys started on March 24 and the first Quino detection was on April 2, it can be assumed that the survey window of March 24 to May 20 appropriately encompassed the flight season for Quino at the project site this year.

Several storm events occurred at the site during the week of March 29, the week of April 19, and the week of April 26. These storm events resulted in snow/mixed precipitation/rain, cold temperatures, and windy conditions that are considered unfavorable for Quino. While surveys did not occur on days when weather conditions were out of protocol requirements, it is possible that the storm events during these time periods (including after the last detection on April 18, 2010) affected local Quino populations, and consequently, detections during these times.

After conclusion of the field season, 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 on June 24, 2010 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 were found to exist outside of the survey area that 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. Given the maturity of the chaparral community based on lack of recent fire and/or other disturbances, these areas lack concentrations of resources that would be likely to support dense localized Quino numbers or use at this time. However, 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 (1,297 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 including the total area surveyed, totaling 1,580 acres potentially supports 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 (greater than 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 – Habitat Assessment (Map Pocket)
- Figure 4 – Quino Survey Area and Detections
- Figure 5 – Quino Larval Host Plants and Suitable Habitat
- Appendix A – Daily Weather Conditions for Focused Quino Surveys on Manzanita Wind Energy Project
- Appendix B – Field Data Sheets
- Appendix C – Summary of Butterfly and Moth Species Observed during Quino Checkerspot Butterfly Surveys for the Manzanita Wind Energy Project

Appendix D – Weekly Flowering Plant Observations for Manzanita Wind Energy Project
Appendix E – Vertebrate Species Detected during Focused Quino Surveys for Manzanita Wind Energy Project
Appendix F – 24-hour Quino Notification Letters to USFWS

Certification

Qualified biologists who conducted Quino checkerspot butterfly surveys for the Manzanita 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 protocol surveys (March 24 to 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.

Barbra Calantas
AECOM Wildlife Biologist

Bonnie Hendricks
AECOM Biologist

Erik LaCoste
AECOM Wildlife Biologist

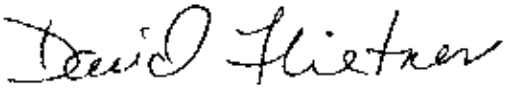
Viviane Marquez
Subcontracted Quino Surveyor

Adam Behle
Subcontracted Quino Surveyor

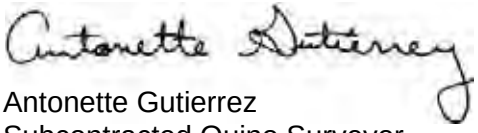
Melissa Booker
Subcontracted Quino Surveyor

Martha Heath
Subcontracted Quino Surveyor

Michael Couffer
Subcontracted Quino Surveyor



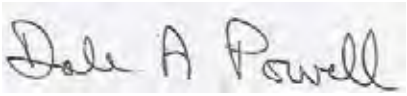
David Flietner
Subcontracted Quino Surveyor



Antonette Gutierrez
Subcontracted Quino Surveyor

Kyle Ince
Subcontracted Quino Surveyor

Diana Jensen
Subcontracted Quino Surveyor



Dale Powell
Subcontracted Quino Surveyor

Steve Rink
Subcontracted Quino Surveyor

Literature Cited

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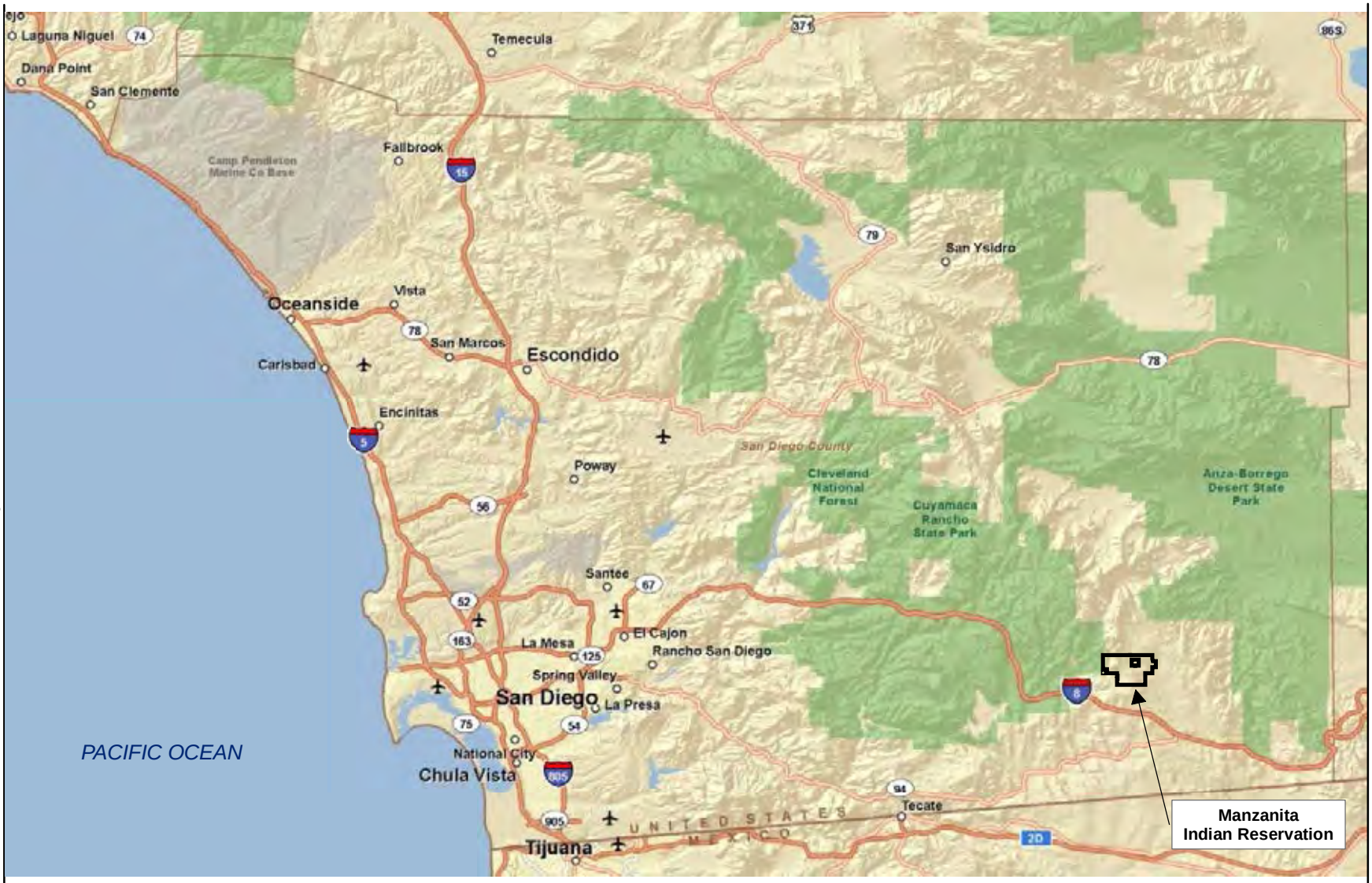
FIGURES

Path: P:\2009\09080155_Manz_SDGE\06GIS\6-3_Layout\regional_map.mxd, 07/01/10, LeeJ

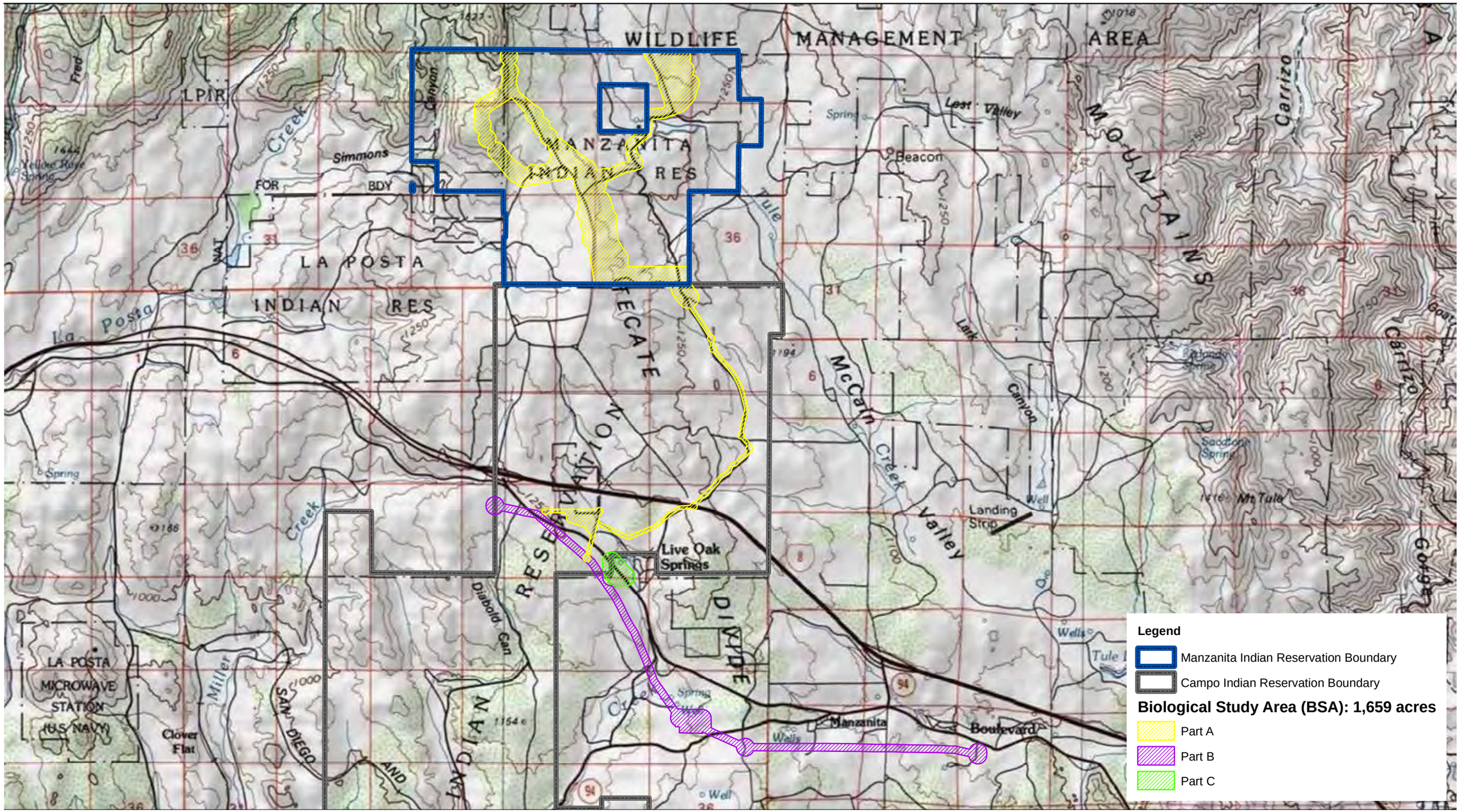


Source: ESRI 2009

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

5,500 2,750 0 5,500 Feet

Scale: 1 = 66,000; 1 inch = 5,500 feet

Figure 2
Vicinity Map

Path: P:\2009\09080155_Manz_SDGE\06GIS\6.3_Layout\vicinity.mxd, 07/02/10, ShahS2

Legend

- Manzanita Reservation
- Quino Checkerspot Butterfly Survey Area

Biological Study Area (BSA): 1,659 acres

- Part A
- Part B
- Part C

Quino Larval Host Plants (through June 20, 2010)

- *Antirrhinum coulterianum*
- *Collinsia concolor*
- *Cordylanthus rigidus*

Excluded Areas

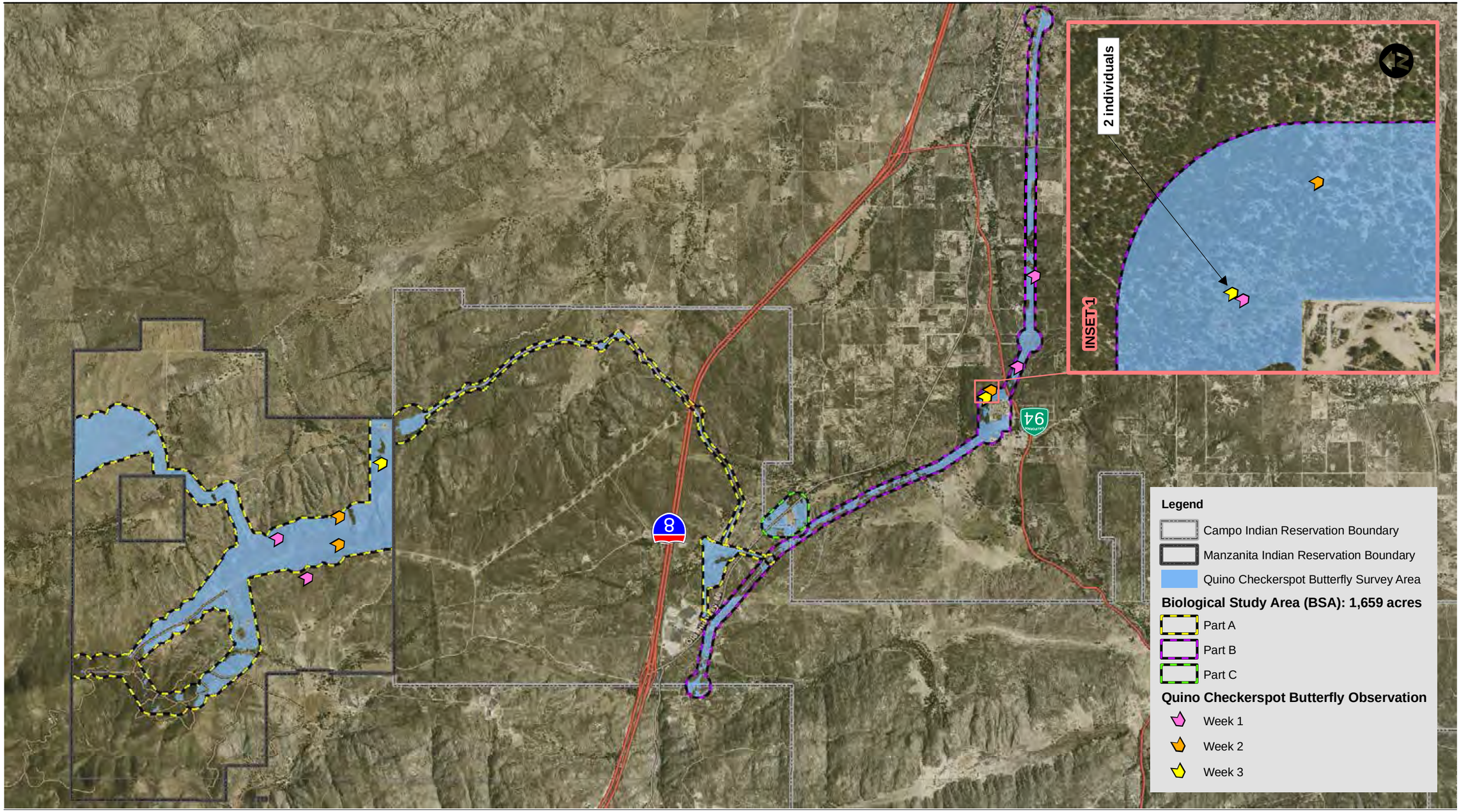
- Dense Chaparral
- Oak Woodland with Dense Grassland
- Dense Grassland
- Dense Southern Willow Scrub
- Developed/Disturbed

1,000 500 0 1,000 Feet

Scale: 1 = 12,000; 1 inch = 1,000 feet

Source: Invenergy 2010; USGS 7.5' Topo Quad Sombrero Peak 1975; Live Oak Springs 1975

Figure 3
Habitat Assessment



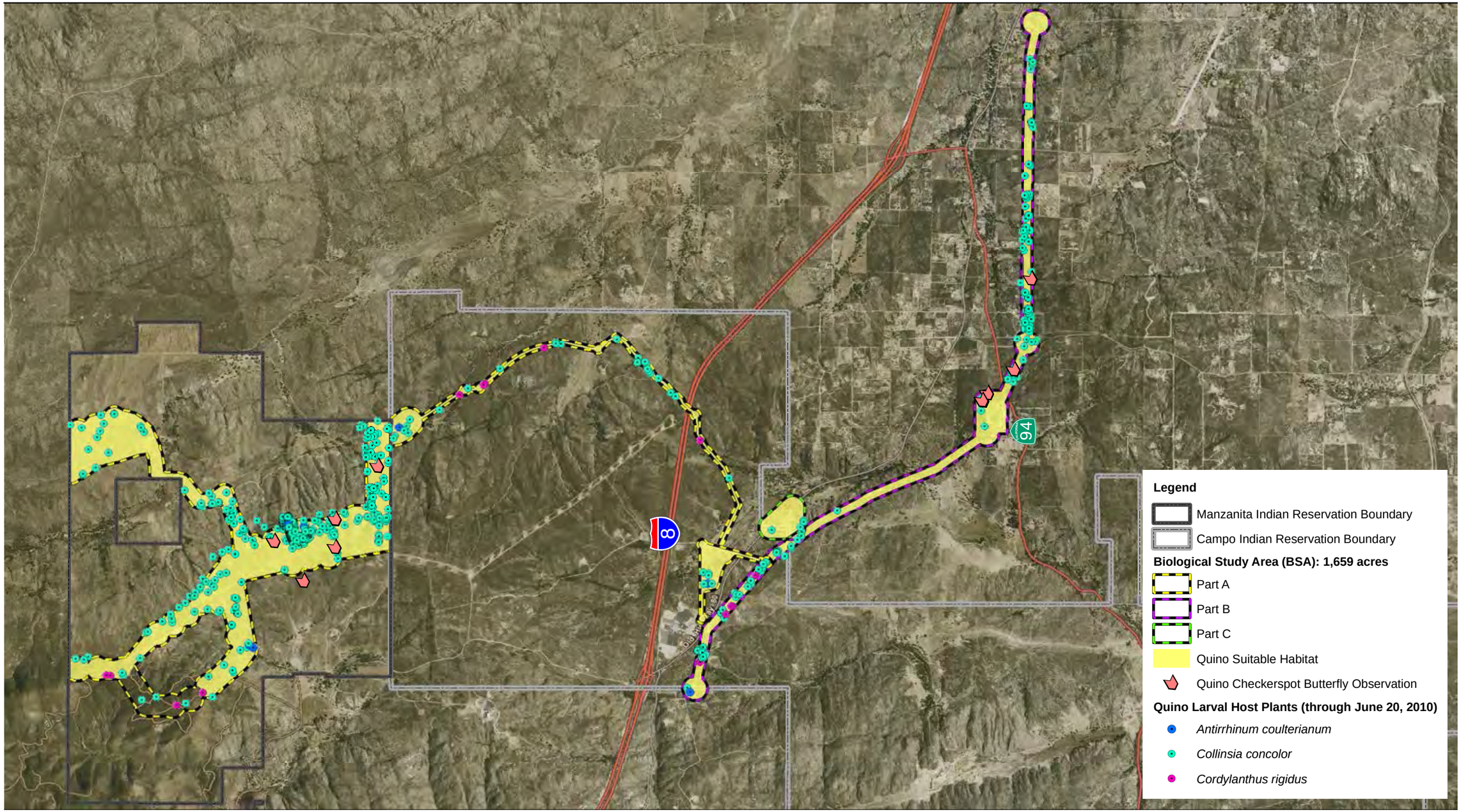
Source: DigitalGlobe 2008; Invenergy 2010

4,000 2,000 0 4,000 Feet

Scale: 1 = 48,000; 1 inch = 4,000 feet

Figure 4
Quino Survey Area and Detections

Path: P:\2009\09080155_Manz_SDGE\06GIS\6.3_Layout\QCB\45_Day_Report\QCB_surveyarea_detections_manz.mxd, 07/09/10, johnsonaa



Source: DigitalGlobe 2008; Invenergy 2010

4,250 2,125 0 4,250 Feet

Scale: 1 = 48,000; 1 inch = 4,000 feet

Figure 5
Quino Larval Host Plants and Suitable Habitat

Path: P:\2009\09080155_Manz_SDGE\06GIS\6.3_Layout\QCB\45_Day_Report\QCB_hostplants_suitablehab_manz.mxd, 07/02/10, ShahS2

APPENDIX A

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

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

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
3/29/2010	1	Rink / McMorran	1100	73.5	1/2	20	patchy
3/29/2010	1	Rink / McMorran	1200	80	1/2	20	patchy
3/29/2010	1	Rink / McMorran	1300	79	5/7	20	patchy
3/29/2010	1	Rink / McMorran	1408	77	7/9	40	patchy
3/29/2010	1	Rink / McMorran	1500	76	7/9	30	patchy
3/30/2010	1	Rink	1200	70	14	10	patchy
3/30/2010	1	Rink	1300	70	13.7	10	patchy
3/30/2010	1	Rink	1400	69	14.5	10	patchy
3/30/2010	1	Rink	1500	69	14.7	10	patchy
3/29/2010	1	LaCoste	915	67	1/3	0	clear
3/29/2010	1	LaCoste	1200	79	2/5.9	15	clear
3/29/2010	1	LaCoste	1400	75	6/9	30	patchy
3/29/2010	1	LaCoste	1600	72	7/10	5	clear
3/30/2010	1	Behle / McMorran	1237	74	4/11	10	clear
3/30/2010	1	Behle / McMorran	1300	73	6/14	10	clear
3/30/2010	1	Behle / McMorran	1400	73	8/14	5	clear
3/30/2010	1	Behle / McMorran	1500	74	8/13	5	clear
4/2/2010	1	Gutierrez	1200	61.9	2.5/8.6	5	clear
4/2/2010	1	Gutierrez	1300	70.7	1.4/2.5	2	clear
4/2/2010	1	Gutierrez	1400	75.2	1.4/2.5	2	clear
4/2/2010	1	Gutierrez	1500	75.2	2.5/7.3	2	clear
4/2/2010	1	Gutierrez	1600	70.5	1.5/3.3	10	clear
4/2/2010	1	Gutierrez	1630	70.5	1.5/3.3	10	clear
4/2/2010	1	Couffer	1200	59	0/3	0	clear
4/2/2010	1	Couffer	1300	68	0/3	0	clear
4/2/2010	1	Couffer	1400	63	0/2	0	clear
4/2/2010	1	Couffer	1500	65	0/3	0	clear
4/2/2010	1	Couffer	1600	65	3/6	0	clear
4/2/2010	1	Couffer	1610	64	3/6	0	clear
4/3/2010	1	Couffer	1030	63	3/7	0	clear
4/3/2010	1	Couffer	1100	63	9/13	0	clear
4/3/2010	1	Couffer	1200	73	3/7	0	clear
4/3/2010	1	Couffer	1300	66	0/4	0	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
4/3/2010	1	Couffer	1400	63	5/11	0	clear
4/3/2010	1	Couffer	1500	60	8/13	0	clear
4/3/2010	1	Hendricks	1100	58	11/18	0	clear
4/3/2010	1	Hendricks	1200	66	7/11	0	clear
4/3/2010	1	Hendricks	1300	62	9/16	0	clear
4/3/2010	1	Hendricks	1400	68	4/8	2	clear
4/3/2010	1	Hendricks	1500	58	7/14	2	clear
4/3/2010	1	Hendricks	1600	64	13/19	30	patchy
4/4/2010	1	Couffer / Bergman	1100	60	5/12	0	clear
4/4/2010	1	Couffer / Bergman	1200	58	8/17	0	clear
4/6/2010	1	Gutierrez	1115	65.8	3/5.1	0	clear
4/6/2010	1	Gutierrez	1200	61.2	6.5/12.8	0	clear
4/6/2010	1	Gutierrez	1300	65.3	7.7/10.6	0	clear
4/6/2010	1	Gutierrez	1400	63	5.6/8.1	0	clear
4/6/2010	1	Gutierrez	1530	69	4/8.2	0	clear
4/6/2010	1	Gutierrez	1630	66.4	4.2/8.5	0	clear
4/6/2010	1	Couffer	1000	60	3-8	0	clear
4/6/2010	1	Couffer	1100	55	4/10	0	clear
4/6/2010	1	Couffer	1200	57	4/10	0	clear
4/6/2010	1	Heath	1000	49.9	6.8/10.5	0	clear
4/6/2010	1	Heath	1100	50.2	9.3/14.8	0	clear
4/6/2010	1	Heath	1200	60.2	8.7/15.3	0	clear
4/6/2010	1	Heath	1345	61.3	4.4/6.7	0	clear
4/6/2010	1	Heath	1500	55.5	9.1/13.6	0	clear
4/6/2010	1	Powell / Bergman	1340	59	5/8	0	clear
4/6/2010	1	Powell / Bergman	1430	61	5/7	0	clear
4/6/2010	1	Powell / Bergman	1530	63	4/7	0	clear
4/6/2010	1	Powell / Bergman	1607	61	5/7	0	clear
4/6/2010	1	Ince / Bergman	1120	62	2/8.8	0	clear
4/6/2010	1	Ince / Bergman	1220	62	2/8	0	clear
4/6/2010	1	Ince	1400	61	3/10	0	clear
4/6/2010	1	Ince	1500	61	2/8	0	clear
4/6/2010	1	Ince	1615	61	2/8	0	clear
4/8/2010	1	Couffer	1315	73	0/2	0	clear
4/8/2010	1	Couffer	1400	73	0/2	0	clear
4/8/2010	1	Couffer	1500	74	0/2	0	clear
4/8/2010	1	Couffer	1600	76	0/3	0	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
4/8/2010	1	Couffer	1700	75	1/3	0	clear
4/8/2010	1	Couffer	900	61	0/6	0	clear
4/8/2010	1	Couffer	1000	60	2/8	0	clear
4/8/2010	1	Couffer	1100	69	0/4	0	clear
4/8/2010	1	Couffer	1200	72	0/4	0	clear
4/8/2010	1	Couffer	1300	67	4/8	0	clear
4/8/2010	1	Jensen	1100	67	2/5	0	clear
4/8/2010	1	Jensen	1400	71	0/0	0	clear
4/8/2010	1	Jensen	934	61	3/6.5	0	clear
4/8/2010	1	Jensen	1100	67	2/5	0	clear
4/8/2010	1	Jensen	1400	71	0/0	0	clear
4/8/2010	1	Jensen	1555	75	0/0	0	clear
4/8/2010	1	Ince	940	62	2/5	0	clear
4/8/2010	1	Ince	1100	64	2/5	0	clear
4/8/2010	1	Ince	1140	64	2/5	0	clear
4/8/2010	1	Ince	1315	65	2/6	0	clear
4/8/2010	1	Ince	1415	68	2/5	0	clear
4/8/2010	1	Ince	1515	68	0/2	0	clear
4/8/2010	1	Ince	1614	70	0/0	0	clear
4/8/2010	1	Ince	1230	64	2/5	0	clear
4/9/2010	1	Jensen	1000	67	0.3/0.5	0	clear
4/9/2010	1	Jensen	1018	67	3/7	0	clear
4/9/2010	1	Jensen	1151	67	5/7	0	clear
4/9/2010	1	Jensen	1430	78	na	0	clear
4/9/2010	1	Jensen / Gutierrez	1500	76	3/6	0	clear
4/9/2010	1	Jensen / Gutierrez	1600	76	3/6	0	clear
4/9/2010	1	Gutierrez	1000	73	7.8/7.8	0	clear
4/9/2010	1	Gutierrez	1100	72	5.4/10.3	0	clear
4/9/2010	1	Gutierrez	1200	75	0.9/1.4	0	clear
4/9/2010	1	Gutierrez	1300	77	1.5/3.0	0	clear
4/9/2010	1	Gutierrez	1400	76	2.5/7.1	0	clear
4/9/2010	1	Ince	1215	67	3/10	0	clear
4/9/2010	1	Ince	1330	67	5/15	0	clear
4/9/2010	1	Ince	1545	68	3/7	0	clear
4/9/2010	1	Ince	1000	62	1/5	0	clear
4/9/2010	1	Ince	1115	65	3/10	0	clear
4/9/2010	1	Ince	1215	67	3/10	0	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
4/9/2010	1	Jensen	1219	na	10/12	0	clear
4/9/2010	1	Jensen	1245	na	10/12	0	clear
4/9/2010	1	Jensen	1309	na	10/12	0	clear
4/9/2010	1	Jensen	1430	na	10/12	0	clear
4/9/2010	1	Jensen/Gutierrez	1600	na	7/10	0	clear
4/9/2010	1	Jensen/Gutierrez	1635	na	7/10	0	clear
4/9/2010	1	Gutierrez	1500	76	2.5/6.5	0	clear
4/9/2010	1	Gutierrez	1600	76	2.6/5	0	clear
4/9/2010	1	Heath	930	67.2	0.9/1.9	0	clear
4/9/2010	1	Heath	1030	69.5	1.3/4.2	0	clear
4/9/2010	1	Heath	1230	70.6	3.7/10	0	clear
4/9/2010	1	Heath	1330	72.1	3.4/5.2	0	clear
4/9/2010	1	Heath	1500	74.2	3.6/6.5	0	clear
4/9/2010	1	Heath	1600	67.9	3.6/7.9	0	clear
4/10/2010	1	Couffer	1030	65	1/3	0	clear
4/10/2010	1	Couffer	1100	68	1/4	0	clear
4/10/2010	1	Couffer	1200	68	1/7	0	clear
4/10/2010	1	Couffer	1300	72	0/4	0	clear
4/10/2010	1	Couffer	1400	70	4/7	0	clear
4/10/2010	1	Couffer	1500	71	2/8	0	clear
4/10/2010	1	Hendricks / Bergman	1100	64	5/11	5	clear
4/10/2010	1	Hendricks / Bergman	1235	70	3/12	2	clear
4/10/2010	1	Hendricks / Bergman	1330	67	4/15	1	clear
4/10/2010	1	Hendricks / Bergman	1430	64	9/14	1	clear
4/10/2010	1	Hendricks / Bergman	1530	62	5/12	2	clear
4/10/2010	1	Hendricks / Bergman	1700	63	2/14	10	clear
4/10/2010	1	Hendricks / Bergman	1730	61	3/11	2	clear
4/10/2010	1	Heath	1000	60.2	2.2/6.9	0	clear
4/10/2010	1	Heath	1200	62.1	8.7/13.5	0	clear
4/10/2010	1	Heath	1330	64.4	8.2/11.1	0	clear
4/10/2010	1	Heath	1500	66.7	6.2/10.3	0	clear
4/10/2010	1	Heath	1600	64.9	4.3/7.5	0	clear
4/10/2010	1	Powell	1000	63	6/9	0	clear
4/10/2010	1	Powell	1120	68	5/8	0	clear
4/10/2010	1	Powell	1230	72	8/11	0	clear
4/10/2010	1	Powell	1350	72	4/7	0	clear
4/10/2010	1	Powell	1540	70	5/9	0	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
4/10/2010	1	Powell	1615	64	5/7	0	clear
4/11/2010	1	Couffer	1145	65	1/4	0	clear
4/11/2010	1	Couffer	1200	67	0/5	0	clear
4/11/2010	1	Couffer	1245	65	1/5	0	clear
4/11/2010	1	Couffer	1300	64	3/8	0	clear
4/11/2010	1	Couffer	1315	65	3/5	0	clear
4/11/2010	1	Heath / Innecken	1200	67	3.9/7.4	0	clear
4/11/2010	1	Heath / Innecken	1400	62.2	3.2/6.9	10	clear
4/11/2010	1	Heath / Innecken	1530	59	3.6/12.4	5	clear
4/11/2010	1	Booker / Jensen	1130	72	3/8	10	clear
4/11/2010	1	Booker / Jensen	1237	72	6/12	10	clear
4/11/2010	1	Booker / Jensen	1535	71	5/9	10	clear
4/11/2010	1	Jensen / Booker	1130	72	3/8.6	0	clear
4/11/2010	1	Jensen / Booker	1238	na	6/12	0	clear
4/11/2010	1	Jensen / Booker	1435	71	5/9	0	clear
4/11/2010	1	Powell	1200	61	9/13	0	clear
4/11/2010	1	Powell	1240	62	6/8	0	clear
4/11/2010	1	Powell	1520	62	7/11	0	clear
4/13/2010	2	Ince	1130	61	2/5	5	clear
4/13/2010	2	Ince	1230	61	2/5	5	clear
4/13/2010	2	Ince	1300	63	2/3	5	clear
4/13/2010	2	Ince	1400	63	2/5	5	clear
4/13/2010	2	Rink	1130	60	2/5	5	clear
4/13/2010	2	Rink	1235	61	2/5	5	clear
4/13/2010	2	Rink	1330	63	2/5	5	clear
4/13/2010	2	Rink	1430	63	2/5	5	clear
4/13/2010	2	Rink	1530	62	2/5	15	patchy
4/13/2010	2	Rink	1600	60	2/5	15	patchy
4/13/2010	2	Jensen	1330	64	5/8	1	clear
4/13/2010	2	Jensen	1611	67	3/5	20	clear
4/13/2010	2	Jensen	1200	60	1/3	1	clear
4/13/2010	2	Jensen	1308	65	1/3	1	clear
4/14/2010	2	Couffer / Innecken	1130	72	0/3	0	clear
4/14/2010	2	Couffer / Innecken	1200	72	0/3	0	clear
4/14/2010	2	Couffer / Innecken	1000	67	0/1	0	clear
4/14/2010	2	Couffer / Innecken	1100	68	1/4	0	clear
4/14/2010	2	Couffer / Innecken	1130	72	0/3	0	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
4/14/2010	2	Couffer / Innecken	1500	70	0/4	90	overcast
4/14/2010	2	Couffer / Innecken	1600	65	2/5	90	overcast
4/14/2010	2	Couffer / Innecken	1218	74	0/3	0	clear
4/14/2010	2	Couffer / Innecken	1300	73	1/4	10	patchy
4/14/2010	2	Couffer / Innecken	1400	71	0/2	60	patchy
4/14/2010	2	Marquez / Fleitner	1000	65.6	2.1/5.2	10	patchy
4/14/2010	2	Marquez / Fleitner	1130	67.3	2.6/4.4	0	clear
4/14/2010	2	Marquez / Fleitner	1255	66.7	2.4/4.3	30	patchy
4/14/2010	2	Marquez / Fleitner	1335	68	2.6/4.6	30	patchy
4/14/2010	2	Fleitner	1420	72	2/5	80	overcast
4/14/2010	2	Fleitner	1450	70	4/6	90	overcast
4/14/2010	2	Fleitner	1520	72	4/6	80	overcast
4/14/2010	2	Fleitner	1550	69	5/9	80	overcast
4/14/2010	2	Fleitner/Marquez	1000	65	2/5	20	clear
4/14/2010	2	Fleitner/Marquez	1310	74	2/5	60	patchy
4/14/2010	2	Marquez/Fleitner	1430	69.8	2.4/4.7	80	patchy
4/14/2010	2	Marquez/Fleitner	1500	65.5	2.1/3.1	85	overcast
4/14/2010	2	Marquez/Fleitner	1530	66.1	1.6/4.1	85	overcast
4/15/2010	2	Ince	930	60	5/12	5	clear
4/15/2010	2	Ince	1130	62	3/8	5	clear
4/15/2010	2	Ince	1230	62	5/10	30	patchy
4/15/2010	2	Ince	1315	64	3/8	30	patchy
4/15/2010	2	Ince	1415	66	2/5	30	patchy
4/15/2010	2	Ince	1515	70	2/5	30	patchy
4/15/2010	2	Ince	1615	70	2/5	30	patchy
4/15/2010	2	Flietner	1215	68	8/12	30	patchy
4/15/2010	2	Flietner	1415	73	5/10	100	overcast
4/15/2010	2	Flietner	1515	71	4/6	90	overcast
4/15/2010	2	Flietner	1545	73	4/7	100	overcast
4/15/2010	2	Flietner	1615	72	3/7	100	overcast
4/15/2010	2	Faulkner	1100	64	9	0	clear
4/15/2010	2	Faulkner	1200	67	10	10	patchy
4/15/2010	2	Faulkner	1300	69	11	10	patchy
4/15/2010	2	Flietner	855	61	5/8	0	clear
4/15/2010	2	Flietner	1155	70	5/10	0	clear
4/15/2010	2	Behle	1135	68	3/4	0	clear
4/15/2010	2	Behle	1340	75	4/7	na	overcast

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
4/15/2010	2	Jensen	1130	76	3/4	1	clear
4/15/2010	2	Jensen	1345	75	4/7	1	clear
4/15/2010	2	Behle	910	63	3.9/4.4	0	clear
4/15/2010	2	Jensen	910	63	4/5	1	clear
4/15/2010	2	Behle	1545	76	1/3	na	overcast
4/16/2010	2	Gutierrez	900	68	0	5	clear
4/16/2010	2	Gutierrez	1000	74	2	0	clear
4/16/2010	2	Gutierrez	1115	78	2	0	clear
4/16/2010	2	Gutierrez	1124	78	2	0	clear
4/16/2010	2	Gutierrez	1500	78	2/7	0	clear
4/16/2010	2	Flietner	845	58	3/5	0	clear
4/16/2010	2	Flietner	905	61	4/7	0	clear
4/16/2010	2	Flietner	1415	73	7/12	0	clear
4/16/2010	2	Flietner	1515	72	8/15	0	clear
4/16/2010	2	Heath / Innecken	915	62.5	3.6/6.6	0	clear
4/16/2010	2	Heath / Innecken	1030	64.5	2.5/4.3	0	clear
4/16/2010	2	Heath / Innecken	1200	67.3	2.1/4.4	0	clear
4/16/2010	2	Heath / Innecken	1400	67	6.8/14.2	0	clear
4/16/2010	2	Heath / Innecken	1500	62	8.3/12.9	0	clear
4/17/2010	2	Jensen	930	62	1/2	25	patchy
4/17/2010	2	Jensen	1420	70	1/2.5	25	patchy
4/17/2010	2	Heath	900	64.7	6.7/9.3	100	overcast
4/17/2010	2	Heath	1000	65.6	4.5/8.7	100	overcast
4/17/2010	2	Heath	1130	70.2	4.9/7.6	100	overcast
4/17/2010	2	Heath	1330	68.2	4.8/9.0	100	overcast
4/17/2010	2	Heath	1500	70.1	2.8/5.0	100	overcast
4/17/2010	2	Couffer	1350	76	0/3	100	overcast
4/17/2010	2	Couffer	1400	76	0/3	100	overcast
4/17/2010	2	Couffer	1500	75	0/4	100	overcast
4/17/2010	2	Couffer	1600	75	0/2	100	overcast
4/18/2010	2	Heath	900	66	0/2	50	clear
4/18/2010	2	Heath	1100	68.6	3.8/4.7	10	clear
4/18/2010	2	Heath	1300	71.2	4.6/10.9	0	clear
4/18/2010	2	Heath	1500	70.2	5.5/10.6	0	clear
4/19/2010	2	Flietner	1040	66	5/8	30	patchy
4/19/2010	2	Flietner	1240	68	5/10	10	clear
4/18/2010	3	Calantas	920	66	3.2/4.8	50	patchy

