

# **APPENDIX D-1**

*45-Day Summary Reports of Protocol Surveys for  
Least Bell's Vireo and  
Southwestern Willow Flycatcher*



August 30, 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 Protocol Surveys for Least Bell's Vireo for the  
Campo Wind Energy Project**

Dear Ms. Marquez:

This letter summarizes results of protocol surveys conducted during 2010 by AECOM to determine the presence or absence of the least Bell's vireo (*Vireo bellii pusillus*; LBV) within the proposed Campo Wind Energy Project area in San Diego County (Figure 1). Surveys were conducted on behalf of the Campo Band of Mission Indians (a California federally recognized Indian tribe), Muht-Hei, Inc. (a tribally chartered corporation wholly owned by the Campo Band of Mission Indians), the Bureau of Indian Affairs, and Invenergy Wind California, LLC.

**Project Description**

The Campo Band of Mission Indians, Muht-Hei, the Bureau of Indian Affairs, and Invenergy Wind California propose the construction and operation of a wind energy generation facility on the Campo Indian Reservation in southeastern San Diego County. This facility would be capable of generating up to 300 megawatts (MW) of electricity and would include wind turbines, substations, transmission facilities, operations and maintenance building, and access roads. The project is currently being designed, but generally, strings of 2.5-MW turbines are being considered for installation across ridgelines throughout the reservation that do not contain residences, including areas north and south of both Interstate 8 (I-8) and State Route 94. Each turbine would be set on a large concrete foundation. Turbines would be connected by underground electrical cables to one or two substations. Each substation would be sited on approximately 2 to 3 acres and would consist of a graveled, fenced area containing transformers and switching equipment and an area to park utility vehicles. In addition, a three-phase overhead transmission line would be constructed from each substation to connect the project to the existing transmission network. A temporary concrete batch plant would likely be necessary during construction. The biological survey area (BSA) identified for the proposed project is approximately 4,417 acres. This acreage encompasses the area within which all proposed project features would be located, with a 500-foot buffer around new proposed components (i.e. turbines, substations and transmission facilities) and a 100-foot buffer around existing features (i.e., existing roads) that are proposed to be used or modified.

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## **Site Description**

The Campo Indian Reservation includes lands both north and south of I-8 along the Tecate Divide, extending from the Manzanita Indian Reservation to the north and south to 0.25 mile north of the California/Mexico international border (Figure 1). The reservation is located between the communities of Old Campo and Jacumba, around the community of Live Oak Springs, and is bisected by Church Road (Figure 2). On-site elevation ranges from approximately 3,030 to 4,320 feet above mean sea level.

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

## **Background Information**

The LBV was listed as endangered by the U.S. Fish and Wildlife Service (USFWS) on May 2, 1986 (Federal Register 51[85]:16474–16481), with designated critical habitat (Federal Register 59[22]:4845–4867). This listing status applies to the entire population of LBV. A draft recovery plan was written by USFWS and circulated for review in 1998 (USFWS 1998). No critical habitat occurs within the BSA. The California Department of Fish and Game listed this subspecies as endangered on October 2, 1980.

Historically, this subspecies was a common summer visitor to riparian habitat throughout much of California. Currently, the LBV is found only in riparian woodlands in Southern California, with the majority of breeding pairs in San Diego, Santa Barbara, and Riverside counties. Substantial LBV populations are currently found on five rivers in San Diego County (the Tijuana, Sweetwater, San Diego, San Luis Rey, and Santa Margarita rivers), with smaller populations on other drainages. During 1996, a total of 1,423 territorial males was recorded within San Diego County (Unitt 2004). From 2001 through 2005, a total of 1,609 pairs was recorded in San Diego County, which accounts for approximately 54% of the total LBV population within California (USFWS 2006).

The LBV is migratory and arrives in San Diego County in late March through early April and leaves for its wintering grounds in September. The LBV primarily occupies riparian woodlands that include dense to moderately open cover within 3 to 7 feet of the ground and a dense, stratified canopy. The subspecies inhabits low, dense riparian growth along water or along dry parts of intermittent streams. The understory is typically dominated by species of willow (*Salix* sp.) and mulefat (*Baccharis salicifolia*). Overstory species typically include cottonwood (*Populus* sp.), western sycamore (*Platanus racemosa*), and mature willows. The

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subspecies typically builds nests in vegetation 3 to 4 feet above the ground (Salata 1984) where moderately open midstory cover occurs with an overstory of willows, cottonwoods, sycamores, or coast live oaks (*Quercus agrifolia*). Nests are also often placed along internal or external edges of riparian thickets at an average of 3.3 feet above the ground (Unitt 2004). Riparian plant succession is an important factor in maintaining vireo habitat.

The LBV's decline is attributed to loss, degradation, and fragmentation of riparian habitat combined with brood and nest parasitism by the brown-headed cowbird (*Molothrus ater*; BHCO). LBVs are known to be sensitive to many forms of disturbance, including noise, night-lighting, and consistent human presence. Due to concerted programs focused on preserving, enhancing, and creating suitable nesting habitat, the LBV population has steadily increased in size along several of its breeding drainages in Southern California. Significant increases in breeding populations have occurred along the Santa Ana River at Prado Basin and on the Santa Margarita River on Marine Corps Base Camp Pendleton, as well as at several other sites throughout the region.

### **Survey Methodology**

Prior to the initiation of surveys, regional databases were searched to determine the closest known occurrences of LBV in the vicinity of the BSA. A search of the California Natural Diversity Database (CDFG 2010) and the eBird database (eBird 2010) resulted in two documented LBV locations in 1991 and 1992, ranging from approximately 8.15 to 8.2 miles (possibly representing the same individual or pair) to the northwest of the BSA in Cottonwood Creek.

A habitat assessment focusing on suitable LBV habitats within and adjacent to the BSA was completed by qualified AECOM biologists James McMorran and Erin Riley on April 17 and April 22, 2010. Contiguous riparian areas either within the BSA or within the immediate vicinity of the BSA were assessed. Areas mapped as suitable LBV habitat included all riparian willow forest and riparian willow scrub associations, and upland and wetland habitats adjacent to areas of scrub. Riparian areas adjacent to the BSA with optimal LBV habitat were considered when they were contiguous with suitable habitat in the BSA because of the nature of the forthcoming risk assessment for the proposed wind farm project. This approach ensures maximum potential for detectability of LBVs migrating through or breeding in the vicinity of the project but outside of the footprint. Four areas within or adjacent to the BSA were found to have habitat suitable to support LBV, and an overview of these areas is depicted in Figure 3. Three of the four LBV Survey Areas are located in the southern half of the BSA (LBV Survey Areas 2, 3, and 4), and the remaining survey area (LBV Survey Area 6) is located in the northern half (Figure 3). The LBV Survey Area numbering system (2, 3, 4, and 6) is consistent with an ongoing Bird Area Search study that shares several of the areas surveyed for LBV. Approximately 6.24 acres of suitable LBV habitat occur within the BSA, and approximately 21.11 acres occur outside of the BSA (contiguous with LBV habitat within the BSA), providing a combined total of approximately 27.35 acres of surveyed suitable LBV habitat (Figures 4a, 4b, 4c, and 4d).

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LBV surveys followed the current USFWS survey protocol for the subspecies (USFWS 2001). The surveys consisted of walking through potential LBV habitat. Qualified AECOM biologists conducted passive surveillance (i.e., listening and looking for the species) in all four areas mapped as suitable habitat to support LBV. Per the current USFWS protocol, suitable habitat within the BSA was surveyed eight times, at least 10 days apart, during the 2010 breeding season. Surveys were completed between dawn and 11 a.m. In addition to any LBV observations/detections, all avian species detected were recorded on field datasheets, and BHCs were mapped upon their initial sighting in a survey area.

## Results

Protocol-level LBV surveys were conducted between April 23 and July 16, 2010, within the BSA and adjacent areas of suitable LBV habitat (Table 1). A summary of survey data is presented in Table 1, including date of survey, survey number, time, weather conditions, field biologists, and LBV observations. Field notes are presented in Appendix A.

**Table 1**  
**Least Bell's Vireo Protocol Surveys**  
**Dates, Personnel, Weather Conditions, and Results**

Date	Survey Period	Surveyors	Time	Weather Conditions	LBV Observed
04/23/10	1	James McMorran	0525–1008	Start: 34°F, wind 0–2 mph, 0% cover End: 62°F, wind 1–2 mph, 0% cover	None
05/07/10	2	James McMorran	0621–1100	Start: 56°F, wind 1–2 mph, 0% cover End: 75°F, wind 2–7 mph, 0% cover	None
05/17/10	3	Andrew Fisher	0634–1016	Start: 50°F, wind 0–2 mph, 100% cover End: 67°F, wind 1–3 mph, 100% cover	None
05/27/10	4	Andrew Fisher Erin Riley	0520–1106	Start: 44°F, wind 0–1 mph, 30% cover End: 62°F, wind 2–6 mph, 5% cover	None
06/10/10	5	James McMorran Erin Riley	0504–1102	Start: 56°F, wind 0–4 mph, 0% cover End: 74°F, wind 5–16 mph, 0% cover	None
06/21/10	6	Erik LaCoste	0515–1035	Start: 48°F, wind 0–2 mph, 0% cover End: 80°F, wind 2–5 mph, 0% cover	None
07/06/10	7	James McMorran Doug Willick	0517–1003	Start: 48°F, wind 0–3 mph, 0% cover End: 76°F, wind 0–2 mph, 0% cover	None
07/16/10	8	Brennan Mulrooney Erin Riley	0522–1003	Start: 71°F, wind 0 mph, 0% cover End: 90°F, wind 0–3 mph, 0% cover	None

No LBVs were detected within the survey areas during spring 2010. BHCs were detected at two survey locations adjacent to the BSA (Figures 4b and 4c), with a maximum number of five individuals observed on two occasions (in April and June). A summary of the BHCs detected is provided in Table 2.

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**Table 2**  
**Summary of Brown-Headed Cowbird Observations**  
**by Survey Period**

Survey Period	Survey Date	Number of BHCO Individuals Detected
1	04/23/10	5
2	05/07/10	1
3	05/17/10	1
4	05/27/10	1
5	06/10/10	5
6	06/21/10	0
7	07/06/10	2
8	07/16/10	0

## Discussion

Protocol-level surveys for LBV did not yield any sign of this subspecies within the BSA or adjacent suitable habitat on the reservation during spring migration or the nesting period. The closest LBV individual/pair is approximately 8 miles northwest of the BSA, and the next closest is approximately 10 miles west of the BSA (CNDDDB 2010).

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

Sincerely,



James McMorran  
Wildlife Biologist  
james.mcmorran@aecom.com

Attachments:    Figure 1 – Regional Map  
                      Figure 2 – Vicinity Map  
                      Figure 3 – Least Bell's Vireo Survey Area Overview  
                      Figure 4a – Least Bell's Vireo Survey Area 2 Results  
                      Figure 4b – Least Bell's Vireo Survey Area 3 Results  
                      Figure 4c – Least Bell's Vireo Survey Area 4 Results  
                      Figure 4d – Least Bell's Vireo Survey Area 6 Results  
                      Appendix A – Field Data Sheets

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**Certification**

Qualified biologists who conducted LBV surveys for the Campo Wind Energy Site certify that the information in this survey report fully and accurately represents the work performed by AECOM biologists. Signatures of current AECOM biologists as listed in Table 1 who conducted protocol-level surveys (April 23 through July 16, 2010) are included below. The results of protocol-level surveys for listed species are typically considered valid for 1 year by the resource agencies.



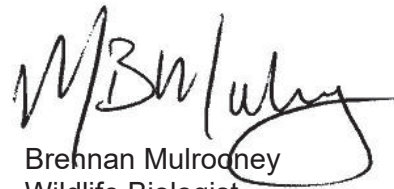
Andrew Fisher  
Wildlife Biologist



Erin Riley  
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Doug Willick  
Wildlife Biologist



Brennan Mulrodne  
Wildlife Biologist



Erik LaCoste  
Wildlife Biologist



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### **Literature Cited**

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- U.S. Fish and Wildlife Service (USFWS). 2001. Least Bell's Vireo Survey Guidelines. Carlsbad Fish and Wildlife Office. January 19, 2001.
- U.S. Fish and Wildlife Service (USFWS). 2006. Least Bell's Vireo (*Vireo bellii pusillus*) 5-year Review Summary and Evaluation. Carlsbad Fish and Wildlife Office, Carlsbad, California. September.