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
4/18/2010	3	Calantas	1000	68.6	2.1/3.0	60	patchy
4/18/2010	3	Calantas	1100	71.3	2.4/3.8	30	clear
4/18/2010	3	Calantas	1200	72.3	3.5/5.7	20	clear
4/18/2010	3	Calantas	1300	71.2	3.0/4.2	20	clear
4/18/2010	3	Calantas	1400	73.1	2.1/3.8	0	clear
4/18/2010	3	Calantas	1500	71.3	2.3/2.3	0	clear
4/19/2010	3	Flietner	1250	75	4/7	30	patchy
4/19/2010	3	Flietner	1520	78	10/15	50	patchy
4/19/2010	3	Gutierrez / Innecken	1100	76	1/2	10	clear
4/19/2010	3	Gutierrez / Innecken	1200	74	3.7/6.6	10	clear
4/19/2010	3	Gutierrez / Innecken	1300	70	3/4.2	15	clear
4/19/2010	3	Gutierrez / Innecken	1400	78	3/4.2	40	patchy
4/19/2010	3	Gutierrez / Innecken	1510	78	3/4.2	50	patchy
4/19/2010	3	Jensen	1348	70	3/5	20	patchy
4/19/2010	3	Jensen	1540	70	2/4	20	patchy
4/19/2010	3	Jensen	1055	63	1/1	25	patchy
4/19/2010	3	Jensen	1120	na	5/8	25	patchy
4/19/2010	3	Jensen	1301	70	5/9	10	clear
4/20/2010	3	Jensen	1300	71	8/13	45	patchy
4/20/2010	3	Jensen	1345	71	15	45	patchy
4/20/2010	3	Jensen	1400	71	10/13	45	patchy
4/20/2010	3	Jensen	1415	71	8/13	45	patchy
4/20/2010	3	Flietner	945	66	5/8	40	patchy
4/20/2010	3	Flietner	1018	66	12/18	50	patchy
4/20/2010	3	Flietner	1115	68	8/12	70	patchy
4/20/2010	3	Flietner	1230	80	10/20	80	patchy
4/20/2010	3	Gutierrez	954	70	0/2	20	patchy
4/20/2010	3	Gutierrez	1155	72	2/5.7	20	patchy
4/20/2010	3	Gutierrez	1255	68	4.4/6.4	40	patchy
4/20/2010	3	Gutierrez	1455	66	5.2/13.6	40	patchy
4/20/2010	3	Gutierrez	1600	67	9.2/6.6	40	patchy
4/24/2010	3	Heath	830	60.2	3.6/4.6	0	clear
4/24/2010	3	Heath	1030	70.5	2.2/3.2	0	clear
4/24/2010	3	Heath	1130	69.8	3.5/7.1	0	clear
4/24/2010	3	Heath	1330	72.3	2.1/2.8	0	clear
4/24/2010	3	Heath	1530	70.5	8.0/11.5	0	clear
4/23/2010	3	Heath / Bergman	1000	45.7	4.0/5.5	0	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
4/23/2010	3	Heath / Bergman	1100	53	2.6/4.7	0	clear
4/23/2010	3	Heath / Bergman	1200	61.5	2.7/4.9	0	clear
4/23/2010	3	Heath / Bergman	1330	59.8	3.6/7.9	0	clear
4/23/2010	3	Heath / Bergman	1430	60.8	6.5/9.8	0	clear
4/23/2010	3	Heath / Bergman	1600	54	7.5/10.9	0	clear
4/23/2010	3	Ince	1220	62	2/8	0	clear
4/23/2010	3	Ince	1320	62	2/10	0	clear
4/23/2010	3	Ince	1530	62	2/10	0	clear
4/23/2010	3	Ince	1615	62	2/8	0	clear
4/24/2010	3	Flietner	915	66	0/2	0	clear
4/24/2010	3	Flietner	1005	72	0/2	0	clear
4/24/2010	3	Flietner	1030	69	4/7	0	clear
4/24/2010	3	Flietner	1600	73	4/7	0	clear
4/25/2010	3	Heath / Bergman	830	72.5	1.5/2.1	0	clear
4/25/2010	3	Heath / Bergman	1100	77	1.2/3.8	0	clear
4/25/2010	3	Heath / Bergman	1300	73.1	1.2/4.4	0	clear
4/25/2010	3	Heath / Bergman	1500	72.3	1.8/3.1	0	clear
4/26/2010	3	Ince	900	68	0/5	5	clear
4/26/2010	3	Ince	1000	70	0/5	5	clear
4/26/2010	3	Ince	1100	76	0/5	5	clear
4/26/2010	3	Ince	1200	76	0/5	0	clear
4/26/2010	3	Ince	1500	77	1/5	0	clear
4/26/2010	3	Flietner	900	65	0-2	10	clear
4/26/2010	3	Flietner	1415	77	0/3	20	clear
4/26/2010	3	Behle	852	72	0/1	10	clear
4/26/2010	3	Behle	1120	74	3/7	10	clear
4/26/2010	3	Behle	1145	77	2/7	15	clear
4/26/2010	3	Behle	1510	84	2/7	5	clear
4/26/2010	3	Gutierrez	930	76	0/2	2	clear
4/26/2010	3	Gutierrez	1130	79	1.5/5	2	clear
4/26/2010	3	Gutierrez	1230	80	1.5/5	2	clear
4/26/2010	3	Gutierrez	1430	80	0/1	2	clear
4/26/2010	3	Gutierrez	1630	79	1,5/5	2	clear
4/26/2010	4	LaCoste/Fisher	900	68	2/4	5	clear
4/26/2010	4	LaCoste/Fisher	1400	80	2/4	5	clear
4/26/2010	4	LaCoste/Fisher	1530	71	4/8	5	clear
4/26/2010	4	Rink	930	65	2-3/5	5	patchy

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
4/26/2010	4	Rink	1040	70	2-3/5	5	patchy
4/26/2010	4	Rink	1130	70	3-5/6	5	patchy
4/26/2010	4	Rink	1230	68	3-5/6	5	patchy
4/26/2010	4	Rink	1328	70	2-3/5	5	patchy
4/26/2010	4	Rink	1440	69	1-2/3	5	patchy
4/26/2010	4	Rink	1530	69	1-2/3	5	patchy
4/27/2010	4	Flietner	1225	74	5/9	10	clear
4/27/2010	4	Flietner	1500	74	7/12	25	patchy
4/27/2010	4	Flietner	1545	74	10/15	25	patchy
4/27/2010	4	Flietner	845	65	3/6	10	clear
4/27/2010	4	Flietner	1100	72	7/10	10	clear
4/27/2010	4	Flietner	1210	74	5/8	10	clear
4/27/2010	4	Gutierrez	900	66	2.1/5	2	clear
4/27/2010	4	Gutierrez	1000	72	1.2/3	5	clear
4/27/2010	4	Gutierrez	1100	74	4.2/9	5	clear
4/27/2010	4	Gutierrez	1200	74	1.8/6.9	10	clear
4/27/2010	4	Gutierrez	1300	74	4/7.2	15	clear
4/27/2010	4	Gutierrez	1400	74	5.1/10.1	40	patchy
4/27/2010	4	Gutierrez	1440	71	4.5/9	40	patchy
4/27/2010	4	Behle	1030	71	2/7	0	clear
4/27/2010	4	Behle	1500	77	11/15	10	clear
4/27/2010	4	Ince	930	71	2/7	0	clear
4/27/2010	4	Ince	1030	74	na	na	na
4/27/2010	4	Ince	1230	na	12	na	na
4/27/2010	4	Ince	1330	na	na	na	na
4/27/2010	4	Ince	1500	77	11/15	0	clear
5/1/2010	4	Heath	800	58.9	2.3/5.1	0	clear
5/1/2010	4	Heath	1150	63.2	2.1/6.8	0	clear
5/1/2010	4	Heath	1400	62.3	6.1/9.8	0	clear
5/1/2010	4	Heath	1600	62.8	4.7/8.7	0	clear
5/2/2010	4	Heath	1030	61.5	1.1/2.8	0	clear
5/2/2010	4	Heath	1230	65.1	2.1/2.8	0	clear
5/2/2010	4	Heath	1430	68.8	2.1/4	0	clear
5/2/2010	4	Heath	1630	69.8	2.1/4.5	0	clear
5/3/2010	4	Gutierrez	900	67	.7/3.4	0	clear
5/3/2010	4	Gutierrez	1300	70	5.5/12.6	0	clear
5/3/2010	4	Gutierrez	1100	72	1.3/5.7	0	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
5/3/2010	4	Gutierrez	1200	72	0/1.7	0	clear
5/3/2010	4	Gutierrez	1300	72	1/5	0	clear
5/3/2010	4	Gutierrez	1400	72	1/5	0	clear
5/3/2010	4	Gutierrez	1530	72	1/5	0	clear
5/3/2010	4	Rink	845	61	2/5	0	clear
5/3/2010	4	Rink	922	63	10-12/19	0	clear
5/3/2010	4	Rink	1030	67	10-12/13	0	clear
5/3/2010	4	Rink	1130	65	10-12/13	0	clear
5/3/2010	4	Rink	1230	67	8-10/12	0	clear
5/3/2010	4	Rink	1309	72	10-12/14	0	clear
5/3/2010	4	Rink	1430	70	8-10/12	0	clear
5/3/2010	4	Rink	1545	70	6/8	0	clear
5/3/2010	4	LaCoste	845	60	5/9	0	clear
5/3/2010	4	LaCoste	1030	67	7/10	0	clear
5/3/2010	4	LaCoste	1130	64	5/5	0	clear
5/3/2010	4	LaCoste	1200	69	3/7	0	clear
5/3/2010	4	Behle	855	64	1/5	0	clear
5/3/2010	4	Behle	950	67	2/7	0	clear
5/3/2010	4	Behle	1025	70	3/7	0	clear
5/3/2010	4	Behle	1415	76	1/6	0	clear
5/3/2010	4	Behle	1430	84	0/1	0	clear
5/3/2010	4	Behle	1550	80	1/3	0	clear
5/4/2010	4	Rink	845	64	2/5	0	clear
5/4/2010	4	Rink	1030	70	3/6	0	clear
5/4/2010	4	Rink	1130	72	5/9	0	clear
5/4/2010	4	Rink	1230	74	5/10	0	clear
5/4/2010	4	Rink	1300	78	3/7	0	clear
5/4/2010	4	Rink	1400	80	8/12	0	clear
5/4/2010	4	Rink	1515	80	8/12	0	clear
5/5/2010	4	Rink	830	72	10/15	0	clear
5/5/2010	4	Rink	930	69	10/17	0	clear
5/5/2010	4	Rink	1030	69	10/19	0	clear
5/5/2010	4	Rink	1130	70	12/18	0	clear
5/5/2010	4	Rink	1230	71	10/17	0	clear
5/5/2010	4	Rink	1330	70	10/19	0	clear
5/6/2010	4	Gutierrez / Krantz	945	74	0/3	0	clear
5/6/2010	4	Gutierrez / Krantz	1045	76	0/5	0	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
5/6/2010	4	Gutierrez / Krantz	1245	76	1/5	0	clear
5/6/2010	4	Gutierrez / Krantz	1430	76	1.5/10	0	clear
5/6/2010	5	Gutierrez / Krantz	1450	75	4/10	0	clear
5/6/2010	5	Gutierrez / Krantz	1630	73	4/10	0	clear
5/7/2010	5	Hendricks	950	67.7	1/5	0	clear
5/7/2010	5	Hendricks	1035	68.3	2/4	0	clear
5/7/2010	5	Hendricks	1155	78.7	1/6	0	clear
5/7/2010	5	Hendricks	1255	80.6	2/9	0	clear
5/7/2010	5	Hendricks	1405	79.5	1/4	0	clear
5/7/2010	5	Hendricks	1499	73.1	0/8	0	clear
5/7/2010	5	Hendricks	1612	78.7	3/7	0	clear
5/7/2010	5	Heath	830	63.2	1.8/3	0	clear
5/7/2010	5	Heath	930	69.3	1.2/2.4	0	clear
5/7/2010	5	Heath	1200	69.9	3.6/5.3	0	clear
5/7/2010	5	Heath	1500	74	1.6/4.9	0	clear
5/7/2010	5	Heath	1600	73.2	2.3/5.7	0	clear
5/14/2010	5	Gutierrez	900	68	2/8	0	clear
5/14/2010	5	Gutierrez	1000	71	2/7	0	clear
5/14/2010	5	Gutierrez	1100	74	5/10	2	clear
5/14/2010	5	Gutierrez	1200	76	3/6	2	clear
5/14/2010	5	Gutierrez	1300	78	3/6	2	clear
5/14/2010	5	Gutierrez	1400	78	2/7	10	clear
5/14/2010	5	Gutierrez	1600	78	2/6	20	clear
5/14/2010	5	Rink / Krantz	845	71	1/2	0	clear
5/14/2010	5	Rink / Krantz	1005	73	1/2	0	clear
5/14/2010	5	Rink / Krantz	1100	75	1/3	0	clear
5/14/2010	5	Rink / Krantz	1230	70	3/5	0	clear
5/14/2010	5	Rink / Krantz	1500	71	5/7	0	clear
5/14/2010	5	Ince	850	68	0/5	0	clear
5/14/2010	5	Ince	1000	70	0/5	0	clear
5/14/2010	5	Ince	1100	72	0/5	0	clear
5/14/2010	5	Ince	1230	76	0/5	0	clear
5/14/2010	5	Ince	1400	77	0/5	0	clear
5/16/2010	5	Gutierrez / Krantz	845	75	1/6	0	clear
5/16/2010	5	Gutierrez / Krantz	1000	76	2/10	0	clear
5/16/2010	5	Gutierrez / Krantz	1030	76	2/10	0	clear
5/8/2010	5	Heath	900	68	2.1/3.9	0	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
5/8/2010	5	Heath	1030	72	3.9/5.6	0	clear
5/8/2010	5	Heath	1230	74	2.5/7	0	clear
5/8/2010	5	Heath	1400	73	3.2/6.7	0	clear
5/8/2010	5	Heath	1530	75	5.5/13.1	0	clear
5/8/2010	5	Hendricks	845	64	9/12	0	clear
5/8/2010	5	Hendricks	950	75	2/5	0	clear
5/8/2010	5	Hendricks	1050	73	5/12	0	clear
5/8/2010	5	Hendricks	1150	73	7/14	0	clear
5/8/2010	5	Hendricks	1430	74	5/9	0	clear
5/8/2010	5	Hendricks	1530	72	5/10	0	clear
5/8/2010	5	Hendricks	1615	71	5/8	0	clear
5/12/2010	5	Gutierrez	840	64	0	0	clear
5/12/2010	5	Gutierrez	940	68	0/1	0	clear
5/12/2010	5	Gutierrez	1040	70	0/3	0	clear
5/12/2010	5	Gutierrez	1240	74	1/6	0	clear
5/12/2010	5	Gutierrez	1340	75	1/8	2	clear
5/12/2010	5	Gutierrez	1440	75	2/8	2	clear
5/12/2010	5	Gutierrez	1600	71	4/12	5	clear
5/12/2010	5	Ince	830	63	0/2	0	clear
5/12/2010	5	Ince	930	64	0/2	0	clear
5/12/2010	5	Ince	1130	72	0/2	0	clear
5/12/2010	5	Ince	1330	77	2/5	0	clear
5/12/2010	5	Ince	1400	78	2/5	0	clear
5/12/2010	5	LaCoste	845	60	2/4	0	clear
5/12/2010	5	LaCoste	1045	65	4/8	0	clear
5/12/2010	5	LaCoste	1100	63	4/8	0	clear
5/12/2010	5	LaCoste	1300	65	4/8	0	clear
5/12/2010	5	Behle	850	60	0/1	0	clear
5/12/2010	5	Behle	1500	76	6/9	10	clear
5/13/2010	5	Powell	835	71	2/4	0	clear
5/13/2010	5	Powell	1045	70	4/5	0	clear
5/13/2010	5	Powell	1120	78	3/6	0	clear
5/13/2010	5	Powell	1140	75	6/8	0	clear
5/13/2010	5	Powell	1330	77	4/5	0	clear
5/13/2010	5	Powell	1600	70	6/7	0	clear
5/13/2010	5	Couffer	848	75	0/2	0	clear
5/13/2010	5	Couffer	900	75	0/3	0	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
5/13/2010	5	Couffer	1000	75	0/4	0	clear
5/13/2010	5	Couffer	1100	74	0/7	0	clear
5/13/2010	5	Couffer	1200	71	2/6	0	clear
5/13/2010	5	Couffer	1300	73	2/7	0	clear
5/13/2010	5	Couffer	1400	81	0/2	20	clear
5/13/2010	5	Couffer	1500	73	0	20	patchy
5/13/2010	5	Couffer	1600	72	4/7	30	patchy
5/14/2010	6	Hendricks	855	65	4/8	0	clear
5/14/2010	6	Hendricks	1040	79	2/3	0	clear
5/14/2010	6	Hendricks	1145	82	4/6	0	clear
5/14/2010	6	Hendricks	1255	77	2/4	5	clear
5/14/2010	6	Hendricks	1400	76	4/5	8	clear
5/14/2010	6	Hendricks	1510	79	1/13	20	patchy
5/14/2010	6	Hendricks	1540	77	1/2	10	clear
5/14/2010	6	Behle	900	70	5/11	0	clear
5/14/2010	6	Behle	1320	73	4/9	5	clear
5/14/2010	6	Behle	1320	73	1/8	5	clear
5/14/2010	6	Behle	1530	74	1/6	20	patchy
5/16/2010	6	Hendricks / Anguiano	900	72	2/3	0	clear
5/16/2010	6	Hendricks / Anguiano	1050	77	1/2	0	clear
5/16/2010	6	Hendricks / Anguiano	1150	81	2/5	0	clear
5/16/2010	6	Hendricks / Anguiano	1310	85	2/5	0	clear
5/16/2010	6	Hendricks / Anguiano	1400	83	2/3	0	clear
5/16/2010	6	Hendricks / Anguiano	1555	82	2/4	0	clear
5/16/2010	6	Gutierrez / Krantz	1030	78	2/10	0	clear
5/16/2010	6	Gutierrez / Krantz	1230	78	4/12	0	clear
5/16/2010	6	Gutierrez / Krantz	1330	78	4/14	0	clear
5/16/2010	6	Gutierrez / Krantz	1430	78	4/10	2	clear
5/16/2010	6	Couffer	845	76	0/3	0	clear
5/16/2010	6	Couffer	900	76	0/4	0	clear
5/16/2010	6	Couffer	1000	76	3/7	0	clear
5/16/2010	6	Couffer	1100	76	5/13	0	clear
5/16/2010	6	Couffer	1200	79	2/7	0	clear
5/16/2010	6	Couffer	1300	80	2/8	0	clear
5/16/2010	6	Couffer	1400	79	1/6	0	clear
5/16/2010	6	Couffer	1500	80	1/5	0	clear
5/16/2010	6	Couffer	1600	81	1/3	0	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
5/16/2010	6	Couffer	1620	76	2/7	0	clear
5/17/2010	6	LaCoste	1040	64	5/7	100	overcast
5/17/2010	6	LaCoste	1230	68	3/6	100	overcast
5/17/2010	6	LaCoste	1330	63	5/10	60	overcast
5/17/2010	6	LaCoste	1345	64	7/12	70	overcast
5/17/2010	6	Rink	1100	64	8/10	100	overcast
5/17/2010	6	Gutierrez	1100	62	8/10	100	overcast
5/17/2010	6	Gutierrez	1314	65	8/15	100	overcast
5/17/2010	6	Heath	1000	60	2.5/5	100	overcast
5/17/2010	6	Heath	1100	65	2.3/5	100	overcast
5/17/2010	6	Heath	1200	62	4/9	100	overcast
5/17/2010	6	Heath	1300	62	4/10	100	overcast
5/20/2010	6	Couffer	1325	84	0/4	0	clear
5/20/2010	6	Couffer	1400	80	0/5	0	clear
5/20/2010	6	Couffer	1500	79	2/6	0	clear
5/20/2010	6	Couffer	1600	82	1/4	0	clear
5/19/2010	6	Powell	1350	78	7/10	0	clear
5/19/2010	6	Powell	1515	78	5/7	5	clear
5/19/2010	6	Powell	1615	73	6/9	5	clear
5/19/2010	6	Rink	830	70	2/3	0	clear
5/19/2010	6	Rink	1100	72	5/7	0	clear
5/19/2010	6	Rink	1330	73	5/7	0	clear
5/19/2010	6	Rink	1545	73	8/10	0	clear
5/19/2010	6	Heath	845	62	1/3	0	clear
5/19/2010	6	Heath	1000	67	2/5	0	clear
5/19/2010	6	Heath	1130	72	3/5	0	clear
5/19/2010	6	Heath	1300	74	2/4	0	clear
5/19/2010	6	Heath	1530	73	2.7/3	0	clear
5/19/2010	6	Gutierrez	845	61	2/3	0	clear
5/19/2010	6	Gutierrez	1000	74	1/3	0	clear
5/19/2010	6	Gutierrez	1200	78	1/6	0	clear
5/19/2010	6	Gutierrez	1400	78	1/6	0	clear
5/19/2010	6	Gutierrez	1500	78	1/6	0	clear
5/19/2010	6	Gutierrez	1600	78	3/6	2	clear
5/19/2010	6	Behle	955	71	1/2	0	clear
5/19/2010	6	Behle	1505	66	1/6	0	clear
5/19/2010	6	Behle	840	65	1/2	0	clear

Date	Survey Week	Personnel	Time	Temperature (°F)	Wind Speed Average/ Maximum (mph)	Cloud Cover (%)	General Sky Condition
5/19/2010	6	Behle	945	71	1/2	0	clear
5/19/2010	6	LaCoste	850	71	1/2	0	clear
5/19/2010	6	LaCoste	1100	78	2/5	0	clear
5/19/2010	6	LaCoste	1200	80	3/7	0	clear
5/20/2010	6	Powell	830	68	8/10	0	clear
5/20/2010	6	Powell	1015	73	9/12	0	clear
5/20/2010	6	Powell	1040	74	10/12	0	clear
5/20/2010	6	Powell	1145	73	8/14	0	clear
5/20/2010	6	Powell	1245	79	6/8	0	clear
5/20/2010	6	Couffer	1345	77	5/8	0	clear
5/20/2010	6	Couffer	1400	77	3/9	0	clear
5/20/2010	6	Couffer	1500	76	3/6	0	clear

APPENDIX B

FIELD DATA SHEETS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Steve Rivle Add'l Person: JIMMY MCMORROW Date: 3/29/10

Project: ~~Campo~~ MANZANITA Wind Energy Project Map #: 9 Survey Sxn: MANZ-L

GPS Unit : SM 14 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	11:00	73.5	1-2 mph	20%	clear	patchy	overcast	drizzle	shower
	12:00	80.0	1-2	20%	clear	patchy	overcast	drizzle	shower
	13:00	79.0	~~1-2~~ 5-7	20%	clear	patchy	overcast	drizzle	shower
	14:08	77.0	7-9	40%	clear	patchy	overcast	drizzle	shower
	15:00	76.0	7-9	30%	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
Common White	1	1
Pearl. Hairstreak	~~1111~~ ~~1111~~ ~~1111~~ 111	18
Sara's Orangetip	111	3
Blue sp.	~~1111~~ ~~1111~~ ~~1111~~ 11	17
Sulphur sp.	1	1
Behr's metalmark	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)
SDHL01	pt.	SD horned lizard
SDOW01	pt.	Orange throated whiptail
SDBJ01	pt.	Black Tailed ~~Jackrabbit~~ Jackrabbit
		Scja
		Cotn
		Darkeyed junko
		Lago
		Lowo
		Cati
		Copa
		Anhu
		Buti
		Ocwa
		granite spiny lizard
		hola
		Blchhum
		Lasp

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: GRR STEVE R. Add'l Person: ——— Date: 3/30/10

Project: MANZANITA ~~Campo~~ Wind Energy Project Map #: 5 Survey Sxn: MANZ-D

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

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1200	70	14	10%	clear	patchy	overcast	drizzle	shower
	1300	70	13.7	10%	clear	patchy	overcast	drizzle	shower
	1400	69	14.5	10%	clear	patchy	overcast	drizzle	shower
	1500	69	14.7	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
Com. white	1	1
Brown elfin	111	3
Lorquin Admiral	11	2
Perplexing Hairstreak	𝍸	5
Tort. Shell	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)
		Black diamond sparrow
SRWR-01	pt.	neotoma sp. nest. woodrat
		Buti
		Wasp
		CATh
SRWR02	pt	neotoma spp. nest.

TOTAL NUMBER OF QCB DETECTED: 2 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Adam Behle (MIA) Add'l Person: Jimmy McMorran Date: 3/30/10

Project: MAN2 Campo Wind Energy Project Map #: 2 Survey Sxn: MAN2-D

GPS Unit : Garmin 4 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1237	74°	4/11	10%	(clear)	patchy	overcast	drizzle	shower
	1300	73°	6/14	10%	(clear)	patchy	overcast	drizzle	shower
	1400	73°	8/14	5%	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1500	74°	8/13	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
? SKIPPER - DUSKY BANDED FRECKLED, BRIGHT RED HIND	IIII	5
(PONTIA SP)	I	1
PERPLEXING HAIRSTREAK (CALOPHRYS PERPLEXA)	III	3
1 ASH - (VANESSA SP)	I	1
SARA'S ORANGE TIP (ANTHOCHARIS SARA)	IIII I	6

UNITED # OF SPECIES

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)
		CATTLE
		WSJA
		WCSP
ABSG01	POINT	MULTIPLE INDIVIDUALS DETECTED IN AREA
		HOLA
ABSG02	POINT	ONE OBSERVED ON CHAMISE IN OPEN CHAP.
		TIVI
		OATI
		CORA
		YRWA
		ANHU
		WEKI
		SPTO

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Antonette Gothard Add'l Person: None Date: 2 Apr 16

Project: ~~Campo~~ Manzanita Wind Energy Project Map #: Tile 6 Survey Sxn: Manz-5

GPS Unit : 7 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1200	61.9	2.5 / 8.6	5	(clear)	patchy	overcast	drizzle	shower
	1300	70.7	1.4 / 12.5	2	(clear)	patchy	overcast	drizzle	shower
	1400	75.2	1.6 / 10.5	2	(clear)	patchy	overcast	drizzle	shower
	1500	75.2	2.5 / 7.3	2	(clear)	patchy	overcast	drizzle	shower
	1600	70.5	1.5 / 3.3	10	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1630	70.5	1.5 / 8.3	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
Pacific orangetip	1	5
Unid white	11	2
Sara's Orangetip	111	3
Funereal Duskywing	1111	4
Common White	1111	5
Acmon Blue	1	1
1419 QCB Checkerspot hilltopping	1	1
Sulphur sp. hilltopping	11	2

Gonia 7

4/2/10

qty M.J

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 sp. Eastwoo
		Amsinckia menz. Fiddleneck
		[illegible]
		unid Orobanche moth
		Nemophila menz. Baby Blue eyes
		CAOG
AGBJ 1	1 Jackrabbit	In S. mix chaps
		CORA
		Cottonwood seedling 1
		Shrubby black mustard
		DEJU
		GRHO 1
[illegible]	[illegible]	along drainage
AGBJ 1	1 Jackrabbit	along drainage in dense vegetation
		ANHU 1
		Coyote scat
		mostly open trails/open areas [illegible]
AGBJ 1	QCB	Plain bellied
0561054	1 checkerspot 3623122	Hilltopping tattered hindwings faded orange edge
		in open sandy soil [illegible]
		WESC southern mixed Chap. open and disturbed.
		COBU

TOTAL NUMBER OF QCB DETECTED: 1 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Antonette Gutierrez Add'l Person: None Date: 4/6/10

Project: ~~Campo~~ MAR2 Wind Energy Project Map #: 4 Survey Sxn: G

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

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1115	65.3	3.0/5.1	0	clear	patchy	overcast	drizzle	shower
	1200	64.2	6.5/12.8	0	clear	patchy	overcast	drizzle	shower
	1300	65.3	7.7/10.4	0	clear	patchy	overcast	drizzle	shower
	1400	63.0	5.6/8.1	0	clear	patchy	overcast	drizzle	shower
	1530	69.0	4.0/8.2	0	clear	patchy	overcast	drizzle	shower
	1630	66.4	4.2/8.5	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's Orangetip	1111	4
Enreed's Dusky Wing	1111 1111	10
Rhesus Checkerspot	1111 1111 1	11
Mournful Dusky wing	1	1
Unid white Pi ~ 25 away	1	1
Common white	11	2
Woodland Skipper	11	2
Painted Lady	1	1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Antonette Gutierrez
4/06/10 MSH-G

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
AGBJ 1	Jackrabbit	along road
		Eriodictyon cal C
		~~Plag~~ Plagiobothrys
		cryptantha
		CAQU III
		WESJ IIII
		COBU II
		Amsinkia
		Sugarbush-
		Ceanothus
AGNL 1	Woodrat nest	SP. woodrat nest in Oak trails to rock outcrop
AGNL 2	" "	SP " " in Oak
		Baby Blue Eyes
		Wild cucumber
AGSG 1	Sage sparrow spr	~~Sage~~ SASP pr in oaks and buckwheat
		CORA II
		TOYU I
		YUBA III
AGBJ 2	Jackrabbit	in SAGE
		WEME III I

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: ERIK LaCoste (Manzanita) Add'l Person: — Date: 3/29/10

Project: ~~Campo~~ Wind Energy Project Map #: 10 & 12 Survey Sxn. _____

GPS Unit: 3 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0945	67	1.0/3.0	0	(clear)	patchy	overcast	drizzle	shower
	1207	79	2.0/5.9	15	(clear)	patchy	overcast	drizzle	shower
	2:00	75	6.0/9.0	30	clear	(patchy)	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	4:00	72	7.0/10.0	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	II	2
Sara orangetip	IIII IIII III	13
Perplexing hairstreak	IIII IIII IIII	14
Duskywing (sp. dark, flyby)	IIII	4
Lupine Blue	I	1
Behr metalmark	II	2
~~Bear~~ California Marble	IIII I	6
Sulfur (sp. Fly-by)	I	1
Acmon Blue	I	1
Common Sootywing	II	2
California Tortoiseshell	II	2
Funereal Duskywing	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)
ELHL01	Point	S.D. HORNED LIZARD.
ELNL01	Point	S.D. WOODRAT MIDDEN
		Plagiobothrys SP.
		Erodium SP.
		Lasthenia Cal. Fornica
		Camissonia SP.
		Calycoseris parryii
		Layia Glandulosa
		Baby blue eyes.
		Amsinkia menziesii
		Cryptantha SP.
		Camanthus heterophyllus
		Eschscholzia Californica
		ARABIS SP.
		Phacelia SP.
ELNL02	Point	SD woodrat
ELNL03	Point	S.D. woodrat.

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: Ø Date: 2 APRIL, 2010

Project: ~~Campo~~ Manzanita Wind Energy Project Map #: TILE 9 Survey Sxn: MANZ - K

GPS Unit : CAMPO/MANZANITA, GARMIN 5 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1200	59	Ø->3 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	68	Ø->3 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1400	63	Ø->2 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1500	65	Ø->3 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1600	65	3->6 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1610	64°F	3->6 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) VERY LITTLE NECTAR

Butterfly Species	Tally	Total
BEHR'S METALMARK	𝍸 𝍸 II	12
ACMON BLUE	𝍸 I	6
CALIFORNIA MARBLE	𝍸 𝍸 II	12
FUNEREAL DUSKYWING	𝍸 𝍸 I	11
CALIFORNIA TORTOISESHELL	II	2
FRITILLARY SP.	II	2
PAINTED LADY	III	3
PERPLEXING HAIRSTREAK	𝍸 𝍸 𝍸	15
THE MAP WAS LABELED AS MANZ-K; HOWEVER, THE MAJORITY OF THE MAP COVERED MANZ-L, WEST OF THE JUNCTION OF ROUTE 14 AND ROUTE 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)
MCLA01	POINT	(WGS 84) 11S 0561552, 3623499
MCQB01	POINT	SINGLE FRESH ADULT
MCLA02	POINT	SINGLE INDIVIDUAL
MCLA03	POINT	SIX INDIVIDUALS IN CLOSE ASSOCIATION

TOTAL NUMBER OF QCB DETECTED: 1 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Mike Coulters Add'l Person: Ø Date: 3 April, 2010

Project: ~~Campo Wind~~ Manzanita Energy Project Map #: MAP TILE 6 Survey Sxn: MANZANITA J

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

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1030	63	3→7	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	63	9→13	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	73	3→7	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	66	Ø→4	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1400	63	5→11	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1500	60	8→13	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
PERPLEXING HAIRSTREAK	TALLY IN FIELD NOTEBOOK	21
PAINTED LADY	"	12
BEHRS METALMARK	"	130+
FUNEREAL DUSKYWING	"	22
QUINO CHECKERSPOT	"	1
CALIFORNIA MARBLE	"	2
CALIFORNIA TORTOISESHELL	"	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)
MCLA01	POINT	(WGS84) 11S 0561552, 3623499
MCQB01	POINT	SINGLE FRESH ADULT
MCLA02	POINT	SINGLE INDIVIDUAL
MCLA03	POINT	SIX INDIVIDUALS IN CLOSE ASSOCIATION

TOTAL NUMBER OF QCB DETECTED: 1 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Mike Coulter Add'l Person: Ø Date: 3 April, 2010

Project: ~~Campo~~ Manzanita Wind Energy Project Map #: MAP TILE 6 Survey Sxn: MANZANITA J

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

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1030	63	3→7	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	63	9→13	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	73	3→7	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	66	Ø→4	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1400	63	5→11	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1500	60	8→13	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
PERPLEXING HAIRSTREAK	TALLY IN FIELD NOTEBOOK	21
PAINTED LADY	"	12
BEHRS METALMARK	"	130+
FUNEREAL DUSKYWING	"	22
QUINO CHECKERSPOT	"	1
CALIFORNIA MARBLE	"	2
CALIFORNIA TORTOISESHELL	"	3

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Bonnie Hendricks Add'l Person: none Date: 4/13/10

Project: Manzanita ~~Campo~~ Wind Energy Project Map #: 6 Survey Sxn: Manz-M

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

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	11:00	58°	11/18	0	clear	patchy	overcast	drizzle	shower
	12:00	66°	7/11	0	clear	patchy	overcast	drizzle	shower
	1:00	62°	9/16	0	clear	patchy	overcast	drizzle	shower
	2:00	64°	4/8	2%	clear	patchy	overcast	drizzle	shower
	3:00	59°	7/14	2%	clear	patchy	overcast	drizzle	shower
END	4:00	64°	13/19	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
Perplexing hairstreak	𝍸 𝍸 | | |	11
Sarah's Orangetip	𝍸 𝍸 | | |	8
White sp.	| |	2
Duskywing	|	1
California Ringlet	| |	2
Brown Elfin	|	1
Western Tailed Blue	| |	2
Sphinx Moth	|	1
Behr's metalmark	|	1
Lady sp.	| |	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)
		YRWA, CORA, SCJA, SPTO
		Cattle
		Bees, Moths, Ants Very Sparse
		Nectar Sources: Plagiobothrys sp.,
		Gilia sp., Ceanothus greggii, Arct

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE CUEVAS Add'l Person: ERIN BERGMAN Date: 4 APRIL, 2010

Project: Manzanita Wind Energy Project Map #: 6 Survey Sxn: MANZ-L

GPS Unit : 7 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1100	60	5→12 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	58	8→17 MPH	CLEAR	(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
VERY LITTLE NECTAR

Butterfly Species	Tally	Total
PAINTED LADY	IIII	7
REDBACK WHITEMARK	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)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER, MANZ Add'l Person: NONE Date: 6 APRIL, 2010

Project: Campo Wind Energy Project Map #: 6 Survey Sxn: MANZ-L

GPS Unit : 5 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% cc	Sky				
START	1000	60	3-8	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	55	4-10	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	57	4-10	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
PAINTED LADY	11	2
ACMON BLUE	1	1
PERPLEXING HAIRSTREAK	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)
MCEP 1	EXCLUDED POLYGON	DENSE CHAPARRAL
MCEP 2	EXCLUDED POLYGON	" "
MCEP 3	" "	DENSE CHAPARRAL, STEEP SLOPE, OAKS
MCEP 4	" "	OAKS
MCEP 5	" "	DENSE CHAPARRAL
MCEP 6	" "	" "
MCEP 7	" "	DENSE CHAPARRAL + OAKS
MCEP 8	" "	DENSE CHAPARRAL.
MCEP 9	" "	" "
MCLA04	HORNED LARKS	

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: M. Heath Add'l Person: 0 Date: 4/6/16

Project: ~~Campo~~ Manz Wind Energy Project Map #: 6 D & H. Survey Sxn: D

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

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	10:00	49.9	6.8/10.5	0	[✓ clear] patchy overcast drizzle shower
	11:00	50.2	9.3/14.8	0	[✓ clear] patchy overcast drizzle shower
	12:00	60.2	8.7/15.3	0	clear patchy overcast drizzle shower
	13:45	61.3	4.4/6.7	0	clear patchy overcast drizzle shower
	15:00	55.5	9.1/13.6	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
Painted Lady	||	2
White	|	1
Green Hs	|||	3
Acmon Blue	||	2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

* flowering

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
	*	Erodium
	*	Manzanita
	*	Cupleaf ceanothus
	*	Baby blue eyes
MITCH05	Possible Host Plant	Collinsia — 2"-4" almost to flower
		AMCR / SCJA / ORJU
	*	Popcorn flower
	*	Small yellow lotus
		Cows
	*	Miner's lettuce
	*	Goldfields
	*	Scrub oak

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: Erin Bergman Date: 4/6/10

Project: Manzanita Wind Energy Project Map #: 4 Survey Sxn: H

GPS Unit: 2 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	13:40	59°	5/6	0	clear	patchy	overcast	drizzle	shower
	14:30	61°	5/7	0	clear	patchy	overcast	drizzle	shower
	15:30	63°	7/7	0	clear	patchy	overcast	drizzle	shower
	16:07	61°	5/7	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
Lady	IIII	4
Pamphiloing	III	3
Acmon	IIII	4
Phase	IIII I	6
	III	3
Blue?	I	1
White?	IIII	4
(West Coast 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)
		Calythrauthia
		Layia chrysanthemoides
		Eriophyllum
		Lupinus
		Plantago
		Coreopsis gigantea
		Tidy Tips

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Kyle Ince Add'l Person: Erin Benjamin 1100-1300 Date: 4/6/10

Project: MAW Campo Wind Energy Project Map #: F 4 Survey Sxn: Man 2 - F

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

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START					clear	patchy	overcast	drizzle	shower
1120		62	2/8	0	clear	patchy	overcast	drizzle	shower
1220		62	2/8	0	clear	patchy	overcast	drizzle	shower
1400		61	3/10	0	clear	patchy	overcast	drizzle	shower
1500		61	2/8	0	clear	patchy	overcast	drizzle	shower
1615		61	2/8	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
Erynnis sp. (Not Funereal)	1 HT	5
Pieris rapae	HHT II	7
Papilio rumiko Nevadensis	1	1
Pontia sp.	III	3

GPS #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)
Mapped Mun 2 F	Woodrat	Woodrat nest
4/KiBJune	Ceanothus sinuatus	Descurainia, Cryptantha, Lasthenia
4/KiBJune	Black-tailed ?	also Astragalus douglasii purshii var.?
	Jack Rabbit	population of 2 (K. meadia, Nemophila
		One BJT

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: ~~[illegible]~~ Date: 8 APRIL, 2010

Project: ~~Campo~~ MAIZ Wind Energy Project Map #: 6,5 Survey Sxn: ~~MAP FILE 6~~ SECTION "C"

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

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1315	73	0->2	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1400	73	0->2	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1500	74	0->2	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1600	76	0->3	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1700	75	1->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
FUNEREAL DUSKYWING	IN FIELD NOTEBOOK	8
CALIFORNIA MARBLE	"	25
BEHR'S METALMARK	"	820
CALIFORNIA TORTOISESHELL	"	1
PAINTED LADY	"	8
ACMON BLUE	"	7
BROWN ELFIN	"	5
PERPLEXING HAIRSTREAK	"	4
ALFALFA BUTTERFLY (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)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: Ø Date: 8 APRIL, 2010

Project: ~~Campo~~ Manz Wind Energy Project Map #: TILE 60 Survey Sxn: MANZ - L

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

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	60	Ø→6	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1000	60	2→8	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	69	Ø→4	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	72	Ø→4	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	67	4→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
PERPLEXING HAIRSTREAK	IN FIELD NOTEBOOK	9
BROWN ELFIN	"	3
BEHR'S METALMARK	"	34
SARA ORANGETIP	"	1
CALIFORNIA MARBLE	"	12
PAINTED LADY	"	3
SPRING AZURE / ECHO BLUE	"	2
ACMON BLUE	"	4
FUNEREAL DUSKYWING	"	5
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)

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dana Jensen Add'l Person: None Date: 4/8/10

Project: ~~Campo~~ MAIZ Wind Energy Project Map #: 86 Survey Sxn: MAIZ-N

GPS Unit: 7 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1100	67°	2.0/5.0	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	1400	71°	0.0/0.0	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
fritillary sp	𝍸	5
white sp	𝍸 |||	13
Desplaining hairstreak	𝍸 𝍸 ||	12
Behrs metal mark	|||	3
blue sp.	||	2
Sara's orangetip	𝍸 𝍸	10
Acmon 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)
DJ HL01	sensitive animal	San Diego horned lizard
DJ BJ01	sensitive animal	San Diego black-tailed jackrabbit

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Diane Jensen Add'l Person: None Date: 4/8/10

Project: ~~Campo~~ Manz Wind Energy Project Map #: 65 Survey Sxn: MANZ-N/MANZ-M

GPS Unit: 7 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0934	61°	3.0/6.5	0	(clear)	patchy	overcast	drizzle	shower
END	1100	67°	2.0/5.0	0	(clear)	patchy	overcast	drizzle	shower
Start	1400	71°	0.0/0.0	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1555	75°	0/0	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
Fritillary sp	/	1
white sp	///	3
purpleing hairstreak	//	2
~~Babs hairstreak~~		
blue sp	/	1
Sara's orangetip	///	3
Acmon blue	//	2
painted lady	///	3
brizo duskywing	////	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)
DJEP01-06	Excluded habitat?	actively grading/used tracking feature
		to walk around area (inside tracking
		line) (straight line connect btwn
		DJEP02-DJEP06

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Kyle Ince Add'l Person: — Date: 4/8/2010

Project: ~~Gempe~~ Manz Wind Energy Project Map #: MAW2 F Survey Sxn: ____

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

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0940	62	2/5	0	(clear)	patchy	overcast	drizzle	shower
	1100	64	2/5	0	(clear)	patchy	overcast	drizzle	shower
End	1140	64	2/5	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
Sara Orangetip	III	3
Dusky Wing (sp.)	~~HH~~ II	7
Pontia sp	II	2
Purplestreak Hairstreak	III	3
Acmon Blue	II	2
Painted Lady	II	2

Page 1 of 2

KCI
4/8/10
GPS #3

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Manz - F

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
F/KISO1	Point	2 Sceloporus occiti on rock
F/KI CS1	Point	2 Caulanthus simulans

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Page 2 of 2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Kyle Ince Add'l Person: — Date: 4/8/2010

Project: ~~Campo~~ Manz Wind Energy Project Map #: manz-c #5 Survey Sxn: 5

GPS Unit : 3 QCB Protocol Survey # 1 of 5

TIME (24-hour)	Temp (F°):	Wind (avg/max)	% CC	Sky				
START				clear	patchy	overcast	drizzle	shower
1315	65°	2/6	0	clear	patchy	overcast	drizzle	shower
1415	68°	2/5	0	clear	patchy	overcast	drizzle	shower
1515	68°	0/2	0	clear	patchy	overcast	drizzle	shower
1614	70°	0/0	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 Orangetip	1111	4
Acmon Blue	11	11
White (Pontia)	1	1
Behr's metalmark	11	2
Painted Lady	~~1111~~ ~~1111~~ 11	12
	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: Kyle Ince Add'l Person: — Date: 4/8/2010

Project: ~~Campo~~ Man7 Campo Wind Energy Project Map #: Man2-6 Survey Sxn: _____

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

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START					clear	patchy	overcast	drizzle	shower
~~1000~~	1230	64°	2|5		clear	patchy	overcast	drizzle	shower
1440					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

~~Footprint~~ Butterfly Species	Tally	Total
Pieris rapae (Imported cabbage)	𝍸 III	8
Pontia sp	1	1
Sara Orangetip	II	2
Duskywing sp.	𝍸 IIII	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)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Diana Jeanson (M&A) Add'l Person: Noor Date: 4/9/16

Project: Manzanita Wind Energy Project Map #: Tile 6 Survey Sxn: N/A

GPS Unit: 1 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1000	67°	0.8/3.0.5	0	(clear)	patchy	overcast	drizzle	shower
~~1000~~	1015	—	3.0/7.5	—	(clear)	patchy	overcast	drizzle	shower
END	1151	—	2.0/7.0	5	(clear)	patchy	overcast	drizzle	shower
START	1450	78°	—	40	(clear)	patchy	overcast	drizzle	shower
~~START~~	1560	76°	3.0/6.0	0	(clear)	patchy	overcast	drizzle	shower
END	1600	76°	3.0/6.0	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
Satis arcagetip	1	1
Perplexing hairstreak	1 1 1	3
Acmon blue	1 1	2
unidentified checkerspot - high potential for QCB		
Hesperiidae sp	1	1
white sp	1	1
lady sp.	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)
DJQB?01	se	potential QCB (90%) based on size, round forewing shape & zigzag & low flight pattern

TOTAL NUMBER OF QCB DETECTED: _____ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Arbouette Cabrerez Add'l Person: None Date: 4/9/10

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

GPS Unit: 2 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	10:00	73	3.8/7.8	0	(clear)	patchy	overcast	drizzle	shower
	11:00	72	5.4/10.3	0	(clear)	patchy	overcast	drizzle	shower
	12:00	75	0.9/1.4	0	(clear)	patchy	overcast	drizzle	shower
	13:00	77	1.5/3.0	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	14:00	76	2.5/7.1	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
Common white	𝍸 ||	8
serpentine hairstreak	𝍸 𝍸 |||	14
Behr's Metalmark	𝍸 ||	7
Gabb's Checkerspot	𝍸 |||	8
Sara's Orangetip	𝍸	5
Ca. Tortoiseshell	1	1
Unid Sulphur Flying ~ 20' away	1	1

Page 1 of 2 - includes back of this 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)
AGNL 1	Woodrat nest	S. Dwood rat nest, n Vacher shrub
		Erodium cic
		Sugar bush
		Pentachaetha sp
		Amsinkia
		Cuna zonica
		Baby Blue Eyes
AGSG 1	Sage SASP	SASPin SMX
AGSG 2	SASP	SASP in SMX
AGSG 3	SASP	SASP in SMX
		WESC 11
		ANCR 1
		SPTO 1
		ANHU
		CORA 1

TOTAL NUMBER OF QCB DETECTED: 0 None INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Kyle Ince Add'l Person: — Date: 4/9/10

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

GPS Unit: 3 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START					clear	patchy	overcast	drizzle	shower
1215		67	3/10	0	clear	patchy	overcast	drizzle	shower
1330		67	5/15	0	clear	patchy	overcast	drizzle	shower
1545		68	3/7	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
Sara Orangetip	III	3
Dusky Grizzle?) - Included at least 2 species	~~IIII IIII IIII IIII~~	20
Pale Swallowtail	~~II~~ II	2
Pontia sp	III	3
Purplestreak Hairstreak	II	2
Behr's metalmark	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)
1/KiCr01	point	Cordylanthus rigidus 1
1/KiCr02	point	" " 2
1|KiCr03	point	Cordylanthus rigidus – scattered

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Antonette Gutierrez 1600-1635

Recorder: Diana Ibarra (DIBA) Add'l Person: None (cm) / Antonette Gutierrez Date: 4/9/16

Project: Manzanita Wind Energy Project Map #: Tile 4 Survey Sxn: N/A

GPS Unit : 1 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1219		10.0/12.0	0	clear	patchy	overcast	drizzle	shower
END	1245		10.0/12.0	0	clear	patchy	overcast	drizzle	shower
START	1309		10.0/12.0	0	clear	patchy	overcast	drizzle	shower
END	1430		10.0/12.0	0	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
START	1600		7.0/10.0	0	clear	patchy	overcast	drizzle	shower
END	1635		7.0/10.0	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
white sp	////	4
funereal duskywing	/	1
duskywing sp	//	2
Sara's orangetip	///	3
Behr's metalmark	//// ///	8
perplexing hairstreak	//	2
brown 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)

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

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)
3/kics1	Point	Ceanothus similans ~30

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Kyle Ince Add'l Person: — Date: 4/9/2010

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

GPS Unit: 3 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START					clear	patchy	overcast	drizzle	shower
1000		62	1/5	0	clear	patchy	overcast	drizzle	shower
1115		65	3/10	0	clear	patchy	overcast	drizzle	shower
1215		67	3/10	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
Painted Lady	I	1
Anthia Sp.	II	2
Sara Orangetip	++++ III	7
Duskwing (small)	II	2
Reflexing, Hairstreak	III	4

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Antonette Gutierrez Add'l Person: Diana Jensen Date: 4/9/10

Project: Manzanita Wind Energy Project Map #: Tule 6 Survey Sxn: N/A

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

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1500	76	2.5/6.5	0	clear	patchy	overcast	drizzle	shower
END	1600	76	3.6/5	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

~~Plants~~ Butterfly Species	Tally	Total
Acmon Blue	III	3
Perplexing hairstreak	II	2
Funereal Dusky wing	II	2

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Page 1 of 2 sides

362000 - 100
362500 - 362400

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: M. Heath Add'l Person: N/A Date: 4/9/10

Project: ~~Campo~~ Manzana Wind Energy Project Map #: 11, 12 Survey Sxn: _____

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

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	09:30	67.2	0.9/1.9	0%	clear	patchy	overcast	drizzle	shower
	10:30	69.5	1.3/4.2		clear	patchy	overcast	drizzle	shower
	12:30	70.6	3.7/10		clear	patchy	overcast	drizzle	shower
	13:30	72.1	3.4/5.2		clear	patchy	overcast	drizzle	shower
	15:00	74.2	3.6/6.5		clear	patchy	overcast	drizzle	shower
→	16:00	67.9	3.6/7.9	↓	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
Green hairstreak		~~13~~ 13
Sara Orange Tips		11
Marble		1
Behr's metalmark		18
Spring white		8
Arman blue		12
Duskywing sp		4
Spring Azure		1
Vanessa sp		3
Blue sp		2
white 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)
MHHL09	Sensitive Sp	Horned Lizard - Coast
		Fiddleneck
		Ramona lilac
		Desert dandelion
		Goldfields
		Calif Poppy
		Erodium
		Baby blue eyes
		Mexican manzanita
		Miners lettuce
		Buckbrush
		Tauschia Southern
		Popcorn flower
		Black mustard
		White flower ceanothus
		Tansy mustard
		Sun cup
		Eastwood Manzanita
		Phacelia
		Jewel flower pink
		Peony
		Small yellow lotus
		Penstemon clevelandii

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

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

Project: Manzanita Wind Energy Project Map #: 13 Survey Sxn: _____

GPS Unit : 1 QCB Protocol Survey # _____ of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	10:00	63°	6/9	0	(clear)	patchy	overcast	drizzle	shower
	11:30	68°	5/8	0	(clear)	patchy	overcast	drizzle	shower
	12:30	72°	8/11	0	(clear)	patchy	overcast	drizzle	shower
	13:50	72°	4/7	0	(clear)	patchy	overcast	drizzle	shower
	15:40	70°	5/9	0	(clear)	patchy	overcast	drizzle	shower
	16:15	67°	5/7	20	(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 𝍸 𝍸	35
Marble	𝍸 𝍸	8
Whites ?	𝍸 𝍸 𝍸 𝍸	20
Behr's Metalmark	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	26
Eadu ?	1	1
Orange Butterfly ?	1	1
Dusky-wing ½	𝍸 𝍸 𝍸 𝍸	18
Blue ½	1	2
Tortoiseshell	1	1
QUINO CHECKERSPOT (DRQBO1)	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
		Isothrix
		Layia
		Marah sp.
		Plagiobothrys
		Cryptantha
		Lupinus
		Amsinckia
		Eschscholzia
		Nemophila
		Mustard?
DPHLO1	POINT	San Diego Horned Lizard
DPEPO1	Excluded Polygon	Closed Canopy Chaparral
02		
03		
04		
05		
06		
07		
08		
09		

TOTAL NUMBER OF QCB DETECTED: _____ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: Ø Date: 10 APRIL, 2010

Project: ~~Campo~~ MANZANITA Wind Energy Project Map #: TILE 14 Survey Sxn: MANZ-R

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

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1030	65	1→3	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	68	1→4 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	68	1→7	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	72	Ø→4	CLEAR	(clear)	patchy	overcael	drizzle	shower
	1400	70	4→7	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1500	71	2→8	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	IN FIELD NOTEBOOK →	48
PERPLEXING HAIRSTREAK	"	21
BROWN ELFIN	"	1
FUNEREAL DUSKYWING	"	30
DESERT ORANGETIP	"	4
PAINTED LADY	"	2
SARA ORANGETIP	"	1
CALIFORNIA TORTOISESHELL	"	1
QUINO CHECKERSPOT 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)
MCHL04	Point	
MCHL03	Point	
MCQB02	Point	Photo taken in hand

TOTAL NUMBER OF QCB DETECTED: 1 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Bonnie Hendricks Add'l Person: Erin Bergman Date: 4/10/10

Project: ~~Gempe~~ Manzanita Wind Energy Project Map #: Tile 1 & 3 Survey Sxn: _____

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

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	11:00	64°	5/11	5%	(clear)	patchy	overcast	drizzle	shower
	12:35	76°	3/12	2%	(clear)	patchy	overcast	drizzle	shower
	1:30	67°	4/15	1%	(clear)	patchy	overcast	drizzle	shower
	2:30	64°	9/14	1%	(clear)	patchy	overcast	drizzle	shower
	3:30	63°	5/12	2%	(clear)	patchy	overcast	drizzle	shower
	4:60	63°	2/14	10%	(clear)	patchy	overcast	drizzle	shower
END	5:30	61°	3/11	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
Behr's Metalmark	𝍸 I	6
Purplelining hairstreak w/ white edge	I	1
Dusky-wing Erynnis funeralis	I	1
Erynnis sp. (without white edge)	I	1
Sara's Orangetip	III	3
Painted Lady	𝍸 𝍸 II	12
Nyanta's Marble	𝍸	5
Pygmy Blue	III	3

Very brushy & hard to navigate
Clear morning around brush

Bonnie Hendricks
24/10/10

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)
BHAsp01	point	Astragalus sp. (red stem)
		Nectar plant patches of Cryptantha sp.
Hedgehog cactus pt.		
[redacted]		
BHGevi01-32	pt. &	Gerea vicsida or Helianthus? Need to key (took pt. 32 plants plus 100 +)
BHNL01	pt.	Woodrat midden
BHCH01	pt.	Chaparrhouses 1 seedling

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: M. Heath Add'l Person: / Date: 4/10/10

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

GPS Unit : 5 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	10:00	60.2	2.2/6.9	0%	clear	patchy	overcast	drizzle	shower
	12:00	62.1	8.7/13.5		clear	patchy	overcast	drizzle	shower
	13:30	64.4	8.2/11.1		clear	patchy	overcast	drizzle	shower
	15:00	66.7	6.2/10.3		clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	16:00	64.9	4.3/7.5		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
Green Hairstreak		37
Behr's metalmark		29
Duskywing Species		12
Spring White		14
Sara Orangetips		2
Painted Lady		1
Acmon blue		4
Spring Azure		1
Blue 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)
		Erodium
		Peony
		F. ddRe weed
		Popcorn
		Sun Cup
		Lupine
		Wild Cucumber
		Mexican Mangarita
		Tansy mustard
		Silver leaf lotus
		White thorn ceanothus
MHPJ01	flowering	Parry's jewel flower
		Calif poppy
		Desert Dandelion
		Phacelia
		Baby blue eyes
		Mindi's lettuce
		Grand lotus - small yellow flower
		Southern Tarweed
		Gold fields
		Golden bush
		Bush broom
		SCJA/CAQU/GRRB/ACWO/ATTCR/ORTU/CATO
		Pocket gophers, ground squirrel, blacktail JR.
		Rodent burrows, coyote scat
		Grasshoppers / Sphinx moths
MHEP460	Excluded Poly	Dense Chaparral
401	Excluded Poly	" "
402	" "	Dense Redshank / Ropeseed Woodland
403	" "	Dense Chaparral

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: Ø Date: 11 APRIL, 2010

Project: ~~Campo~~ MANZANITA Wind Energy Project Map #: TILE 10 Survey Sxn: MANZ-O

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

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1145	65	1->4 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	67	Ø->5MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1245	65	1->5 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	64	3->8MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1315	65	3->5 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
BEHRS METALMARK	IN FIELD NOTES	21
ACMON BLUE	"	1
PAINTED LADY	"	2
CALIFORNIA MARBLE	"	3
PERPLEXING HAIRSTREAK	"	1
CLOUDLESS SULPHUR	"	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)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: M. Heath Add'l Person: Shirley Innecken Date: 4/11/10

Project: MAM Campo Wind Energy Project Map #: 13 Survey Sxn: _____

GPS Unit : 1 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	12:00	67	3.9/7.4	0	clear	patchy	overcast	drizzle	shower
	14:00	62.2	3.2/6.9	10%	clear	patchy	overcast	drizzle	shower
	15:30	59.0	3.1/12.4	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
Green hairstreak		8
Dusky wing sp		8
Spiny wt		2
Sleep Orangetip		4
Quino checkerspot b.tterfly - seen before by Dale P.		1
Behr's metalmark		Many
Queen		1
Desert marble		4
Painted Lady		1
Arman 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)
MHHL10	Sensitive Sp	Horned lizard
MHHL11	" "	" "
		Popcorn flower *
		Plagiobothrys *
		Ceanothus greggii *
		F. Idleweed *
		Erodium *
		Mt Mahogany *
		Goldfields *
		Baby blue eyes *
		Calif Poppy *
		Jewel flower - pink *
MHLIBE01	Sensitive *	Linanthus bellus *
		Sugar bush *
		Buckbrush *
		Marrubium glauca *
		Miners lettuce *
		White thorn ceanothus *
		Peony *
		Johnny jump ups *
		S. Blobtail lizard
		Fence lizards
		Pocket gopher sign
		RTHA / CATO / SCJA / AMCR
		Sphinx moths
MHER420	Excluded Poly	Oak woodland
421	" "	" "

TOTAL NUMBER OF QCB DETECTED: 1 — previously observed by Dale P. INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MELISSA BOOKER Add'l Person: DIANA JEPSEN Date: 4/11/10

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

GPS Unit: 9 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1130	72	3 /8 mph	10	clear	patchy	overcast	drizzle	shower
	1237	72	6/12 mph	10	clear	patchy	overcast	drizzle	shower
	1525	71	5/9 mph	10	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 hairstreak	III	3
Common checkered skipper	IIII	5
Sara Orangetip	IIII I	6
Funereal Duskywing	II	2
Checkered White (not QCB)	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)
16/16Mbhl01	Pt - Horned Lizard	SD Horned Lizard
16/16MBHL02	Pt - Horned Lizard	SD Horned Lizard

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

617-804-7081

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dicas Jeasen (DMA) Add'l Person: Melissa Pasker (DMA) Date: 4/11/10

Project: Manzanita Wind Energy Project Map #: Tile 16 Survey Sxn: N/A

GPS Unit: 10 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1130	72°	3.0/8.6	0	(clear)	patchy	overcast	drizzle	shower
	1235		6.0/12.0	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	1435	71°	5.0/9.0	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
Pelpleaing nausstreak	////	4
Behrs metalmark	//// //// //	11
Unidentified white	///	3
lady sp.	//	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: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: — Date: 4/11/10

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

GPS Unit: 8 QCB Protocol Survey # _____ of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	12:00	61	9/13	0	(clear)	patchy	overcast	drizzle	shower
	13:40	62°	6/8	0	(clear)	patchy	overcast	drizzle	shower
	15:20	62°	7/11	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	𝍸 𝍸 |||	9
Lady	|	1
White	𝍸 ||	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)
		Nemophila
		Castilleja
		Pectocarya

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Kyle Ince Add'l Person: — Date: 4/13/10

Project: Manzanita Wind Energy Project Map #: 5 Survey Sxn: # G

GPS Unit : 6 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START					clear	patchy	overcast	drizzle	shower
1130		61	2/5	5	(clear)	patchy	overcast	drizzle	shower
1230		61	2/5	5	(clear)	patchy	overcast	drizzle	shower
1300		63	2/3	5	(clear)	patchy	overcast	drizzle	shower
1400		63	2/5	5	(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	𝍸 𝍸 |||	8
Pervasive Hairstreak	𝍸 𝍸 ||| ||	9
Dusky-wing sp	𝍸 |||	8
Penta sp	|||	4
Scarce Funereal Duskywing	|	1
Vanessa sp	|	1

502800

5632500

GPS 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)
5 ~~[illegible]~~/ KiGV	point	~~[illegible]~~ Geraea viscida 3
5/KiCS	point	Caulanthus simulans 1

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: S. Rink MAM Add'l Person: _____ Date: 4/13/10

Project: ~~Campo~~ Wind Energy Project Map #: 5 Survey Sxn: F

GPS Unit : 5 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	11:30	60	2/5	5	clear	patchy	overcast	drizzle	shower
	12:35	61	2/5	5	clear	patchy	overcast	drizzle	shower
	13:30	63	2/5	5	clear	patchy	overcast	drizzle	shower
	14:30	63	2/5	5	clear	patchy	overcast	drizzle	shower
	15:30	62	2/5	15	clear	patchy	overcast	drizzle	shower
	16:00	60	0/5	15	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
Sarah Orangetip	IIII	3
Pearl. Crescent	III	3
Behr's Metalmark	III	3
Funereal Duskywing	I	1
Blue sp.	I	1
White sp.	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)
5SR Ad	point	Astragalus douglasiana ssp. parishii (#'s = 1)
5SR CS	point	Caulanthus simulans (#'s = 5)
5SR Ad	pt.	Astragalus douglasiana ssp. parishii (# = 1)
5SR B Ja	pt.	Black tailed Jack Rabbit

TOTAL NUMBER OF QCB DETECTED: 8 INDIVIDUALS

Page 2 of 2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: SHIRLEY INNEKIN Date: 14 APRIL 2010

Project: ~~Campo~~ MANZANITA Wind Energy Project Map #: TILE 2 Survey Sxn: MANZ-B

GPS Unit : GARMIN 10 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1130	72	Ø->3 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	72	Ø->3 MPH	CLEAR	(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	IN FIELD NOTEBOOK	1
CALIFORNIA MARBLE	"	2
BEHR'S METALMARK	"	15
PERPLEXING HAIRSTREAK	"	2
FUNEREAL DUSKYWING	"	2
SARA ORANGETIP	"	1
BROWN ELFIN	"	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: MIKE COUFFER Add'l Person: SHIRLEY INNEKIN Date: 14 APRIL, 2010

Project: ~~Campo Wind Energy Project~~ MANZANITA Map #: TILE 2 Survey Sxn: MANZ-C

GPS Unit : GARMIN 10 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1000	67	0-7/MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	68	1-7 4/	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1130	72	0-3	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
PAINTED LADY	IN FIELD NOTEBOOK	1
CALIFORNIA MARBLE	"	8
BEHR'S METALMARK	"	12
PERPLEXING HAIRSTREAK	"	5
FUNEREAL DUSKYWING	"	4
CALIFORNIA TORTOISESHELL	"	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)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: SHIRLEY INNERSIN Date: 14 APRIL, 2010

Project: ~~Campo~~ MANZANITA Wind Energy Project Map #: TILE 1 Survey Sxn: MANZ-B

GPS Unit: GARMIN 10 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1500	70	0->4 MPH	90	clear	patchy	(overcast)	drizzle	shower
	1600	65	2->5 MPH	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
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
RED ADMIRAL	IN FIELD NOTEBOOK	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)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: SHIRLEY INNEKIN Date: 14 APRIL, 2010
MANZANITA

Project: ~~Campo Wind Energy Project~~ Map #: TILE 5 Survey Sxn: MANZ - F
WESTERN PORTION

GPS Unit : GARMIN 10 QCB Protocol Survey # 1 of 5

	TIME (24-hour)	Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1218	74	0→3 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	73	1→4	10%	clear	(patchy)	overcast	drizzle	shower
	1400	71	0→2	60%	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	IN FIELD NOTEBOOK	2
BEHRS METALMARK	"	5
FUNEREAL DUSKYWING	"	2
ACMON BLUE	"	5
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: Viviane Marquez Add'l Person: Dave Fleitner Date: 4/14/10

Project: ~~Campo~~ Mancanita Wind Energy Project Map #: 7 Survey Sxn: _____

GPS Unit: 9 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	10:00	65.6	2.1 / 5.2	10%	clear	(patchy)	overcast	drizzle	shower
	11:30	67.3	2.6 / 4.9	0	(clear)	patchy	overcast	drizzle	shower
	12:55	66.7	2.4 / 4.3	30%	clear	(patchy)	overcast	drizzle	shower
	1:35	68.0	2.6 / 4.6	30%	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	II	2
Behr's Metal mark	~~HH~~ ~~HH~~ ~~HH~~ I	16
Perplexing hairstreak	IIII	4
Checkered Skipper	II	2
Common White	~~HH~~ HH IIII	14
Funereal Dusky wing	III	3
Brown Elfin	I	1
Southern Skee	II	2
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)
		Clarkia species x2 Blooming
		Amsinckia nectar
		Erodium cicutarium nectar
		Scrub oak
		Tree Poppy ?
		CA Quail
		cattle
		Spotted Towhee
		Deer scat
		Lark Sparrow
		Scrub Jay
		Bush Tit
		White-Crowned Sparrow
		CA Towhee
		American Crow
		Gold fields blooming nectar
		Lupine sp ↓

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVE FLUETSCH HAVASUPAI Add'l Person: _____ Date: 4/14/10

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

GPS Unit: 60 QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1420	72	2-5	80	clear	patchy	overcast	drizzle	shower
	1460	70	4-6	90	clear	patchy	overcast	drizzle	shower
	1520	72	4-6	80	clear	patchy	overcast	drizzle	shower
	1580	69	5-9	80	clear	patchy	overcast	drizzle	shower
1600	GO BUZAUSE	OUT OF	PROTOCOL		clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1550	69	5-9	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
Behrs metalmark	𝍸	6
Sara orange tip	𝍸	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)
		annual Lotus
		Crypt int
		Camis spp
		Lupin conc
		Nemo menz
		Amsi menz
DFCS01?	point	~20 Caulanthus simulans ✓ - confirmed
DFCS02	"	12 " (extends uphill ~80')
DFCS03	"	12 " "
		C. simulans appears to be dispersed over this slope at low density

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Viviane Marques Add'l Person: Dave Heitner Date: 4/14/10

Project: ~~Campo~~ Manzanita Wind Energy Project Map #: 3 + 4 Survey Sxn: _____

GPS Unit : 9 QCB Protocol Survey # _____ of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	2:20	69.8	2.4 4.7	80%	clear	(patchy)	overcast	drizzle	shower
		64.8↑		8	clear	patchy	overcast	drizzle	shower
	3:00	65.5	2.1 / 3.1	85%	clear	patchy	(overcast)	drizzle	shower
	3:30	66.1	1.6 / 4.1	85%	clear	patchy	(overcast)	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	3:30	66.1	1.6 / 4.1	85%	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	1	2
Perplexing Hair Streak	1	1
Common White	1	1
Southern Blue	1	2
Behr's Metalmark	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 sp.
		Gold fields
VMMD01		Mule deer scat
VMHL01		Horned Lizard

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

340

working independant on same map

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID FLIETNER Add'l Person: V. Marquez Date: 4/14/10

Project: ~~Campo~~ Margarita Wind Energy Project Map #: 7-L Survey Sxn:

GPS Unit: (p QCB Protocol Survey # 1 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	light haze Sky				
START	10:00	65	2-5	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
					clear	patchy	overcast	drizzle	shower
END	13:0	74	2-5	60	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	12
lady	III	5
Perplexing hairstreak	III	5
Pearly marble	IIII	4
Properties dusky wing	I	1
Sara orange tip	III	3

3 622 200 / 520 550

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)
		Cean greggii (flwr)
		Dendro rig (")
		Camiss sp.
		Crypt int
		Sal colum
		Gilia sp.
		Nemo menz
		Lasth cal
		Esch cal
		annual Lotus
		Phacelia sp.
		Delph par
		Layia glandulosa
		Platystemon calif

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

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Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Kyle Ince Add'l Person: _____ Date: 4/15/10

Project: Manzanita Wind Energy Project Map #: 10 Survey Sxn: A

GPS Unit : 7 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0930	60	5/12	5	(clear)	patchy	overcast	drizzle	shower
	1130	62	3/8	5	(clear)	patchy	overcast	drizzle	shower
	1230	62	5/10	30% high clouds	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	11
Sara orangetip	11	2
Blue sp.	1	1
Purplish hairstreak	11	2
Acmon Blue	111	3
Immaculate Dusky wing	1	1

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)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID FULLMER Add'l Person: — Date: 4/15/10

Project: Manzanita Wind Energy Project Map #: 4 Survey Sxn: D

GPS Unit: 1 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	light haze		Sky		
START	1215	68	8-12	30	clear	patchy	overcast	drizzle	shower
	1415	73	6-10	1088	clear	patchy	overcast	drizzle	shower
	1515	71	4-6	90	clear	patchy	overcast	drizzle	shower
	1545	73	4-7	100	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1615	72	3-7	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
Acmon blue	⠁	1
Bonvs metal mark	⠿⠿⠇	22
Sara. orange tip	⠿⠗	20
Pearly Marble	⠇	2
Painted lady	⠇⠁	3
common 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)
		GPS died at 3:40 –
		no spare batteries in
		bag
		Lasth cal
		Lup comin
		Plagio
		Layia glandulosa
		Gilia O
		Ranunculus
		Cumiss
		Gayophytum heterozs
		Nemo menz
		Salvia columb
		Erysimum capitatum

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

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

Project: Manzanita Wind Energy Project Map #: 19 Survey Sxn: Campo N

GPS Unit : 3 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1100	64°	9	0	(clear)	patchy	overcast	drizzle	shower
	1200	67	10	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	1300	69	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
Callophrys perplexa		15+
Apodemia virgulti		15+
Euchloe h. hill		6
Erynnis species		5
Anthocharis 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)
19		Goldfields
		Cryptantha
		Baby Blue eyes
		Sugar bush

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID FLETCHER Add'l Person: _____ Date: 4/15/10

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

GPS Unit: _____ QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	8.55	61	5-8	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	11.55	70	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
Behrs metalmark	8	8
Sara orange tip	4	4
Perplexing hairstreak	7	7
~~Pearly~~ ~~Everlasting~~ common white	3	3
Propertius dusky wing	1	1
Acmon blue	1	1
Painted lady	7	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)
		Lupinus
		Ams menz
		Crypt int
DFCS04	point	5 Eriogonum simulans
DFCS05	"	10 " "
DFCS06	"	6 " "
DFCS07	"	2
		Lasth cal
		Lotus strigosus
DFCS08	point	3 Eriogonum simulans
		Gilia sp.
		Lupinus concin
		Plagio

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet Shirley Iannucci (Trainer)

Recorder: Adam Beall Add'l Person: Diana Jensen Date: 4/15/10

Project: Manzanita Wind Energy Project Map #: MANZ - 14 Survey Sxn: N/A

GPS Unit : # 10 (shared) QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START					clear	patchy	overcast	drizzle	shower
1135		65°	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
END	1340	75°	4/7	HAZY	clear	patchy	HAZY 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 nomad vial. - Behr's metal mark	𝍸 𝍸 𝍸 |	16
White, unidentified	𝍸 𝍸 |	11
Callophrys perplexa - Perplexing hairstreak	||	2
Erynnis funeralis Funereal duskywing	||	2
Pontia protodice Common 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)
SEE DIANA JENSEN'S GPS - SHARED GPS UNIT #10		

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

SHIRLEY INNUCKEN (TRAINER)

Recorder: Adam Benke Add'l Person: Diana Jelson Date: 4/15/10

Project: Manzanita Wind Energy Project Map #: MAN2 15 Survey Sxn: N/A

GPS Unit : #10 (SHARP) QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START					clear	patchy	overcast	drizzle	shower
0910	1130	63°	~~3~~3.9/4.4	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
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

WHITE ~~Pontia~~ SP. - (PEARLS?)	Tally	Total
~~Pontia~~ SP. - (PEARLS?)	IIII IIII	9
E. ZYNIS FUNERALIS - FUNEREAL DUSKYWING	I	1
ADDELAIA MOINO VIRGULTI-BEHR'S METALMARK	III	3
CALLOPHRYS PERPLEXA - PERPLEXING HAIRSTREAK	III	3
ANTHOCHARIS SARA - SARA ORANGETIP	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)
SEE DIANA ~~EMM~~ JENSEN'S		DATA SHEET FROM SAME DAY (4-15-10) - HAD TO SHARE GPS

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Shirley Innuckea (trainee)

Recorder: Dana Jensen Add'l Person: Adam Behle Date: 4/15/10

Project: Manzanita Wind Energy Project Map #: 14 Survey Sxn: N/A

GPS Unit: 16 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1130	76°	3/4	1%	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	1345	78°	4/7	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
~~Dorcas~~ Dorcas copper	111	3
checkered sp.	1	1
Sara's orangetip	111	3
Acmon blue	1	1
Behr's metalmark	1111	2
Sara's orangetip	1111 1111	9
Acmon blue	11	2
common pearl	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)
STASD02P01	Sensitive plant	astragulus (10)
STLTBE01	Sensitive plant	(100s)
STASD02P02	Sensitive plant	Astragulus (10)
STLTBE02	Sensitive plant	(100s)
STGEVI01	Sensitive plant	(5's)
STASD02P03	Sensitive plant	astragulus (Bish (50's)
STLTBE03	Sensitive plant	linanthus (10's)
STLTBE04	Sensitive plant	linanthus (throughout)
STASD02P04	Sensitive plant	astragulus (10's)
STLTBE05	"	linanthus (50's)
STLTBE06	"	linanthus