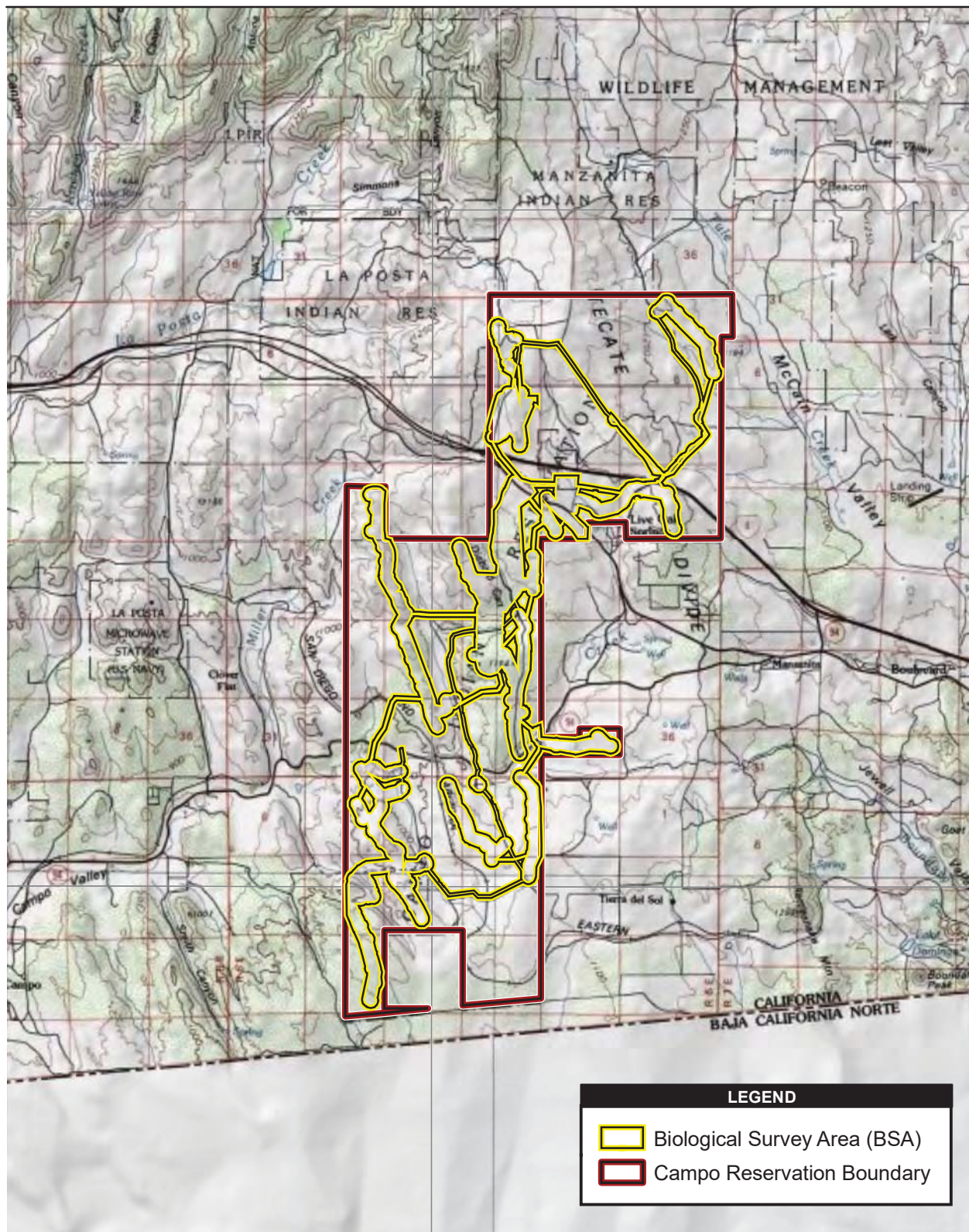
## FIGURES



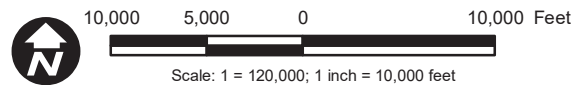


**Figure 1**  
**Regional Map**





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



**Figure 2**  
**Vicinity Map**

Campo Wind Energy Project Least Bell's Vireo 45-Day Report

Path: P:\2009\09080183\_Campo\_wind\6.0 GIS\6.3 Layout\BIO\AVIAN\LBV\_45DayReport\_Aug2010\Fig2Vicinity.mxd, 08/20/10, johnsona





**Figure 3**  
**Least Bell's Vireo Survey Areas Overview**







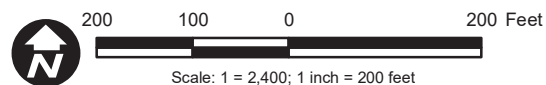


**Figure 4a**  
**Least Bell's Vireo**  
**Survey Area 2 Results**





Source: DigitalGlobe 2008; Invenenergy 2010; AECOM 2010

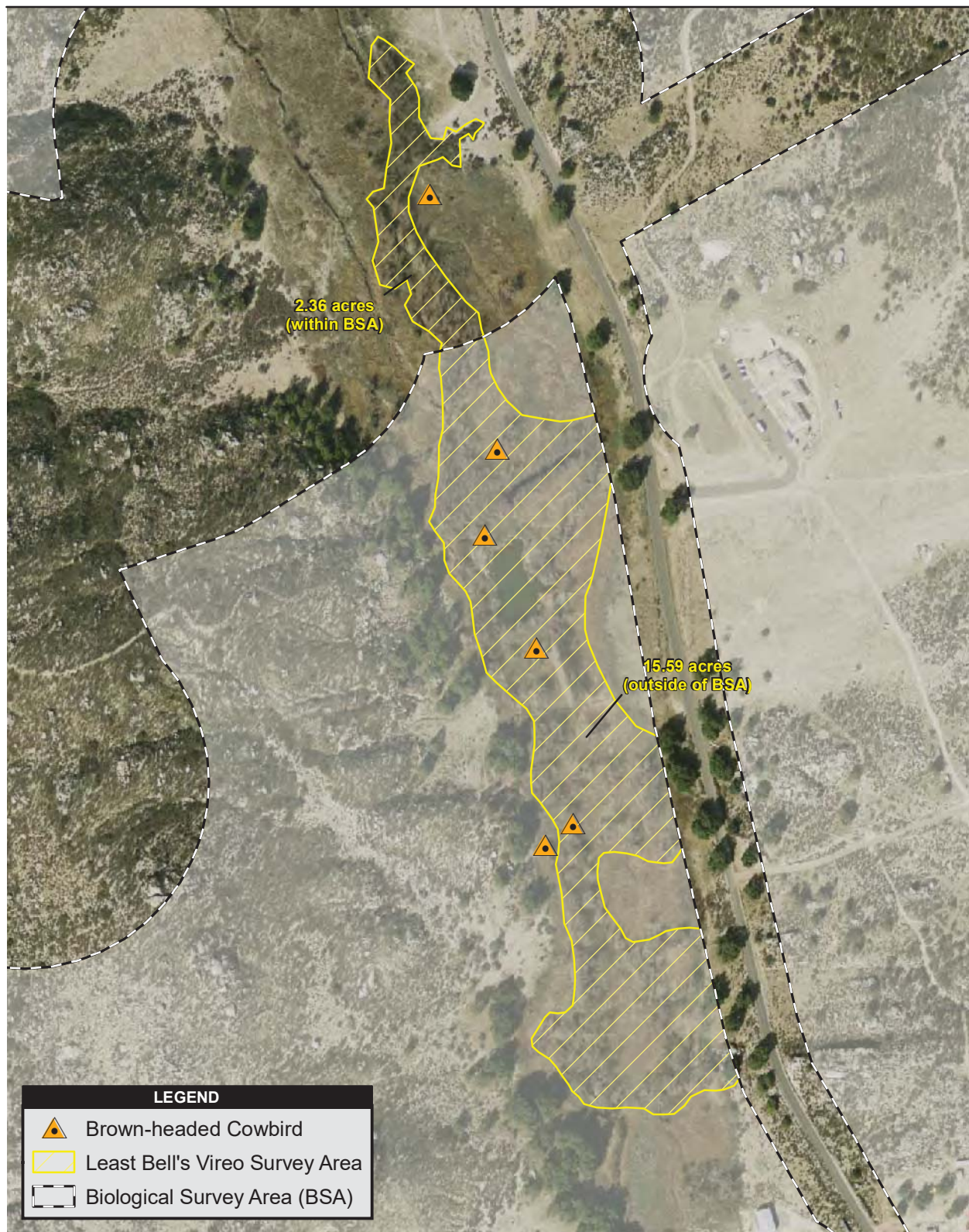


**Figure 4b**  
**Least Bell's Vireo**  
**Survey Area 3 Results**

Campo Wind Energy Project Least Bell's Vireo 45-Day Report

Path: P:\2009\09080183\_Campo\_wind\6.0 GIS\6.3 Layout\BIO\AVIAN\LBV\_45DayReport\_Aug2010\Fig4b\_LBV\_SurveyArea\_Detail.mxd, 08/25/10, johnsonaa



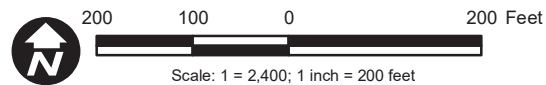


**Figure 4c**  
**Least Bell's Vireo**  
**Survey Area 4 Results**





Source: DigitalGlobe 2008; Invenergy 2010; AECOM 2010



**Figure 4d**  
**Least Bell's Vireo**  
**Survey Area 6 Results**

Campo Wind Energy Project Least Bell's Vireo 45-Day Report

Path: P:\2009\09080183\_Campo\_wind\6.0 GIS\6.3 Layout\BIO\AVIAN\LBV\_45DayReport\_Aug2010\Fig4d\_LBV\_SurveyArea\_Detail.mxd, 08/25/10, johnsonaa

**APPENDIX A**

**FIELD DATA SHEETS**



## BIRD AREA SEARCH DATASHEET

CAMPO WIND ENERGY PROJECT

Survey #

1

STATION

BASC

DATE: 4/23/10 OBSERVER: JMC START TIME: 0525 END TIME: 0555 GPS: SM14 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 0% 6% TEMP (°F) 34° 36°

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW NW n/a SPEED (MPH) Low: 0 10 High: 13 Ave: 09 10.8

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			SPTO			2			N		
2			HOWR			2			N		
3			CALT			1			N		
4			AMCR			1			N		
5			WEST			1			N		
6			CORA			1			N		
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #:

BIRD AREA SEARCH DATASHEET CAMPO WIND ENERGY PROJECT Survey # 1 STATION: BAS-3

DATE: 4/23/10 OBSERVER: JMC START TIME: 0621 END TIME: 0651 GPS: SM14 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) <sup>1,2</sup> GOOD FAIR POOR CLOUD COVER (%) 0% 0% TEMP (°F) 38.7 37.6WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW <sup>1,2</sup> NW n/a SPEED (MPH) Low: 0 0 High: 33 3.3 Ave: 08 0.9PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) <sup>1,2</sup> None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			SPTO								MULTIPLE INDIVIDUALS
2			CATH								
3			HOWR								MULTIPLE INDIVIDUALS
4			NOFL								
5			OATI								
6			ACWO								
7			WEST								
8			CORA								
9			LEGO								
10			AMCR							✓	
11			BHCO								
12			WIWA								
13			EUST								
14			WBNU								
15			CAOV							✓	
16			SOSP							✓	
17			BTYW								
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>†</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_



BIRD AREA SEARCH DATASHEET CAMPO WIND ENERGY PROJECT Survey # 1 STATION: BAS-4DATE: 4/23/10 OBSERVER: JMC START TIME: 0715 END TIME: 0745 GPS SM14 PAGE 1 OF 2WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) 1,2 GOOD FAIR POOR CLOUD COVER (%) 0% 0% TEMP (°F) 45.2 45.4WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW 1,2 W NW n/a SPEED (MPH) Low: 0 10 High: 1.5 4.0 Ave: 0 12.0PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) 1,2 None light rain rain light snow snow sleet hail other \_\_\_\_\_