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet + Shirley Innuksen (Trained)

Recorder: Diana Jensen Add'l Person: Adam Beaux Date: 4/15/10

Project: Manzanita Wind Energy Project Map #: 13 Survey Sxn: N/A

GPS Unit : 10 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1130				clear	patchy	overcast	drizzle	shower
	1345	75°	4/7	1%	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	1335			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
Common peall	/	1
Behrs metalmark	//// //// //// //	15
Sara's orangetip	//// //// //// //	11
Polpleaing Hairstreak	///	3
Dixie Skipping	///	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)
PJLLBE01	sensitive plant	linearifolius (Osl)
DLHL01	Sensitive animal	SD horned lizard

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

SHELBY INNUCKEN (TRAINEE)

Recorder: ADAM BEALE Add'l Person: DIANA JENSEN Date: 4/15/10

Project: Manzanita Wind Energy Project Map #: MAN2-13 Survey Sxn: N/A

GPS Unit: 10 (SHARED) QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1345	75°	4/7	HAZY	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	76	1/3	100%, HAZY	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 PROTODICE - COMMON WHITE	1HT	5
APODEMIA MORMO VIR. - BEHR'S METALMARK	1HT 1HT 1HT 1HT 1HT 1111	29
CALLOPHRYS PERPLEXA - PERPLEXING HAIRSTREAK	1	1
UNIDENTIFIED WHITE SP	1HT 1HT 111	13
ERYNNIS FUNERALIS - FUNEREAL 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)
SEE DIANA	JENSEN'S GPS - SHARED UNIT #10	

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Antonette Gutierrez Add'l Person: None Date: 4/16/10

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

GPS Unit : 10 QCB Protocol Survey # QCB # 12 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	68	0	5	(clear)	patchy	overcast	drizzle	shower
	1000	74	2 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
END	1115	78	2mph	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 metal mark	~~HHT~~	5
Common Blue	II	2
Funereal Duskywing (Dion)	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)
		Plagiobothrys
		Erodium
		Golde fields
		Chia
		Camissonia
		Sugar bush
		Cryptantha
		Ground pink

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Page 2 of 2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Antonette Gutierrez Add'l Person: None Date: 4/16/10

Project: Manzanita Wind Energy Project Map #: 12 Survey Sxn: NE of Oak Rd

GPS Unit: 10 QCB Protocol Survey # QCB #1? of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1124	78	2 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	1500	78	2/7	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
Pale Swallowtail	I	1
Common White	𝍸 𝍸 𝍸 II	17
Behr's Metalmark	𝍸 𝍸 𝍸 𝍸 𝍸	25
Funereal Duskywing	𝍸 II	7
Mournful Duskywing	I	1
Sara's Orangetip	𝍸 I	6
Ovid blue flurry - 10' away	II	
Pepperwood Hairstreak	𝍸 II	7
Brown Elfin	II	2
Ammon 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)
AGNL1	Woodrat nest	in rock out crop
AGNL2	"	in chamise
AGNL3	"	in oak + rock outcrop
		Phacelia sp
		Rancher's Fiddleneck
		Sugar bush
		Erodium
		Plantago sp
		Gold fields
		Clover

TOTAL NUMBER OF QCB DETECTED: None INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID FLETCHER Add'l Person: _____ Date: 4/16/10

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

GPS Unit: 5 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
~~START~~	8:45	58	3-5	0	(clear)	patchy	overcast	drizzle	shower
START	9:05	61	4-7	0	(clear)	patchy	overcast	drizzle	shower
	14:15	73	7-12	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	16:15	72	8-15/18		(clear)	patchy	overcast	drizzle	~~shower~~

Habitat On-site (circle): (open soils,) hilltops, ridges, ~~rock outcrops~~ soil crusts, clay soils, old roads, (various nectar sources)
grass 70 25

Butterfly Species	Tally	Total
Behrs metal mark	𝍸 𝍸 𝍸 𝍸 𝍸	25
Sara orange tip		1
Perplexing Hairstreak		2
~~Common~~ White - Cabbage		4
Echo blue		3
Funereal Dusky wing		2
Brown elfin		1
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)
DFCSO1	Point	1 Cercanthus similans
DFHL01	point	1 Horned lizard
		Ams menz
		Nem menz
		Cryp int
		Lath cyn
		Cuni hetch
		Lest cal
		Plagio sp.
		Lotus strig
		Lays a glad
		Gamiss. sp
		Esch cal

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: M. Heath Add'l Person: Shirley Innecken Date: 4/16/10

Project: Manzanita Wind Energy Project Map #: 13, 12, 8 Survey Sxn: _____

GPS Unit : 2 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	09:15	62.5	3.6/6.6	0%	clear	patchy	overcast	drizzle	shower
	10:36	64.5	2.5/4.3		clear	patchy	overcast	drizzle	shower
	12:00	67.3	2.1/4.4		clear	patchy	overcast	drizzle	shower
	14:00	67.0	6.8/19.2	0%	clear	patchy	overcast	drizzle	shower
	15:00	62.6	8.3/12.9	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
Northern Cloudywing		1
Behr's metalmark		56
Desert Marble		6
White sp?		18
Spring White/ike		7
Sara Orangetip		6
Green hairstreak		20
Blue sp		1
Dusky wing		3
QCB MHQB02		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)
		Erodium ✱
		Gold fields ✱
		Popcorn species ✱
		Primrose ✱
		Mangenite glucra ✱
		Arabis ✱
		Lin. authus bellus ✱
		Cali Poppy ✱
		Baby blue eyes ✱
		Black Mustard ✱
		Tansy mustard ✱
		Wild Cucumber ✱
		Buck brush ✱
		Plagio bothus ✱
		lupin - small purple ground ✱
		Miner's lettuce ✱
		Peony ✱
		Mt Mahogany ✱
MHHL13	Sensitive Sp	Horned Lizard

TOTAL NUMBER OF QCB DETECTED: 1 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dixon Jessup (Trainee) Add'l Person: Amanda Gonzales Date: 4/17/10

Project: Manzanita Wind Energy Project Map #: 6 Survey Sxn: N/A

GPS Unit: 10 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind mph (avg/max)	% CC	Sky				
START	0930	<32°	1/2	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
					clear	patchy	overcast	drizzle	shower
END	1420	70°F	1/2-3	25%	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 - Apodemia mormo	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	45
Acmon [illegible] - Lycaena acmon	𝍸 𝍸 𝍸	13
[illegible] - Erynnis sp.	𝍸	4
[illegible] - [illegible]	𝍸	3
[illegible] - Euchloe sp.	𝍸	2
[illegible] - Anthocharis sara	𝍸	3
[illegible] - [illegible]	𝍸	2
[illegible]		
Sleepy [illegible] - [illegible] brizo	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)
DJHL01	~~DJHL01~~ Sen. Animal	San Diego Horned Lizard
DJHL02	" "	" "
DJHL03	" "	" "
DJHL04	" "	" "
DJHL05	" "	" "
DJHL06	" "	" "

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: M. Heath Add'l Person: — Date: 4/17/2010

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

GPS Unit: 7 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky					
START	9:00	64.7	6.7/9.3	100% thin	Hazy cloud clear	patchy	overcast	drizzle	shower	Hazy
	10:00	65.6	4.5/8.7	Hazy	clear	patchy	overcast	drizzle	shower	Hazy
	11:30	70.2	4.9/7.6		clear	patchy	overcast	drizzle	shower	
	13:30	68.2	4.8/9.0		clear	patchy	overcast	drizzle	shower	
	15:00	70.1	2.8/5.0		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
Western tailed blue		5
Behr's metalmark	lots	50+
Vanessa sp		6
Spring white		16
Desert Marble	lots	20+
Spring Azure		1
Green Hairstreak		5
Sara Orange tip		5
White Sparra	lots	100+
Blue sparra		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)
		Peony
		Erodium
		Fiddleneck
		Popcorn
		Broom baccharis
		Mt. Mahogany
		Poison oak
		Wild cucumber
		~~Popcorn~~ Fiveleaf rose
		Manzanita
		Coyote brush ceanothus
		Tansy mustard
		Baby blue eyes
		Arabis
		Desert Dandelion
		Tidy tips
MHHL14	Sensitive Species	Horned Lark
MHHL15		" "
MHLA01		Horned Lark
MHLA02		" "
		2 Swarms of bees
MHEP470	Exclude Poly	Dense Chaparral
MHEP471	" "	Disturbed/Developed for new meteorological tower

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: Ø Date: 17 APRIL 2010

Project: Manzanita Wind Energy Project Map #: TILE 12 Survey Sxn: TILE 12

GPS Unit: GARMIN 3 QCB Protocol Survey # 12 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1350	76	Ø→3 MPH	100	clear	patchy	(overcast)	drizzle	shower
	1400	76	Ø→3 MPH	100	clear	patchy	(overcast)	drizzle	shower
	1500	75	Ø→4 MPH	100	clear	patchy	(overcast)	drizzle	shower
	1600	75	Ø→2 MPH	100	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	TALLY IN FIELD NOTEBOOK	7
CALIFORNIA MARBLE	"	6
BEHR'S METALMARK	"	85
PAINTED LADY	"	2
BROWN ELFIN	"	2
FUNEREAL DUSKYWING	"	6
ACMON BLUE	"	2
SARA ORANGETIP	"	2
SPRING WHITE	"	2
CALIFORNIA PATCH	"	1
CALIFORNIA TORTOISESHELL	"	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: M. Heath Add'l Person: — Date: 4/18/10

Project: Manzanita Wind Energy Project Map #: 8, 4 Survey Sxn: _____

GPS Unit: 6 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	09:00	66	0-2	50%	clear	patchy	overcast	drizzle	shower
	11:00	68.6	3.8/4.7	10%	clear	patchy	overcast	drizzle	shower
	13:00	71.2	4.6/10.9	0%	clear	patchy	overcast	drizzle	shower
	15:00	70.2	5.5/10.6	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
Dusky wing	///	3
White sp		100+
Arman Blue		1
Green hairstreak		12
Behr's metalmark		100+
Blue sp		9
Sara Orangetip		2
Desert Marble		3
Tortoise shell		1
Spiny white		2
Gabbs		1
Vanessa		2
Pale Swallowtail		15+
Quino checkerspot butterfly		2
Brown elfin		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 Tidy tips
		Wild Cucumber Phacelia
		Scrub oak Gold fields
		Cupleaf Ceanothus Payson's jewel
		Manzanita White thorn
		Mt. Mahogany ceanothus
		Poison Oak
		Fiddleneck
		Popcorn
		Primrose
		Miner's lettuce
		Arabis
		Plagiobothrys
		Calif Poppy
		Chia
		Tansy mustard
		Linanthus bellus
		Baby blue eyes
		Yucca
	Potential	Desert Dandelion
MHCH10	Host Plant	Chinese Houses
MHCH11	" "	" "
MHCH12	" "	" " near MHQB03
MHPJ10	Sensit plant	Payson's jewel - yellow jewel
MHHL12	Sensitive Spec	Horned Lizard
MHHL16	" "	" "
MHQB03	QCB	QCB sighted/pic taken 0561838/3622727
MHQB04	"	" no pic 0561479/3622719

TOTAL NUMBER OF QCB DETECTED: 2 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVE FLIEGNER Add'l Person: _____ Date: 4/19/10

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

GPS Unit : 6 QCB Protocol Survey # 2 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	10:40	66	5-8 (10)	30	clear	(patchy)	overcast	drizzle	shower
	12:40	68	5-10 (15)	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
Sara orange tip	𝍸	4
white	𝍸 𝍸	20
Behr's metalmark	𝍸 𝍸	18
Perplexing hairstreak	𝍸	8
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)
		Lotus Strig
		Last cal
		Crypt int
		Plan mens
		Cuscl hel
		Carex sp
		Layia glan

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: BCA Add'l Person: — Date: 04/18/2010

Project: Manzanita Wind Energy Project Map #: 7 Survey Sxn: —

GPS Unit: 2 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0920	66	3.2/4.6	50% haze	clear	patchy	overcast	drizzle	shower
	1000	68.6	2.1/3.0	60% haze	clear	patchy	overcast	drizzle	shower
	1100	71.3	2.4/3.8	30% haze	clear	patchy	overcast	drizzle	shower
	1200	72.3	3.5/5.3	20% haze	clear	patchy	overcast	drizzle	shower
	1300	71.2	3.0/4.2	20% haze	clear	patchy	overcast	drizzle	shower
	1400	73.1	2.1/3.8	0%	clear	patchy	overcast	drizzle	shower
END	1500	71.3	2.3/2.3	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
perplexing hairstreak	II	2
painted lady	IIII	4
Behr's orangetip	II	2
funereal Dusky wing	IIII II	7
Spring white	IIII III	8
Pacific metalmark	IIII IIII IIII IIII IIII IIII IIII	40
Acmon blue	III	3
California marble	IIII	5
Cabbage white	I	1
Quino checkerspot butterfly	I	1
moth sp	IIII II	7
Gabb's 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)
		plagiobothrys
		cupleaf ceanothus
		eriodictyon
		CODA
		CADU
		CATH
		WEBJ
		striped racer
		HOLA
		lupinus bicolor
		Nemophila men
		amsinckia men
		rhus ovata
		rhus integrifolia
		chia
		eriogonum
BCCH01	host-plant pop	~15 collinsia, most in bloom, some just starting
BCQB01	Inaturalist	1325 fresh condition, landed on popcorn flower, bright orange bands, ♀. no photo! landed for ~5 sec then took off
BUOT01	ind	orange-throated whiptail

TOTAL NUMBER OF QCB DETECTED: _____ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID FLIETNER Add'l Person: _____ Date: 4/19/10

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

GPS Unit : 6 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	12:50	75	4-7	30	clear	(patchy)	overcast	drizzle	shower
	~~15:2~~				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	15:20	78	10-15(22)	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
Common white	⁞	2
Behr's metalmark	⁞⁞	4
Echo blue	⁘	1
Perplexing hairstreak	卌 ⁞	12
Sara orangetip	⁞	3
Propertius 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)
DFHTO1	point	Horned tailed lizard (juvenile)
DFCSO1	"	1 Caulostrus simulans
		Eng int
		Layia glandulosa
		Lup dou
		Sigh colum
		Phacelia sp
		Lotus strig
		Camis sp.
		Last cal
		Esch cal

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Antonette Gutierrez Add'l Person: Shelly Innecken Date: 4/19

Project: Manzanita Wind Energy Project Map #: TILE 3 Survey Sxn:

GPS Unit : 1 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1100	76	1/2	10	clear	patchy	overcast	drizzle	shower
	1200	74	6.6/3.7	10	clear	patchy	overcast	drizzle	shower
	1300	70	3/4.2	15	clear	patchy	overcast	drizzle	shower
	1400	78	3/4.2	40	clear	patchy	overcast	drizzle	shower
	1510	78	3/4.2	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
Behr's Metalmark	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	>70
Unid. Sulphur	1	1
Peoples or Hairstreak	𝍸	5
Cloudywing Skipper	1	1
Mournful Duskywing	1	1
Sara's Orangetip	111	3
Unid white	11	2
Funereal Duskywing	1	1
Pearl White (Behr's)	𝍸 1	4
Pacuvius Blue	𝍸 1	6
Fiery Skipper	11	2
Common White	11	2
Pale Swallowtail	1	1
Brown elfin	1	1
Painted Lady	1	1
Hoffman's Sulphur	1	1
Southern blued	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)
SHASOO "20"	Astr do	~20 plants
AGAVE 1	Woodrat nest	in rock outcrop
		Eriodictyon fas.
		Camissonia sp.
		Las ca
		Cryptantha sp.
		Plag. sp.
		Per bet
		Ceo leu
		Gilia sp
		RUHA
		SPTO
		CAQU
SAHL 1	Horned lizard	along trail
		Amsinckia
		Filago
		COBU
		NUWO
		WESC
		AMCR
		Linanthus

TOTAL NUMBER OF QCB DETECTED: _____ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dicus Jensen Add'l Person: Steve Rusk Date: 4/19/10

Project: Manzanita Wind Energy Project Map #: 1 Survey Sxn: N/A

GPS Unit : 9 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1348	70°	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
					clear	patchy	overcast	drizzle	shower
END	1540	76°	2/4	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
Rounding hairstreak	///	3
Sleepy elfin	//	2
Sara orangetip	////	4
~~Swallowtail~~ Pale swallowtail	////	5
Pontia beckerii	////	5
Acmon blue	/	1

Page 1 of 2 (back side)

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)
DJEP01	Excluded Polygon	Excluded Polygon

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Wanky one GPS blun us- Steve carried it for the tracking less & we walked parallel thru study area

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Diane Jensen Add'l Person: Steve Bink Date: 4/19/10

Project: Manzanita Wind Energy Project Map #: 2 Survey Sxn: N/A

GPS Unit: 9 QCB Protocol Survey # 23 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1055	68°	1/1	25%	clear	(patchy)	overcast	drizzle	shower
	1120	—	5/8	—	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	1301	70°	3/9	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
Behr's metalmark (continued below)	~~HHT HHT HHT HHT HHT~~ /	see →
Sara's orangetip	//	2
Pontia beckerii	////	4
Purplewing hairstreak	///	3
Common white	/	1
Pontia sp.	~~HHT~~	5
Blue sp.	///	3
Behr's metalmark continued	~~HHT HHT HHT HHT HHT HHT~~ ////	60

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: Diana Jensen Add'l Person: None Date: 4/20/10

Project: Manzanita Wind Energy Project Map #: 1 Survey Sxn: N/A

GPS Unit: 9 QCB Protocol Survey # 2? (according to mcP) of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1300	71	8/13	45	clear	(patchy)	overcast	drizzle	shower
END	1345	71	15+	45	clear	(patchy)	overcast	drizzle	shower
START	1400	71	10/13	45	clear	(patchy)	overcast	drizzle	shower
END	1415	71	8/13	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
Brown elfin	/	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

Page 2 of 2 (frontside)

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVE FLIETNER Add'l Person: _____ Date: 4/20/10

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

GPS Unit: 1 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Light haze Sky				
START	9:45	66	5-8	40	clear (patchy)	overcast	drizzle	shower	
1220	10:15	66	12-18	50	clear (patchy)	overcast	drizzle	shower	
START	11:15	68	8-12	70	clear (patchy)	overcast	drizzle	shower	
~~END~~	~~12:30~~				clear patchy	overcast	drizzle	shower	
					clear patchy	overcast	drizzle	shower	
					clear patchy	overcast	drizzle	shower	
END	12:30	68	16-20	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
Acmon blue	5	5
Behr's metalmark	5	5
White	1	1
Wind speeds w/in protocol only for lower areas; could not survey on upper part of slope		

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 ~~planting~~ Sand
		Cryptant
		Last cast
		Lotus strig
		Lup cone
		Plagio
		canis

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Antonette Gutierrez Add'l Person: None Date: 4/20/10

Project: Manzanita Wind Energy Project Map #: 13 Survey Sxn: ~~A~~

GPS Unit : 6 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky wispy clouds
START	954	70	0/2	20	clear [✓ patchy] overcast drizzle shower
	1155	72	2/5.7	20	clear [✓ patchy] overcast drizzle shower
	1255	68	4.4/6.4	40	clear [✓ patchy] overcast drizzle shower
	1455	66	5.2/13.6	40	clear [✓ patchy] overcast drizzle shower
	1600				clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END	1600	67	9.2/16.6	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	卌 卌 | Tally	Total
Behr's Metalmark	卌 卌 卌 卌 卌 卌 卌	51
Pearl White	|||	3
Perplexing hairstreak	|||	3
Funereal Duskywing	||	2
Common White	|	1
Sara Orangetip	|	1
Quino checkerspot	||	2
Acmon Blue	||||	4
Mournful Duskywing	|	1
Unid Sulfur flying away	|	1
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)
AGNL 1	Woodrat Nest	5 a woodrat nest in chemise dead
AGNL 2	" "	" " in Rockouttrop
AGHL 1	SD Horned Lizard	along sandy trail
AGQB 1	Quino checkerspot	In open area w/ ~~totals~~ Fragrant shrubs
several photos	11:15 T 63389 3614599	Bare ground of sand Flying low to ground Gold Fields Zig zag pattern Ocotillos small QCB Cattle fly level fly land
T=69 8.5 20	50% Aphids	Ceanothus
		Filago
		plantago bahys
	♀	Ground pink
AGQB 2	Quino checkerspot	In denser area of larger QCB
1 photo	distant 11:30	chamise bush still longer flight before
		Open pockets up than landing
		Observed the 2 quino attempting to
		mate ~~attacked~~ flew up in air then split
		apart collided
AGAS DO 5	Astragalus do	
AGHL 2	SD Horned Lizard	along fence / Sandy trail
AGNL 3	Woodrat Nest	in Rockouttrop
		Gopher snake, two stripe racer, side blotched lizard, fence lizard
		AMLI, BOES 3, COBU, YEWA, ETHA, JUVI
AGASDO 1	Astragalus	approx 10 plants spread out
AGASDO 2	Astragalus	approx 3 "

TOTAL NUMBER OF QCB DETECTED: 2 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: M. Heath Add'l Person: Andrew Fisher 15-16:00 Date: 4/24/10

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

GPS Unit: 6 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	08:30	60.2	3.6/4.6	0%	clear	patchy	overcast	drizzle	shower
	10:30	70.5	2.2/3.2		clear	patchy	overcast	drizzle	shower
	11:30	69.8	3.5/7.1		clear	patchy	overcast	drizzle	shower
	13:30	72.3	2.1/2.8		clear	patchy	overcast	drizzle	shower
	15:30	70.5	8.0/11.5		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
Green hairstreak		19
Western tailed blue		5
Desert Marble		11
White sp		31
Behr's metalmark		80+
Blue sp		3
Pale Swallowtail		5
Spring white		3
Dogface		1
Sara orangetip		7
Common		5
Tortoise shell		1
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
		White thorn ceanothus
		Mt Mahogany
		Tarweed Mustard
		Popcorn flower
		Fabri wood & Mexican Marigold
		Cuplea coanifu
		Lupine
		Tidy tips
		Gold Field
		Baby blue eyes
		Primrose
		Wild Cucumber
		Hairy yellow lotus
		Arabis — Rock cress
		Goldenbush
		Miner's lettuce
		Chia
		Calif poppy
		Blue dicks
		Desert dandelion
		Yucca
		Jewel flower - pink
	Potential host plant	Sun cup
~~MHCH13~~ → 19		Chinese houses
MHLA20		Hunnel Tanks

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: M. Heath Add'l Person: E. Bergman Date: 4/23/10

Project: ~~Cameo~~ Manz Wind Energy Project Map #: 13, 8 Survey Sxn: _____

GPS Unit : 6 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	10:00	45.7	4.0/5.5	0%	clear	patchy	overcast	drizzle	shower
	11:00	53	2.6/4.7		clear	patchy	overcast	drizzle	shower
	12:00	61.5	2.7/4.9		clear	patchy	overcast	drizzle	shower
	13:30	59.8	3.6/7.9		clear	patchy	overcast	drizzle	shower
	14:30	60.8	6.5/9.8		clear	patchy	overcast	drizzle	shower
	16:00	54F	7.5/10.9		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		3
Spring white		1
Brown hairstreak		5
Behr's metalmark		53
Acmon blue		3
Dusky wing		3
Blue sp		1
Vanessa		10
Red Admiral		3
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)
		Erodium
		Wild cucumber
		goldfields
		Popcorn sp
		Eupleaf ceanothus
		tansey mustard
		Lepichthus bellas
		Baby blue eyes
		fiddleneck
		Lupine concinus
		Calif Poppy
		Mt. Mahogany
		Peony
		Yucca
		Miner's lettuce
		Minitm lupine
		Phacelia
		Arabis - Rockcress
		Desert dandelion
		Goldenbush
		Blue dicks
MIHLA10	Sensitive Species	Horned lark
LIBE 01		n=10
02		20
03		50
04		50
05		25
06		100
07		40

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Kyle Ince Add'l Person: — Date: 4/23/2010

Project: Manzanita Wind Energy Project Map #: 11 Survey Sxn: 11

GPS Unit: 3 QCB Protocol Survey # 2 of 5

TIME (24-hour)	Temp (F°):	Wind (avg/max)	% CC	Sky
START			⊠	clear patchy overcast drizzle shower
1220	62°	2/8	0	clear patchy overcast drizzle shower
1320	62°	2/10	0	clear patchy overcast drizzle shower
1530	62°	2/10	0	clear patchy overcast drizzle shower
1615	62°	2/8	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
Sara orangetip	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)
11/Kiadp 1	Point	Astragalus douglasi ssp. parishi - ~~[illegible]~~ 5 plants
11/KiLb 1	Point	Linanthus bellus ~ 100 - many burned out
11/KiCs 1	Point	Caulanthus simulans ~ 20

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID FLIETNER Add'l Person: _____ Date: 4/24/10

Project: Manzanita Wind Energy Project Map #: 1 Survey Sxn: Files 1 DONE

GPS Unit: 3 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0915	66	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
					clear	patchy	overcast	drizzle	shower
END	1005	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
common white	1	
Sulfur	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)
		Crypt int
		Sal col
		Camiss sp.

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID FLEMER Add'l Person: _____ Date: 4/24/10
Manzanita

Project: ~~Gampo~~ Wind Energy Project Map #: 5 Survey Sxn: Title 5

GPS Unit: 3 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1030	69	4-7	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
					clear	patchy	overcast	drizzle	shower
END	1600	73	4-7	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
Behr's metal mark	𝍸 II	17
Perplexing hairstreak	𝍸 𝍸 III	28
common white	𝍸 𝍸 𝍸 II	22
Sara orangetip	𝍸 I	7
Propertius dusky wing	:	2
Dusky wing sp. (hilltopping)	::	4
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)
		Last cal
		Ams menz
		Cean ges
		Cryp par
DFHLO1	point	1 Horned lizard
		Gilia capitatum
		Salvia columbariae
		Plagiobothrys

TOTAL NUMBER OF QCB DETECTED: ∅ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: M. Heath Add'l Person: E Bergman Date: 4/25/10

Project: ~~Campo~~ Manzanita Wind Energy Project Map #: 5, 12, 15 Survey Sxn: _____

GPS Unit : 2 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	08:30	72.5	1.5/2.1	0%	(clear)	patchy	overcast	drizzle	shower
	11:00	77	1.2/3.8		clear	patchy	overcast	drizzle	shower
	13:00	73.1	1.2/4.4		clear	patchy	overcast	drizzle	shower
	15:00	72.3	1.8/3.1		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 sp		9
Behr's metalmark		20+
Green hairstreak		6
Dusky wing		6
White sp		6
Blue sp		1
Sara orangetip		7
Arman blue		11
Pale swallowtail		11
Spring white		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)
MHLIBE 30 → 33		Linanthus bellus
	Flowering plants	Popcorn flower sp
		erodium
		cup leaf ceanothus
		golden bush
		wild cucumber
		sun cup
		gold fields
		night shade
		phacelia
		Yucca shidigera
		chia
		small grand lupine
		desert dandelion
		baby blue eyes
		aster
		tidy tips
		minitum lupine
		gunsteman spectabalis & the other
		Tansy
		doddy
		Grape soda lupine
		Calif poppy
		fiddle neck
		Black Mustard
		Arabis
		Indian paint brush
		Falago ch
		Chenopodium
MHHL 18, 19	Sens sp	Horned Lizards

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Kyle Ince Add'l Person: — Date: 4/26/10

Project: Manzanita Wind Energy Project Map #: 6 Survey Sxn: _____

GPS Unit: 3 QCB Protocol Survey # 3 of 5

TIME (24-hour)	Temp (F°):	Wind (avg/max)	% CC	Sky
START				clear patchy overcast drizzle shower
0900	69°F	0/5mph	5%	clear patchy overcast drizzle shower
1200	70°F	0/5mph	5%	clear patchy overcast drizzle shower
1100	76°F	0/5mph	5%	clear patchy overcast drizzle shower
1300	76°F	0/5mph	0%	clear patchy overcast drizzle shower
1500	77°F	1/5mph	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

~~Behr's~~ Butterfly Species	Tally (1)	Total
Behr's Metalmark	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	37
Sulphur	𝍸	6
Blue sp. (Fly by)	1	1
Funereal Duskywing	1	1
Sara Orangetip	𝍸	7
Purplerking Hairstreak	𝍸	5
Duskywing sp.	111	3
Acmon Blue	𝍸	5
Painted Lady	𝍸	6

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

parishi = possible perstrictus

MAP/GPS LABEL	POINT/POLYGON TYPE	COMMENTS FOR ALL MAPPED POLYGOS AND GPS POINTS/ SPECIES LIST (NECTAR SOURCES, GENERAL WILDLIFE LIST)
6/K: ADP	point	Astragalus douglasi ssp parishi 1
6/K: AD P2	"	" " " " 2
6/K: ADP3	"	" " " ~35
6/K: RN1	"	Raptor nest in cottonwood
6/K: AdP4	"	~~Yellow Breasted Chat heard from Ryman~~ ?
6/K: AdP5	→ Point	Astragalus douglasi ssp. parishi 1
		" " " " ~50
6/K: Ad P6		" " " ~3
6/K: AdP7	"	" " " ~5
6/K: CS 1	"	Centaurea melitensis 3
6/K: AdP8		Astragalus douglasi parishi 1
6/K: Ch 1	"	Collinsia (Concolor) ~~bicolor~~ patch ~50
6/K: Ch 2	"	" " " ~50
6/K: Ch 3	"	" " " ~25
6/K: Ch 4	"	" " " ~50
6/K: Ch 5	"	" " " 2
6/K: Ch 6	"	" " " ~30
6/K: Ch 7	"	" " " ~10
6/K: Ch 8	"	" " " ~25
6/K: Ch 9	"	" " " ~25
6/K: btjr	"	Blackstriped Jack Rabbit 1
6/K: Ch 10	"	Collinsia (Concolor) ~~bicolor~~ ~50

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID FLIGHT Add'l Person: _____ Date: 4/26/10

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

GPS Unit : GTF 4 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	65	0-2	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
					clear	patchy	overcast	drizzle	shower
END	1415	77	0-3	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
Perplexing hairstreak	⊠	8
Prop skipper	⁘	4
Common white	⊠ ⊠	20
Sara orange tip	⁘	4
Behrs metalmark	⊠ ⊠ ⊠ ⊠ ⊠	50
sulfur	⁘	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)
		Cryp int
		Lact cal
		Layia glandl
		Nemo menz
		Amsinckia menz
		Potentilla?
		Plagio
		Esch cal
		Lup conc.
		Calyptridium sp.
		Malacothrix
		Hirc lasiens
		Phace Lotus str
		Salv. columb
		Camis cal
		Cent melanoleucus (Centaurea melitensis)

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: ADAM BEHLE Add'l Person: — Date: 4/26/10

Project: Manzanita Wind Energy Project Map #: MAN2 10 Survey Sxn: _____

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

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START					clear	patchy	overcast	drizzle	shower
	0852	72°	0/1	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	1120	~~74~~ 74°	3/7	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
BEHR'S METALMARK	HT HT III	13
UNIDENTIFIED WHITE	III	3
PERPLEXA HAIRSTREAK	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)
ABHL01	POINT	S.D. HORNED LIZARD UNDER CHAMISE IN CHAP.

TOTAL NUMBER OF QCB DETECTED: ___Ø___ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: ADAM BEHLE Add'l Person: — Date: 4/26/10

Project: Manzanita Wind Energy Project Map #: MANZ 14 Survey Sxn: _____

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

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1145	77°	2/7	15%	(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	1510	84°	2/7	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
PAINTED LADY	||||	4
SARA'S ORANGETIP	||	2
PACC SWALLOWTAIL	|	1
BEHR'S METALMARK	HHT HHT HHT ||	17
COMMON WHITE	||	2
UNIDENTIFIED WHITE	|||	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)
ABCH01	POINT	APPROX 25 COLLINSIA CONCOLOR IN FLOWER NORTH OF POWER POLE X-44278
ABCH02	POINT	APPROX 8
ABCH03	POINT	APPROX 4
ABCH04	POINT	APPROX 25 UNDER BARBED WIRE FENCE
ABCH05	POINT	APPROX 200
ABCH06	POINT	APPROX 3
ABCH07	POINT	APPROX 30
ABCH08	POINT	APPROX 15

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Antonette Gutierrez Add'l Person: None Date: 4-26-10

Project: Manzanita Wind Energy Project Map #: Tile 4 Survey Sxn: _____

GPS Unit: 12 QCB Protocol Survey # 3 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0930	76	0/2	2	clear	patchy	overcast	drizzle	shower
	1130	79	1.5/5	2	clear	patchy	overcast	drizzle	shower
	1230	80	1.5/5	2	clear	patchy	overcast	drizzle	shower
	1430	80	0/1	2	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1630	79	1.5/5	2	clear	patchy	overcast	drizzle	shower

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

Butterfly Species	Tally	Total
Behr's metalmark	>80	80
Western-tailed Blue	I	1
Pacific White	HHT HHT III	10
Acmon Blue	III	3
Sara's Orangetip	III	3
Funereal Dusky wing	HHT III	8
Painted Lady	HHT II	7
Perplexing hairstreak	~~HHT~~ II	~~7~~ 3
Pale Swallowtail	III	~~3~~ 4
Common white	~~HH~~	~~2~~ 2
Unid. Sulphur flying ~30' away	II	2
Echo Blue	I	1
Hurford's 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)
AGCH 1	Chinese Houses	50-100
AGCH 2	"	50-100
AGCH 3	"	10-50
AGCH 4	"	10-50
AGCH 5	"	20-50
AGCH 6	"	Continuous patch from #5
AGCH 7	"	end point
AGCH 8	"	point for poly
AGCH 9	"	50-100
AGCH 10	"	100-500
AGCH 11	"	end point for poly to 10
AGCH 12	"	50-100
AGPAS001	Astragalus	~10
AGPAS002	Astragalus	20-30
AGCH 13	Chinese Houses	2500
AGCH 14	"	10-50
AGCH 15	"	71000

Contiguous Poly
See hard copy map

TOTAL NUMBER OF QCB DETECTED: _____ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Erik LaCoste Add'l Person: Andrew Fisher Date: 4/26/10

Project: Manzanita Wind Energy Project Map #: 2, 3 Survey Sxn: _____

GPS Unit : _____ QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	68	2/4	5	(clear)	patchy	overcast	drizzle	shower
	2:00	80	2/4	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	330	71	4/8	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
Spring Azure	1	1
Behr metalmark	Many	200+
Sara Orangetip	II	2
Funereal Duskywing	IN IN IN IN II	23
Painted Lady	III	3
Cal marble	II	2
Brown elfin	III	3
Spring white	IIII	4
Pale swallowtail	IN II	7
Anise swallowtail	1	1
Southern Blue	1	1
Chalcedon checkerspot	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)
ELHL01	P.	San Diego Horned Lizards
ELHL02	P.	" " "
		Las Cal
		Erodium sp.
		Collinsia heterophylla
		Plagio. sp.
		Layia glandulosa
		Amsinkia menziesii
		Baby blue eyes
		Lupine sp.
		Eriogonum.
		Chia
		Camissonia sp.
		Emmenanthe pedulifolia
		Phacelia sp.
		Bush Poppy.

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: S Rink (MEA, Inc.) Add'l Person: _____ Date: 4/26/10

Project: Manzanita Wind Energy Project Map #: 7 Survey Sxn: _____

GPS Unit: 2 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0930	65	2-3/5	2-5	clear	(patchy)	overcast	drizzle	shower
	1050	78	2-3/5	2-5	clear	(patchy)	overcast	drizzle	shower
	1130	90	3-5/6	2-5	clear	(patchy)	overcast	drizzle	shower
	1230	68	3-5/6	2-5	clear	(patchy)	overcast	drizzle	shower
	1348	70	2-3/5	2-5	clear	(patchy)	overcast	drizzle	shower
	1446	69	1-2/3	2-5	clear	(patchy)	overcast	drizzle	shower
END	1530	69	1-2/3	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
Behris metalmark	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	45
Blue sp.	𝍸	3
Pontia sp.	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	17
W. C. Lady	𝍸 𝍸	85
Pale Tiger Swallowtail	𝍸 𝍸	2
Sulfur sp.	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)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVE FLIGNOR Add'l Person: _____ Date: 4/27/10

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

GPS Unit: 2 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	12:25	74	5-9	10	(clear)	patchy	overcast	drizzle	shower
	15:00	74	7-12	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	15:45	74	10-15(25)	25	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	⊠::	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)
		Cryp int
DFCH01	point	10 Collinsia
		Plagio
		Lotus scri
		Phacelia dis
		Linanthus dem
		Lupin sp.
		Lupin concinnus
		Eriogonum bist
		Gilia cap
		Solanum ptinatii (?)
		Salv col
		Last col
DFCH02	point	1 Collinsia

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: DAVID FLETCHER Add'l Person: _____ Date: 4/27/10
MAN2

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

GPS Unit : 2 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	08:45	65	3-6	10	(clear)	patchy	overcast	drizzle	shower
	11:00	72	7-10	10	(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	~~12:40~~	74	5-8	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
Sara orange tip	⊠	10
Lotty	:	2
Pale swallowtail	:	1
Propertius dusky wing	:	1
Behr's metal mark	:	2
Pearly 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)
		Crypt int
		Let stri
		Com biet
		Nem menz

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Antonette Gutierrez Add'l Person: None Date: 4/21/10

Project: Manzanita Wind Energy Project Map #: 13 Survey Sxn:

GPS Unit : 7 QCB Protocol Survey # 4 of 5.

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	0900	66	3.1/5	2	[✓ clear] patchy overcast drizzle shower
	1000	72	1.2/3	5	[✓ clear] patchy overcast drizzle shower
	1100	74	4.2/9	5	[✓ clear] patchy overcast drizzle shower
	1200	74	1.8/6.9	10	[✓ clear] patchy overcast drizzle shower
	1300	74	4.1/7.4	15	[✓ clear] patchy overcast drizzle shower
	1400	74	5.1/10.1	40	clear [✓ patchy] overcast drizzle shower
END	1440	71	4.5/9	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
Onid white flying ~20' away	|	1
Behr's metalmark	卌 卌	>040
Funereal Duskywing	卌 |	6
Acmon Blue	|	1
Sara's Orangetip	卌 |	6
Pearl White	卌 |||	8
Pale Swallowtail	|	1
Common Sooty wing	||	2
Gabb's Checkerspot	|	1
Painted Lady	|	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)
		Lasthenia cal, Plagiobothrys, sp,
		Eriodictyon cit., Amsinkia, Clinia, Bluedicks
		SPTO, BECP, AMCR, ANHU, BLGN, COEA,
		Cottontailed Rabbit
AGCH 1	Chinese Houses	>50-100 plants
		Groundsel pink, Baby Blueeyes, Buckwheat
		Ca Poppy, Phacelia, Filago
		Western fence lizard
AGCH 2	Chinese Houses	50-100 plants - 500
		Gilia
AGCH 3	Chinese Houses	10-50 blooming
AGCH 4	" "	100-500 "
AGCH 5	" "	50-100
AGCH 6	" "	10-50
AGCH 7	" "	~~50-100~~ -500-1000
AGCH 8	" "	~~10-50~~
AGCH 9	" "	10-50
AGNL 1	Woodrat nest	in rock outcrop
AGCH 10	Chinese House	10-50
AGNL 2	Woodrat nest	in rock outcrop
AGCH 11	Chinese House	20-50
AGCH 12	" "	20-50
AGCH 13	" "	10-50
AGCH 14	" "	~~50-100~~ -500-1000
AGCH 15	" "	~~1~~ 50-100
AGCH 16	" "	10-50 not in bloom
AGCH 17	" "	10-50 in bloom
AGHL 1	Horned Lizard	along sandy trail
AGCH 18	Chinese House	~~50-100~~ 10-50 in bloom 500-1000
AGHL 2	Horned Lizard	along sandy trail
AGHL 3	Horned Lizard	long horned lizard along sandy trail

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

AGNL 3 woodrat nest in deadfencing

AGCH 19 Chinese Houses

AGCH 20 " "

500-1000 plants in bloom

" "

100-500

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Adam Behle Add'l Person: — Date: 4/27/10

Project: Manzanita Wind Energy Project Map #: M4V2 4 Survey Sxn: _____

GPS Unit: Garmin 10 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START					clear	patchy	overcast	drizzle	shower
	10:30	71°	2/7	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	15:00	77°	11/15	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
UNIDENTIFIED WHITE	𝍸 𝍸 III	13
BEHR'S METALMARK	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 III	33
Common WHITE	I	1
PAINTED LADY	III	3
SARA'S ORANGETIP	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)
4/ABCH01	POINT	COLLINSIA CONCOLOR, APPROX 40 PLANTS IN BLOOM
4/ABCH02	POINT	" APPROX 45
4/ABCH03	POINT	" " 5
4/ABCH04	POINT	" " 50
4/ABCH05	POINT	" " ~~6~~ 12
4/ABCH06	POINT	" " 9
4/ABCH07	POINT	" " 8

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Kyle Inre Add'l Person: — Date: 4/27/10

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

GPS Unit: 12 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START					clear	patchy	overcast	drizzle	shower
0930		~~65~~ 71	2/7	0	(clear)	patchy	overcast	drizzle	shower
1030		74			clear	patchy	overcast	drizzle	shower
1230			7/12		clear	patchy	overcast	drizzle	shower
1330					clear	patchy	overcast	drizzle	shower
1500		77	11/15	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

~~Satyr~~ Butterfly Species	Tally	Total
Sara orangetip	~~HHH~~	5
Behr's metalmark	~~HHH HHH HHH HHH HHH~~	30
Funereal Duskywing	1	1
White	1	1
Painted Lady	~~HHH~~ 1	6
Perplexing Hairstreak	1	1
Pale Swallowtail	1	1

#12

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)
4/KiAdp1	1, Point	Astragalus douglii pers 1
4/KiAdp2	Point	" " " "
4/KiCC1	Point	Collinsia concolor ~50
4/KiCC2	Point	" " ~5
4/KiCC3	"	" " 15
4/KiCC4	"	" " ~15
4/KiCC5	"	" " ~50
4/KiCC6	"	" " 5
4/KiCC7	"	" " ~25
4/KiCC8	"	" " 8
4/KiCC9	"	" " ~40
4/KiCC10	"	" " 225

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: M. Heath Add'l Person: — Date: 5/1/10

Project: Manzanita ~~Campo~~ Wind Energy Project Map #: 12, 13 Survey Sxn: _____

GPS Unit : 9 QCB Protocol Survey # 4? of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	08:60	~~2~~ 58.1	2.3/5.1	0%	(clear)	patchy	overcast	drizzle	shower
		58.4			(clear)	patchy	overcast	drizzle	shower
	11:50	63.2	2.1/6.8	0%	(clear)	patchy	overcast	drizzle	shower
	14:00	62.3	6.1/9.8	0%	(clear)	patchy	overcast	drizzle	shower
	16:00	62.8	4.7/8.7	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
California Hairstreak		3
Behr's metalmark		40
Sara orangetip		5
Vanessa sp		2
Painted Lady		~~38~~ 18
Dusky wing		4
Green Hairstreak		4
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)
		Popcorn
		fiddleneck
		Peony
		Yucca
		Goldenbush
		erodium
		~~Peony~~ Tansey mustard
		Silver leaf lotus
		Phacelia
		Desert dandelion
		Camissonia sp
		Mt Mahogany
		White-thorn ceanothus
		Bstub. blue eyed
		Calif Poppy
		Gold fields
		Chia
		Coastal lotus
		Goldenbush
		Lupine Dove Bajada
		Tidy tips
		Wild cucumber
		Blue dicks
		collinsia
		night shade
		phacelia sp
		Woolly blue curls
MHHL19	Sensitive sp	Horned lizard

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: M. Heath Add'l Person: M. Anguiano Date: 5/2/10

Project: Manzanita Wind Energy Project Map #: 12, 13, 14 Survey Sxn: 9

GPS Unit : ____ QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	10:30	61.5	1.1/2.8	0%	clear	patchy	overcast	drizzle	shower
	12:30	65.1	2.1/4.2		clear	patchy	overcast	drizzle	shower
	14:20	68.8	2.1/4.0		clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	16:30	69.8	2.1/4.5		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~~ Butterfly Species	Tally	Total
Behr's metalmark		130+
White sp		6
Pygmy Blue		1
~~Sara~~ Sara orange tip		3
Painted Lady		8
Green hairstreak		1
Vanessa		4
~~Acmon~~ Acmon Blue		1
Blue species		2
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
		Phacelia
		Fiddleneck Amsinckia
		Miniture Lupine
		Popcorn flower
		Plagiobothrys
		Filaree
		Nevada Rockcress
		Mt Mahogany
		Cupleaf Ceanothus
		Mustard - Black & Tansey
		Chia
		Calif Poppy
		Chinese Houses
		Blue dicks
		White thorn ceanothus
		Limnathan bella
		Sun cup Camissionia
		Golden bush
		Gilia
		Baby blue eye
		Nightshade
		Tidy tips
		Peony
MHCH50	n = 75	Silver leaf [illegible] lotus
MHCH51	n= 150	
52	75	
53	10	
54	400	
55	50	
56	40	

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

57 30

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Antoinette Gutierrez Add'l Person: None Date: 3 May 2010

Project: Manzanita Wind Energy Project Map #: T16 #5 Survey Sxn: _____

GPS Unit: 2 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	67	0.7 / 3.4	0	clear	patchy	overcast	drizzle	shower
	1000	70	5.5 / 12.6	0	clear	patchy	overcast	drizzle	shower
	1100	72	6.9 / 15.7	0	clear	patchy	overcast	drizzle	shower
	1200	72	0 / 1.7	0	clear	patchy	overcast	drizzle	shower
	1300	72	1 / 5	0	clear	patchy	overcast	drizzle	shower
	1400	72	1 / 5	0	clear	patchy	overcast	drizzle	shower
END	1530	72	1 / 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
Behr's Metalmark	𝍸 𝍸 𝍸 ||||	19
Painted Lady	𝍸	5
Perplexing Hairstreak	𝍸 𝍸 𝍸 ||	17
Funereal Dusky wing	𝍸 |	6
Unid white flying approx 25' away	|	1
Pale Swallowtail	|||	3
Dorcas Sulphur	||	2
West Coast Lady	||||	4
Sara's Orangetip	𝍸 ||	7
Unid Sulphur flying ~30' away	||	2
Pearl White	𝍸 |||	8
Harford's Sulphur	|||	3
Common Sootywing	𝍸 𝍸 ||||	9
Common White	||	2
Unid blue flying ~20' away	|	1
Tiger 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)
6/AGCH 1	Chinese House	plant pop > 1000
6/AGNL1	Woodrat nest SP	in old brushpile
		Plagiobothrys sp.
		Cryptantha sp
		Lasthenia californica
		Salvia columbariae
		Filago
		Erodium cicutarium
		Phacelia
		Camissonia sp
		~~Chinese Houses~~ Brass Buttons
		Gilia
		Eriastrum densifolium
		Linanthus dianthiflorus
		Linanthus lemmonii
		Calycadenia villosa
		~~Plagiobothrys sp~~
6/AGNL2	Woodrat Nest	in rock outcrop
6/AGNL3	" "	moist
6/AGCH2	Chinese Houses	plant pop ~~>1000~~ 50's
6/AGCH3	" "	" " 50-100
6/AGCH4	" "	" " 10-50
		TUVU, WEME, CORA;

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: S. Rink Add'l Person: _____ Date: 5/3/10

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

GPS Unit: 9 QCB Protocol Survey # 4 of 5

TIME (24-hour)	Temp (F°):	Wind (avg/max)	% CC	Sky
START				clear patchy overcast drizzle shower
0845	61	2-3/5	0	clear patchy overcast drizzle shower
0922	63	10-12/19	0	clear patchy overcast drizzle shower
1030	67	10-12/13	0	clear patchy overcast drizzle shower
1130	65	12-17/13	0	clear patchy overcast drizzle shower
1230	67	8-10/12	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
Painted Lady	|||	3
Behr's metalmark	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 ||	37
Pale tiger - swallowtail	|	1
Agraulis Orangetip	𝍸 ||	7
Pontia sp.	𝍸 |||	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)
SRC0001	pt.	Cal. concolor (n= 10-15)
SRC0002	pt.	Cal. concolor (n= 20-30)
SRC0003	pt.	Cal. concolor. (n= 10-15)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Page 1 of 1

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: S. Rink Add'l Person: _____ Date: 5/3/10

Project: ~~Camp Wind Energy Project~~ Manzanita Map #: 10 Survey Sxn: _____

GPS Unit : _____ QCB Protocol Survey # 4 of 5

TIME (24-hour)	Temp (F°):	Wind (avg/max)	% CC	Sky
START				clear patchy overcast drizzle shower
1309	78	10-12/14	0	clear patchy overcast drizzle shower
1430	70	8-10/12	0	clear patchy overcast drizzle shower
1545	70	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
Lorquin's Blue	III	3
Behr's metalmark	~~HHH~~ II	12
Pontia sp.	II	2
West Coast Lady	~~HH~~ III	8

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)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: ERIK LaCoste Add'l Person: — Date: 5/3/10

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

GPS Unit: GARMIN CO QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	845	60	5/9	0	(clear)	patchy	overcast	drizzle	shower
	1020	67	7/10	0	(clear)	patchy	overcast	drizzle	shower
	1130	64	5/5	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1200	69	3-7	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
Acmon Blue	𝍸	5
Painted lady	𝍸	5
Behr's metalmark	𝍸 𝍸 𝍸 𝍸 𝍸 → 100+	100+
Perplexing hairstreak	III	3
Sara Orangetip	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)
ELCOLHET01	P	20-30 Collinsia individuals.
ELCOLHET02	P	5-10 Collinsia.
ELCOLHET03	P	25-250 Collinsia
[redacted] ELCOLHET04	P	[redacted] Collinsia 1000-2500- scattered on entire W side of Road
		Plagiobothrys sp.
		Mustard sp.
		Erodium sp
		Camissonia sp
		Lupine sp.
		Phacelia sp.
		Chanachis sp.
		Salvia Columbariae
		Lasthenia californica
		Collinsia - GPS'd
		Emmananthe pendulifiora
		Phacelia tanacetifolia
		Ceanothus sp.
		Layia glandulosa
		Uropappus lindleyi
		Amsinkia menziesii
		Linanthus lemmonii
		Ericameria sp.
		Penstemon cleveladdii
		Bush Poppy
		Eriophyllum wallacei
		Cream cups
		Erysimum capitatum
		Solanum sp.

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Adam Bente Add'l Person: _____ Date: 5/3/18

Project: Manzanita Wind Energy Project Map #: MAN2-12 Survey Sxn: _____

GPS Unit : Campo/MAN2 1 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0855	64°	1/5	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
					clear	patchy	overcast	drizzle	shower
END	0950	67	2/7	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
Behr's metalmark (Apodemia mormo virgulti)	III	III

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: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: ADAM BENNE Add'l Person: _____ Date: 5/3/10

Project: ~~Campo~~ MANZANITA Wind Energy Project Map #: MAN2 # 15 Survey Sxn: _____

GPS Unit: CAMPO/MAN2 / QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1035	70°	3/7	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
	1415				clear	patchy	overcast	drizzle	shower
END	~~1415~~	76°	1/6	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
PHAEOBEBRIS MACROTOMAE	I	1
EUPHYDRYAS EDITHA MORMONIA	HH II	7
UNIDENTIFIED WHITE	I	1
VANESSA SP. (OVERHEAD FLY BY)	III	3

Page 1 of 2

NO QCB.

Adam Beale
MANZ 15
5/31/10
GPS 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/ABLIBE01	Point	3 Linanthus Bellus in Sandy Wash
15/ABLIBE02	"	Approx 30
15/ABLIBE03	"	Approx 50
15/ABLIBE04	"	Approx 100
15/ABLIBE05	"	"
15/ABLIBE06	"	100's

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Adam Bemis Add'l Person: _____ Date: 5/5/10

Project: Manzanita Wind Energy Project Map #: MAJ2 11 Survey Sxn: _____

GPS Unit : 1 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1430	84°	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	1550	80°	1/3	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	IIII	4
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)
11/4BHL01	Point	SMAN SD Horned Lizard (~ 2")

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: S. Rink Add'l Person: _____ Date: 5/4/10

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

GPS Unit : ~~3~~ 5 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0845	~64°	2-3/5	0	clear	patchy	overcast	drizzle	shower
	1030	70	3-5/6	0	clear	patchy	overcast	drizzle	shower
	1130	72	5-7/9	0	clear	patchy	overcast	drizzle	shower
	1230	74	5-7/10	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
Painted Lady	~~HH~~ II	7
Porphyrin Duskywing	I	1
Blue sp.	III	3
Behr's metalmark	~~HH~~ ~~HH~~ II	12
Pale tiger swallowtail	I	1
Popetia sp.	II	2
Sulfur 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)
SRCOCO1	pt.	Cel. concolor (n=5)
SRCOCO2	pt.	" " (n=10-15)

TOTAL NUMBER OF QCB DETECTED: 2 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: S. Rink Add'l Person: ______ Date: 5/4/10

Project: Manzanita Wind Energy Project Map #: 4 Survey Sxn: ______

GPS Unit : 5 QCB Protocol Survey # 4 of 5 .

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	1300	78	3-5/7	0	[✓ clear] patchy overcast drizzle shower
	1400	80	8-10/12	0	[✓ clear] patchy overcast drizzle shower
	15[illegible]	80	8-10/12	0	[✓ clear] patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
					clear patchy overcast drizzle shower
END	1535				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	卌 卌 卌 卌 卌 卌 IIII	34
Pontia sp.	II	2
Blue sp.	卌 II	7
Painted Lady	卌	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)
SRCH01	pt.	Chinese house (n= 15-20)
SRCH02	pt.	" " (n = 60-70)
SRCH03	pt.	" " (n = 20 - 30)
SRCH04	pt.	" " (n = 100-150)
SRCH05	pt.	" " (n = 200-300)
SRCH06	pt.	" " (n = 200-250)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: C. Rule Add'l Person: _____ Date: 5/5/10

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

GPS Unit: 12 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	[illegible]	72	10-13/15	0	clear	patchy	overcast	drizzle	shower
	0930	69	10-12/17	0	clear	patchy	overcast	drizzle	shower
	1030	69	10-12/13	0	clear	patchy	overcast	drizzle	shower
	1130	70	12-13/18	0	clear	patchy	overcast	drizzle	shower
	1230	71	10-12/17	0	clear	patchy	overcast	drizzle	shower
	1330	70	10-12/19	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
Painted Lady	𝍸 I	6
Behr's metalmark	𝍸 𝍸 𝍸 𝍸 II	22
Pale tiger swallowtail	I	1
Sara Orangetip	II	2

Page 1 of 2 (for this date, 5/5/10)

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)
SRCH01	pt.	Chinese House (n = 25-30)
SRCH02	pt.	" " (n = 50-60)
SRCH03	pt.	" " (N = 150-200)
SRCH04	pt.	" " (n = 250-300)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Page 2 of 2

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Antoinette Gutierrez Add'l Person: Gina Grant-2 Date: 5/6/10

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

GPS Unit: 7 QCB Protocol Survey # 4 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0945	74	0/3	0	(clear)	patchy	overcast	drizzle	shower
	1045	76	0/5	0	(clear)	patchy	overcast	drizzle	shower
	1245	76	7/5	0	clear	patchy	overcast	drizzle	shower
				0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1430	76	15/10	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
Pacific Orange Tip	IIII IIII	10
Tortoiseshell	III	3
Painted Lady	IIII	4
Common Wood	I	1
Hermes Copper	I	1
Sara Orange Tip	II	2
Common Sootywing	I	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)
4 AGCH 1	Chinese Houses	Pop 10-50
AGCH 2	" "	100-500
AGCATH 1	Ca. Thrasher	In chamise
AGCH 3	Chinese Houses	10-50
AGCH 4	" "	50-100
		TU VU, AMER
		Gopher Snake(11) King snake, two stripped racer
		side blotch lizard, Ringneck lizard
AGCH 5	Chinese Houses	50-100 Foothill
AGCH 6	" "	500-2000 below hilltop

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Antonette Gutierrez Add'l Person: Greg Grant Date: 5/6/10

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

GPS Unit: 7 QCB Protocol Survey # 5 of 5

	TIME (24-hour)	Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1450	75	4/10	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	1630	73	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
Behr's Metalmark	HHT III	9
Sara's Orangetip	I	1
Mylitta crescent	I	1
Painted lady	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)
AGHL 1	Horned Lizard	in sandy soil
		Baldellia Ranunculoides Plagiobothrys
		Cryptantha.

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Bonnie Hendricks Add'l Person: none Date: 5/7/10

Project: Manzanita Wind Energy Project Map #: 7 Survey Sxn: Manz-L

GPS Unit: SM 13 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	9:50	67.1	1.5/4.5	0	[✓ clear] patchy overcast drizzle shower
	10:35	68.3	2.1/4.3	0	[✓ clear] patchy overcast drizzle shower
	11:55	73.7	2.6/6.1	0	[✓ clear] patchy overcast drizzle shower
	12:55	80.6	2.2/5.9	0	[✓ clear] patchy overcast drizzle shower
	2:05	79.5	2.1/14	0	[✓ clear] patchy overcast drizzle shower
	3:30	73.1	2.0/8.6	0	[✓ clear] patchy overcast drizzle shower
END	4:30	78.7	3.7/5.6	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	卌	5
Behr's Metalmark	卌 卌 卌 卌 卌 |||	28
Painted Lady	|||	3
Acmon Blue	||||	4
Sarah's Orangetip	卌		6
Perplexing hairstreak			1
Small black butterfly			1
Duskywing sp.			1
Orangetip sp.			1
Sulpher sp.	||	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)
BHCH01	host plant	Collinsia heterophylla in bloom 60
BHCH02	"	" " " 50
BHCH03	"	" " " 100
" 04	"	" " " 200
" 05	"	" " " 200
" 06	"	" " " 200
BHlibe01	rare plant	Linanthus bellus in bloom 15+40
BHCH07	host plant	Collinsia heterophylla 200
BHCH08	" "	" " 50
" 09	" "	" " 150
" 10	" "	" " 50
" 11		" 150
" 12	"	" 200
" 13	"	" 3
" 14	"	" 8
" 15	"	" 20
" 16	"	" 30
" 17	"	" 150
BHHL01	animal	Horned Lizard 1
BHCH 18	host plant	Collin heter 200
" 19	"	" 200
" 20	"	" 200
21		100
22		100
23		50
24		50
25		50
26		60
27		40
BHSTCA01	Rare plant	Streptanthus campestris 3

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Bonnie Hendricks

5/7/10

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 few pts. not GPS'ed at end of day when GPS stalled, on S. side of ~~dirt~~ road.
		CH (40)
		CH (40)
		CH (50)
		CH (100)
		Horned Lark
		CH (10)
		CH (400)

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: _____ Add'l Person: _____ Date: _____

Project: Manzanita Wind Energy Project Map #: _____ Survey Sxn: _____

GPS Unit : _____ QCB Protocol Survey # _____ of 5

TIME (24-hour)	Temp (F°):	Wind (avg/max)	% CC	Sky				
START				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

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: M. Heath Add'l Person: Ø Date: 5/7/2010

Project: ~~Campo~~ MAW Wind Energy Project Map #: 2, 1 Survey Sxn: _____

GPS Unit: 7 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	08:30	63.2	1.8/3.0	0%	(clear)	patchy	overcast	drizzle	shower
	09:30	69.3	1.2/2.4	0%	clear	patchy	overcast	drizzle	shower
	12:00	69.9	3.6/5.3	0%	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
	15:00	74.0	1.4/4.9	0%	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	16:00	73.2	2.3/5.7	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
Vanessa sp		3
Common White		3
Behr's metalmark		22
Sara Orangetip		9
Painted Lady		2
Dusky-wing		1
Pale Swallowtail		2
Blue sp		1
White sp		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)
	Flowering plants	Popcorn flower
		Erodium
		Bush poppy
		Camissonia
		Fiddleneck
		Tansey mustard
		White Sage
		Cup-leaf ceanothus
		Golden bush
		Peony
		Goldfield
		Desert dandelion
		Phacelia
		Chinese Houses
		Chia
		Miniature lupine
		Buck brush
		Red maids
		Mina's lettuce
		Wild cucumber
MHcH60	Host sp	Chinese Houses n= 30
61		n = 100
62		n = 10
63		n = 25
64		n = 25
65		n = 150
66		n = 200
MHHL20	Sensitive sp	Horned Lizard

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: M. Heath Add'l Person: Ø Date: 05/08/2010

Project: Manzanita ~~Camps~~ Wind Energy Project Map #: 1 Survey Sxn: —

GPS Unit: 3 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	09:00	68.1	2.1/3.9	0%	clear	patchy	overcast	drizzle	shower
	10:30	72.3	3.9/5.6		clear	patchy	overcast	drizzle	shower
	12:30	74.5	2.5/7.0		clear	patchy	overcast	drizzle	shower
	14:00	73.5	3.2/6.7		clear	patchy	overcast	drizzle	shower
	15:30	75.5	5.5/13.1		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
Sara Orangetip		30
Behr's metalmark		11
Acmon blue		3
Painted Lady		2
Common White		1
Pale Swallowtail		2
Vanessa sp		3
Dusky wing sp		3
Blue sp		5
White sp		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)
	Flowering plants Species	Erodium
		Popcorn flower
		Fiddleneck (Amsinckia)
		Primrose (Camissonia)
		Phacelia
		Coyote ceanothus
		Woolly blue curls
		Chinese houses
		Peony
		Coast lotus
		Chia
		Annual yellow monkey flower
		Sugar bush
		Goldenbush
		Blue dicks
		Arabis (Nevada Rockcress)
		Tansy Mustard
		Bush poppy
		Miner's lettuce sp
		Baby blue eyes
		wild cucumber
		gilia
MHSP01	n=1	slender pod jewel flower
MHCH70	n=200 Host	Chinese houses potential host plant
71	n=20 Plant	
72	n=40	
73	n=300	
74	n=100	
75	n=2000	
76	n=15	

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder. Bonnie Hendricks Add'l Person: — Date: 5/8/10

Project: Manzanita ~~Campo~~ Wind Energy Project Map #: 4 Survey Sxn: Manz-M

GPS Unit : Garmin 7 QCB Protocol Survey # 5 of 6

TIME (24-hour)		Temp (F°)	Wind (avg/max)	% CC	Sky
START	6:45	63.7	9.0/11.7	0	[✓ clear] patchy overcast drizzle shower
	9:50	75.5	2.5/5.0	0	[✓ clear] patchy overcast drizzle shower
	10:50	73.0	5.2/12.3	0	[✓ clear] patchy overcast drizzle shower
	11:50	72.6	7.1/14.2	0	[✓ clear] patchy overcast drizzle shower
	2:30	73.6	5.5/9.0	0	[✓ clear] patchy overcast drizzle shower
	3:30	71.9	5.4/9.8	0	[✓ clear] patchy overcast drizzle shower
END	4:15	71.4	5.1/7.7	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
Perplexing hairstreak	𝍷 𝍷𝍷 𝍸 𝍸 𝍸𝍸𝍸	1
Behr's Metalmark	𝍸𝍸 𝍸𝍸𝍸𝍸𝍸𝍸𝍸𝍸	67
Orangetip sp.	𝍷𝍷𝍷	3
~~Western Tiger Swallowtail~~	~~𝍷~~	~~1~~
Pearly Marble	𝍸𝍷	6
Dustywing sp. (Propertius?)	𝍷𝍷𝍷	3
Blue sp.	𝍷	1
Acmon blue	𝍸	5
Painted Lady	𝍷𝍷	2
Duskeywing (E. funeralis or tristis)	𝍸𝍷	6
Pale Swallowtail	𝍷𝍷𝍷𝍷	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)
BHSTCA02	Rare Plant	Streptanthus campestris 2 plants
BHASDD01	" "	Astragalis douglasii 5
BHCH 30	host plant	*Collinsia concolor 27
		*keyed out last night, all Collinsia on my 5/7/10 data sheet should be Coll. concolor.
BHASDD03	Rare Plant	Astr. doug. 3
BHCH 31	host plant	Collinsia concolor 4
" 32	"	" " 75
" 33	"	" 153
" 34	"	" 137
" 35	"	" ~500
BHSTCA03	Rare Plant	Strep camp 4
BHCH 36	host plant	Collinsia con. ~500
" 37	"	" ~200
" 38	"	" ~100
" 39	"	" 50
BHASDD04	Rare plant	Ast doug 5
BHCH 40	host	Col con 17
" 41	"	" ~200
42		~300
BHLIBE01	Rare Plant	Linanthus bolkus 5
BHCH 43	host	Col con ~200
" 44	"	" " ~100
" 45	"	" " ~100
" 46	"	" " ~300
BHLIBE02	Rare Plant	Lin bel. ~100
BHCH 47	host	Col. con. ~100
BHLIBE03	Rare Plant	Lin. bel. ~100
BHCH 48	host	Col. con. ~ 50
BHCH 49	"	" ~ 50

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Antonette Cochrenes Add'l Person: None Date: 12 May 2010

Project: Campo Wind Energy Project (Margarita) Map #: Tile 4 Survey Sxn: _____

GPS Unit: 7 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0840	64	0	0	(clear)	patchy	overcast	drizzle	shower
	0940	68	0/1	0	(clear)	patchy	overcast	drizzle	shower
	1040	71	1/3	0	(clear)	patchy	overcast	drizzle	shower
	1240	74	1/6	0	(clear)	patchy	overcast	drizzle	shower
	1340	75	1.5/8	2%	(clear)	patchy	overcast	drizzle	shower
	1440	75	2.2/8.4	20%	(clear)	patchy	overcast	drizzle	shower
END	1600	71	4/12	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	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	155
Painted Lady	𝍸 III	3
Sara's Orangetip	𝍸	5
Pearl White	𝍸 𝍸 I	8
Common White	𝍸 II	7
Funereal Duskywing	I	1
Pale Swallowtail	II	2
Western Blue	III	3
West Coast 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)
4/AGBJ1	Blacktailed Jackrabbit	in NNG HAVI, CATO, PSPI,
~~4/AGCH1~~	~~Chinese House~~	SPTO, WEBL, BCSP, CORA, VESP, MIPO, ANHU, WEME, LEBO
4/AGCH1	Chinese Houses	Plant Pop 100-500 good conditions
		Tidy tips, erodium CIC, phacelia, Amsinkia
		cryptantha sp, Lasthenia cal.
		Cal lem, Camissonia sp. Clara, Spermaboro gilicsp
4/AGBCSP1	Blackbirmed Sparrow	in Chamise
4/AGNL1	Woodrat nest	in chamise
4/AGCH2	Chinese House	Plant Pop. 100-500 good condition
4/AGBJ2	Blacktailed Jackrabbit	in chamise
4/AGNL2	Woodrat nest	in art. glas
4/AGCH3	Chinese Houses	plant pop 100-500 good condition
4/AGCH4	" "	plant pop 100-200 good condition
4/AGCH5	" "	plant pop 50-100 good condition
4/AGCH6	" "	plant pop >1000-5000 good condition
4/AGBCSP2	Blackbirmed Sparrow pair	in Backdrop (pair)
4/AGHOLA1	Horned lark pair	open soil area
4/AGCH7	Chinese Houses	plant pop 1000-5000 good condition
4/AGHL1	Horned Lizard	in open sandy soil
4/AGMD1	Mule deer scat	fresh mule deer scat
4/AGCH8	Chinese Houses	Good cond. Plant Pop >1000
		Buttercups, groundpink, pincushion, Baby Blue Eyes
4/AGNL3	Woodrat nest	In cer. bet (mountain mahogany)
4/AGCH9	Chinese Houses	Plant Pop 1000-5000 good condition along trail
4/AGHOLA2	Horned lark	backdrop sandy area
4/AGCH10	Chinese Houses	Plant Pop 500-1000 good condition
4/AGBCSP3	Blackbirmed Sparrow	in ceanothus
4/AGCH11	Chinese Houses	Plant pop 500-1000 good condition
		Coastal whiptail lizard, western Fence lizard, Side blotched lizard
		gopher snake,
4/AGCH12	Chinese Houses	Plant pop >5000 good condition

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Antonette Estrella Add'l Person: None Date: 5/12/10

Project: Mountain Campo Wind Energy Project Map #: 4764 Survey Sxn: _____

GPS Unit : 57 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START					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

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)
4/AGCH13	Chinese Horses	Plant pop. ~~>~~ 5000 in good condition
4/AGCH14	" "	" " > 5000 in good condition
4/AGCH15	" "	" " ~~>5000~~ " " "
4/AGBJ3	Black tailed Jackrabbit in Chamise	
4/AGCH16	Chinese Horses	Plant pop > 1000 good condition
4/AGBCSP4	Black chinned Sparrow in chamise	
4/AGCH17	Chinese Horses	Plant pop 50-100 good condition
4/AGHL3	SR Horned lizard	on sandy trail

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Kyle Ince Add'l Person: - Date: 5/12/10

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

GPS Unit : 2 QCB Protocol Survey # 5 of 6

TIME (24-hour)	Temp (F°):	Wind (avg/max)	% CC	Sky				
START				(clear)	patchy	overcast	drizzle	shower
0830	63°	0 - 2mph	0	(clear)	patchy	overcast	drizzle	shower
0930	64°	0 - 2mph	0	(clear)	patchy	overcast	drizzle	shower
1130	72°	0 - 2mph	0	(clear)	patchy	overcast	drizzle	shower
1330	77°	2 - 5mph	0	clear	(patchy)	overcast	drizzle	shower
1430	78°	2 - 5mph	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
Acmon Blue	𝍸 𝍸 ||	12
Behr's metalmark	𝍸 𝍸 𝍸 𝍸 |	21
Checkered White	|	1
Umbe white	𝍸 |	6
Sara orangetip	|	1
Propertius Duskywing	||	2
Painted Lady	||	3
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)
3/KiCC1	Point	Collinsea concolor ~20
3/KiAdp1	"	Astragalus douglasii perstrictus ~20
3/KiCC2	"	Collinsea heterophylla ~50
3/KiCC3	"	" " ~30
3/KiCC4	"	" " ~25
3/KiCC5	"	" " ~50
3/KiCC6	"	" " ~50
3/KiCr1	"	Cordylanthus rigidus ~3
3/KiCC7	"	Collinsea hetero ~100

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: ERIK LACSIC Add'l Person: — Date: 5/12/10

Project: MANZANITA ~~Campo~~ Wind Energy Project Map #: 8 Survey Sxn: K

GPS Unit: 5 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0845	60	2 / 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	1045	65	4 / 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

~~Echo metalmark~~ Butterfly Species	Tally	Total
Behr's metalmark	100+	100's +
Checkered white	IIII	4
Pale swallowtail	I	1
Funereal Duskywing	I	1
Sara Orangetip	I	1
Northern White skipper	I	1
~~Lotis~~ Western tailed Blue	I	1
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)
ELCOHE01	P	5-10 Collinsia.
ELCOHE02	P.	100-200 Collinsia
ELCOHE03	P	50-100 Collinsia
		OENCAL
		Plagiobothrys sp.
		Erodium sp.
		Wild Pea
		AMSMEN
		Brassica sp.
		Ceanothus sp.
		Phacelia sp.
		SALCOL
		Camissonia sp.
		LASCAL
		LAYGLA
		ERICON
		COLTET
		~~ERILA~~ TRILAN
		Ericameria sp.
		Ground Pink
		ESCCAL
		SOLPAR
		NEMMEN
		UROLIN

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: ERIK LeCoste Add'l Person: — Date: 5/12/10

Project: ~~Campo~~ Manzanita Wind Energy Project Map #: 11 Survey Sxn: 4

GPS Unit : 5 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1100	93	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
					clear	patchy	overcast	drizzle	shower
END	1400	65	4/8	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
Acmon Blue	IIII	4
Checkered White	II	2
Behrs metalmark	NII	5
Western tiger swallowtail	I	1
Sara orangetip	I	1
Painted Lady	I	1
Northern White SKIPPER	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)
ELCOHE04	P	50-100 Collinsia
ELANCO01	P	3-10 Antirrhinum coulterianum
		Plagiobothrys sp.
		Brassica sp
		LASCAL
		AMSMEN
		LINPAR
		Chaenactis sp.
		ESCCAL
		LAYGLA
		DELPAR
		GROUND PINK

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Adam Behle Add'l Person: — Date: 5/12/10

Project: Manzanita ~~Campo~~ Wind Energy Project Map #: Manz - 6 Survey Sxn: —

GPS Unit : Garmin 10 QCB Protocol Survey # 5 of 5.

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky
START	0850	60°	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	1500	76°	6/9	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
Behr's Metalmark	||| 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	43
Painted Lady	|||	3
Unidentified Duskywing			1
Pygmy Blue			1
Sara Orangetip	𝍸 𝍸 ||	12
Common White			1
~~Red Admiral~~ California Sister			1
Unidentified Blue	|||	3
Unidentified White			1

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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)
6/ABDJ01	POINT	BLACK TAILED JACK RABBIT OBSERVED ALONG CHAP DOMINATED RIDGE.

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Pownall Add'l Person: — Date: 5/13/10

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

GPS Unit : 13 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% cc	Sky				
START	8:39	71°	2/4	8	(clear)	patchy	overcast	drizzle	shower
	10:45	78°	4/5	8	(clear)	patchy	overcast	drizzle	shower
	11:20	78°	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 Orangetip	1	1
Common White	1	1
Acmon Blue	HHT	5
Blue ?	1111	4
Behr's Metalmark	111	3
Cuhita?	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
		Layia
		Deinandra
		Eriodictyon
		Cryptantha
		Plagiobothrys
		Collinsia
		Penstemon
		Descurainia
001	Point	Collinsia
↓	"	"
004	"	"
(Track was not on during this portion of the survey.)		

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell (Manzanita) Add'l Person: - Date: 5/13/10

Project: ~~Campo~~ Wind Energy Project Map #: 14, 15 Survey Sxn: -

GPS Unit : 13 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	11:40	75°	6/8	0	Cirrus clear	patchy	overcast	drizzle	shower
	13:30	77°	4/5	0	Cirrus clear	patchy	overcast	drizzle	shower
	16:00	78°	6/7	0	Cirrus 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
W Buck?	IIII	4
Bikis Metalmark	HHT HHT III	14
Common Blue	HHT III	8
Lady?	II	2
Sara Orangetip	HHT III	8
Dunkyspot	IIII	4
Funereal Duskywing	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
		Layia
		Delphinium
		Eriodictyon
		Cryptantha
		Plagiobothrys
		Collinsia
		Penstemon
		Descurainia
015	Point	Collinsia
↓	"	"
028	"	"
(Track was not run during part of the survey)		

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: NONE Date: 13 MAY, 2010

Project: Manzanita Wind Energy Project Map #: TILE 4 Survey Sxn: MANZ-M

GPS Unit : GARMIN 10 + PERSONAL ETREX VISTA HCX QCB Protocol Survey # 5 of 5

	TIME (24-hour)	Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0848	75	Ø→2 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	0900	75	Ø→3	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1000	75	Ø→4	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	79	Ø→7	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	71	2→6	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	73	2→7	CLEAR	(clear)	patchy	overcast	drizzle	shower
END	1400	81	Ø→7	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)

1500 HRS, 73°F, WIND Ø→8 MPH, 20% COVER, 1600 HRS, 72°F, WIND= 4→7 MPH, 30% COVER

Butterfly Species	Tally	Total
BEHR'S METALMARK	IN FIELD NOTEBOOK	480
SPRING WHITE	"	4
PAINTED LADY	"	4
CALIFORNIA MARBLE	"	4
PALE TIGER SWALLOWTAIL	"	1
SARA ORANGETIP	"	9
WEST COAST LADY	"	2
ACMON BLUE	"	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)
MCHL32	POINT	ADULT HORNED LIZARD
MCHL07	POINT	HORNED LARK (#1 OF PAIR)
MCHL08	POINT	HORNED LARK (#2 OF PAIR)
MY GARMIN GPSMAP 60 CSx HAS JUST UNDER 1000 NUMBERED POINTS THAT REPRESENT COLUMSIA (GARMIN 10). AFTER USING UP ALL OF THE GPS MEMORY, I SWITCHED TO MY PERSONAL GARMIN ETREX HCx AND FILLED THE MEMORY OF THIS UNIT WITH COLUMSIA POINTS AS WELL.		