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			BUOR	M	AD	2					
2			BUOR	F	AD	2					
3			RWBL			40					
4			ACWO			5					
5			LEGO			12					
6			EOST			15					
7			MODD			5					
8			YWAR			7					
9			BHGR			3					
10			WAMI			6					
11			BHCO			4					
12			WJWA			8					
13			COYE			2					
14			CORA			1				✓	
15			HOWR			2					
16			NAWA			5					
17			SOSP			1					
18			SPTO			1					
19			LARB			8					
20			NUWO			1					

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptorsComments per observation #: DATA ON BACK

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>1</sup>	Breeding Status/Behavioral Notes
21			ATFL			1					
22			LAGO			5					
23											
24											
25											
26											
27											
28											
29											
30											
31											
32											
33											
34											
35											
36											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Activity Codes		Habitats		Sensitive Species Codes			
PE	Perched	CCH	Chamise Chaparral	BE	Bald eagle	CO	Cooper's hawk
SO	Soaring	RSC	Red Shank Chaparral	BL	Bank swallow	FH	Feruginous hawk
FL	Flapping	BSS	Big Sagebrush Scrub	BS	Belding's Savannah sparrow	GS	Grasshopper sparrow
CS	Circle	SSS	Upper Sonoran Subshrub Scrub	SG	Bell's sage sparrow	GV	Gray vireo
HU	Hunting/ Foraging	SOCH	Scrub Oak Chaparral	CB	Brown headed cowbird	GE	Golden eagle
OT	Other	CLOW	Coast Live Oak Woodland	BW	Burrowing owl	LG	Lawrence's goldfinch
		SWS	Southern Willow Scrub	CC	California condor	BV	Least Bell's vireo
		NNG	Nonnative Grassland	LA	California horned lark	LH	Loggerhead shrike
				RP	California rufous-crowned sparrow	LO	Long-eared owl
				CW	Coastal cactus wren	ME	Merlin
				CG	Coastal California gnatcatcher	NH	Northern harrier
						PF	Peregrine falcon
						FA	Prairie falcon
						PU	Purple martin
						SA	Sharp-shinned hawk
						SW	Short-eared owl
						WF	Southwestern willow flycatcher
						SU	Summer tanager
						SH	Swainson's hawk
						TB	Tricolored blackbird
						VF	Vermilion flycatcher
						WK	White-tailed kite
						YB	Western yellow-billed cuckoo
						YW	Yellow warbler
						YC	Yellow-breasted chat

Comments per observation #: \_\_\_\_\_

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey #

1

STATION: BAS-2

DATE: 4/23/10 OBSERVER: JMC, START TIME: 0850 END TIME: 0920 GPS: SM14 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) <sup>1,2</sup> GOOD FAIR POOR CLOUD COVER (%) 0% / 0% TEMP (°F) 64.2 / 64.2WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W <sup>1,2</sup> NW n/a SPEED (MPH) Low: 0 / 10.2 High: 12.2 / 22 Ave: 0.8 / 1.0PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) <sup>1,2</sup> None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			LEGO			12				✓	
2			CORA			1				✓	
3			HOWR			5				✓	
4			HOWI			2				✓	
5			OATI			6				✓	
6			WIWA			3					
7			SPTO			2				✓	
8			WBNV			1					
9			MODD			1					
10			NUWD			1					
11			VRWA			4					'Audubon's'
12			ACWO			3					
13			SOSP			5					
14			BTYU			1					
15			TOWA			4					
16			WAVI			1					
17			HUVI			1					
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey #

2

STATION

3

DATE: 5/7/10

OBSERVER: JMC

START TIME: 0822

END TIME: 0852

GPS Sm/4

PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END)

GOOD

FAIR POOR

CLOUD COVER (%)

0 / 0

TEMP (°F)

68.3 / 73.8

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END)

N

NE E SE S SW W NW n/a

SPEED (MPH) Low:

1.1 / 1.0

High:

67.53 Ave: 2.5 / 2.2

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END)

None

light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			HWR						N		
2			OAT						N		
3			YWAR						N		
4			ACW						N		
5			WEST						N		
6			SPT						N		
7			BH						N		
8			YWAR						N		
9			SOSP						N		
10			LEGO						N		
11			BHGR						N		
12			WJWA						N		
13			COYE						N		
14			NWWD						N		
15			NOFL						N		
16	0836	JMWIFLO1	WIFL	U	AD	1	PE, HU	RIP	N		NONE
17			LAZB						N		
18			DEJU						N		
19			YWAR						N		
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: #16 - WIFL WAS SEEN BRIEFLY PERCHED + FLYCAPTURING IN UNDERSTORY OF WILLOW. I LOOKED DOWN FOR A SECOND + FROM THEN COULD NOT RELOCATE THE WIFL -

BIRD AREA SEARCH DATASHEET CAMPO WIND ENERGY PROJECT Survey # 2 STATION: 2

DATE: 5/7/10 OBSERVER: JML START TIME: 0917 END TIME: 0937 GPS: SM14 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) 1,2 GOOD FAIR POOR CLOUD COVER (%) 0 1 0 TEMP (°F) 72.1 72.6

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) 1,2 N NE E SE S SW W NW n/a SPEED (MPH) Low: 1.1 1.3 High: 9.1 8.4 Ave: 2.6 2.7

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) 1,2 None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity <sup>1,2,3</sup>	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			<u>HOFI</u>				PE SO FL CS HU OT		<u>N</u>		
2			<u>WAVI</u>				PE SO FL CS HU OT				
3			<u>HOWR</u>				PE SO FL CS HU OT				
4			<u>OCWA</u>				PE SO FL CS HU OT				
5			<u>GTGR</u>				PE SO FL CS HU OT				
6			<u>LEGO</u>				PE SO FL CS HU OT				
7			<u>MODO</u>				PE SO FL CS HU OT				
8			<u>SOSP</u>				PE SO FL CS HU OT				
9			<u>OATI</u>				PE SO FL CS HU OT				
10			<u>BUSH</u>				PE SO FL CS HU OT				
11			<u>WRNU</u>				PE SO FL CS HU OT				
12	<u>0936</u>	<u>JMRSHAO1</u>	<u>RSHA</u>	<u>U</u>	<u>U</u>	<u>1</u>	PE SO FL CS HU OT		<u>N</u> <u>Y</u>		<u>✓ Ask Pete Bloom</u>
13							PE SO FL CS HU OT				
14							PE SO FL CS HU OT				
15							PE SO FL CS HU OT				
16							PE SO FL CS HU OT				
17							PE SO FL CS HU OT				
18							PE SO FL CS HU OT				
19							PE SO FL CS HU OT				
20							PE SO FL CS HU OT				

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

Comments per observation #: \_\_\_\_\_



BIRD AREA SEARCH DATASHEET CAMPO WIND ENERGY PROJECT Survey # 2 STATION: 4  
 DATE: 5/7/10 OBSERVER: JMC START TIME: 0952 END TIME: 1022 GPS SM14 PAGE 1 OF 1  
 WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) 1/2 GOOD FAIR POOR CLOUD COVER (%) 01 0 TEMP (°F) 73.2 72.6  
 WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) 1/2 N NE E SE S SW W NW n/a SPEED (MPH) Low: 1.3 15.4 High: 8.4 9.6 Ave: 2.3 6.6  
 PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) 1/2 None light rain rain light snow snow sleet hail other \_\_\_\_\_

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity <sup>1,2,3</sup>	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			RWBL				PE SO FL CS HU OT		N		
2			HOWR				PE SO FL CS HU OT				
3			WEKI				PE SO FL CS HU OT				
4			MODO				PE SO FL CS HU OT				
5			BUOW				PE SO FL CS HU OT				
6			CLSW				PE SO FL CS HU OT				
7			YWAR				PE SO FL CS HU OT				
8			NOFL				PE SO FL CS HU OT				
9			CART				PE SO FL CS HU OT				
10			SPTO				PE SO FL CS HU OT				
11			BHOR				PE SO FL CS HU OT				
12			BIPH				PE SO FL CS HU OT				
13			COYE				PE SO FL CS HU OT			✓	
14			EUST				PE SO FL CS HU OT				
15			REGO				PE SO FL CS HU OT				
16			ATFL				PE SO FL CS HU OT			✓	
17			WEST				PE SO FL CS HU OT		N	✓	
18							PE SO FL CS HU OT				
19							PE SO FL CS HU OT				
20							PE SO FL CS HU OT				

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

Comments per observation #: \_\_\_\_\_

BIRD AREA SEARCH DATASHEET CAMPO WIND ENERGY PROJECT Survey # 2 STATION: 1  
 DATE: 5/7/10 OBSERVER: JMC START TIME: 1030 END TIME: 1100 GPS SM14 PAGE 1 OF 1  
 WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) <sup>1,2</sup> GOOD FAIR POOR CLOUD COVER (%) 0 1 0 TEMP (°F) 75.5 75.8  
 WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) <sup>1,2</sup> N ~~N~~ E SE S SW W NW n/a SPEED (MPH) Low: 0.7/1.6 High: 4.1/6.9 Ave: 1.3/2.2  
 PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) <sup>1,2</sup> None light rain rain light snow snow sleet hail other \_\_\_\_\_

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			LEGO						N		
2			OSTI								
3			WAVI							✓	
4			ANKU								
5			LAZB								
6			HOLR								
7			WIWA								
8			HOFI								
9			WEBL								
10			NOFL								
11			SPTO								
12			SOSP								
13			ATFL								
14			MODD						N		
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_

BIRD AREA SEARCH DATASHEET CAMPO WIND ENERGY PROJECT Survey # 3 STATION: 6  
 DATE: 5-17-10 OBSERVER: AKI START TIME: 0634 END TIME: 0704 GPS 4 PAGE 1 OF 2  
 WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 100 / 100 TEMP (°F) 58.7 / 50.9  
 WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW n/a SPEED (MPH) Low: 0 / 0 High: 1.2 / 1.8 Ave: 0 / 0.6  
 PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other Foggy / 1.2

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1	0634		BCSP	u	u	1	PE/calling	Oak/rip	nr	✓	
2			WSJA			1				✓	
3			CALT			1				✓	
4			ISNGR			1				✓	
5			HNHN			1				✓	
6			LEGO			1				✓	
7	0636		ORTS			2				✓	
8			MUWO			1				✓	
9			CALT			1				✓	
10			LEGO			2				✓	
11			NOFL			1				✓	
12			HOWR			1				✓	
13	0639		LAZU	m	A	2					
14	0644		SPTO	u	u	1				✓	
15	0645		LEGO	u	u	2					
16	0645		CONA	u	u	1					
17	0646		MUWO	u	u	1				✓	
18	0648		ORTS	u	u	1					
19	0652		HOWR	u	u	1					
20	L		BUSH	u	u	2				✓	

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>†</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_



Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
21	0655		SPTD	W	U	1	PE/CALIS	Kip.	NR	✓	
22	↓		BEWR	W	U	1				✓	
23	↓		WSPR	W	U	2				✓	
24	0658		BHGR	W	U	1				✓	
25	0659		LEGO	W	U	1					
26	↓		HOFI	W	U	2					
27	↓		ORTZ	W	U	3					
28	0703		ABFL	W	U	1					
29											
30											
31											
32											
33											
34											
35											
36											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Activity Codes		Habitats		Sensitive Species Codes					
PE	Perched	CCH	Chamise Chaparral	BE	Bald eagle	CO	Cooper's hawk	SA	Sharp-shinned hawk
SO	Soaring	RSC	Red Shank Chaparral	BL	Bank swallow	FH	Feruginous hawk	SW	Short-eared owl
FL	Flapping			BS	Belding's Savannah sparrow	GS	Grasshopper sparrow	WF	Southwestern willow flycatcher
CS	Circle	BSS	Big Sagebrush Scrub	SG	Bell's sage sparrow	GV	Gray vireo	SU	Summer tanager
HU	Hunting/ Soaring	SSS	Upper Sonoran Subshrub Scrub	CB	Brown headed cowbird	LG	Lawrence's goldfinch	SH	Swainson's hawk
OT	Other	SOCH	Scrub Oak Chaparral	BW	Burrowing owl	BV	Least Bell's vireo	TB	Tricolored blackbird
		CLOW	Coast Live Oak Woodland	CC	California condor	LH	Loggerhead shrike	VF	Vermilion flycatcher
				LA	California horned lark	LO	Long-eared owl	WK	White-tailed kite
		SWS	Southern Willow Scrub	RP	California rufous-crowned sparrow	ME	Merlin	YB	Western yellow-billed cuckoo
		NNG	Nonnative Grassland	CW	Coastal cactus wren	NH	Northern harrier	YW	Yellow warbler
				CG	Coastal California gnatcatcher	PF	Peregrine falcon	YC	Yellow-breasted chat
						FA	Prairie falcon		
						PU	Purple martin		

Comments per observation #: \_\_\_\_\_

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey #

3

STATION:

4

DATE: 5-7-10

OBSERVER: AFI

START TIME: 0731

END TIME: 0801

GPS 4

PAGE 1 OF 2

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 100 / 100 TEMP (°F) 55.6 / 55.5WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW n/a SPEED (MPH) Low: 0 / 0 High: 1.2 / 1.6 Ave: 0 / 1.8PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other Foggy / Drizzle

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1	0731		NWWD	U	W	1	PE/SINGING	SWR Temp	NR	✓	
2			CACPA		W	1				✓	
3			SOSP	L	W	1				✓	
4		AFJW01	YEWL	M	A	1					
5			RWBB	M	A	3					
6			ACWD	U	W	3					
7			AMCO			1					
8			COYE			2					
9			CLSW			1					
10	0740		RWBB	F	U	3					
11			WINDA	U	W	1					
12			BHGR	M	A	1					
13			SPTD	U	W	1					
14			MSPD			1				✓	
15			LAZB			1				✓	
16			ATFL			2				✓	
17		AFJW02	YEWL	M	A	1					
18	7:42		BHGR	U	SA	1					
19			ACWD	U	A	3					
20			WSDA	U	A	1					

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #:

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
21	0743	AFCB01	BHCB	M	A	1	PE/Calling	Rip/SWR			
22	0744		DATE	U	U	1				✓	
23	0745		BHGR			2				✓	
24			LEGO			3					
25			SOSP			4					
26			NNWO			1				✓	
27	0749	AFYWD3	YENR	M	A	1					
28	0750		WSTA	U	U	3					
29			SPTD	U	U	2					
30	0759	RTNA01	RTNA	U	A	1	Flying		R		Near Neop Loc. on map.
31											
32											
33											
34											
35											
36											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Activity Codes		Habitats		Sensitive Species Codes					
PE	Perched	CCH	Chamise Chaparral	BE	Bald eagle	CO	Cooper's hawk	SA	Sharp-shinned hawk
SO	Soaring	RSC	Red Shank Chaparral	BL	Bank swallow	FH	Feruginous hawk	SW	Short-eared owl
FL	Flapping			BS	Belding's Savannah sparrow	GS	Grasshopper sparrow	WF	Southwestern willow flycatcher
CS	Circle Soaring	BSS	Big Sagebrush Scrub	GV	Gray vireo	GE	Golden eagle	SU	Summer tanager
HU	Hunting/ Foraging	SSS	Upper Sonoran Subshrub Scrub	SG	Bell's sage sparrow	LG	Lawrence's goldfinch	SH	Swainson's hawk
				CB	Brown headed cowbird	BV	Least Bell's vireo	TB	Tricolored blackbird
OT	Other	SOCH	Scrub Oak Chaparral	BW	Burrowing owl	LH	Loggerhead shrike	VF	Vermilion flycatcher
		CLOW	Coast Live Oak Woodland	CC	California condor	LO	Long-eared owl	WK	White-tailed kite
		SWS	Southern Willow Scrub	LA	California horned lark	ME	Merlin	YB	Western yellow-billed cuckoo
				RP	California rufous-crowned sparrow	NH	Northern harrier	YW	Yellow warbler
				CW	Coastal cactus wren	PF	Peregrine falcon	YC	Yellow-breasted chat
		NNG	Nonnative Grassland	CG	Coastal California gnatcatcher	FA	Prairie falcon		
						PU	Purple martin		

Comments per observation #: \_\_\_\_\_

BIRD AREA SEARCH DATASHEET CAMPO WIND ENERGY PROJECT Survey # 3 STATION: 2  
 DATE: 5-17-10 OBSERVER: AFI START TIME: 0845 END TIME: 0915 GPS 4 PAGE 1 OF 2  
 WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 100/100 TEMP (°F) 61.8/59.1  
 WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW NE SPEED (MPH) Low: 0/1 High: 1.9/9.3 Ave: 0.7/3.7  
 PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other Overcast

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1	0845		Howr	u	n	2	PE/SI	SWS	NR	✓	
2	0845		ORTI	u	n	2					
3	0848		SPTD	u	n	3					
4	0849		Howr	u	n	5					
5			LELO	u	n	2					
6			MUHO	u	n	2					
7	0851		SPTD			3					
8	0853		BUSH			2					
9			HSTA			2					
10			WBNU			2					
11			BHGR			2				✓	
12	0858		COLT			1					
13	0900		Howr			1					
14	0900	<del>AFJ001</del>	<del>HEAR</del>	<del>AD</del>	<del>AD</del>	1				✓	
15			BLPH	u	n	1	FL				
16			ATPL	u	A	2	SI				
17	0908		GHOW	u	A	1	HN		R		on map
18			LAER	M	A	1	SI	Orch	NR		
19			ORTI	u	n	2		Orch		✓	
20			Howr	u	n	5		Orch			

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: Overall very quiet w/ low bird activity

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
21	0914		LEGO	W	W	5	PE	SWS	NR		
22			RETHA	W	A	1	FL		R		CHN WAP
23			WESTR	W	W	2	PE		NR		
24			HOFI	W	W	5	PE		NR		
25			LBMR	W	A	1	FL		NR		
26											
27											
28											
29											
30											
31											
32											
33											
34											
35											
36											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Activity Codes		Habitats		Sensitive Species Codes					
PE	Perched	CCH	Chamise Chaparral	BE	Bald eagle	CO	Cooper's hawk	SA	Sharp-shinned hawk
SO	Soaring	RSC	Red Shank Chaparral	BL	Bank swallow	FH	Feruginous hawk	SW	Short-eared owl
FL	Flapping			BS	Belding's Savannah sparrow	GS	Grasshopper sparrow	WF	Southwestern willow flycatcher
CS	Circle Soaring	BSS	Big Sagebrush Scrub	SG	Bell's sage sparrow	GV	Gray vireo	SU	Summer tanager
HU	Hunting/ Foraging	SSS	Upper Sonoran Subshrub Scrub	CB	Brown headed cowbird	LG	Lawrence's goldfinch	SH	Swainson's hawk
OT	Other	SOCH	Scrub Oak Chaparral	BW	Burrowing owl	BV	Least Bell's vireo	TB	Tricolored blackbird
		CLOW	Coast Live Oak Woodland	CC	California condor	LH	Loggerhead shrike	VF	Vermilion flycatcher
				LA	California horned lark	LO	Long-eared owl	WK	White-tailed kite
				RP	California rufous-crowned sparrow	ME	Merlin	YB	Western yellow-billed cuckoo
		SWS	Southern Willow Scrub	NH	Northern harrier	PF	Peregrine falcon	YW	Yellow warbler
		NNG	Nonnative Grassland	CW	Coastal cactus wren	FA	Prairie falcon	YC	Yellow-breasted chat
				CG	Coastal California gnatcatcher	PU	Purple martin		

Comments per observation #: \_\_\_\_\_



## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey # 3 STATION: 3DATE: 5-17-10 OBSERVER: AFI START TIME: 0946 END TIME: 1016 GPS 4 PAGE 1 OF 2WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD<sub>1,2</sub> FAIR POOR CLOUD COVER (%) 100/100 TEMP (°F) 60.2/67.0WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW<sub>1,2</sub> n/a SPEED (MPH) Low: 0 High: 3.3/2.5 Ave: 1.2/1.3PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None<sub>1,2</sub> light rain rain light snow snow sleet hail other overcast & cold

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1	0940		BUSH	u	u	1	PE/SI	Orch	NR	✓	
2			HOE	u	u	2				✓	
3			SPTO	u	u	3				✓	
4			ATFL	u	u	1				✓	
5			LEGO	u	u	2					
6	0953		HOWR	u	u	2		SWS		✓	
7	0959		ORTI	u	u	2				✓	
8	1002		CORA	u	u	1					
9	1004		LAER	u	u	3				✓	
10	1005		HOWR	u	u	2				✓	
11	1006		CORA	u	u	1				✓	
12	1009		WRVE	u	u	1					
13	1010		LEGO	u	u	2					
14	1010		ANTR	u	u	2					
15	1012		ATFL	u	A	1					
16	1015		ACHA	u	u	1				✓	
17	1015		NOFL	u	u	1				✓	
18			SPTO	u	A	2					
19			BUSH	u	u	4					
20			SOSP	u	u	1					

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #:

Very few birds - low activity

Page 2 of 2 Date: 5-17-10 Observer: AFI Survey #: 3 Station #: 3

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A*	Breeding Status/Behavioral Notes
21	1015		WETA	n	A	1	PE	SWS	nre	✓	
22	L		SOSP	n	A	1	PE/SO	L	+	✓	
23											
24											
25											
26											
27											
28											
29											
30											
31											
32											
33											
34											
35											
36											

\* check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

\* Special Status species and all raptors

#### Activity Codes

PE Perched  
SO Soaring  
FL Flapping  
CS Circle  
HU Hunting/  
OT Other

#### Habitats

CCH Chamise Chaparral  
RSC Red Shank  
Chaparral  
BSS Big Sagebrush  
Scrub  
SSS Upper Sonoran  
Subshrub Scrub  
SOCH Scrub Oak Chaparral  
CLOW Coast Live Oak  
Woodland  
SWS Southern Willow  
Scrub  
NNG Nonnative Grassland

#### Sensitive Species Codes

BE Bald eagle	CO Cooper's hawk	SA Sharp-shinned hawk
BL Bank swallow	FH Ferruginous hawk	SW Short-eared owl
BS Belding's Savannah sparrow	GS Grasshopper sparrow	WF Southwestern willow flycatcher
SG Bell's sage sparrow	GV Gray vireo	SU Summer tanager
CB Brown headed cowbird	GE Golden eagle	SH Swainson's hawk
BW Burrowing owl	LG Lawrence's goldfinch	TB Tricolored blackbird
CC California condor	BV Least Bell's vireo	VF Vermilion flycatcher
LA California horned lark	LH Loggerhead shrike	WK White-tailed kite
RP California rufous-crowned sparrow	LO Long-eared owl	YB Western yellow-billed cuckoo
CW Coastal cactus wren	ME Merlin	YW Yellow warbler
CG Coastal California gnatcatcher	NH Northern harrier	YC Yellow-breasted chat
	PF Peregrine falcon	
	FA Prairie falcon	
	PU Purple martin	

Comments per observation #: \_\_\_\_\_

LBV & SWFL Surveys

LBV #4  
SWFL #1

BIRD AREA SEARCH DATASHEET CAMPO WIND ENERGY PROJECT Survey # STATION:

DATE: 5-27-10 OBSERVER: ERI/AFI START TIME: 0520 END TIME: 11:00 GPS 4 PAGE 1 OF 2

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 30% 5% TEMP (°F) 44.6/62

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW n/a SPEED (MPH) Low: 0/4 High: 1/12.2 Ave: 0/6.6

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			BUSH								
2			YENM	A	2						Already GPS'd.
3			RWBB								
4			SPTD								
5			HOWR								
6			SOSP								
7			MODD								
8			BHGR								
9			AMCO								
10			WRNU								
11			NOFL								
12			RTPL								
13			HOFT								
14			CALR								
15			LEGO								
16			WEKI								
17			CALT								
18			ANKH								
19			CONA								
20			LISP								

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_



Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
21			BLPH								
22			BKOR								
23		AFYWO1	YENH	M	A	1					
24			WNPE	U	A	10					
25		APCBO1	BKCB	M	A	1					
26			WIWA	F	A	1					
27			GATI								
28			ACWO								
29			WJTB								
30		AFYWO2	YENH	M	A	1					
31			WEBB	M/F	A	2					
32			LAGF	M/F	A/SA	12					Small pulses/families groups pushing through sh.
33			LREB								
34		AEYWO4	YENH	M	A	1					
35			SWTH			1					
36			PSFL								

<sup>a</sup> check if Auditory only

BCSP

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

NO LBV / SWFL

#### Activity Codes

PE Perched  
SO Soaring  
FL Flapping  
CS Circle  
HU Hunting/  
Foraging  
OT Other