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: [illegible] Add'l Person: Noah Date: 5/14/10

Project: ~~Campo Wind Energy Project~~ Manzanita Map #: Tile 4 Survey Sxn:

GPS Unit : 6 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	68	2/8	0	(clear)	patchy	overcast	drizzle	shower
	1000	71	2/7	0	(clear)	patchy	overcast	drizzle	shower
	1100	74	3/10	20%	(clear)	patchy	overcast	drizzle	shower
	1200	76	3/6	30%	(clear)	patchy	overcast	drizzle	shower
	1300	78	3/6	30%	(clear)	patchy	overcast	drizzle	shower
	1400	78	2/7	10%	(clear)	patchy	overcast	drizzle	shower
END	1600	78	2/6	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
Bolin's Metalmark	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	120
Marine Blue	II	2
Pearl White	𝍸 II	7
[illegible]	I	1
Ramon Blue	I 𝍸	5
Dainty Sulphur	II	2
Painted Lady	II	2
[illegible]	III	3
Sara's Orangetip	𝍸	5
[illegible]	IIII	4
West Coast Lady	I	1
Sleepy Orange (P)	I	1
Unid Vanessid sp. flying low to ground in wind	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)
4/AGCH 1	Chinese Houses	100 - 500 ~10% drying out others still in good condition
4/AGCH 2	" "	50 - 100 in good condition 5% drying out
4/AGWL1	SD Woodrat nest	in Oak
		Cryptantha sp, Eriodictyon sp, Eriogonum sp, Salvia sp, Silene sp, Gilia sp, Plagiobothrys sp, Camissonia sp, Erigeron sp, Lupinus sp, Stipa sp, Avena sp, Bromus sp, Festuca sp, Hordeum sp, Poa sp, Elymus sp, Clarkia sp, Nemophila sp, Malacothrix sp, Phacelia sp, Calystegia sp, Convolvulus sp, Cirsium sp, Centaurea sp, Brassica sp, Sisymbrium sp, Erodium sp, Lactuca sp, Malva sp, Rumex sp, Amsinckia sp, Lasthenia sp, Layia sp, Baileya sp, Eschscholzia sp, Madia sp, Helianthus sp, Pectocarya sp, Plantago sp, Trifolium sp, Lotus sp, Medicago sp, Melilotus sp, Vicia sp, Lathyrus sp, Astragalus sp, Acmispon sp, Lupinus sp, Ceanothus sp, Salvia sp, Eriogonum sp, Eriodictyon sp, Encelia sp, Artemisia sp, Isocoma sp, Baccharis sp, Ericameria sp, Gutierrezia sp, Grindelia sp, Helianthus sp, Pectocarya sp, Plantago sp, Trifolium sp, Lotus sp, Medicago sp, Melilotus sp, Vicia sp, Lathyrus sp, Astragalus sp, Acmispon sp, Lupinus sp, Ceanothus sp, Salvia sp, Eriogonum sp, Eriodictyon sp, Encelia sp, Artemisia sp, Isocoma sp, Baccharis sp, Ericameria sp, Gutierrezia sp, Grindelia sp
4/AGBCSP1	Blackchinned Sparrow	in chaparral
		Lasthenia sp, Layia sp, Baileya sp, Eschscholzia sp, Madia sp, Helianthus sp, Pectocarya sp, Plantago sp, Trifolium sp, Lotus sp, Medicago sp, Melilotus sp, Vicia sp, Lathyrus sp, Astragalus sp, Acmispon sp, Lupinus sp, Ceanothus sp, Salvia sp, Eriogonum sp, Eriodictyon sp, Encelia sp, Artemisia sp, Isocoma sp, Baccharis sp, Ericameria sp, Gutierrezia sp, Grindelia sp
4/AGCH3	Chinese Houses	10000 10% drying out rest in good condition
4/AGHL1	SD Horned Lizard	in open sandy soil
4/AGBS1	Blackchinned Sparrow	in drainage w/ chaparral
4/AGCH4	Chinese Houses	~100 Good condition ~5% dry
4/AGCH5	" "	75000 good condition ~5% dry
4/AGHL2	SD Horned Lizard	on sandy trail
4/AGCH6	Chinese Houses	100-200 good condition
4/AGCH7	" "	?10,000 good condition slightly dry hillside top
4/AGCH8	" "	500 - 1000 hilltop and drainage
4/AGHL3	SD Horned Lizard	open sandy soil
4/AGCH9	Chinese Houses	100-500 fair condition 5% drying out
4/AGCH10	" "	50-100 fair condition 5% drying out
4/AGCH11	" "	10-50 " " " "
4/AGSASP	Sage Sparrow	in Chap
4/AGCH12	Chinese Houses	50-100 fair condition 5% drying out
4/AGCH13	Chinese Houses	" " " "
4/AGHL4	SD Horned Lizard	Open Sandy soil
4/AGCH15	Chinese Houses	50-100 fair condition 5% drying out

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: G. Rink Add'l Person: G. Brady Date: 5/14/10

Project: Manzanita Wind Energy Project Map #: 13 Survey Sxn: _____

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

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0845	71	1-2	0	(clear)	patchy	overcast	drizzle	shower
	1005	73	1-2	0	(clear)	patchy	overcast	drizzle	shower
	1100	75	1-3	0	(clear)	patchy	overcast	drizzle	shower
	1280	90	1-5	0	(clear)	patchy	overcast	drizzle	shower
	1500	71	5-7	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
Sara Orangetip	𝍸 II	(7)
Funereal Duskywing	II	(2)
Boloria metalmark	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 III	(68)
Pieris sp.	III	(3)
Baltis checkerspot	I	(1)
Pontia sp.	I	(1)
Sulphur	I	(1)
Pale tiger swallowtail	I	(1)
Anise Blue	II	(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)
SRCH01	pt.	Chinese houses (n= 45-50)
SRCH02	pt.	" " (n = 100-150)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

D

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Kyle Ince Add'l Person: — Date: 5/14/10

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

GPS Unit : 5 QCB Protocol Survey # 5 of 5

TIME (24-hour)	Temp (F°):	Wind (avg/max)	% CC	Sky				
START	68	0 - 5	0	(clear)	patchy	overcast	drizzle	shower
0850	68	0 - 5	0	(clear)	patchy	overcast	drizzle	shower
1000	70	0 - 5mph	0	(clear)	patchy	overcast	drizzle	shower
1100	72	0 - 5mph	0	(clear)	patchy	overcast	drizzle	shower
1230	76	0 - 5mph	0	(clear)	patchy	overcast	drizzle	shower
1400	77	0 - 5mph	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
Behr's metalmark	𝍸 I	6
Acmon Blue	𝍸 𝍸 II	12
Stanford's Sulphur	I	1
Painted Lady	I	1
Sara Orangetip	I	1
Queen	I	1
White	I	1
Duskywing sp.	II	2
Spring White	𝍸	5
Propertius Duskywing	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)
S/HL1	Point	Horned Lizard 1
S/KiRC1	"	Collinsea concolor ~10
S/KiHL2	"	Horned Lizard 1
S/KiCC2	"	Collinsea concolor 5
S/KiLb1	"	Limnaeus bellus ~25

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Antonette Gutierrez Add'l Person: Gina Krantz Shirley Date: 5/11/10
MANZ Inaccan (Botany)

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

GPS Unit: 7 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	945	~~73~~ 75	1.4/6.5	0	(clear)	patchy	overcast	drizzle	shower
	1000	76	2/10	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	1030	76	2/10	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	IIII	4
Acmon Blue	I	1
Common White	I	1
~~Pale~~ Swallowtail	I	1
Funereal Dusky wing	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)
4/AGCH 1	Chinese Houses	Plant pop 50-100 good condition 5% dry
4/AG HL 1	SD Horned Lizard	Open sandy soil (hill top)
4/AG HL 2	" "	" "
4/AGCH 2	Chinese Houses	Plant Pop >5000 throughout entire
		survey area

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Bonnie Hendricks Add'l Person: — Date: 5/14/10

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

GPS Unit: 10 QCB Protocol Survey # 6 of 6,5

TIME (24-hour)	Temp (F°):	Wind (avg/max)	% CC	Sky
START 6:55	65.0	4.1/7.7	0	(clear) patchy overcast drizzle shower
10:40	72.3	1.7/3.2	0	(clear) patchy overcast drizzle shower
11:45	62.2	4.1/6.1	0	(clear) patchy overcast drizzle shower
12:55	77.6	1.9/4.4	5	(clear) patchy overcast drizzle shower
2:00	76.1	4.0/5.1	5	(clear) patchy overcast drizzle shower
3:10	79.1	1.5/3.5	20	clear (patchy) overcast drizzle shower
END 3:40	76.8	1.2/2.3	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
Behr's Metalmark	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	40
Pearly Marble	𝍸 I	6
Painted Lady	II	2
Sara's Orangetip	IIII	4
Sulphur sp.	I	1
Anise Swallowtail	I	1
Checkerspot sp.	I	1
Nectaring Plants		
Cryptantha sp.		
Deinandra conjugens		
Eriophyllum confertiflorum		
Gilia capitata		
Phacelia distans		
Lasthenia gracilis		
Camissonia sp.		
Lasia glandulosa		
Delphinium parryi		
Amsinckia menz.		
Chaenactis glabriuscula		
Leptosiphon bicolor		
Malacothrix sp.		
Nemophila sp.		

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)
BHCH50	host plant	Collinsia concolor - 300 plants (blooming)
" 51	"	" 150 "
" 52	"	" 20 "
" 53	"	" 200 "
" 54	"	" 10 "
" 55	"	" 50 "
" 56	"	" 100 "
" 57	"	" 500 "
" 58		100
" 59		200
" 60		50
" 61		100
" 62		700
" 63		900
" 64		200
" 65		100
" 66		100
" 67		500
BHLIBE10	Rare plant	Linanthus bellus 1,000 pl. blooming
BHCH68	host	Col. con. 500 "
" 69	"	" 400 "
" 70	"	" 50 "
" 71		200
" 72		200
" 73		150
" 74		50
" 75		200
" 76		400
" 77		100
" 78		~~35~~
" 79		50
" 80		50
" 81		200 end.

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Adam Berlet Add'l Person: — Date: 5/14/10

Project: ~~Campo~~ MAN2 Wind Energy Project Map #: MAN2 - 2 Survey Sxn: —

GPS Unit: SM 13 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0900	70°	5/11	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	1320	73	4/9	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
BEHR'S METALMARK	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	43
UNIDENTIFIED SWD	I	1
PEARLY WHITE	III	3
SARA ORANGETIP	II	2
UNIDENTIFIED SULPHUR	III	3
AFRANIUS DUSKYWING	III	3
PAINTED LADY	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)
2/ABHL01	POINT S.D.	HORNED LIZARD ON ROAD.

TOTAL NUMBER OF QCB DETECTED: ∅ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Adam Benke Add'l Person: — Date: 5/14/10

Project: ~~Canoe~~ MAN2 Wind Energy Project Map #: MAN2 - 1 Survey Sxn: —

GPS Unit: SM 13 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1320	73°	1/3	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
					clear	patchy	overcast	drizzle	shower
END	1530	74°	1/6	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	1111	4
PAP SWALLOWTAIL	1111 1	6
PIERID WHITE	111	3
SARE ORANGETIP	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)
1/ABHL02	POINT	S.D. HORNED LIZARD ON ROAD

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Bonnie Hendricks Add'l Person: Mike Anguiano Date: 5/16/10

Project: Manzanita Wind Energy Project Map #: 12 & 13 Survey Sxn: —

GPS Unit: 10 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	9:00	71.6	1.9/2.9	0	(clear)	patchy	overcast	drizzle	shower
	10:50	77.2	1.4/2.2	0	(clear)	patchy	overcast	drizzle	shower
	11:50	81.2	2.1/5.2	0	(clear)	patchy	overcast	drizzle	shower
	1:10	84.6	2.4/4.6	0	(clear)	patchy	overcast	drizzle	shower
	2:00	83.5	1.9/2.9	0	(clear)	patchy	overcast	drizzle	shower
	3:55	82.3	2.1/3.5	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
Behr's Metalmark	卌卌卌卌	40
Sulphur sp.	||	2
Acmon's Blue	卌卌卌||	18
California Marble	卌	5
Sara's Orangetip	||	2
Swallowtail sp.	|	1
Dusky-wing sp. (Erynnis funeralis or E. tristis)	卌||	7
Pale Swallowtail	|||	3
Pompleius Hairstreak	|	1
Spring Azure	|	1
Gnaphalium sp.		
Layia hieracioides		
Plagiobothrys		
Hypochaeris sp.		
Eriophyllum confertiflorum		
Chaenactis artemisiifolia		
Chaenactis glabriuscula		
Lasthenia		
Brown Elfin	|	1
Gilia capitata ssp.		

Plant Species

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)
BHASD0	Rare Plant	Astragalus douglasii ~10
BHASD002	"	" " 42
BH STCA 01	"	Streptanthus campestris 243
BH CH 85	Host Plant	Coll. con. ~150
" 86	"	" ~200
BH STCA 02	Rare Plant	Strep cam 1
BH AR 01	Host Plant	Antirrhinum coulterianum 30
BH HL 02	Animal	Horned Lizard 1
BH CH 87	Host Plant	Coll. con ~250
" 88	"	" 20
" 89	"	" ~100
" 90	"	" ~200
BH LIBE 10	Rare Pl	Linanthella ~200
BH CH 91	Host	Coll con. ~300
BH LIBE 11	Rare Pl	Linbell ~25
" 12	"	" ~100
BH CH 92	Host	Coll con. 100
" 93	"	" 50
" 94	"	" 50
" 95	"	" 100

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Antoinette Gutierrez Add'l Person: Gina Krantz Shirley Date: 5/15/10
Project: ~~Gampo~~ Manzana Wind Energy Project Map #: 3 Survey Sxn:
GPS Unit: 7 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1030	78	2/10	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
	1230	78	4/12	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
	1330	78	4/14	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1430	78	4/10	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	HHT II	7
Common White	II	2
Dixie Sulphur	II	2
Acmon Blue	II	2
Pale Swallowtail	II	2
Echo Blue	II	2
Funereal Duskywing	III	3
Sara's Orangetip	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)
		minuartia douq, gilia, plucilia,
		Las. cal,
4/AGCH5	Chinese Houses	Plant Pop 100 - 500 5% dry
4/AGCH6	" "	" " 1000 5% dry
4/AGCH7	" "	Plant pop 100 - 500 5% dry
4/AGCH8	" "	" " 50 - 150 good condition
4/AGCH10	" "	Plant pop 100 - 500 good cond 5% dry
4/AGCH9	" "	" " 500 - 1000 good cond
4/AGCH11	" "	" " 100 - 500 " "
4/AGCH12	" "	" " 50 - 100 " "

TOTAL NUMBER OF QCB DETECTED: ∅ INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: NONE Date: 16 MAY, 2010

Project: Manzanita Wind Energy Project Map #: TILES 5, 6 Survey Sxn: MANZ - F

GPS Unit: SM 13 QCB Protocol Survey # 6 of 6

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0845	76	0→3 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	0900	76	0→4 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1000	76	3→7 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1100	76	5→13 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1200	79	2→7 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1300	80	2→8 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
END	1400	79	1→6 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, 80°F, 1→5 MPH, 80°F, CLEAR		
1600 HRS, 81°F, 1→3 MPH, 81°F, CLEAR		
1630 HRS, 76°F, 2→7 MPH, 76°F, CLEAR		
BEHR'S METALMARK	IN FIELD NOTEBOOK	24
PAINTED LADY	"	10
ACMON BLUE	"	16
HARFORD'S SULPHUR	"	6
MARINE BLUE	"	1
PALE TIGER SWALLOWTAIL	"	2
SPRING WHITE	"	8
SPRING AZURE	"	5
FUNEREAL DUSKYWING	"	7
CALIFORNIA MARBLE	"	1
GRAY HAIRSTREAK	"	3
CALIFORNIA PATCH	"	1
BORDERED PATCH	"	1
PERPLEXING HAIRSTREAK	"	6
BROWN ELFIN	"	1
CALIFORNIA SOOTYWING	"	1
MELISSA BLUE	"	13
DAINTY SULPHUR	"	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)
MCWW01	POINT	
MCWW02	POINT	
MCWW03	POINT	
MCWW04	POINT	
MCWW05	POINT	
MCWW06	POINT	
MCWW07	POINT	
MCHL36	POINT	
MCHL37	POINT	
MCHL38	POINT	
MCHL39	POINT	
MCHL40	POINT	
MC MORTAR HOLE	POINT	SINGLE MORTAR HOLE IN LARGE ROCK.
MC ARGEMONE SP.	POINT	3-FOOT-TALL(!) PRICKLY POPPY
NUMBERED POINTS	REPRESENT COLLINSIA LOCATIONS	

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: ERIC LACOSTE Add'l Person: NONE Date: 5/17/10

Project: Manzanita Wind Energy Project Map #: 15, 15 Survey Sxn: R

GPS Unit: 7 QCB Protocol Survey # 5 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1040	64	5/7	100	clear	patchy	overcast	drizzle	shower
	1230	68	3/6	100	clear	patchy	overcast	drizzle	shower
	130	63	5/10	60	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	145	64	7/12	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
W. Tail Blue	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)
		LASCAL
		Erodium sp.
		Mustard sp.
		Penstemon sp.
		Plagiobothrys sp.
		Phacelia sp.
		Monardella sp
		SOLPAR.
		Platystemon Californicus
		Delphinium parryi
		Lupinus bicolor
		Chaenactis sp.
		Lotus Scoparius
		Camissonia californica

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Stephen Rink Add'l Person: _____ Date: 5/17/10

Project: Manzanita [redacted] Wind Energy Project Map #: 4 Survey Sxn: [redacted]

GPS Unit: 6 QCB Protocol Survey # 6 of [redacted]

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1100	64	8-10	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
					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
inappropriate conditions @ 1514 hrs.		

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: Antoinette Gutierrez Add'l Person: _____ Date: 5/17/10

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

GPS Unit : 6 (no data) QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1100	62	8-10	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
					clear	patchy	overcast	drizzle	shower
END	1314	65	8-15	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
inappropriate conditions at 1314		

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: M. Heath Add'l Person: — Date: 5-17-10

Project: ~~Sempra~~ Monarch Wind Energy Project Map #: 13 Survey Sxn: _____

GPS Unit : 9 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	10:00	60	2.5/5	100%	clear	patchy	overcast	drizzle	shower
	11:00	65	2.3/5.4		clear	patchy	overcast	drizzle	shower
	12:00	62	4.2/9.2		clear	patchy	overcast	drizzle	shower
	13:06	61.5	3.8/10.2		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
Walked Map 13 areas from 12:00 - 13:00		
But power glitch into true protocol conditions		
Marine blue	11	2
Blue sp	11	2
Acmon blue	11	2
Behr's metalmark	11	2
Rustyspot sp ?	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)

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Mike Coulter Add'l Person: None Date: 19 May, 2010

Project: Manzanita Wind Energy Project Map #: Tile 33+26 Survey Sxn: Campo Q

GPS Unit: Garmin II QCB Protocol Survey # 60 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1325	84	0→4 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1400	80	0→5 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1500	79	2→6 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1600	82	1→4 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
Marine Blue	In Field Notebook →	5
Acmon Blue	"	5
Behr's Metalmark	"	38
Funereal Duskywing	"	7
Sachem	"	1
Pale Tiger Swallowtail	"	1
Sara Orangetip	"	2
Southern Blue	"	15
Harford's Sulphur	"	5
Spring Azure	"	5
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)
NUMBERED POINTS REPRESENT COLLINSIA LOCATIONS		

TOTAL NUMBER OF QCB DETECTED: 10 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: — Date: 5/19/10

Project: Manzanita Wind Energy Project Map #: 8 Survey Sxn: 6

GPS Unit : 6 QCB Protocol Survey # 6 of 5

	TIME (24-hour)	Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1350	78°	7/10		(clear)	~~patchy~~	overcast	drizzle	shower
	1515	78°	5/7	5	(clear)	patchy	overcast	drizzle	shower
	1615	73°	6/9	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
Pale Swallowtail	III	3
Anise Blue	III	3
Blue?	IIII IIII	9
Behr's Metalmark	IIII IIII IIII	14
Checkered White	I	1
White?	IIII	5
Orange Skipper	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)
DPHL02	Point	San Diego Horned Lizard

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: S. Rink Add'l Person: _____ Date: 5/19/10

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

GPS Unit : 6 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0830	70	2-3	0	(clear)	patchy	overcast	drizzle	shower
	1100	72	5-7	0	(clear)	patchy	overcast	drizzle	shower
	1330	73	5-7	0	(clear)	patchy	overcast	drizzle	shower
	1545	73	8-10	0	(clear)	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	1600				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
Bolivia metallmark	~~HHHHHHHHHH~~ 100's	100's
Common Ruse	HHHHHHHHHH II	12
Pale Tiger swallowtail	III	3
Pontia sp.	HHHHHHHHHH IIII	14
Blue sp.	~~HHHHHHHHHH~~ III	13
Vanessa sp.	II	2
Sarah Orangetip	HHHHH 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)

TOTAL NUMBER OF QCB DETECTED: 2 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: M. Heath Add'l Person: @ Date: 5/19/10

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

GPS Unit: 5 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	08:45	61.9	1.3/3.0	0%	(clear)	patchy	overcast	drizzle	shower
	10:00	67	2.4/5.6		clear	patchy	overcast	drizzle	shower
	11:30	72.2	2.9/4.9		clear	patchy	overcast	drizzle	shower
	13:00	74.3	2.1/3.8		clear	patchy	overcast	drizzle	shower
	15:30	73.1	2.7/3.0		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, various nectar sources

Butterfly Species	Tally	Total
Acmon blue		19
Sona orange tip		12
Dusky wing sp		15
Painted Lady		3
Behr's metalmark		22
Pale swallowtail		1
Western tiger swallowtail		2
Marine blue		8
Sulphur sp		3
Common white		2
Green hairstreak		1
Dainty Sulphurs		1
Blue sp		8
Gurdon copper		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)
	flowering plants	Tansey mustard
		Black Mustard
		Miniature lupine
		Goldfields
		Popcorn sp
		Mimulus lethale
		Sun cups
		Fiddleneck
		Peony
		Exodium
		Camissionia sp
		Thistle (cobweb)
		Blue dicks
		Chinese House
		Larkspur
		Penstemon
		Penstemon
		Golden bush
		Golden yarrow
		Phacelia
		Desert dandelion
		Woolly blue curls
		Deer weed
		Cal Poppy
		Plagiobothrys
		Tidy tips
		Silver leaf lotus
		Night shade
		Lotus Maculatum sp
		white pincushion

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: M. Heath Add'l Person: Ø Date: 5/19/10

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

GPS Unit : 5 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START					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

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)
MITCH 80	Potential Host	Chinese House n = #
81	↓	↓ n = 2
82	↓	↓ n = 200
MAHL 25	Senstive Sp	Horned lizard
	↓	

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Antonette Cortrez Add'l Person: None Date: 5/19/10

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

GPS Unit: 9 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0845	61	2/3.3	0%	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
	1000	74	1/3	0%	clear	patchy	overcast	drizzle	shower
	1200	78	1/6	0%	clear	patchy	overcast	drizzle	shower
	1400	78	1/6	0%	clear	patchy	overcast	drizzle	shower
	1500	78	1/6	0%	clear	patchy	overcast	drizzle	shower
END	1600	78	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 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	62
Common White	𝍸	4
Pearl White (Behrs white	𝍸	5
Funereal Dusky-wing	𝍸 𝍸	11
Purplerim hairstreak	1	1
Acmon Blue	𝍸 𝍸	9
Mexic Blue	11	2
Pale Swallowtail	111	3
Painted Lady	111	3
West Coast Lady	1	1
Common Sootywing	111	3
Echo Blue	1	1
Juba Skipper (CF)	1111	4
Western tailed Blue	11	2
Sara's Orangetip	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)
		Did not GPS host plant / previously mapped
		~~host~~ overall host plant cond. (Chinese Houses)
		drying out 10-20% most populations here
		on hill tops.
4/AGBJ1	Blacktailed Jackrabbit	in sage scrub
4/AGHZ1	90 Horned Lizard	in open area of grassland

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Adam Beale Add'l Person: — Date: 5/19/2010

Project: ~~Campo Wind Energy Project~~ Map #: 13 Survey Sxn: —

GPS Unit : Colorado 7 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0955	71°	1/2	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	1505	66°	1/6	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 𝍸 𝍸 𝍸 𝍸	40
Funereal Duskywing	𝍸	5
White Pigmy	𝍸 |	4
Sara Orangetip	𝍸 𝍸 |	8
Bartram's Hairstreak	|	1
Marine Blue	𝍸 |	4
Pale Swallowtail	𝍸 |	4
Unidentified Blue	𝍸	5
Acmon Blue	𝍸 𝍸 |	9
Common White	𝍸 |	3
Painted Lady	|	1
Grey 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)
13/ ABHL01	Point	S.D. Horned Lizard under Eriogonum.

TOTAL NUMBER OF QCB DETECTED: Ø INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Adam Behle Add'l Person: — Date: 5/19/10

Project: Manzanita Wind Energy Project Map #: 10 Survey Sxn: —

GPS Unit: Garmin 7 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0840	65°	1/2	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	0945	71°	1/2	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	II	2
Behr's metalmark	III	3
Pearly white	II	2
Funereal Duskywing	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)

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: ERIK LACoste Add'l Person: — Date: 5/19/10

Project: Manzanita Wind Energy Project Map #: 14, 15 Survey Sxn: R

GPS Unit: 3 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	0850	71	1-2	0	(clear)	patchy	overcast	drizzle	shower
	1100	78	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	1200	80	3-7	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
Acmon Blue	IIII	4
Southern Blue	I	1
Funereal Duskywing	II	2
Pale Swallowtail	II	2
Cheek White	I	1
Behr Metalmark	IIII IIII IIII	15
Western Tailed Blue	III	3
Sara 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)
		LASThenia California
		Erodium SP.
		Eriastrum Sapphirinum
		Plagiobothrys SP
		Eschscholzia California
		Penstemon Centranthifolius
		Chaenactis glabriuscula
		Uropappus Lindleyi
		Delphinium Parishii
		Linanthus Parviflorus
		Collia capitata
		Rafinesquia California
		Platystemon Californicus
		Lupinus Concinnus
ELCOHE01	P	Collinsia ≈ 50 individuals
		Eriophyllum confertiflorum
		Penstemon spectabilis
		Camissonia californica
		Tricostema lanatum
		Dichelostemma capitatum
		Linanthus dianthiflorus
		Solanum Parishii
		Lotus Scoparius
		Sambucus mexicanus
ELANCO01	P	Antirrhinum coulterianum — 3-5 individuals
		Amsinkia menziesii
		Astragalus sp.

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: - Date: 5/20/10

Project: Manzanita Wind Energy Project Map #: 12 Survey Sxn: -

GPS Unit: 6 QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	8:30	68°	8/10	2	(clear)	patchy	overcast	drizzle	shower
	1015	73°	9/12	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
Blue?	1	1
Sara's Metalmark	1	1
Checkered White	1	1
White?	1	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)
DP 85501	Point	Black Tailed Jack-Rabbit

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

(2)

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: Dale Powell Add'l Person: — Date: 5/20/10

Project: Manzanita Wind Energy Project Map #: 11 Survey Sxn: —

GPS Unit : _____ QCB Protocol Survey # 6 of 5

TIME (24-hour)		Temp (F°):	Wind - (avg/max)	% CC	Sky				
START	10:40	74°	10/12	0	(clear)	patchy	overcast	drizzle	shower
	11:42	73°	8/14	0	(clear)	patchy	overcast	drizzle	shower
	12:45	79°	6/8	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
Checkered White	1	1
White ?	𝍸 1	6
Behr's Metalmark	11	2
Sulfur ?	1	1
Acmon Blue	111	3
Blue ?	𝍸 ~~𝍸~~ 111	13
Orange ?	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)
OPHL01	Point	San Diego Horned Lizard

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

Quino Checkerspot Butterfly Protocol Survey
Field Data Sheet

Recorder: MIKE COUFFER Add'l Person: NONE Date: 20 MAY, 2010

Project: Manzanita Wind Energy Project Map #: TILE 4 Survey Sxn: MANZ-D

GPS Unit: GARMIN II QCB Protocol Survey # 6 of 6

TIME (24-hour)		Temp (F°):	Wind (avg/max)	% CC	Sky				
START	1345	73°	5->8 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1400	77°	3->9 MPH	CLEAR	(clear)	patchy	overcast	drizzle	shower
	1500	76°	3->6 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	4
MARINE BLUE	"	20
JUBA SKIPPER	"	1
BEHR'S METALMARK	"	7
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)
MCHL41	POINT	ADULT
MCHL42	POINT	ADULT

TOTAL NUMBER OF QCB DETECTED: 0 INDIVIDUALS

APPENDIX C

SUMMARY OF BUTTERFLY AND MOTH SPECIES OBSERVED DURING QUINO CHECKERSPOT BUTTERFLY SURVEYS FOR THE MANZANITA WIND ENERGY PROJECT

APPENDIX C
SUMMARY OF BUTTERFLY SPECIES OBSERVED DURING QUINO CHECKERSPOT BUTTERFLY SURVEYS FOR THE MANZANITA WIND ENERGY PROJECT[1]

Common Name	Species Name	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Total
Anise swallowtail	*Papilio zelicaon*	0	0	1	1	0	1	**3**
Western tiger swallowtail	*Papilio rutulus*	0	0	0	1	0	3	**4**
Pale swallowtail	*Papilio eurymedon*	2	17	20	16	5	41	**101**
Black swallowtail	*Papilio polyxenes*	0	0	0	0	0	1	**1**
Spring (California) white	*Pontia sisymbrii*	24	27	14	4	5	14	**88**
Checkered (common) white	*Pontia protodice*	22	44	53	4	8	32	**163**
Cabbage white	*Artogeia rapae*	0	4	1	0	0	0	**5**
Becker's white	*Pontia beckerii*	0	2	26	16	7	25	**76**
White species	Species unknown	70	278	51	54	11	40	**504**
Alfalfa butterfly (orange sulfur)	*Colias eurytheme*	1	0	0	0	0	0	**1**
Desert (Felder's) orangetip	*Anthocharis cethura*	4	0	2	0	0	0	**6**
Pacific Sara orangetip	*Anthocharis sara sara*	143	109	45	57	35	116	**505**
Harford's sulphur	*Colias harfordii*	0	0	2	4	1	11	**18**
Cloudless (senna) sulphur	*Phoebus sennae marcellina*	1	0	0	0	0	0	**1**
Sleepy orange	*Eurema nicippe*	0	0	0	0	1	0	**1**
Dainty sulphur	*Nathalis iole*	0	0	0	2	2	3	**7**
Sulphur species	Species unknown	3	0	15	5	1	10	**34**
Orange species	Species unknown	1	0	0	0	0	1	**2**
Perplexing hairstreak	*Callophrys dumetorum perplexa*	261	128	103	28	1	11	**532**
Gray hairstreak	*Strymon melinus*	0	0	0	0	0	4	**4**
Brown elfin	*Callophrys augustinus*	13	8	3	4	0	2	**30**
Pygmy blue	*Brephidium exilis*	3	0	0	1	0	1	**5**
Echo blue	*Celastrina echo*	0	4	2	0	0	3	**9**
Western tailed blue	*Everes amyntula*	3	5	6	0	0	7	**21**
Spring azure (echo blue)	*Celastrina ladon*	4	3	0	1	0	11	**19**
Marine blue	*Leptotes marina*	0	0	0	0	2	24	**26**
Lupine blue	*Plebejus lupines*	1	0	0	0	0	0	**1**
Melissa blue	*Lycaeides melissa*	0	0	0	0	0	13	**13**
Southern (silvery) blue	*Glaucopsyche lygdamus australis*	0	4	1	1	0	17	**23**
arrowhead blue	*Glaucopsyche piasus umbrosa*	0	1	0	0	0	0	**1**
Acmon blue	*Icaricia acmon acmon*	59	36	38	12	24	153	**322**
Blue species	Species unknown	26	16	9	16	4	55	**126**
Behr's metalmark	*Apodemia mormo virgulti*	426	619	669	904	307	1359	**4284**
Fritillary species	Species unknown	8	0	0	0	0	0	**8**
Mylitta crescent	*Phyciodes mylitta*	0	0	0	0	1	0	**1**
Gorgon copper	*Lycaena gorgon*	0	0	0	0	0	6	**6**

Common Name	Species Name	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Total
Satyr comma	*Polygonia satyrus*	2	0	0	0	0	0	**2**
Common ringlet	*Coenonympha tullia*	2	0	0	0	0	0	**2**
Sachem	*Atalopedes campestris*	0	0	0	0	0	1	**1**
Gabb's checkerspot	*Chlosyne gabbii*	0	1	1	1	1	0	**4**
Chalcedon checkerspot	*Euphydryas chalcedona chalcedona*	1	0	1	1	1	0	**4**
Quino checkerspot	***Euphydryas editha quino***	**5**	**3**	**3**	**0**	**0**	**0**	**11**
California patch	*Chlosyne californica*	0	1	0	0	0	1	**2**
Bordered patch	*Chlosyne lacinia*	0	0	0	0	0	1	**1**
Checkerspot species	Species unknown	1	0	0	0	0	0	**1**
Red admiral	*Vanessa atalanta*	0	1	3	0	0	0	**4**
Painted lady	*Vanessa cardui*	65	12	23	71	10	33	**214**
West coast lady	*Vanessa annabella*	3	1	1	31	1	4	**41**
Lady species	*Vanessa* sp.	15	15	24	14	5	7	**80**
California sister	*Adelpha bredowii californica*	0	0	0	0	0	1	**1**
Queen	*Danaus gilippus*	1	0	0	0	1	0	**2**
Funereal duskywing	*Erynnis funeralis*	104	36	12	39	3	28	**222**
Sleepy duskywing	*Erynnis brizo*	6	8	0	0	0	0	**14**
Propertius duskywing	*Erynnis propertius*	0	2	8	1	6	0	**17**
Mournful duskywing	*Erynnis tristis*	1	1	2	0	0	1	**5**
Afranius duskywing	*Erynnis afranius*	0	0	0	0	0	6	**6**
Duskywing species	Species unknown	104	24	24	4	5	42	**203**
Northern cloudywing	*Thorybes pylades albosuffusa*	0	1	1	0	0	1	**3**
Common sootywing	*Pholisora catullus*	1	0	0	12	3	3	**19**
Common checkered skipper	*Pyrgus communis*	0	2	0	0	0	0	**2**
Juba skipper	*Hesperia juba*	0	0	0	0	0	5	**5**
Fiery skipper	*Hylephila phyleus*	0	0	2	0	0	0	**2**
Northern white skipper	*Heliopetes ericetorum*	0	0	0	0	0	3	**3**
Skipper species	Species unknown	1	0	0	0	0	1	**2**
California tortoiseshell	*Nymphalis californica*	12	4	1	0	0	0	**17**
California (Pearly) marble	*Euchloe hyantis*	126	62	16	7	5	22	**238**

[1] Unidentified moth species were also detected during Quino checkerspot butterfly surveys but are not included in this list.