#### Habitats

CCH Chamise Chaparral  
RSC Red Shank  
Chaparral  
BSS Big Sagebrush  
Scrub  
SSS Upper Sonoran  
Subshrub Scrub  
SOCH Scrub Oak Chaparral  
CLOW Coast Live Oak  
Woodland  
SWS Southern Willow  
Scrub  
NNG Nonnative Grassland

#### Sensitive Species Codes

BE Bald eagle	CO Cooper's hawk	SA Sharp-shinned hawk
BL Bank swallow	FH Ferruginous hawk	SW Short-eared owl
BS Belding's Savannah sparrow	GS Grasshopper sparrow	WF Southwestern willow flycatcher
SG Bell's sage sparrow	GV Gray vireo	SU Summer tanager
CB Brown headed cowbird	GE Golden eagle	SH Swainson's hawk
BW Burrowing owl	LG Lawrence's goldfinch	TB Tricolored blackbird
CC California condor	BV Least Bell's vireo	VF Vermilion flycatcher
LA California horned lark	LH Loggerhead shrike	WK White-tailed kite
RP California rufous-crowned sparrow	LO Long-eared owl	YB Western yellow-billed cuckoo
CW Coastal cactus wren	ME Merlin	YW Yellow warbler
CG Coastal California gnatcatcher	NH Northern harrier	YC Yellow-breasted chat
	PF Peregrine falcon	
	FA Prairie falcon	
	PU Purple martin	

Comments per observation #: \_\_\_\_\_

LBI Survey #5 / WIFL #2

BIRD AREA SEARCH DATASHEET CAMPO WIND ENERGY PROJECT Survey # STATION: 3

DATE: 6/10/10 OBSERVER: ERL JMC START TIME: 0704 END TIME: 0855 GPSS 5414 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 0% 10% TEMP (°F) 58.4, 67.3

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW n/a SPEED (MPH) Low: 1.9, 1.0 High: 9.6, 4.8 Ave: 2.7, 2.5

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			LEGO								
2			ATFL								
3			SPTD								
4			RISP								
5			HOWR								
6			NUWO								
7			YWAR								
8			SOSP								
9			OATI								
10			LAGO								
11			NOFL								
12			CORA								
13		JMCB03	BHCO(B)	U	U	2	FL	SWS	N		
14			BuOR								
15	0843	JMCB03	BHCO(B)	U	U	1	FL	SWS	N	✓	
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_

## CAMPO WIND ENERGY PROJECT

LBI Survey #5 | WIFL #2

Survey #

STATION:

DATE: 6/10/10 OBSERVER: ERI, JMC START TIME: 1042 END TIME: 1102 GPS: SM14 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) <sup>1, 2</sup> GOOD FAIR POOR CLOUD COVER (%) 0% / 0% TEMP (°F) 72.3 74.8

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW n/a SPEED (MPH) Low: 5.7 High: 16.4 Ave: 7.8

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

[illegible]

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #:

WIFL/LBV

LBV Survey #5 | WIFL #2

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey #

STATION: 4

DATE: 6/16/10 OBSERVER: CRJ, JMC START TIME: 0504 END TIME: 0645 GPS: M14 PAGE 1 OF 2

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) <sup>2</sup>GOOD <sup>1</sup>FAIR <sup>2</sup>POOR CLOUD COVER (%) <sup>2</sup>0% <sup>1</sup>10% TEMP (°F) 56.8/63.1WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S <sup>2</sup>SW W <sup>1</sup>NE n/a SPEED (MPH) Low: 0.2/0 High: 3.9/3.7 Ave: 1.0/1.6PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) <sup>1</sup>None <sup>2</sup>light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			BHOR								
2			YWAR			III					
3			WEWP								
4			RWBL								
5			ACWO								
6			SOSP								
7			COYE								
8			MODO								
9			BUOW								
10			BUSH								
11			WEBL								
12			BEWR								
13			ATFL								
14			NUWO								
15			HOWR								
16			SPTO								
17			RTHA							✓	
18			CORA								
19			LEGO								
20			CLSW								

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_



LBN Survey #5 / WFL #2  
94

BIRD AREA SEARCH DATASHEET CAMPO WIND ENERGY PROJECT Survey # STATION:

DATE: 6/10/10 OBSERVER: ERI, JMC START TIME: 1016 END TIME: 1029 GPS: SM14 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) ~~GOOD~~ FAIR POOR CLOUD COVER (%) 0% / 0% TEMP (°F) 70.9 / 70.9

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW ~~W~~ NW n/a SPEED (MPH) Low: 1.9 / 1.9 High: 5.9 / 5.9 Ave: 3.5 / 3.5

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			ALWD								
2			YWAR								
3			SSP								
4			CORA								
5			BEWR								
6			LAGO								
7			HOWR								
8			BCSP								
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only  
\* Age: (A) Adult, (SA) Subadult, (F) Fledgling  
<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

LBI Survey #5 | WIFL #2

BIRD AREA SEARCH DATASHEET CAMPO WIND ENERGY PROJECT Survey # 1 STATION: 2

DATE: 6/10/10 OBSERVER: ERI, JMC START TIME: 0922 END TIME: 1004 GPS: SM14 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 0% 0% TEMP (°F) 78.9 78.4

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW n/a SPEED (MPH) Low: 1.5 2.6 High: 7.9 8.0 Ave: 2.4 3.1

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			WENU								
2			OPTI								
3			INEST								
4			SOSP								
5			MODO								
6			YWAR								
7			LEGO								
8			BCSP								
9			SPTO								
10			CLSW								
11			NOFL								
12			CORA								
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only  
 \* Age: (A) Adult, (SA) Subadult, (F) Fledgling  
<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

LBV/SWFL

LBV #3/SWFL #3

BIRD AREA SEARCH DATASHEET

CAMPO WIND ENERGY PROJECT

Survey #

STATION: 6

DATE: 6/21/10 OBSERVER: Elna START TIME: 1035 END TIME: GPS PAGE OF

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 0/0 TEMP (°F) 78/80

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW n/a SPEED (MPH) Low: 2/2 High: 5/5 Ave: 3.244.6

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			HOWF								
2			OATI								
3		LAGO	<del>HOWF</del>	M+FA	5	Perched	WRF	-	-		Perched & Calling
4			ATFL								
5			WSJA								
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: LAGO Added to map By hand

LBV/SWFL

LBV#6/SWFL#3

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey #

STATION: 4A

DATE: 6/21/10 OBSERVER: Erik Lauste START TIME: 700 END TIME: 715 GPS - PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 0/0 TEMP (°F) 51/51

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N <sup>1/2</sup> NE E SE S SW W NW n/a SPEED (MPH) Low: 0/0 High: 2/2 Ave: 1/1

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			SO P								
2			AMCR								
3			HOWR								
4			ATFL								
5			INRO								
6			ROWR								
7			BHGR								
8			ANTH								
9			LEGY								
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_



LBV/SWFL

LBV #8/SWFL #3

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey #

STATION: 4

DATE: 6/21/10 OBSERVER: ELA START TIME: 830 END TIME: 1020 GPS - PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 010 TEMP (°F) 69, 75

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW n/a SPEED (MPH) Low: 214 High: 416 Ave: 244.9

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			WWPE								
2			HOWR								
3			WSJA								
4			LEGO								
5			RTHA								
6			SOSP								
7	040	- 1	YEWA	?	?	1	Perch	WRF	-		
8			ATFL								
9			RWBAL								
10			NRWS								
11			ANHU								
12			BLPA								
13			NUWO								
14			ACWO								
15			SPTO								
16			AMCO								
17			COYE								
18			BHGR								
19			WEKI								
20	1000	- 2	YEWA	?	?	1	Perch	WRF	-		

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: NO GPS - YEWA put on map by hand

LBV/SWFL

LBV#8/SWFL#3

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey #

STATION: 3

DATE: 6/21/10 OBSERVER: ELA START TIME: 515 END TIME: 645 GPS: PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 0/1 TEMP (°F) 48/46

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW SPEED (MPH) Low: 0/1 High: 2/2 Ave: 1/1

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1		SPTO									
2		LE60									
3		AMCR									
4		ATFL									
5		WSJA									
6		<del>WUWO</del> HOWR									
7		OATI									
8		COHA									
9		ACWO									
10		BCSP									
11		SOSP									
12		WUWO									
13		MOQU									
14		CORA									
15		ANHU									
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_

LBV/SWFL

LBV#5/SWFL#3

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey #

STATION: 2DATE: 6/21/10 OBSERVER: Erik Lagarde START TIME: 730 END TIME: 800 GPS — PAGE 1 OF 1WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 01 0 TEMP (°F) 58 64WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW n/a SPEED (MPH) Low: 0 2 High: 0 4 Ave: 0 3.2PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) (None) light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			ATFL								
2			OATI								
3			SOSP								
4	0740		YEWA	?	?	1	PE	WRS	—	—	Percher, Singing
5			MODO								
6			WSCJ								
7			CORA								
8			Lego								
9			CATH								
10			STJA								
11			WEBL								
12			<del>ATFL</del>								
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptorsComments per observation #: DOGS!

LB1#7 WIFL#4

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey #

STATION: BAS 6

DATE: 6 July 2010 OBSERVER: Dany Willard / Jimmy McManis START TIME: 0517 END TIME: 0532 GPSSM14 PAGE 1 of 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 21 TEMP (°F) 48 48WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW n/a SPEED (MPH) Low: 0.80 High: 3.2 Ave: 1.1PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			ATPL								
2			SPTD								
3			SOSP								
4			CORA								
5			WESS								
6			BLOR								
7			HCF1								
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #:



LBV#7 WIFL#4

## BIRD AREA SEARCH DATASHEET CAMPO WIND ENERGY PROJECT

Survey # 1 STATION: 4DATE: 7/6/10 OBSERVER: Dave J. Wells START TIME: 0543 END TIME: 0720 GPS SM14 PAGE 1 OF 1WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 2 / 1 TEMP (°F) 43 / 53WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W W / W SPEED (MPH) Low: 0 / 0 High: 12 / 1.9 Ave: 8 / 1PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			MOJO								
2			WOWP	♂		1					
3			BHGR	♂	ad	3					
4			YBOA	♂							
5			WRNH								
6			BRBL								
7			CRAB								
8			CRAB								
9			AMCR								
10			ATRL								
11			WEST								
12			NWOD								
13			SPTO								
14			WREN								
15			LABY								
16			LEGO								
17			LACD								
18		JMCB7-701	BUSH								
19			BHCO								
20			WEST								
21			WEEK								
22		JMCOA-0701	COHA		ad. 1		Flying over	Rapier			
23			LABY								
24			CHTO								
25			HOWR								
26			COYE								
27			SOSP								
28			HUVI		2						
29			BEWR								
30		JMCB7-702	WBOD			1					
31			BATI		3						
32			REHA								
33			ACTO								
34			BLPH								

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

MALL:

MOJO:

② = Singing

Comments per observation #: \_\_\_\_\_

LBV#7 WIFL#4

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey # 1 STATION: A3DATE: 7/6/10 OBSERVER: Doug W. [unclear] START TIME: 0730 END TIME: 0837 GPS SM14 PAGE 1 OF 1WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 10 / 10 TEMP (°F) 64 / 80WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW <sup>2</sup>/<sub>1</sub> na SPEED (MPH) Low: 0 / 0.9 High: 14 / 3.7 Ave 06 / 1.3PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other \_\_\_\_\_

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			NWLO NWV1:								
2			LEGO ATP								
3			SPTO								
4		JWCH7-702	COHA								
5			WBNH OAT								
6			HZOR ATNA								
7			SPTO SPTO juv.								
8			DECR (S)								
9			COHA WSTJ								
10			NWLO BAGR								
11			LAGO								
12			ATTH CAGY								
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_

LBN #7 WIFL #4

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey # 1STATION: #2DATE: 7/6/10 OBSERVER: Jimmy McHerron  
Dorey Cillek START TIME: 0900 END TIME: 0942 GPS SMR PAGE 1 OF 1WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) 1 GOOD FAIR POOR CLOUD COVER (%) 0 / 0 TEMP (°F) 75 / 75WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) 1 N NE E SE S SW W NW n/a SPEED (MPH) Low: 0.7 / 1 High: 5.5 Ave: 2.7 / 2.0PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) 1 None light rain rain light snow snow sleet hail other \_\_\_\_\_

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			WOWP								
2			LAGO								
3			WEST								
4			HEAR								
5			SESP								
6			BHGR								
7			LAGO								
8			NUHO								
9			NUHO								
10			NUHO								
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

LAVAYOR Dancer?