APPENDIX D

WEEKLY FLOWERING PLANT OBSERVATIONS FOR MANZANITA WIND ENERGY PROJECT

APPENDIX D
WEEKLY FLOWERING PLANT OBSERVATIONS FOR MANZANITA WIND ENERGY PROJECT

Scientific Name	Common Name	Week					
		1	2	3	4	5	6
Amsinckia menzesii var. intermedia	rancher fiddleneck	X	X	X	X	X	X
*Antirrhinum coulterianum**	Coulter's snapdragon						X
Arabis pulchra var. *pulchra*	tower mustard	X	X	X		X	
Arctostaphylos glandulosa ssp. *adamsii*	manzanita	X					
Arctostaphylos glauca	bigberry manzanita	X	X				
Arctostaphylos pungens	Mexican manzanita	X					
Arctostaphylos spp.	manzanita	X	X				
***Astragalus douglasii var. perstrictus*[1]**	**Jacumba milkvetch**		X	X	X	X	X
Brassica sp.	mustard	X					
Calandrinia ciliata	red maids					X	
Calycoseris parryii	yellow tackstem	X					
Camissonia spp.	sun cup	X	X	X	X	X	X
Camissonia californica	false-mustard			X			X
Caulanthus heterophyllus var. *heterophyllus*	San Diego jewelflower	X	X				X
***Caulanthus simulans*[2]**	**Payson's jewelflower**	X	X	X			
Castilleja spp.	Indian paintbrush			X			X
Ceonothus cuneatus	buckbrush	X	X			X	
Ceonothus greggii var. perplexans	cup-leaf-lilac	X	X	X		X	
Ceonothus leucodermis	chaparral whitethorn	X	X	X	X		
Cercocarpus betuloides var. betuloides	birch-leaf mountain mahogany	X	X	X	X		
Chaenactis artemisiifolia	white pincushion						X
Chaenactis glabriscula var. glabriscula	yellow pincushion						X
Chaenactis spp.	pincushion					X	X
Chenopodium spp.	chenopodium			X			
Cirsium occidentale	cobwebby thistle						X
Claytonia spp.	miner's lettuce	X	X	X		X	X
*Collinsia concolor**	Chinese houses	X	X	X	X	X	X
Cordylanthus rigidus ssp. *setigerus**	bird's beak	X	X				
Cryptantha intermedia	nievitas cryptantha		X	X	X		X
Cryptantha spp.	cryptantha	X	X	X	X	X	X
Cuscuta californica var. *californica*	chaparral dodder			X			
***Delphinium parishii ssp. subglobosum*[3]**	**oceanblue larkspur**						X
Delphinium parryi	larkspur						X
Delphinium spp.	larkspur		X			X	X
Dendromecon rigida	bush poppy				X	X	X
Descurainia pinnata	tansy-mustard	X					
Descurainia spp.	tansy-mustard		X	X	X	X	X

Scientific Name	Common Name	Week					
		1	2	3	4	5	6
Dichelostemma capitatum	blue dicks			X	X	X	X
Emmenanthe penduliflora var. penduliflora	whispering bells				X		
Eriastrum sapphirinum ssp. Sapphirinum							X
Ericameria spp.	goldenbush	X		X	X	X	X
Eriogonum fasciculatum	buckwheat	X		X			
Eriogonum spp.				X	X		X
Eriophyllum confertiflorum var. confertiflorum	long-stem golden yarrow						X
Erodium cicutarium	filaree	X	X	X	X	X	X
Erysimum capitatum ssp. capitatum	western wallflower		X				
Eschscholzia californica	California poppy	X	X	X			X
Filago californica	Californica filago			X	X		
Geraea viscida[4]	**stickey geraea**		X				
Gilia capitatum ssp. *abrotanifolia*	ball gilia			X	X		X
Gilia spp.	gilia	X	X	X		X	X
Hirschfeldia incana	short-pod mustard	X	X	X			X
Lasthenia gracilis	California goldfields	X	X	X	X	X	X
Lathyrus splendens[5]	**Campo pea**		X				X
Layia glandulosa	white layia	X	X	X	X	X	X
Leptosiphon lemmonii	Lemmon's linanthus				X		X
Linanthus bellus[6]	**desert beauty**	X	X	X		X	X
Lomatium sp.	lomatium	X					X
Lotus agrophyllus var. agrophyllus	silver-leaf lotus	X			X		X
Lotus scoparius	deer weed						X
Lotus sp.	lotus	X				X	
Lotus strigosus	bishop's lotus		X	X	X		X
Lupinus bicolor	minature lupine			X			
Lupinus concinnus	bajada lupine		X	X	X		X
Lupinus excubitus var. *austromontanus*	grape soda lupine			X			
Lupinus spp.	lupine	X	X	X	X	X	X
Lupinus succulentus	arroyo lupine						X
Lupinus truncatus	collar lupine						X
Malacothrix spp.	dandelion	X		X			X
Malacothrix californica	desert dandelion	X	X	X	X	X	X
Marah macrocarpus var. macrocarpus	wild cucumber	X	X	X	X	X	
Mentzelia sp.	blazing star	X					X
Nemophila menziesii	baby blue eyes	X	X	X	X	X	X
Oenothera californica ssp. *californica*	California evening-primrose		X				
Paeonia californica	California peony	X	X	X	X	X	X
Pectocarya spp.	combseed	X					
Phacelia imbricata	phacelia						X
Phacelia distans	white-heliotrope			X	X		X

Scientific Name	Common Name	Week					
		1	2	3	4	5	6
Phacelia parryi	Parry's phacelia						
Phacelia spp.	phacelia	X	X	X	X	X	X
Plagiobothrys spp.	popcornflower	X	X	X	X	X	X
Platystemon californicus	cream cups						X
Rafinesquia neomexicana	California chicory						X
Rhus ovata	sugar bush	X	X	X		X	
Rhus trilobata	basket bush		X				
Quercus acutidens	hybrid Englemann/scrub oak	X	X				
Salvia columbariae	chia	X	X	X	X	X	X
Sambucus mexicana	Mexian elderberry						X
Sisymbrium altissimum	tumble mustard						
Sisymbrium spp.						X	
Solanum xantii	nightshade			X	X	X	X
Streptanthus campestris	southern jewelflower	X				X	X
Trichostemma parishii	mountain blue curls				X	X	X
Uropappas lindleyi	silver puffs						X
Viola purpurea ssp. *quercetorum*	viola	X					
Yucca schidigera	Mohave yucca		X	X	X		

boldface = sensitive species
* = potential host plant species
[1] CNPS List 1B.2, Covered Species (proposed) under East County MSCP
[2] CNPS List 4.2, Covered Species (proposed) under East County MSCP
[3] CNPS List 4.3
[4] CNPS List 2.3, Covered Species (proposed) under East County MSCP
[5] CNPS List 4.3, Covered Species (proposed) under East County MSCP
[5] CNPS List 2.3, Covered Species (proposed) under East County MSCP

APPENDIX E

VERTEBRATE SPECIES DETECTED DURING FOCUSED QUINO SURVEYS FOR MANZANITA WIND ENERGY PROJECT

APPENDIX E
VERTEBRATE SPECIES DETECTED DURING FOCUSED QUINO SURVEYS FOR MANZANITA WIND ENERGY PROJECT

Scientific Name	Common Name
REPTILES	
Order Squamata	Lizards and Snakes
Family Colubridae	
Lampropeltis zonata	kingsnake
Masticophis lateralis	California striped racer
Pituophis catenifer	gopher snake
Family Phrynosomatidae	
Phrynosoma coronatum blainvilli[1]	**San Diego coast horned lizard**
Sceloporus occidentalis	western fence lizard
Sceloporus orcutti	spiny lizard
Uta stansburiana	side blotched lizard
Family Teiidae	
Aspidoscelis hyperythra	orange-throated whiptail
Aspidoscelis tigris	western whiptail
BIRDS	
Order Apodiformes	Hummingbirds and Swifts
Family Trochilidae	
Archilochus alexandri	black-chinned hummingbird
Calypte anna	Anna's hummingbird
Order Ciconiiformes	Eagles, Hawks, and Kites
Family Accipitrinae	
Buteo jamaicensis	red-tailed hawk
Family Cathartidae	
Cathartes aura[2]	**turkey vulture**
Order Columbiformes	Pigeons and Doves
Family Columbidae	
Zenaida macroura	mourning dove
Order Galliformes	
Family Odontophoridae	
Callipepla californica	California quail
Order Passeriformes	Song Birds
Family Aegithalidae	
Psaltriparus minimus	bushtit
Family Alaudidae	
Eremophila alpestris[3]	**horned lark**
Family Corvidae	
Aphelocoma californica	western scrub-jay
Corvus brachyrhynchos	American crow
Corvus corax	common raven
Family Cuculidae	
Geococcyx californianus	roadrunner
Family Emberizidae	
Amphispiza belli	sage sparrow
Chondestes grammacus	lark sparrow
Junco hyemalis	dark-eyed junco
Pipilo crissalis	California towhee

Scientific Name	Common Name
Pipilo maculates	spotted towhee
Pooecetes gramineus	vesper sparrow
Spizella atrogularis	black-chinned sparrow
Zonotrichia leucophrys	white-crowned sparrow
Family Fringillidae	
Carduelis lawrencei	Lawrence's goldfinch
Carduelis psaltria	lesser goldfinch
Family Icteridae	
Sturnella neglecta	western meadowlark
Family Mimidae	
Toxostoma redivivum	California thrasher
Family Paridae	
Baeolophus inornatus	oak titmouse
Family Parulidae	
Dendroica coronata	yellow-rumped warbler
Vermivora celata	orange-crowned warbler
Family Polioptilidae	
Polioptila caerulea	blue-gray gnatcatcher
Family Ptilogonatidae	
Phainopepla nitens	phainopepla
Family Tyrannidae	
Empidonax difficilis	Pacific-slope flycatcher
Tyrannus verticalis	western kingbird
Order Piciformes	Woodpeckers
Family Picidae	
Melanerpes formicivorus	acorn woodpecker
Melanerpes lewis	Lewis's woodpecker
Picoides nuttallii	Nuttall's woodpecker
Order Strigiformes	Owls
Family Strigidae	
Bubo virginianus	great horned owl
MAMMALS	
Order Artiodactyla	Deer, Sheep, Goats, Cattle
Family Cervidae	
Odocoileus hemionus	mule deer
Order Carnivora	Carnivores
Family Canidae	
Canis latrans	coyote
Order Lagomorpha	Rabbits, Hares, and Pikas
Family Leporidae	
***Lepus californicus*[4]**	**San Diego black-tailed jackrabbit**
Sylvilagus sp.	rabbit
Order Rodentia	Squirrels, Rats, Mice, and Relatives
Family Geomyidae	
Thomomys bottae	Botta's pocket gopher
Family Muridae	
Neotoma sp.	woodrat

boldface = sensitive species
[1] CDFG Species of Special Concern, Covered Species (proposed) under East County MSCP
[2] Covered Species (proposed) under East County MSCP
[3] CDFG Watch List, Covered Species (proposed) under East County MSCP
[4] CDFG Species of Special Concern, Covered Species (proposed) under East County MSCP

APPENDIX F

24-HOUR QUINO NOTIFICATION LETTERS TO USFWS

APPENDIX F.1
04/02/2010 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 03, 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 at the Manzanita Wind Energy Project, San Diego County, California

Dear Ms. Marquez:

AECOM is submitting this notification letter to inform you that a Quino checkerspot butterfly (*Euphydryas editha quino*; Quino) individual was observed at the proposed Manzanita Wind Energy project site in southeastern San Diego County, California (Figures 1 and 2). On April 02, 2010, sub-contractor biologist to AECOM Antonette Guiterrez (permit number TE-797999-6) made the observation during a protocol level survey for this species. Although the project site exists within U.S. Fish and Wildlife (USFWS) Quino Survey Area 2, Ms. Guiterrez 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 and collection are detailed below.

One male Quino was observed on the Manzanita Reservation (see Figure 3) by Ms. Guiterrez at 14:19. The Quino was detected within southern mixed chaparral habitat atop a hill in an open sandy area. Ms. Guiterrez took one distant photo and then slowly approached the Quino (Photo 1). As she approached, the Quino slowly flew a short distance away, low and near the ground. He landed again in an open area of sand, when she was able to approach closer and take two photos closer up (Photos 2 and 3). The Quino then flew a few feet from the ground and a gust of wind swept him away to the north. The Quino was in a very tattered condition, with both hind and fore wings extremely faded and fringed on the edges.

There are pockets of nectaring sources in the vicinity of the hilltop where the Quino was detected, including a small amount of *Plagiobothrys* sp., *Erodium* sp., *Nemophila menziesii*, and *Amsinckia menziesii*. There is very little flowering occurring on the shrub species; most shrubs have buds that are not in flower yet. There are also many rock outcrops in this area. A representative photo of habitat where the Quino was detected is provided in Photo 4.

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,

Erin Riley

Erin Riley
Wildlife Biologist

Photo 1

Photo 2

Photo 3

Photo 4

Enclosures: Figure 1 Regional Map
Figure 2 Vicinity Map
Figure 3 Quino Observation Location Map

cc: Eric Porter, USFWS
Alison Anderson, USFWS
Beverly Blessant, SDG&E
Kirstie Reynolds, SDG&E
Tom Acuna, SDG&E
Monique LaChappa, Chairwoman, Campo Kumeyaay Nation
Johnny Elliot, Manzanita Tribal Representative
John Rydzik, BIA

USFWS 24-hour Notification of Quino Sighting

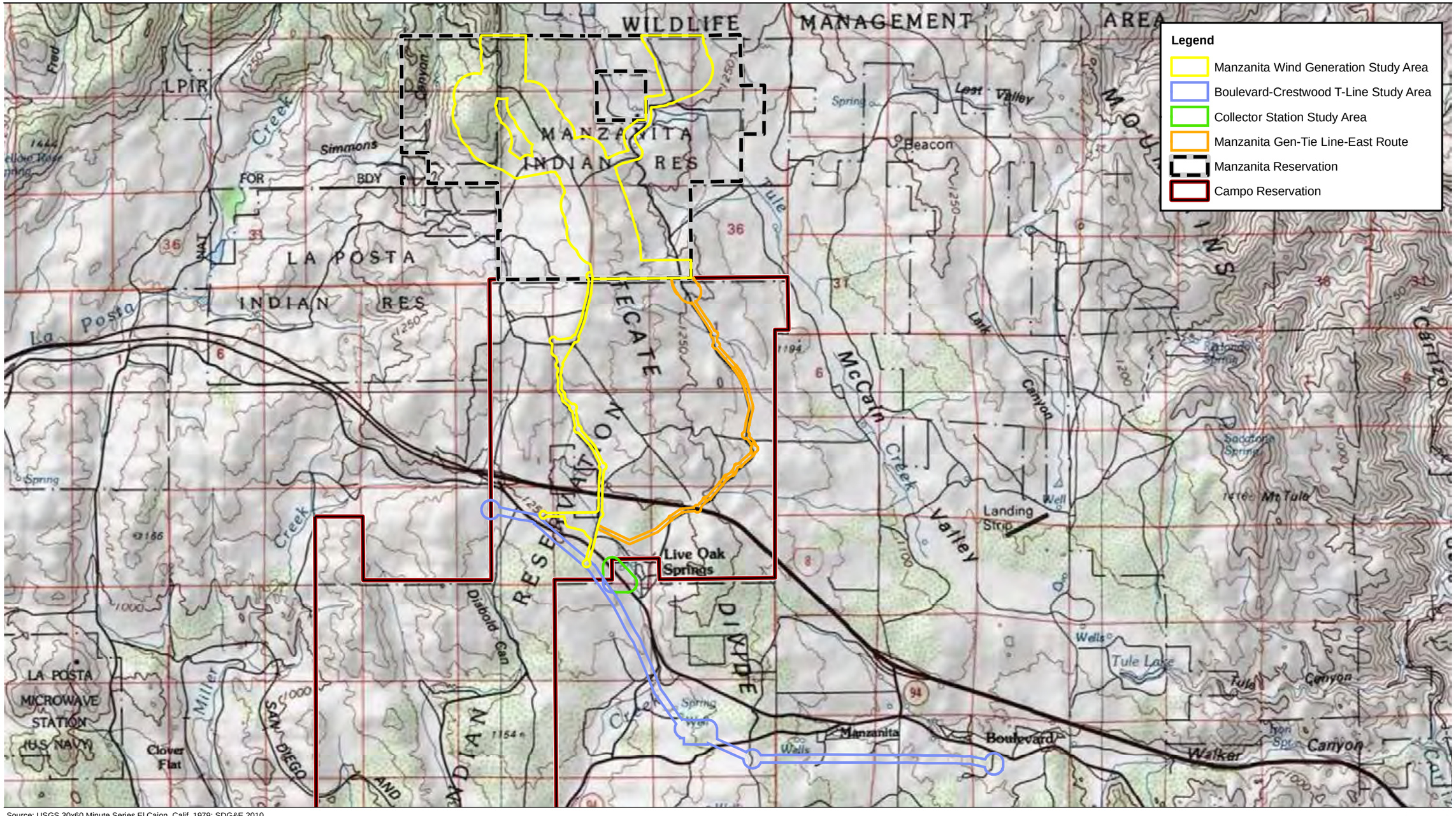
Path: P:\2009\09080155_Manz_SDGE\06GIS\6.3_Layout\USFWS\regional_map.mxd, 04/02/10, AugelloP

Source: ESRI 2009; SDG&E 2010

12.8 0 12.8 Miles

Scale: 1 = 810,772; 1 inch = 12.8 miles

Figure 1
Regional Map



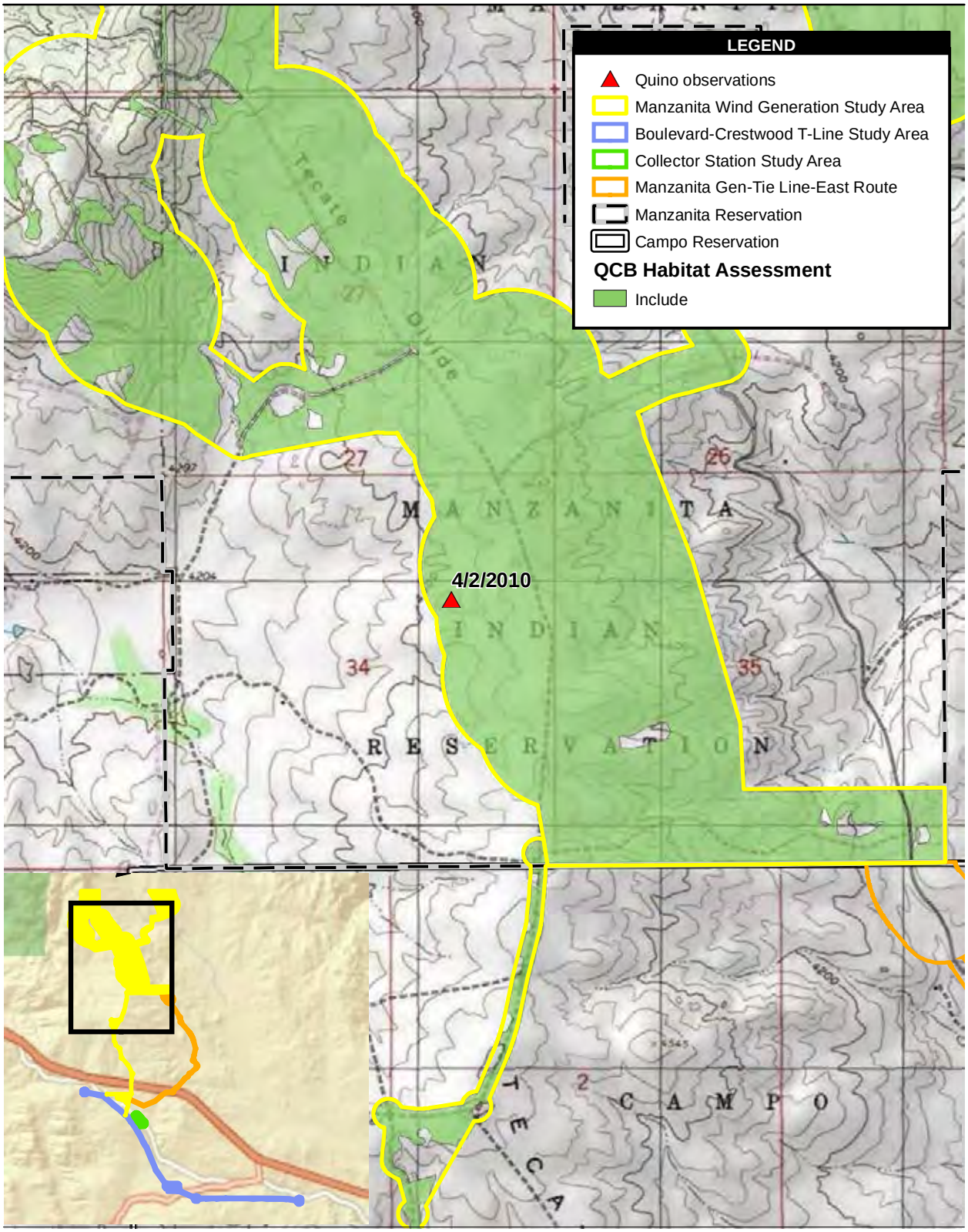
Source: USGS 30x60 Minute Series El Cajon, Calif. 1979; SDG&E 2010

1 0.5 0 1 Miles

Scale: 1 = 63,360; 1 inch = 1 miles

Figure 2
Vicinity Map

Path: P:\2009\09080155_Manz_SDGE\06GIS\6.3_Layout\USFWS\vicinity.mxd, 04/02/10, AugelloP



Source: DigitalGlobe 2008; SDG&E 2010

2,000 1,000 0 2,000 Feet

Scale: 1 = 227,578; 1 inch = 18,965 feet

Figure 3
Quino Observation Location Map

Path: P:\2009\09080155_Manz_SDGE\06GIS\6.3_Layout\USFWS\24hr_notification\QCB_observation_20100402.mxd, 04/02/10, AugelloP

APPENDIX F.2
04/03/2010 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 04, 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 at the Manzanita Wind Energy Project, San Diego County, California

Dear Ms. Marquez:

AECOM is submitting this notification letter to inform you that a second Quino checkerspot butterfly (*Euphydryas editha quino*; Quino) individual was observed at the proposed Manzanita Wind Energy project site in southeastern San Diego County, California. On April 03, 2010, Consulting Biologist Michael Couffer (permit number TE-782703-8), sub-contractor to AECOM observed one Quino during a protocol level survey for this 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.

One Quino was observed on the Manzanita Reservation (see Figure 3) by Mr Couffer at 11:50. The Quino was detected within sparsely vegetated southern mixed chaparral habitat below the crown of a gradually-sloping ridge in sandy substrate at WGS 84 11S 0561553, 3623495 (NAD 83 projection). The Quino was observed with Swarovski 10-power binoculars from a distance of approximately 10 feet away for a short period. The quino was a dark individual in excellent condition, with perfect wing edges and very little scale loss on the wings. The color of the abdomen rings was pronounced. Based on it's overall excellent condition and it's strength of flight in takeoff from the ground, this Quino was a recently-emerged individual. As Mr. Couffer reached for his camera, the butterfly bumped off the ground, and was taken by the wind, not to be seen again.

The specific ridge along which the Quino was observed currently supports the most abundant source of nectar that Mr. Couffer has observed in the limited number of surveys that he has conducted so far on this project. On sites where nectar is both diverse and abundant, it has been his observation that the larger popcornflowers are preferred by Quino over every other nectar source, when they are available. The ridge where this Quino was observed supports more blooming *Plagiobothrys* sp than any other area that he has surveyed on this project, to date. Although the plants are mostly less than an inch tall, they are blooming across the top of the ridge for several hundred feet, which should provide excellent forage for Quino.

The Quino was observed below the crown of the ridge, where blooming popcornflowers are sparse to non-existent. A photograph of the sighting location is included below (Photo 1).

Photo 1

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
Beverly Blessant, SDG&E
Kirstie Reynolds, SDG&E
Tom Acuna, SDG&E
Monique LaChappa, Chairwoman, Campo Kumeyaay Nation
Johnny Elliot, Manzanita Tribal Representative
John Rydzik, BIA

USFWS 24-hour Notification of Quino Sighting

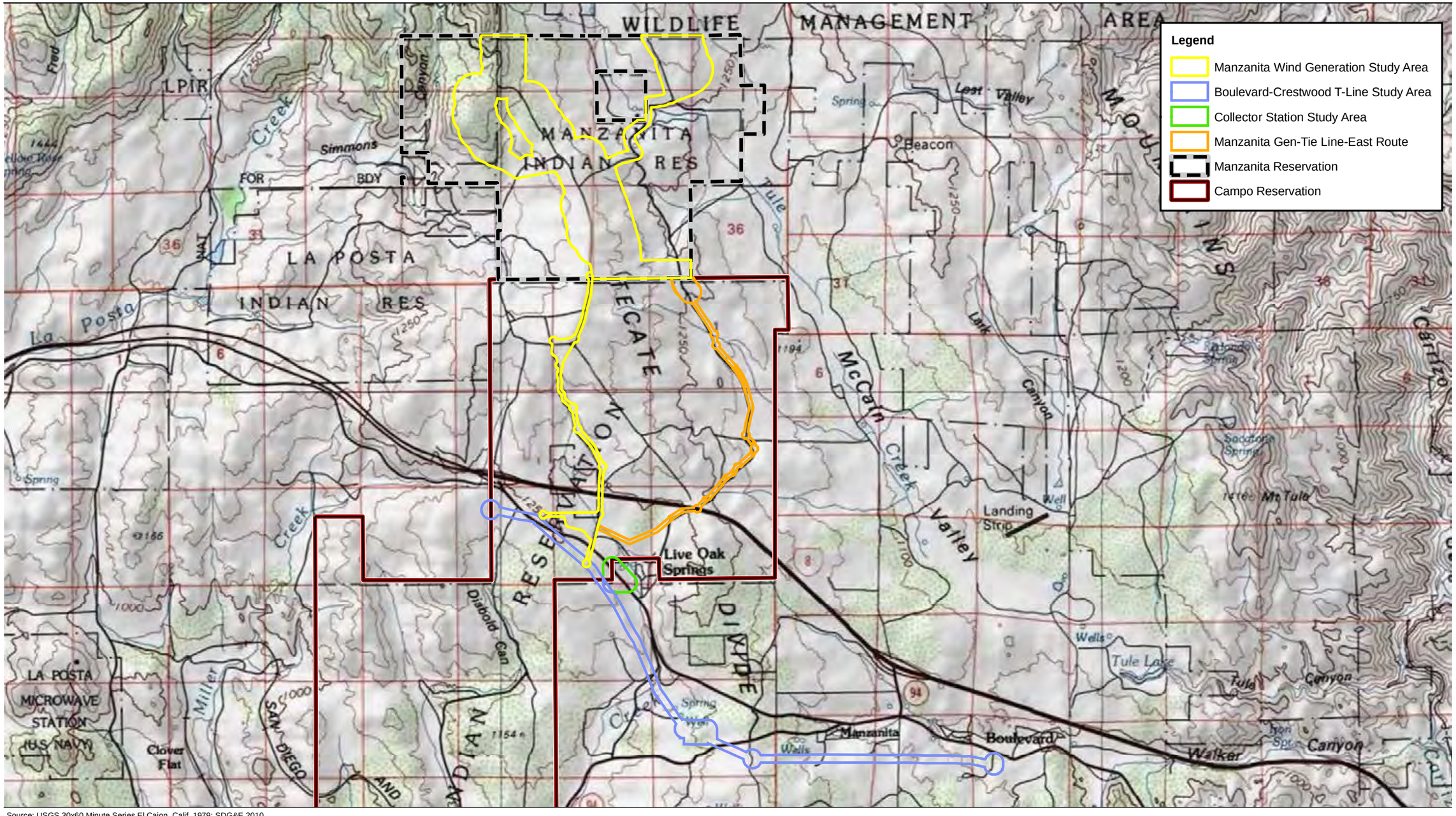
Path: P:\2009\09080155_Manz_SDGE\06GIS\6.3_Layout\USFWS\regional_map.mxd, 04/02/10, AugelloP

Source: ESRI 2009; SDG&E 2010

12.8 0 12.8 Miles

Scale: 1 = 810,772; 1 inch = 12.8 miles

Figure 1
Regional Map



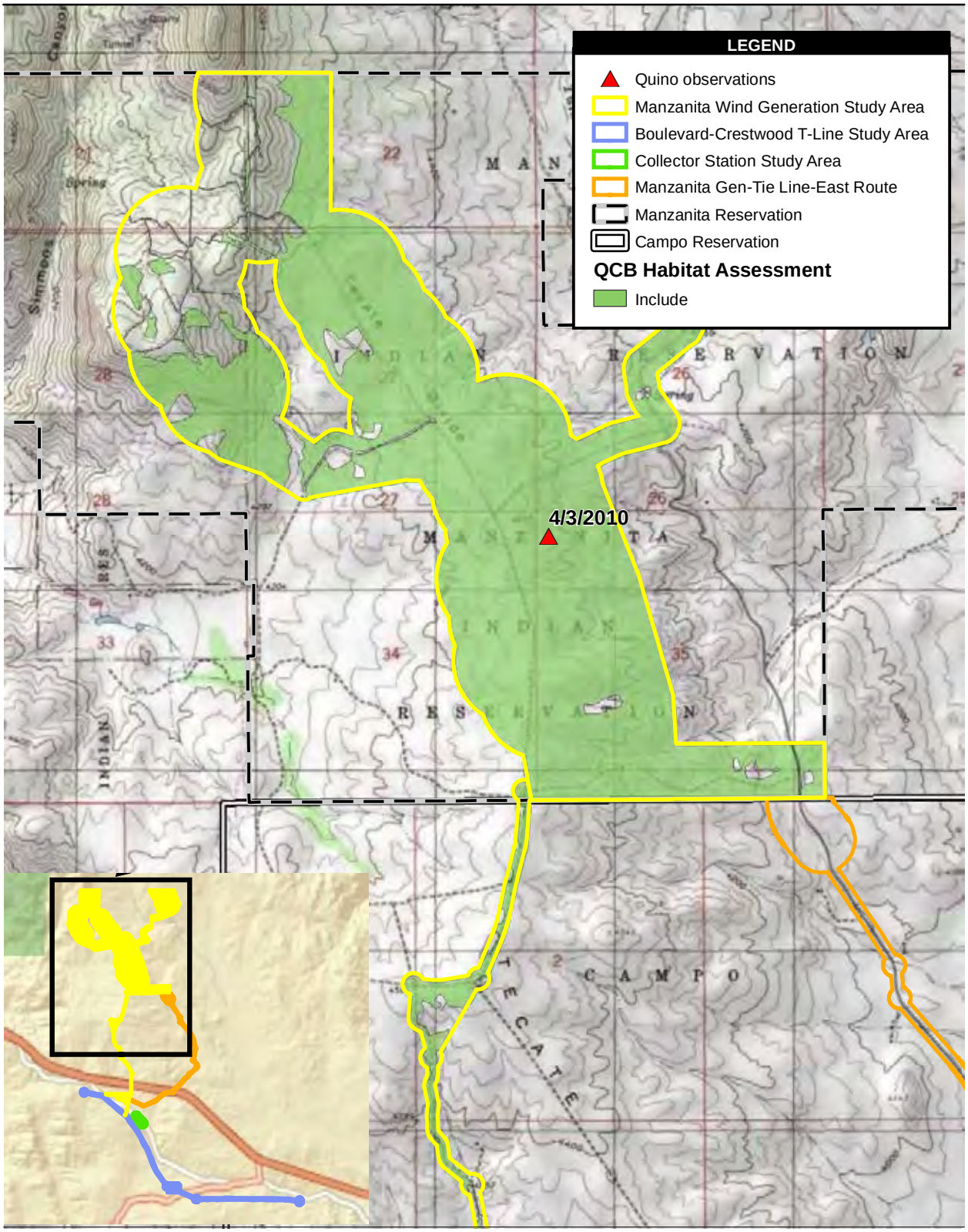
Source: USGS 30x60 Minute Series El Cajon, Calif. 1979; SDG&E 2010

1 0.5 0 1 Miles

Scale: 1 = 63,360; 1 inch = 1 miles

Figure 2
Vicinity Map

Path: P:\2009\09080155_Manz_SDGE\06GIS\6.3_Layout\USFWS\vicinity.mxd, 04/02/10, AugelloP



Source: DigitalGlobe 2008; SDG&E 2010

2,000 1,000 0 2,000 Feet

Scale: 1 = 32,470; 1 inch = 2,706 feet

Figure 3
Quino Observation Location Map

Path: P:\2009\09080155_Manz_SDGE\06GIS\6.3_Layout\USFWS\24hr_notification\QCB_observation_20100403.mxd, 04/05/10, AugelloP

APPENDIX F.3
04/10/2010 and 04/11/2010 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 Third, Fourth, and Fifth Quino Checkerspot Butterfly Observations at the Manzanita Wind Energy Project, San Diego County, California

Dear Ms. Marquez:

AECOM is submitting this notification letter to inform you that an additional three Quino checkerspot butterfly (*Euphydryas editha quino*; Quino) individuals were observed at the proposed Manzanita Wind Energy project site in southeastern San Diego County, California. On April 10 and 11, 2010, Consulting Biologists Michael Couffer (permit number TE-782703-8) and Dale Powell (permit number TE-820658-4), sub-contractors to AECOM observed Quino during a protocol level survey for this species. Although the project site exists within U.S. Fish and Wildlife (USFWS) Quino Survey Area 2, Mr. Couffer and Mr. Powell did not collect any 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 sighting is detailed below.

On April 10, 2010, Mr. Powell detected one Quino in an open clearing within southerm mixed chaparral habitat approximately 1.7 miles southeast of Live Oak Springs (Photo 1). The specific location of the sighting was at UTM coordinates 11S 0563382, 3614590 (Figure 3, Quino 1). Weather consisted of clear skies and mild winds. The butterly was initially detected in flight at 13:44, then observed stopping and basking in the sun on the ground for short periods of time. The butterfly appeared to have emerged recently and was in a fresh condtion. Its red colored abdominal bands were easily discernable (Photo 2).

Mr. Couffer's Quino was observed on April 10, 2010 near the community of Boulevard, south of Campo Road, east of Tierra del Sol Road, and west of Jewel Valley Road. The specific location of the sighting was at UTM coordinates 11S 0564921, 3613993 (see Figure 3, Quino 2). The approximate elevation was 3770 feet above mean sea level. The Quino was detected on a gradual slope with sandy soils supporting primarily *Lasthenia* sp. (Photo 3). The Quino was captured and photographed in the hand before being released unharmed (Photo 4). This Quino was somewhat drab, overall, but its wing edges were still in good condition, indicating a butterfly that was neither a fresh individual, nor an individual that was near the end of its life.

On April 11, 2010, Mr. Couffer incidentally observed another Quino within the project's boundaries after completing the areas assigned to him for protocol surveys for the species. After completing the area assigned to him for protocol-level Quino surveys, Mr. Couffer moved to a different portion of the project site to meet with other biologists surveying their assigned area. As he was walking down a dirt road through chamise chaparral to meet the biologists, a Quino flew past him on the road, for approximately 50 feet and landed on the ground in a patch of low-density annual grassland to one side of the road (Photo

5). The Quino stayed long enough to be positively identified with binoculars, and then flew into dense chamise chaparral before a photo could be taken. This Quino was somewhat drab, with no major tears in the wings.

Mr. Couffer observed the Quino was along the same telephone alignment as where he observed a Quino the previous day; however, this Quino was observed northwest of the previous location. The Quino was located at UTM coordinates 11S 0563773, 3614200, at approximately 3873 feet above mean sea level (Figure 3, Quino 3). This general location was southwest of the community of Boulevard. More specifically, the sighting was made along an existing telephone easement road northwest of Tierra del Sol Road, and southeast of State Route 94.