SARA in vic.

Comments per observation #: \_\_\_\_\_

LBV#7 WIFL#4

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey #

STATION: #49

DATE: 7/6/10 OBSERVER: Jimmy McHenry / Doug Giddick START TIME: 0953 END TIME: 1003 GPS: SM14 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 18 TEMP (°F) 76, 76

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW 173 SPEED (MPH) Low: 010 High: 2620 Ave: 11.3

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			OATI								
2			YEDA:								
3			SPID 365A								
4			BUSH HOUR								
5			ABOR ③ ATFL								
6			N4600								
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_



SWFL/LBV

BIRD AREA SEARCH DATASHEET

CAMPO WIND ENERGY PROJECT

SWFL/LBV  
Survey # 5/8 STATION: 2

DATE: 7/16/10 OBSERVER: BMJ, ER START TIME: 0941 END TIME: 1003 GPS 8 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) 1,2 GOOD FAIR POOR CLOUD COVER (%) 0 10 TEMP (°F) 86.6 190.0

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW 1,2 W NW n/a SPEED (MPH) Low: 0.0/1.3 High: 2.6/3.1 Ave: 1.6/1.9

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) 1,2 None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1	0941		CORA						N	✓	
2			HOFI						/	X	
3			ATFL								
4			WEST								
5		BNLLG10	LAGO								
6			ORTI								
7			BNKR		FL					X	Conf. breeding
8			BGGN							X	
9			BUSH						✓		
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_

SOFL/LBU

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

SOFL/LBU  
Survey # 5/8STATION: 3DATE: 7/16/10 OBSERVER: ZMU START TIME: 0759 END TIME: 0930 GPS: 5 PAGE 1 OF 1WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 0/10 TEMP (°F) 80.2/86.7WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW WNW n/a SPEED (MPH) Low: 0/10 High: 0/15 Ave: 0/11.0PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1	0759		NAND						N		strange location ID by voice + bill size + plumage
2			ACWD						N	X	
3			RTHA	U	1/FL	3			R		
4			DATI						N		
5			LEGO								
6			CORA							X	
7			SPTO							X	
8		BML609	LALGO								
9			PRAI								
10			LAZB								
11			ATFL								
12			HOWR								
13			NUWO						Y	X	
14		BMC006	COLA	U	FL				R		
15			BNGR						N	X	
16			WESS								
17			HUYI								
18			CALT								
19			WBNU								
20			SOSP		FL						

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_

SWFL / LBU  
 BIRD AREA SEARCH DATASHEET CAMPO WIND ENERGY PROJECT Survey # 5/8 STATION: 4  
 DATE: 7/16/10 OBSERVER: BMS, ER START TIME: 0549 END TIME: 0745 GPS 8 PAGE 1 OF 2  
 WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 0 / 0 TEMP (°F) 68.4 / 78  
 WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW n/a SPEED (MPH) Low: 0 / 0 High: 0 / 0 Ave: 0 / 0  
 PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1	0549	RSHA	BUSHTON		A/FL	2+			R	Y	≥ 1 FL
2		RSHA			A				R		
3		WELP							N	X	
4		PLWR								Y	
5		ATFL								Y	
6		NUWO								Y	
7		WEST								Y	
8		BRBL								Y	
9		NDFL								Y	
10		MWBO								Y	
11		RWBL								X	
12		COYE								X	
13		LEBO								X	
14		MALL									
15		BHGR									
16		PHAI									
17		WBNU									
18		CALT								X	
19		HOWR									
20		BLGR							Y	X	

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A*	Breeding Status/Behavioral Notes
21			BEUR						N	X	
22			ACWD								
23			SPTD								
24	0643	BALB01	BHCO	M							flyby
25			HUVI								
26			ANHU							X	
27			WREN							X	
28			ELSW								
29		BML608	LAGO							X	
30			COHU							X	
31			QATI							X	
32			CORA								
33			CAJU							X	
34			CATW							X	
35			BLPH								
36			ERRD							X	

\* check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

\* Special Status species and all raptors

WEKI

↓

#### Activity Codes

PE Perched  
SO Soaring  
FL Flapping  
CS Circle  
HU Hunting/  
OT Other

#### Habitats

CCH Chamise Chaparral  
RSC Red Shank  
Chaparral  
BSS Big Sagebrush  
Scrub  
SSS Upper Sonoran  
Subshrub Scrub  
SOCH Scrub Oak Chaparral  
CLOW Coast Live Oak  
Woodland  
SWS Southern Willow  
Scrub  
NNG Nonnative Grassland

#### Sensitive Species Codes

BE Bald eagle	CO Cooper's hawk	SA Sharp-shinned hawk
BL Bank swallow	FH Ferruginous hawk	SW Short-eared owl
BS Belding's Savannah sparrow	GS Grasshopper sparrow	WF Southwestern willow flycatcher
SG Bell's sage sparrow	GV Gray vireo	SU Summer tanager
CB Brown headed cowbird	GE Golden eagle	SH Swainson's hawk
BW Burrowing owl	LG Lawrence's goldfinch	TB Tricolored blackbird
CC California condor	BV Least Bell's vireo	VF Vermilion flycatcher
LA California horned lark	LH Loggerhead shrike	WK White-tailed kite
RP California rufous-crowned sparrow	LO Long-eared owl	YB Western yellow-billed cuckoo
CW Coastal cactus wren	ME Merlin	YW Yellow warbler
CG Coastal California gnatcatcher	NH Northern harrier	YC Yellow-breasted chat
	PF Peregrine falcon	
	FA Prairie falcon	
	PU Purple martin	

Comments per observation #:



SWFL/LBV

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey #

SWFL LBV

58

STATION:

6

DATE: 7/16/10 OBSERVER: BMU/ER START TIME: 0522 END TIME: 0538 GPS 8 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) <sup>1,2</sup> GOOD FAIR POOR CLOUD COVER (%) 0, 0 TEMP (°F) 71.3, 71.5

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW n/a SPEED (MPH) Low: 0/0 High: 0/0 Ave: 0/0

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) <sup>1,2</sup> None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1	0522		SPTO						NX		
2			ATEL							X	
3			BEAR							X	
4			YWAR							X	
5			CALT							X	
6			SOXP								
7			LEBJ								
8			HOFI								
9			CATE							X	
10			BUSH						✓		
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_





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619.233.0952 fax

August 30, 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 Protocol-Level Surveys for Southwestern Willow Flycatcher for the Campo Wind Energy Project**

Dear Ms. Marquez:

In compliance with the Special Terms and Conditions for Endangered and Threatened Wildlife Species Permit TE-820658-4, AECOM submits this letter report summarizing the results of protocol surveys conducted during 2010 for the federally listed endangered southwestern willow flycatcher (*Empidonax traillii extimus*; SWFL) associated with the Campo Wind Energy Project. AECOM currently holds an Endangered and Threatened Species Permit issued by the U.S. Fish and Wildlife Service (USFWS) under Section 10(a) of the federal Endangered Species Act. This permit authorizes AECOM to conduct presence/absence surveys for SWFL.

**Project Description**

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

Ms. Sandy Marquez  
Carlsbad Fish and Wildlife Office  
August 30, 2010  
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## **Site Description**

The Campo Indian Reservation includes lands both north and south of I-8 along the Tecate Divide, extending from the Manzanita Indian Reservation to the north and south to 0.25 mile north of the California and Mexico international border (Figure 1). The reservation is located between the communities of Old Campo and Jacumba, around the community of Live Oak Springs, and bisected by Church Road (Figure 2). On-site elevation ranges from approximately 3,030 to 4,320 feet above mean sea level.

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

## **Background Information**

The SWFL, a subspecies of willow flycatcher (*Empidonax traillii*), was listed by the California Department of Fish and Game (CDFG) as endangered in California in 1991 (CDFG 1991) as part of the state-endangered listing of the full species (willow flycatcher). The SWFL was also federally listed as endangered in 1995 (USFWS 1995). This subspecies can only be separated from other willow flycatcher subspecies in the field geographically by breeding range. The SWFL breeds in New Mexico, Arizona, Southern California, Nevada, Utah, and possibly west Texas (Rourke et al. 1999). According to Unitt (2004), fewer than 90 pairs breed in San Diego County. In 2005, USFWS issued the final ruling to designate critical habitat for the SWFL, which includes portions of San Diego County (USFWS 2005). No critical habitat occurs within the BSA.

The primary factor responsible for the decline of the SWFL is habitat loss, exacerbated by nest predation and brood parasitism by brown-headed cowbirds (*Molothrus ater*, BHCO) (Rourke et al. 1999). The SWFL is a neotropical migrant that breeds in riparian forests with a distinct vegetation structure: a dense understory where nests are built, a moderately closed canopy, and an open foraging area at midstory. SWFL breeding habitat is also characterized by actively changing hydrology, frequently including standing water, but also dry areas that have flooded within the past few years and retain the appropriate vegetation structure. In California, less than 5% of appropriate riparian habitat remains from its extent when California achieved statehood in 1850 (Kus 2003).

SWFLs begin arriving on breeding territories in San Diego County in early May, but the northern subspecies (*E. t. brewsteri*) may migrate through southern breeding areas through mid-June. Both male and female migrant willow flycatchers frequently sing, and determining



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whether an individual is a resident (SWFL) or a migrant (willow flycatcher) cannot be accomplished from a single detection. Therefore, a survey protocol for SWFL has been adopted by USFWS (Sogge et al. 2010).

### **Survey Methodology**

Prior to initiation of surveys, AECOM biologists reviewed the California Natural Diversity Database (CDFG 2010), the eBird database (eBird 2010), and the San Diego County Bird Atlas (Unitt 2004) to determine the closest known occurrences of SWFL in the vicinity of the BSA. The largest colony of SWFL in San Diego County breeds along the upper San Luis Rey River in the Cleveland National Forest (approximately 45 miles northwest of the BSA), which had between 45 and 50 territorial males between 1993 and 2001 (Unitt 2004). The nearest possible breeding colony from the BSA consists of two territorial males documented in 2001 at the upper end of El Capitan Reservoir, approximately 27 miles from the BSA (Unitt 2004).

A habitat assessment focusing on suitable SWFL habitats within and adjacent to the BSA was completed by qualified AECOM biologists James McMorran and Erin Riley on April 17 and April 22, 2010. Contiguous riparian areas either within the BSA or within the immediate vicinity of the BSA were assessed, mapped, and digitized. Areas mapped as suitable SWFL habitat included all riparian willow forest and riparian willow scrub associations, and upland and wetland habitats adjacent to areas of scrub. Riparian areas adjacent to the BSA with optimal SWFL habitat were considered when they were contiguous with suitable habitat in the BSA because of the nature of the forthcoming risk assessment for the proposed wind farm project. This approach ensures maximum potential for detectability of SWFLs migrating through or breeding in the vicinity of the project but outside of the footprint. Four areas within or adjacent to the BSA were found to have habitat suitable to support SWFL; an overview of these areas is depicted in Figure 3. Three of the four SWFL Survey Areas are located in the southern half of the BSA (SWFL Survey Areas 2, 3, and 4), and the remaining Survey Area (SWFL Survey Area 6) is located in the northern half (Figure 3). The SWFL Survey Area numbering system (2, 3, 4, and 6) is consistent with an ongoing Bird Area Search study. Approximately 6.24 acres of suitable SWFL habitat occur within the BSA, and approximately 21.11 acres occur outside of the BSA (contiguous with SWFL habitat within the BSA), providing a combined total of approximately 27.35 acres of surveyed suitable SWFL habitat (Figures 4a, 4b, 4c, and 4d).

AECOM biologists Erin Riley (permitted), Brennan Mulrooney (under supervision at the time of project surveys; now independently permitted), Andrew Fisher (under supervision), and James McMorran (under supervision) conducted surveys under Endangered Species Permit TE-820658-4. AECOM biologists Doug Willick (permitted) and Erik LaCoste (permitted) conducted surveys under Endangered Species Permits TE-821404-5 and TE-027736-4, respectively. The protocol surveys followed the current USFWS survey protocol (Sogge et al. 2010). Each SWFL Survey Area was surveyed once during the first survey period (May 15 through 31), twice during the second survey period (June 1 through 24), and twice during the third survey period (June 25 through July 17). Surveys in each SWFL Survey Area were

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conducted at least 5 days apart between dawn and 11 a.m. Biologists walked through suitable habitat, stopping frequently to listen. After a few minutes of passive listening, if no SWFLs were heard, a playback tape of SWFL calls was played (active surveys) to elicit a response from SWFLs in the vicinity. Incidental SWFL detections during other field surveys were also recorded and mapped.