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
Beverly Blessant, SDG&E
Kirstie Reynolds, SDG&E
Tom Acuna, SDG&E
Monique LaChappa, Chairwoman, Campo Kumeyaay Nation
Johnny Elliot, Manzanita Tribal Representative
John Rydzik, BIA

Photo 1

Photo 2

Photo 3

Photo 4

Photo 5

USFWS 24-hour Notification of Quino Sighting

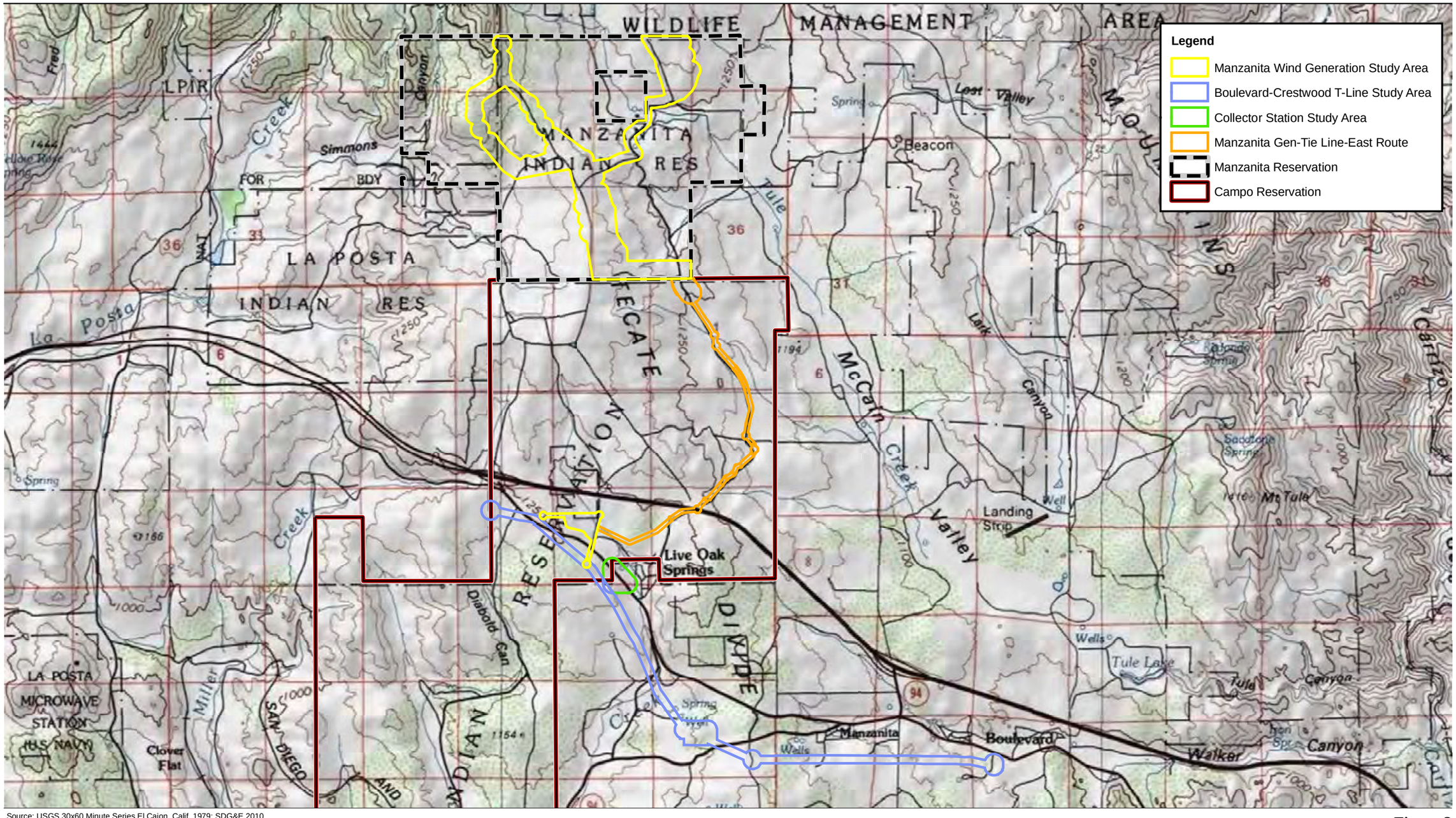
Path: P:\2009\09080155_Manz_SDGE\06GIS\6.3_Layout\USFWS\regional_map.mxd, 04/12/10, johnsonaa

Source: ESRI 2009; SDG&E 2010

12.8 0 12.8 Miles

Scale: 1 = 810,772; 1 inch = 12.8 mile(s)

Figure 1
Regional Map



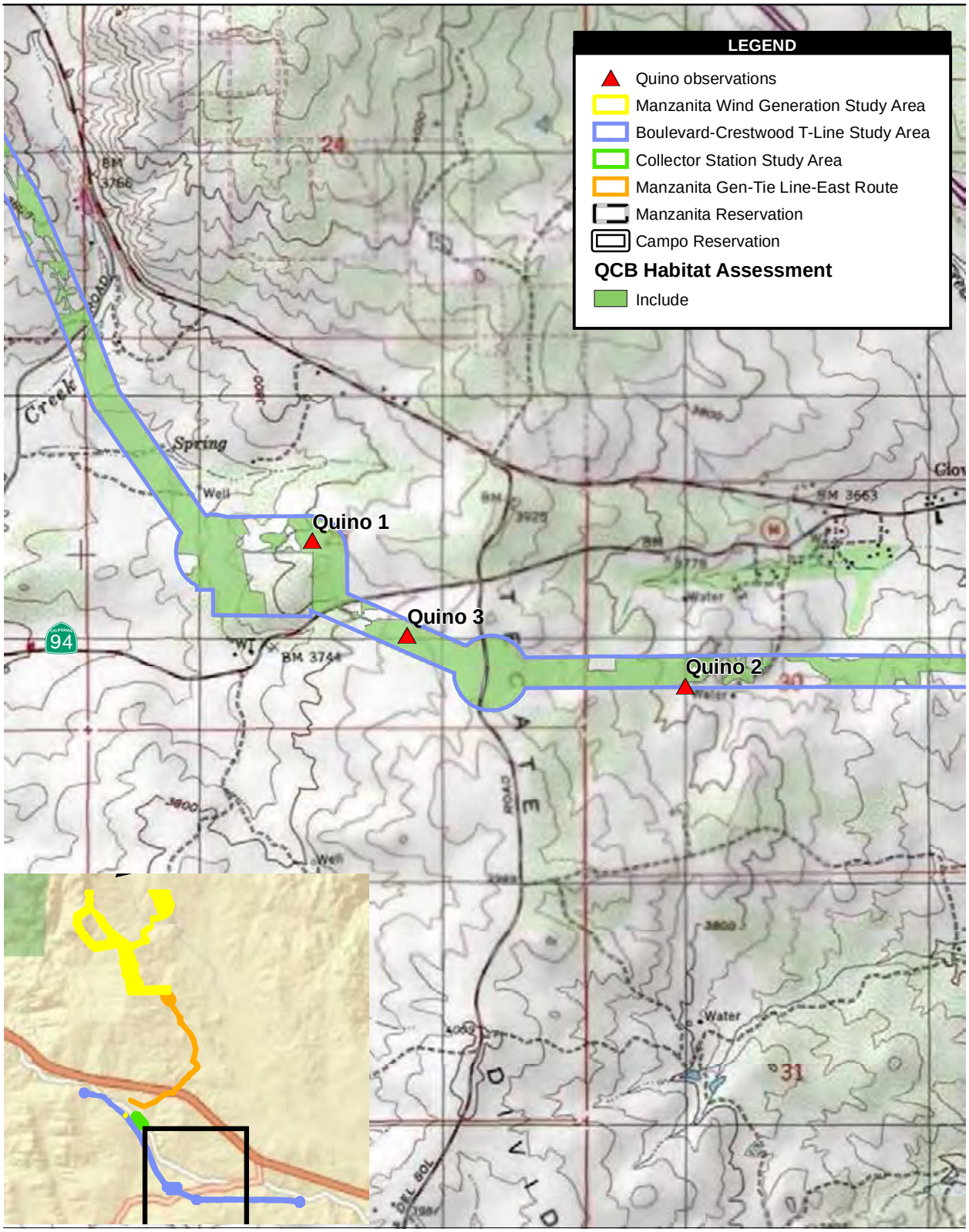
Source: USGS 30x60 Minute Series El Cajon, Calif. 1979; SDG&E 2010

1 0.5 0 1 Miles

Scale: 1 = 63,360; 1 inch = 1 mile(s)

Figure 2
Vicinity Map

Path: P:\2009\09080155_Manz_SDGE\06GIS\6.3_Layout\USFWS\vicinity.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
QCB Suitable Habitat Assessment

Path: P:\2009\09080155_Manz_SDGE\06GIS\6.3_Layout\USFWS\24hr_notification\QCB_observation_20100409.mxd, 04/12/10, johnsonaa

APPENDIX F.4
04/16/2010 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 17, 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 an additional one Quino checkerspot butterfly (*Euphydryas editha quino*; Quino) individual was observed at the proposed Manzanita Wind Energy project site in southeastern San Diego County, California. On April 16, 2010, Consulting Biologist Martha Heath (permit number #TE-099005-1), sub-contractor to AECOM, observed Quino during a protocol level survey for this species. Although the project site exists within U.S. Fish and Wildlife (USFWS) Quino Survey Area 2, Ms. Heath 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.

On April 16, 2010, Ms. Heath detected one Quino individual at 09:55 in open buckwheat scrub habitat. She observed it flying initially, then observed it stopping and basking on the ground in an open area. The Quino was in a fresh condition, brightly colored with no nicks or tears in the wings. Ms. Heath was not able to take a photograph of the individual as it flew away before she was able to take a picture. The specific location of the sighting was at UTM coordinates 11S 0563476, 3614531 (Figure 3). Weather consisted of sunny clear skies and mild winds with a temperature of 64 degress Fahrenheit. Nectaring sources in the area included stork's bill (*Erodium botrys*), fiddleneck (*Amsinckia menziesii*), goldfields (*Lasthenia californica*), cup leaf lilac (*Ceanothus greggii perplexans*), popcorn flower (*Plagiobotrys* sp.), California poppy (*Eschscholzia californica*), California primrose (*Camissonia californica*), and baby blue eyes (*Nemophila menziesii*).

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
Beverly Blessant, SDG&E
Kirstie Reynolds, SDG&E
Tom Acuna, SDG&E
Monique LaChappa, Chairwoman, Campo Kumeyaay Nation
Johnny Elliot, Manzanita Tribal Representative
John Rydzik, BIA

USFWS 24-hour Notification of Quino Sighting

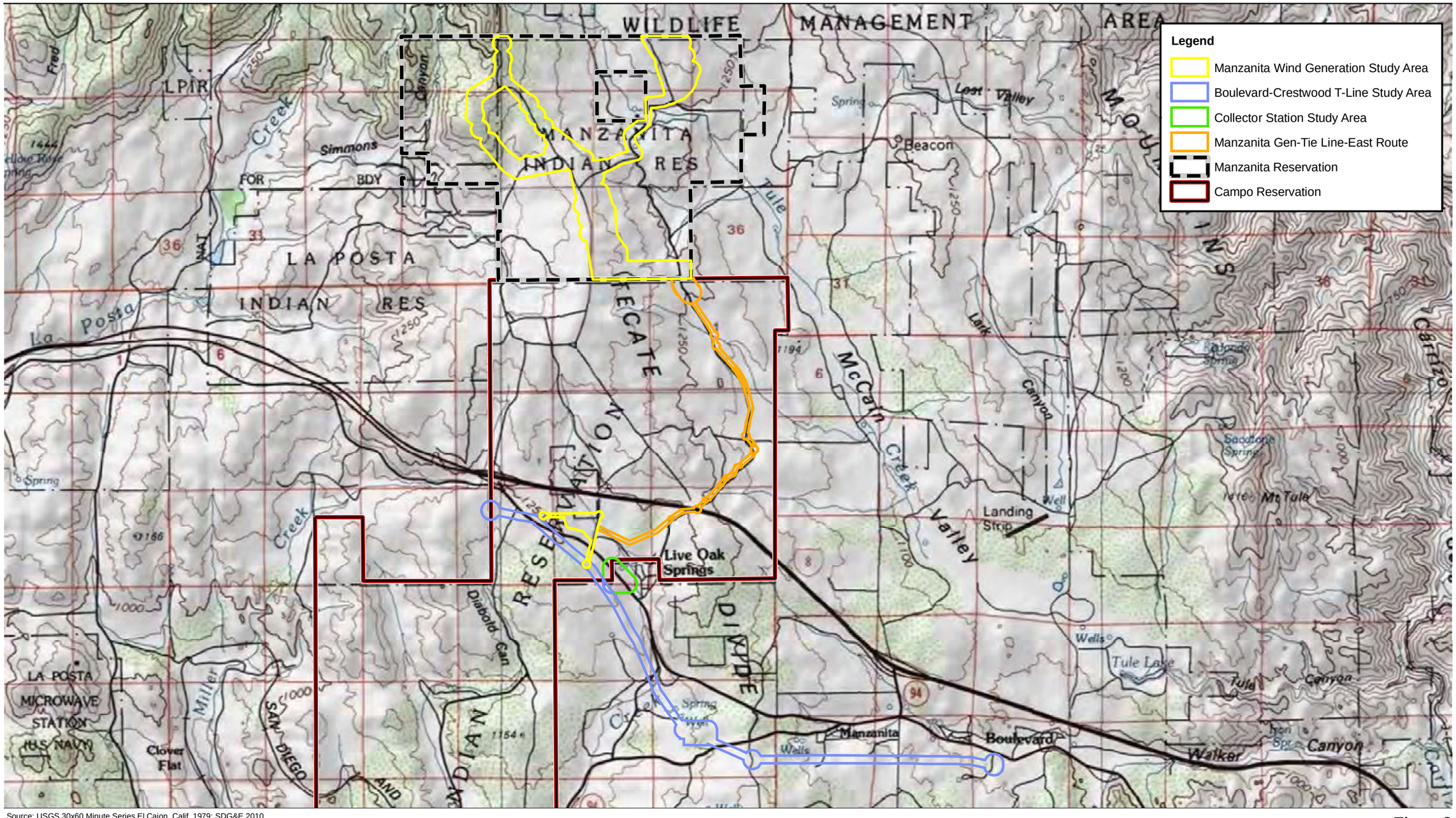
Path: P:\2009\09080155_Manz_SDGE\06GIS\6.3_Layout\USFWS\regional_map.mxd, 04/12/10, johnsonaa

Source: ESRI 2009; SDG&E 2010

12.8 0 12.8 Miles

Scale: 1 = 810,772; 1 inch = 12.8 mile(s)

Figure 1
Regional Map



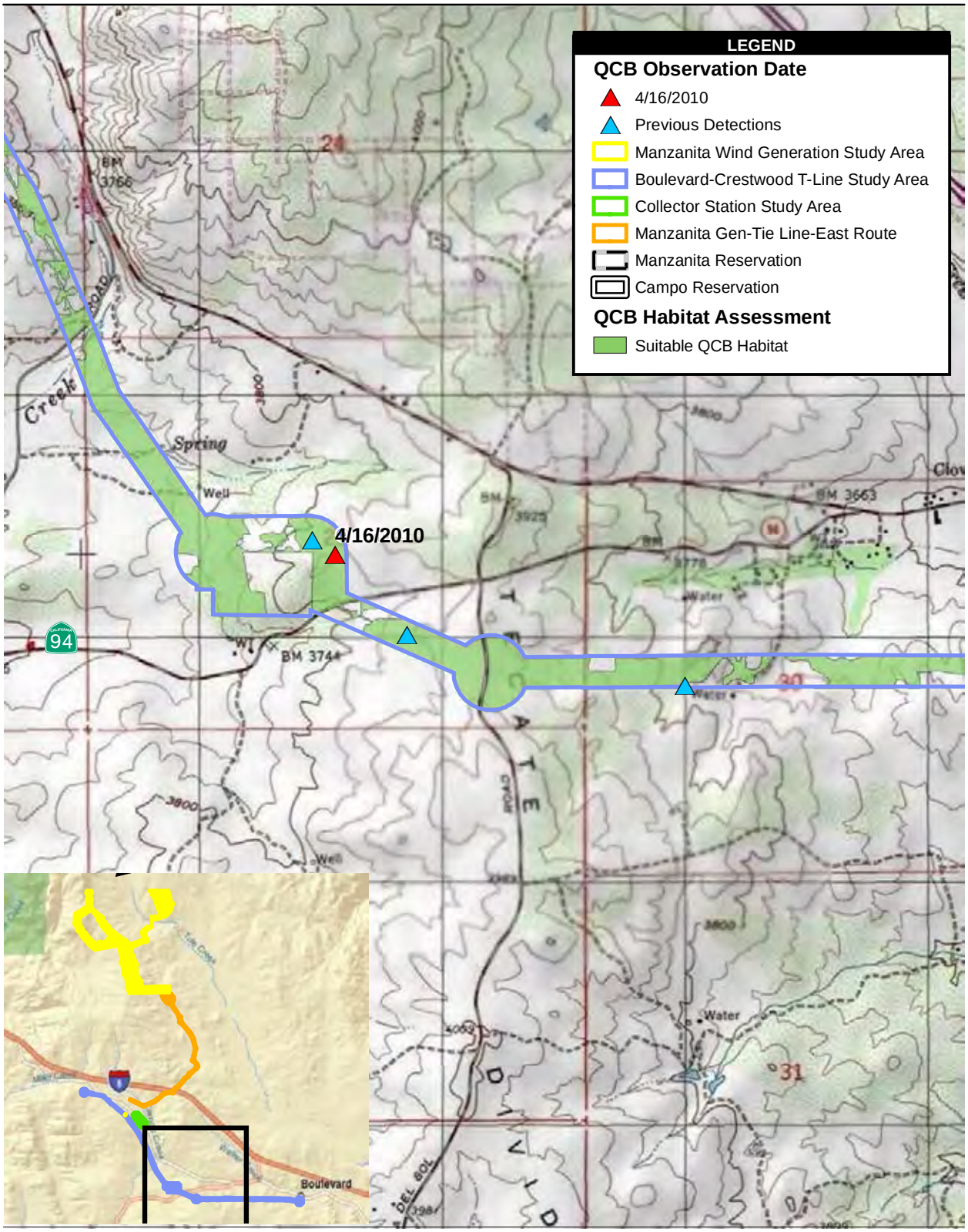
Source: USGS 30x60 Minute Series El Cajon, Calif. 1979; SDG&E 2010

1 0.5 0 1 Miles

Scale: 1 = 63,360; 1 inch = 1 mile(s)

Figure 2
Vicinity Map

Path: P:\2009\09080155_Manz_SDGE\06GIS\6.3_Layout\USFWS\vicinity.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
QCB Suitable Habitat Assessment

Path: P:\2009\09080155_Manz_SDGE\06GIS\6.3_Layout\USFWS\24hr_notification\QCB_observation_20100416.mxd, 04/16/10, johnsonaa

APPENDIX F.5
04/16/2010 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 Seventh 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 three additional Quino checkerspot butterfly (*Euphydryas editha quino*; Quino) individuals were observed at the proposed Manzanita Wind Energy project site in southeastern San Diego County, California. On April 16, 2010, AECOM biologist Barbra Calantas (permit number #TE-820658-4) and Consulting Biologist Martha Heath (permit number #TE-099005-1), sub-contractor to AECOM, observed Quino during a protocol level survey for this species. Although the project site exists within U.S. Fish and Wildlife (USFWS) Quino Survey Area 2, Ms. Heath 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.

On April 18, 2010, Ms. Heath detected one Quino individual at 12:20 in open buckwheat scrub habitat along a ridgeline. She observed it flying initially, around a pile of old Manzanita wood. The Quino was in a fresh condition, brightly colored with no nicks or tears in the wings. It landed in open grass approximately 20-25 feet away from Ms. Heath and stayed for approximately five minutes. She was able to take a photograph of the individual, which will be forwarded to you at a later time. The specific location of the sighting was at UTM coordinates 11S 0561838, 3622727 (Figure 3; Quino 1). Nectaring sources in the area included wild cucumber (*Eriogonum fasciculatum*), stork's bill (*Erodium botrys*), fiddleneck (*Amsinckia menziesii*), goldfields (*Lasthenia californica*), cup leaf lilac (*Ceanothus greggii perplexans*), popcorn flower (*Plagiobotrys* sp.), phacelia (*Phacelia* sp.), and baby blue eyes (*Nemophila menziesii*). Additionally, Chinese houses (*Collinsia concolor*) was present within the vicinity of this Quino.

At 12:51, Ms. Heath detected a second Quino individual. She was surveying the same ridgeline she detected Quino 1 on, heading west of the first obsrervation, when she saw the second Quino flying from a dirt road, flying 1-3 feet above the ground and landing 25 feet from her. She observed the butterfly with her binoculars and confirmed it was a Quino. It was also a brightly colored in a fresh condition. As she attempted to take a photograph, it took flight to the west. Ms. Heath headed back towards the location of the first Quino to verify her second was a unique individual, and observed her first Quino in the same location. Thus, she confirmed this was a second distinct individual. The specific location of this sighting was at UTM coordinates 11S 0561479, 3622719 (Figure 3; Quino 2).

At 13:25, I observed a Quino in a separate area from Ms. Heath's survey area, east of where Ms. Heath was located. I stopped on a hillside in and open area with various nectar sources, including goldfields (*Lasthenia californica*), popcorn flower, phacelia, and baby blue eyes, and observed a butterfly with a flight pattern like a Quino flying towards me. It landed approximately 15 feet in front of me. I observed the butterfly with my binoculars as it nectared on popcorn flower and confirmed it was female Quino. It was also in a fresh condition, with no nicks or tears in its wings, and brightly colored orange bands on its abdomen. Unfortunately, it flew away as I was attempting to take a picture. The specific location of this sighting was at UTM coordinates 11S 0562056, 3622196 (Figure 3; Quino 3).

Weather for all three observations consisted of sunny, clear skies and mild winds with temperatures ranging from 66 to72 degress Fahrenheit during the time period the butterflies were detected.

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
Beverly Blessant, SDG&E
Kirstie Reynolds, SDG&E
Tom Acuna, SDG&E
Monique LaChappa, Chairwoman, Campo Kumeyaay Nation
Johnny Elliot, Manzanita Tribal Representative
John Rydzik, BIA

USFWS 24-hour Notification of Quino Sighting

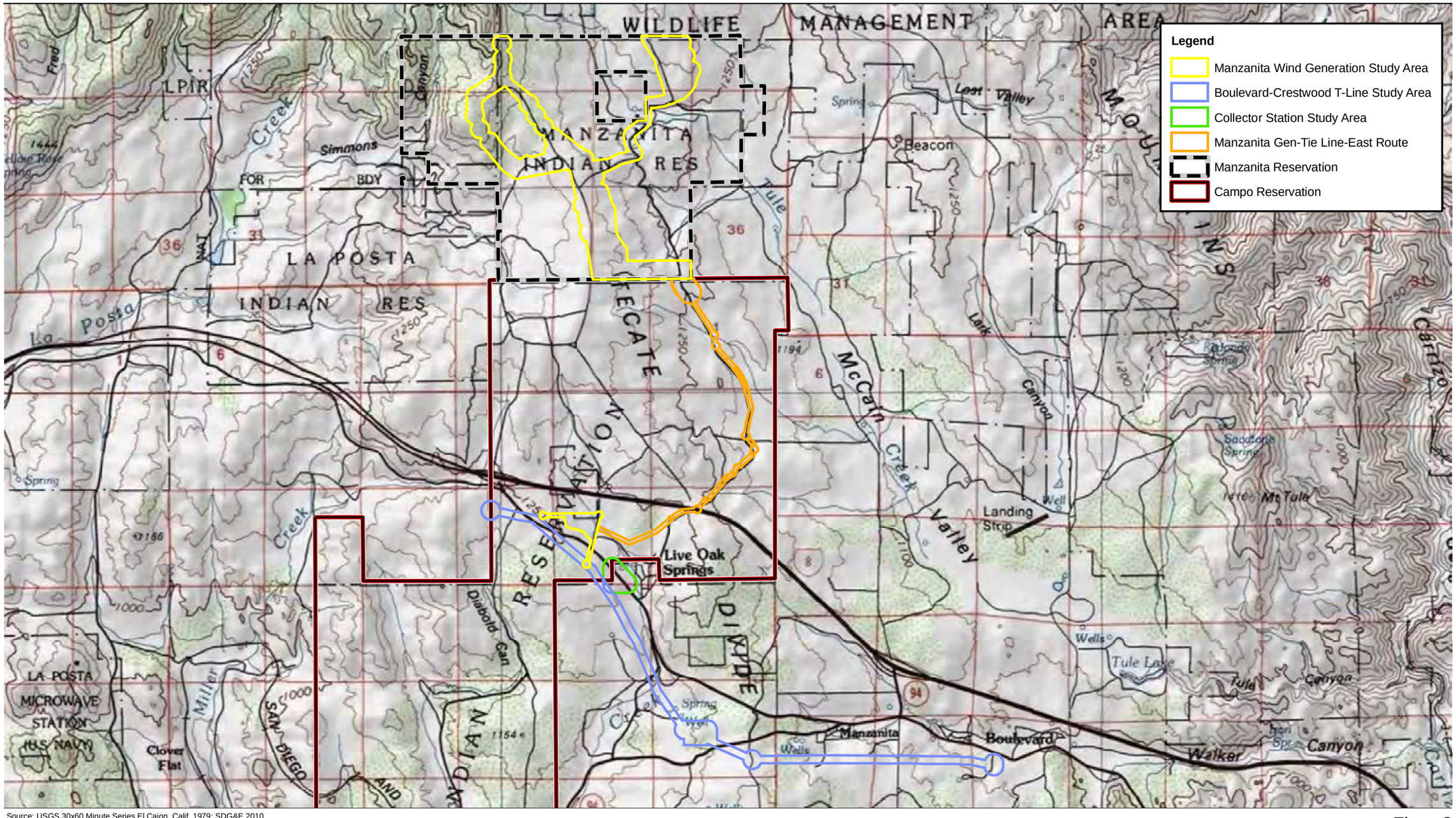
Path: P:\2009\09080155_Manz_SDGE\06GIS\6.3_Layout\USFWS\regional_map.mxd, 04/12/10, johnsonta

Source: ESRI 2009; SDG&E 2010

12.8 0 12.8 Miles

Scale: 1 = 810,772; 1 inch = 12.8 mile(s)

Figure 1
Regional Map



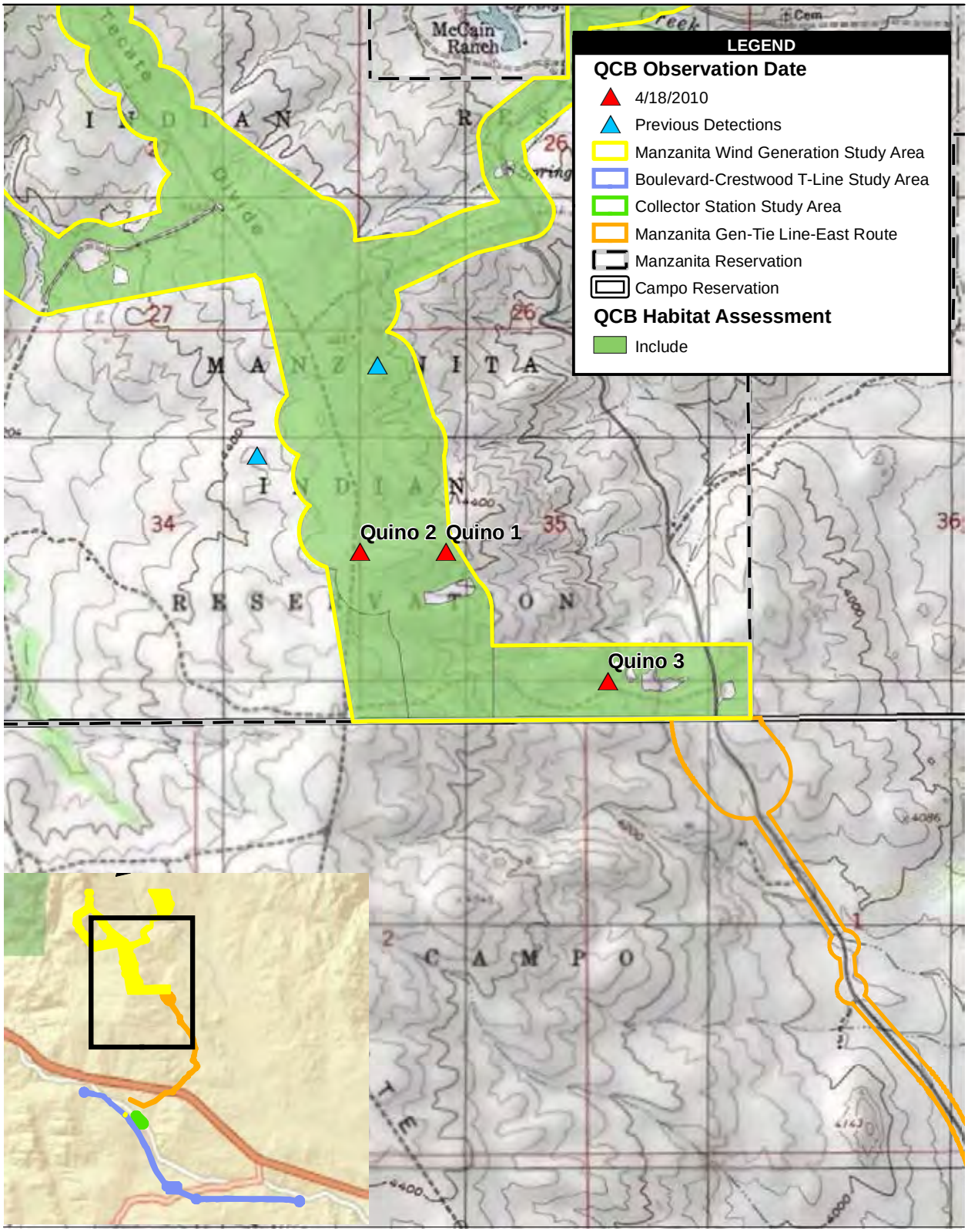
Source: USGS 30x60 Minute Series El Cajon, Calif. 1979; SDG&E 2010

1 0.5 0 1 Miles

Scale: 1 = 63,360; 1 inch = 1 mile(s)

Figure 2
Vicinity Map

Path: P:\2009\09080155_Manz_SDGE\06GIS\6.3_Layout\USFWS\vicinity.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
QCB Suitable Habitat Assessment

USFWS 24-hour Notification of Quino Sighting

Path: P:\2009\09080155_Manz_SDGE\06GIS\6.3_Layout\USFWS\24hr_notification\QCB_observation_20100418.mxd, 04/19/10, johnsonaa

APPENDIX F.6
04/20/2010 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 21, 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 Manzanita 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 Manzanita Wind Energy project site in southeastern San Diego County, California. On April 20, 2010, Consulting Biologist Antonette Guiterrez (permit number #TE-797999-7), sub-contractor to AECOM, observed Quino during a protocol level survey for this species. Although the project site exists within U.S. Fish and Wildlife (USFWS) Quino Survey Area 2, Ms. Guiterrez 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.

Two Quino checkerspot butterflies were observed on April 20, 2010 within the Manzanita Project Area at UTM coordinates 11 S 0563387, 03614599 (Figure 3). A single Quino was previously detected in the same location, as noted in AECOM's 24-hour Notification letter dated April 12, 2010 (previously submitted). The first Quino was detected at 11:15 in an open pocket of southern mixed chaparral. The left hind wing appeared to have some damage but did not hinder the butterfly. This butterfly flew low to the ground in the typical zig zag pattern and repeatedly landed in open sandy patches and on twigs. The immediate surrounding habitat was within open scrub. The dominate shrub was *Eriogonum fasciculatum*. This area supported an abundance of nectar sources including *Gilia* sp., *Linanthus dianthiflorus, Linanthus lemmonii, Plagiobothrys* sp., *Nemophila menziesii, Erodium cicutarium, Sisymbrium altissimum, Camissonia* sp., *Filago* sp., and *Lasthenia californica.* No host plants were observed in this area during this survey. This butterfly was observed for approximately 15 minutes. Around 11:30 a second Quino flew in near the first. The two butterflies made contact flying up in the air together for a short distance and then parted. The second Quino flew into an open area surrounded by taller chaparral while the first Quino returned to the open sandy soil. The second Quino that flew into the chaparral appeared slightly larger than the first and appeared fresh with no damage to the wings. This second Quino flew up over the chaparral and was taken by the wind and not seen again. The first Quino that landed in the sandy soil remained in the area maintaining the same behavior. Several photos of the first Quino were obtained (Photo 1). A photo of this Quino's habitat was also taken (Photo 2). One photo was taken of the second Quino (larger of the two) from a distance (Photo 3). A photo of this second Quino's habitat was also taken (Photo 4).

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
Beverly Blessant, SDG&E
Kirstie Reynolds, SDG&E
Tom Acuna, SDG&E

Photo 1

Photo 2

Photo 3

Photo 4

USFWS 24-hour Notification of Quino Sighting

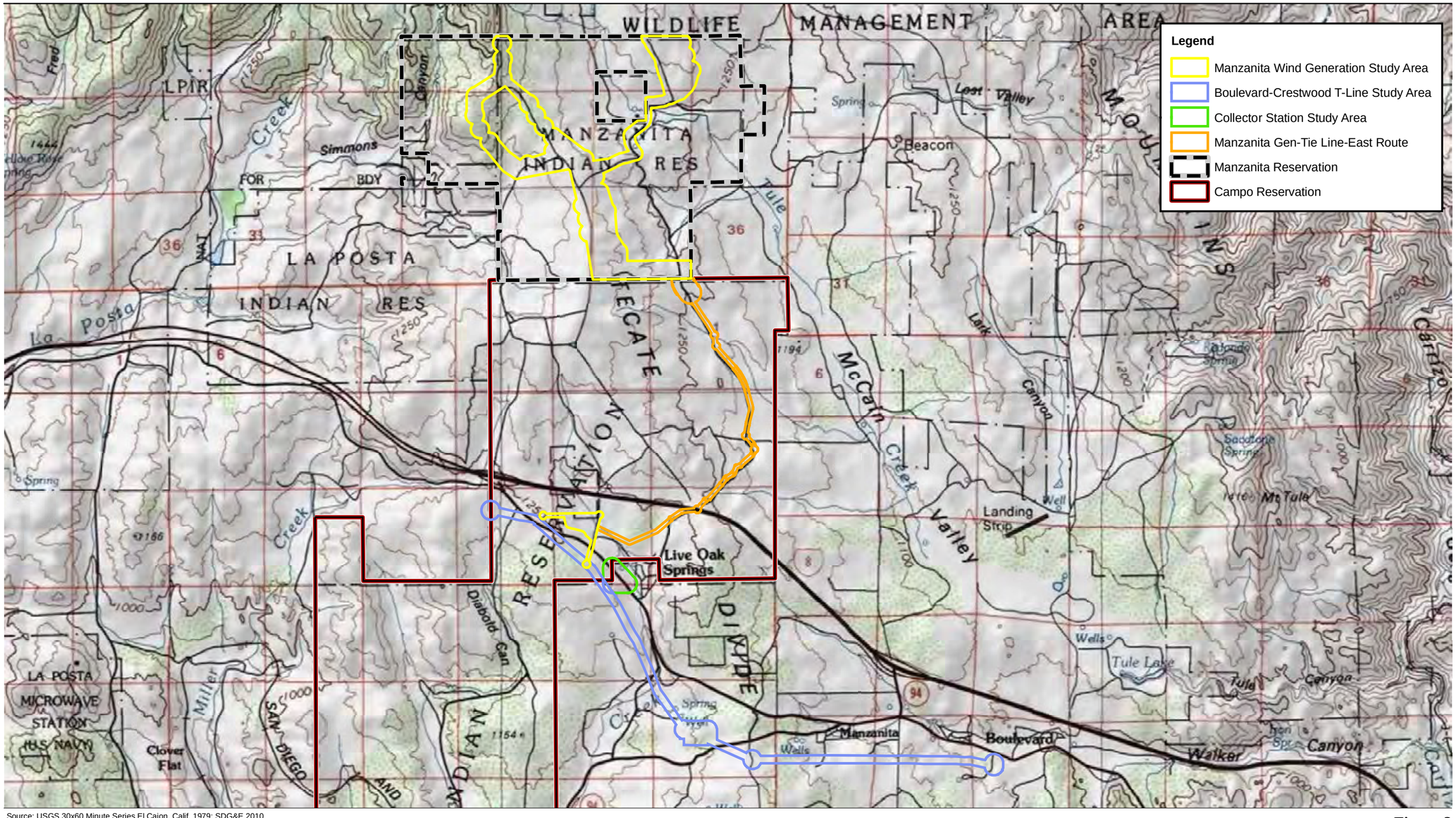
Path: P:\2009\09080155_Manz_SDGE\06GIS\6.3_Layout\USFWS\regional_map.mxd, 04/12/10, johnsonaa

Source: ESRI 2009; SDG&E 2010

12.8 0 12.8 Miles

Scale: 1 = 810,772; 1 inch = 12.8 mile(s)

Figure 1
Regional Map



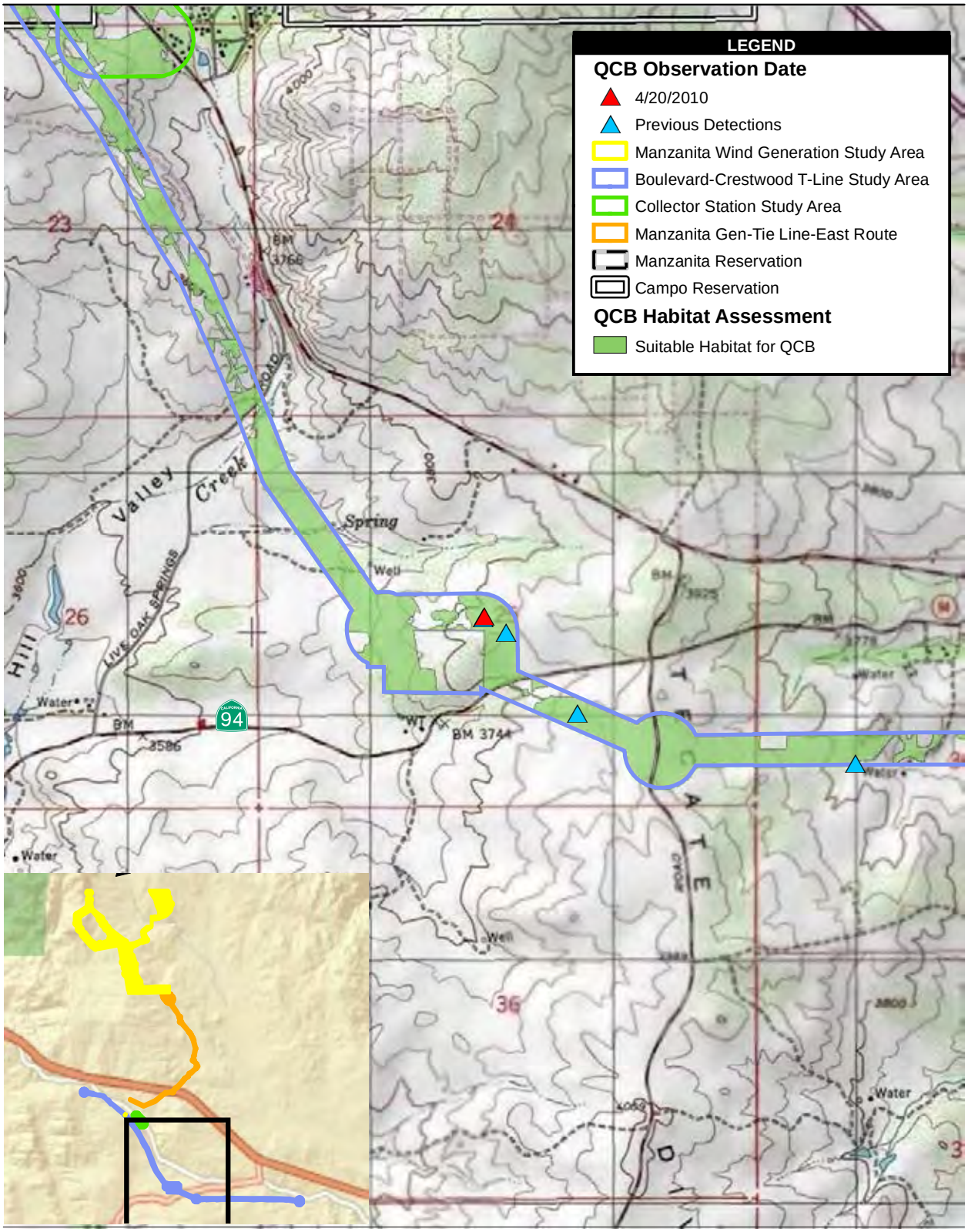
Source: USGS 30x60 Minute Series El Cajon, Calif. 1979; SDG&E 2010

1 0.5 0 1 Miles

Scale: 1 = 63,360; 1 inch = 1 mile(s)

Figure 2
Vicinity Map

Path: P:\2009\09080155_Manz_SDGE\06GIS\6.3_Layout\USFWS\vicinity.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
QCB Suitable Habitat Assessment

Path: P:\2009\09080155_Manz_SDGE\06GIS\6.3_Layout\USFWS\24hr_notification\QCB_observation_20100420.mxd, 04/20/10, johnsonaa