As allowed under the relevant endangered species permits, the survey activity “takes” the SWFL through harassment with playback of taped SWFL vocalizations. No individual SWFLs were captured.

## Results

Protocol-level SWFL surveys occurred between May 27 and July 16, 2010, within the BSA and adjacent areas of suitable SWFL habitat (Table 1). A summary of survey data is presented in Table 1, including date of survey, survey number, time, weather conditions, field biologists, and SWFL observations. Field notes are presented in Appendix A.

**Table 1**  
**Southwestern Willow Flycatcher Protocol Surveys**  
**Dates, Personnel, Weather Conditions, and Results**

Date	Survey Period	Surveyors	Time	Weather Conditions	SWFL Observed
05/27/10	1	Andrew Fisher Erin Riley	0520–1106	Start: 44°F, wind 0–1 mph, 30% cover End: 62°F, wind 2–6 mph, 5% cover	None
06/10/10	2	James McMorran Erin Riley	0504–1102	Start: 56°F, wind 0–4 mph, 0% cover End: 74°F, wind 5–16 mph, 0% cover	None
06/21/10	3	Erik LaCoste	0515–1035	Start: 48°F, wind 0–2 mph, 0% cover End: 80°F, wind 2–5 mph, 0% cover	None
07/06/10	4	James McMorran Doug Willick	0517–1003	Start: 48°F, wind 0–3 mph, 0% cover End: 76°F, wind 0–2 mph, 0% cover	None
07/16/10	5	Brennan Mulrooney Erin Riley	0522–1003	Start: 71°F, wind 0 mph, 0% cover End: 90°F, wind 0–3 mph, 0% cover	None

No SWFLs were detected within the BSA or adjacent areas during the survey period. However, an individual identified to “Traill’s” flycatcher (willow flycatcher [*Empidonax traillii*] or alder flycatcher [*E. alnorum*]) was detected foraging at SWFL Survey Area 3 on May 7, 2010 (Figure 4b). This individual was identified by James McMorran while conducting a least Bell’s vireo protocol survey. It did not vocalize and was not detected again during any protocol surveys on-site.

BHCOs were detected at two survey locations adjacent to the BSA (Figures 4b and 4c), with a maximum number of five individuals observed on one occasion in June. A summary of BHCOs detected on-site is provided in Table 2.

Ms. Sandy Marquez  
Carlsbad Fish and Wildlife Office  
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**Table 2**  
**Summary of Brown-Headed Cowbird Observations**  
**by Survey Period**

Survey Period	Survey Dates	Number of BHCO Individuals Detected
1	05/27/10	1
2	06/10/10	5
3	06/21/10	0
4	07/06/10	2
5	07/16/10	0

## **Discussion**

Protocol-level surveys for SWFL did not yield any sign of this subspecies' presence within the BSA or adjacent areas. A nonvocal "Traill's" flycatcher (willow or alder flycatcher) was seen perching and foraging for approximately 1 minute at a distance of approximately 40 feet within the understory of the willows at SWFL Survey Area 3 on May 7, 2010, by James McMorran while conducting a least Bell's vireo protocol survey.

The Traill's flycatcher recorded on-site was observed at a time of year when willow flycatchers are migrating through San Diego County (early May). Willow flycatchers detected during May 15 through June 24 in Southern California cannot be confirmed as breeding on-site (Sogge et al. 2010). Individual willow flycatchers identified during this time period could be migrants of other subspecies (non-SWFL) and/or migrant SWFL subspecies that are not resident on-site. Only the SWFL subspecies breeds in San Diego County (Sogge et al. 2010). Thus, to confirm that the SWFL subspecies is breeding on-site, it must be detected on-site from June 25 through July 17, after which willow flycatchers should no longer be migrating through the region (Sogge et al. 2010). During this time of spring, any individuals detected are probably resident breeding or nonbreeding SWFLs. No willow flycatchers were observed on-site after May 7 for the remainder of any field project survey efforts thus far. It is therefore concluded that the Traill's flycatcher observed was using the area as stopover habitat during its spring migration.

As mentioned previously, historical accounts of territorial male suspected breeding or confirmed breeding locations were accessed through the San Diego County Bird Atlas (Unitt 2004), with the nearest known locations documented in 2001 at the upper end of El Capitan Reservoir, approximately 27 miles from the BSA. AECOM's protocol-level survey results in spring 2010, along with publicly available data, do not suggest a breeding population of this species in the immediate vicinity of the Campo Wind Energy Project.

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

Sincerely,

A handwritten signature in black ink, reading "James McMorran". The signature is fluid and cursive.

James McMorran  
Wildlife Biologist  
james.mcmorran@aecom.com

Attachments:    Figure 1 – Regional Map  
                      Figure 2 – Vicinity Map  
                      Figure 3 – Southwestern Willow Flycatcher Survey Area Overview  
                      Figure 4a – Southwestern Willow Flycatcher Survey Area 2 Results  
                      Figure 4b – Southwestern Willow Flycatcher Survey Area 3 Results  
                      Figure 4c – Southwestern Willow Flycatcher Survey Area 4 Results  
                      Figure 4d – Southwestern Willow Flycatcher Survey Area 6 Results  
                      Appendix A – Field Data Sheets



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Carlsbad Fish and Wildlife Office  
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**Certification**

Qualified biologists who conducted SWFL surveys for the Campo Wind Energy Site certify that the information in this survey report fully and accurately represents the work performed by AECOM biologists. Signatures of current AECOM biologists as listed in Table 1 who conducted protocol-level surveys (May 27 through July 16, 2010) are included below. The results of protocol-level surveys for listed species are typically considered valid for 1 year by the resource agencies.



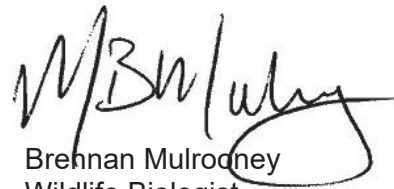
Andrew Fisher  
Wildlife Biologist



Erin Riley  
Wildlife Biologist



Doug Willick  
Wildlife Biologist



Brennan Mulrodne  
Wildlife Biologist



Erik LaCoste  
Wildlife Biologist

Ms. Sandy Marquez  
Carlsbad Fish and Wildlife Office  
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Page 8

### **Literature Cited**

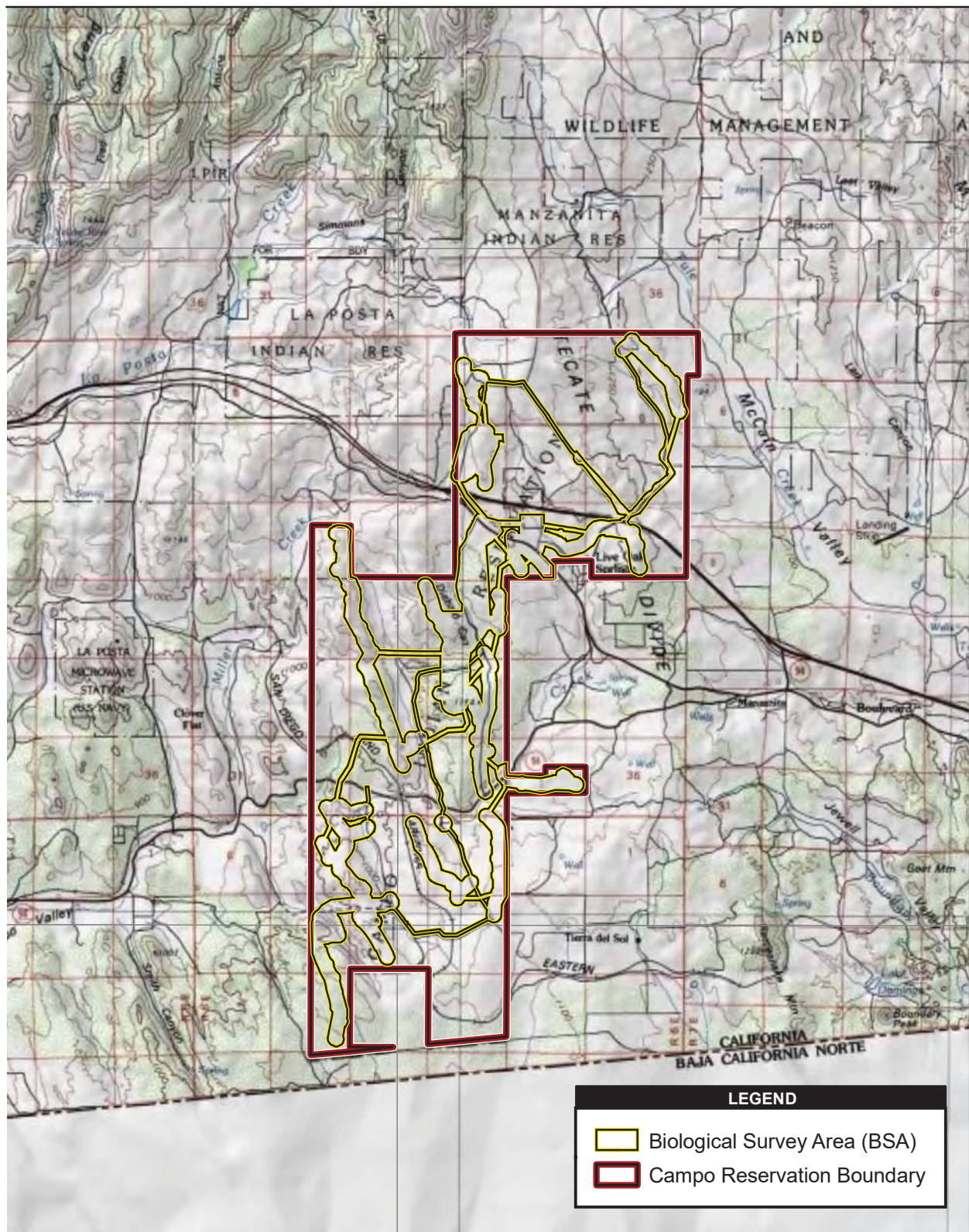
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## FIGURES

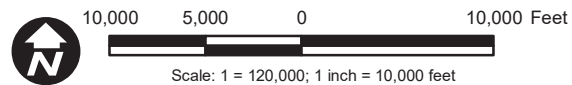








Source: Tierra del Sol 1959; Live Oak Springs 1975; Campo 1959; Cameron Corners 1988



**Figure 2**  
**Vicinity Map**





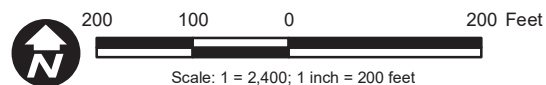
**Figure 3**  
**Southwestern Willow Flycatcher Survey Areas Overview**







Source: DigitalGlobe 2008; Invenenergy 2010; AECOM 2010

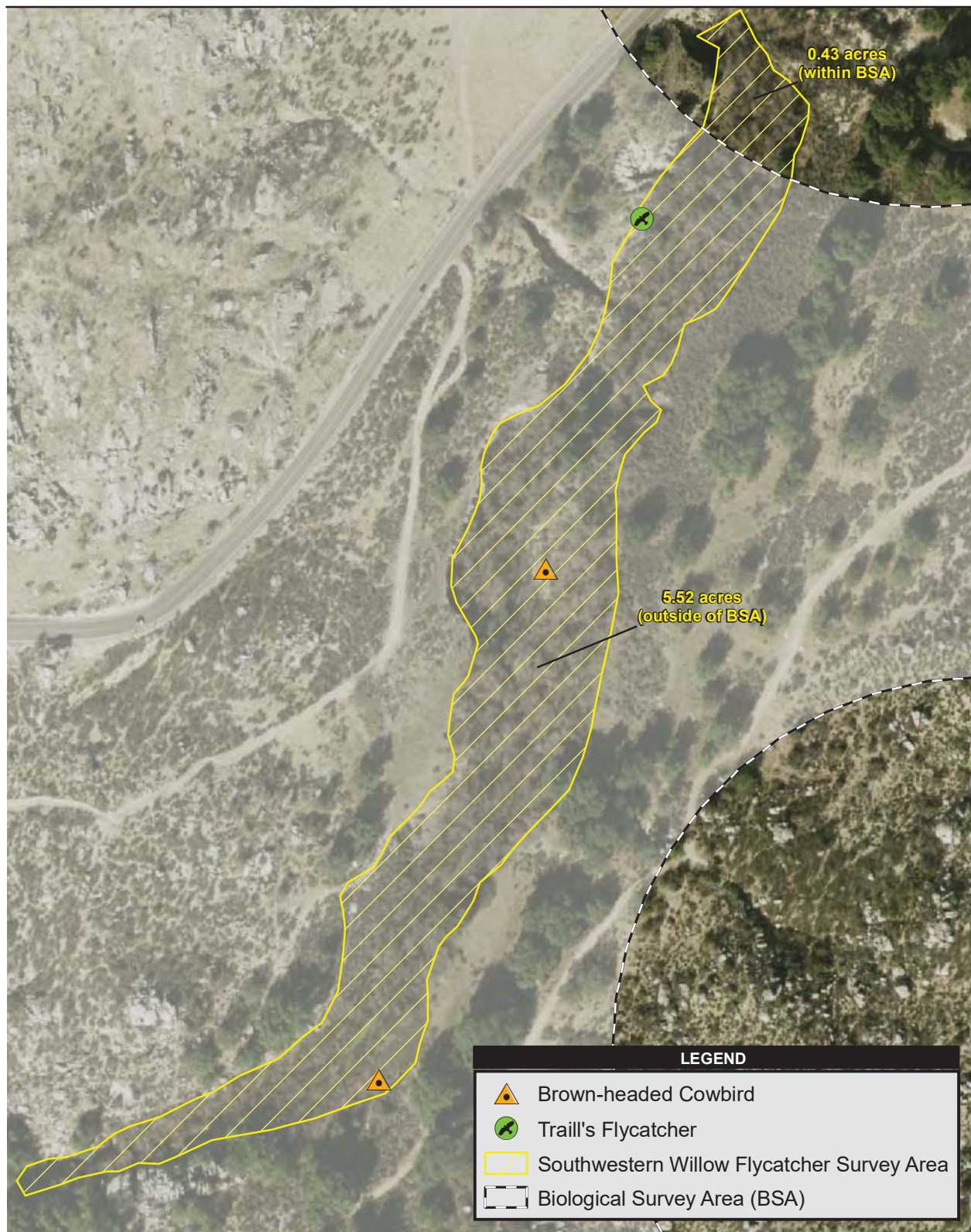


**Figure 4a**  
**Southwestern Willow Flycatcher**  
**Survey Area 2 Results**

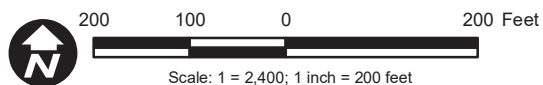
Campo Wind Energy Project Southwestern Willow Flycatcher 45-Day Report

Path: P:\2009\09080183\_Campo\_wind\6.0 GIS\6.3 Layout\BIO\AVIAN\WIFL\_45DayReport\_Aug2010\Fig4a\_WIFL\_SurveyArea\_Detail.mxd, 08/25/10, johnsonaa





Source: DigitalGlobe 2008; Invenery 2010; AECOM 2010

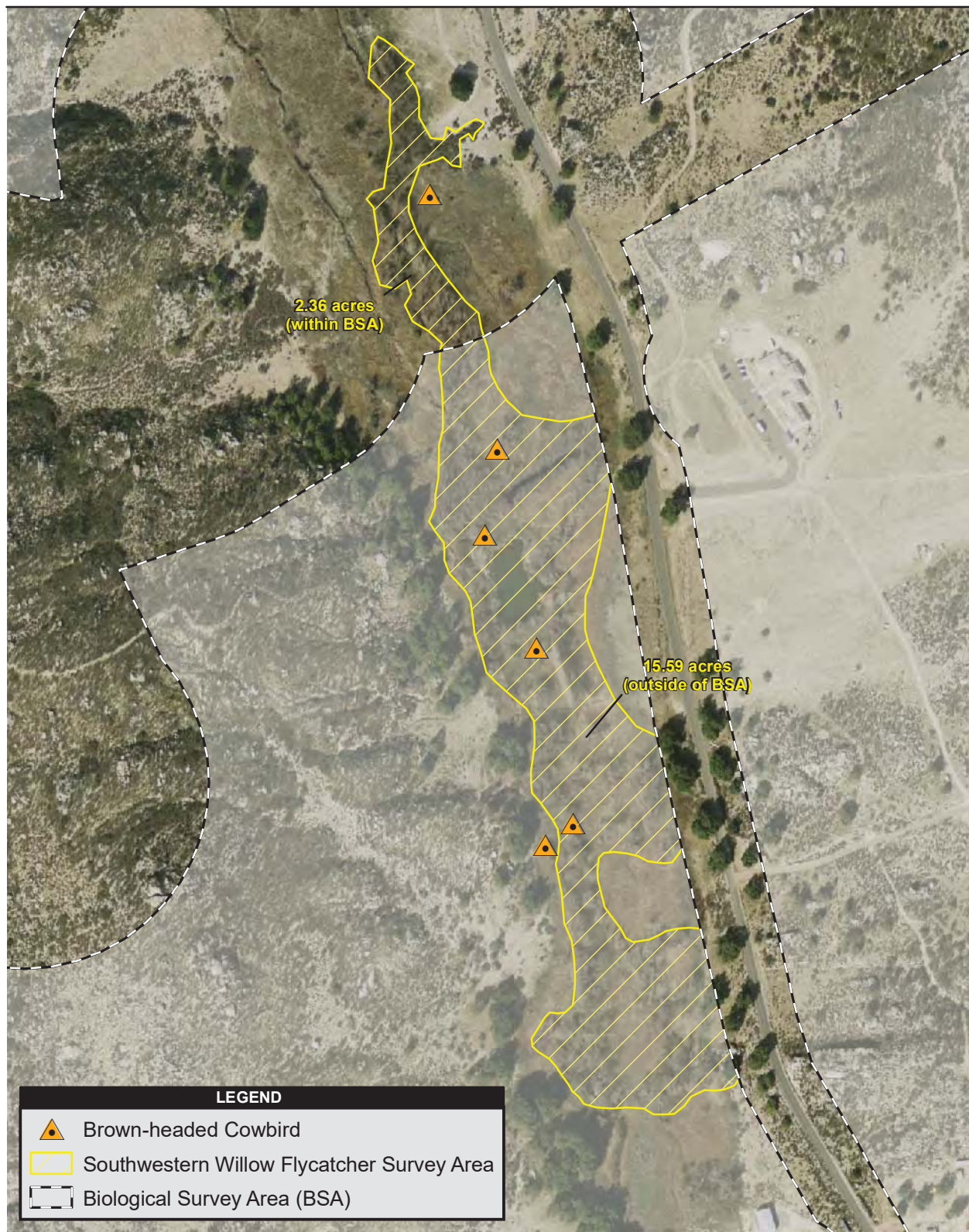


**Figure 4b**  
**Southwestern Willow Flycatcher**  
**Survey Area 3 Results**

Campo Wind Energy Project Southwestern Willow Flycatcher 45-Day Report

Path: P:\2009\09080183\_Campo\_wind\6.0 GIS\6.3 Layout\BIO\AVIAN\WIFL\_45DayReport\_Aug2010\Fig4b\_WIFL\_SurveyArea\_Detail.mxd, 08/25/10, johnsonaa





Source: DigitalGlobe 2008; Invenenergy 2010; AECOM 2010

**Figure 4c**  
**Southwestern Willow Flycatcher**  
**Survey Area 4 Results**

Campo Wind Energy Project Southwestern Willow Flycatcher 45-Day Report

Path: P:\2009\09080183\_Campo\_wind\6.0 GIS\6.3 Layout\BIO\AVIAN\WIFL\_45DayReport\_Aug2010\Fig4c\_WIFL\_SurveyArea\_Detail.mxd, 08/25/10, johnsona





**Figure 4d**  
**Southwestern Willow Flycatcher**  
**Survey Area 6 Results**

**APPENDIX A**

**FIELD DATA SHEETS**



LBV & SWFL Surveys

LBV #4  
SWFL #1

BIRD AREA SEARCH DATASHEET CAMPO WIND ENERGY PROJECT Survey # STATION:

DATE: 5-27-10 OBSERVER: ERI/AFI START TIME: 0520 END TIME: 11:00 GPS 4 PAGE 1 OF 2

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 30% 5% TEMP (°F) 44.6/62

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW n/a SPEED (MPH) Low: 0/4 High: 1/12.2 Ave: 0/6.6

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			BUSH								
2			YENAM		A	2					Already GPS'd.
3			RWBB								
4			SPTD								
5			HOWR								
6			SOSP								
7			MODD								
8			BHGR								
9			AMCO								
10			WRNU								
11			NOFL								
12			RTPL								
13			HOFT								
14			CALR								
15			LEGO								
16			WEKI								
17			CALT								
18			ANKU								
19			CONA								
20			LISP								

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_



Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
21			BLPH								
22			BKOR								
23		AFYWO1	YENH	M	A	1					
24			WNPE	U	A	10					
25		APCBO1	BKCB	M	A	1					
26			WIWA	F	A	1					
27			GATI								
28			ACWO								
29			WJTB								
30		AFYWO2	YENH	M	A	1					
31			WEBB	M/F	A	2					
32			LAGF	M/F	A/SA	12					Small pulses/families groups pushing through sh.
33			LREB								
34		AEYWO4	YENH	M	A	1					
35			SWTH			1					
36			PSFL								

<sup>a</sup> check if Auditory only

BCSP

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

NO LBV / SWFL

#### Activity Codes

PE Perched  
SO Soaring  
FL Flapping  
CS Circle  
HU Hunting/  
OT Other

#### Habitats

CCH Chamise Chaparral  
RSC Red Shank  
Chaparral  
BSS Big Sagebrush  
Scrub  
SSS Upper Sonoran  
Subshrub Scrub  
SOCH Scrub Oak Chaparral  
CLOW Coast Live Oak  
Woodland  
SWS Southern Willow  
Scrub  
NNG Nonnative Grassland

#### Sensitive Species Codes

BE Bald eagle	CO Cooper's hawk	SA Sharp-shinned hawk
BL Bank swallow	FH Ferruginous hawk	SW Short-eared owl
BS Belding's Savannah sparrow	GS Grasshopper sparrow	WF Southwestern willow flycatcher
SG Bell's sage sparrow	GV Gray vireo	SU Summer tanager
CB Brown headed cowbird	GE Golden eagle	SH Swainson's hawk
BW Burrowing owl	LG Lawrence's goldfinch	TB Tricolored blackbird
CC California condor	BV Least Bell's vireo	VF Vermilion flycatcher
LA California horned lark	LH Loggerhead shrike	WK White-tailed kite
RP California rufous-crowned sparrow	LO Long-eared owl	YB Western yellow-billed cuckoo
CW Coastal cactus wren	ME Merlin	YW Yellow warbler
CG Coastal California gnatcatcher	NH Northern harrier	YC Yellow-breasted chat
	PF Peregrine falcon	
	FA Prairie falcon	
	PU Purple martin	

Comments per observation #:

LBI Survey #5 / WIFL #2

BIRD AREA SEARCH DATASHEET CAMPO WIND ENERGY PROJECT Survey # STATION: 3

DATE: 6/10/10 OBSERVER: ZPL, JMC START TIME: 0704 END TIME: 0855 GPSS 5414 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 0% 10% TEMP (°F) 58.4, 67.3

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW n/a SPEED (MPH) Low: 1.9, 1.0 High: 9.6, 4.8 Ave: 2.7, 2.5

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			LEGO								
2			ATFL								
3			SPTD								
4			RISP								
5			HOWR								
6			NUWO								
7			YWAR								
8			SOSP								
9			OATI								
10			LAGO								
11			NOFL								
12			CORA								
13		JMCB03	BHCO(B)	U	U	2	FL	SWS	N		
14			BuOR								
15	0843	JMCB03	BHCO(B)	U	U	1	FL	SWS	N	✓	
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_

## BIRD AREA SEARCH DATASHEET

CAMPO WIND ENERGY PROJECT

LBI Survey #5 | WIFL #2

Survey #

STATION: 6

DATE: 6/10/10 OBSERVER: ERI, JMC START TIME: 1042 END TIME: 1102 GPS: 5414 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) <sup>1,2</sup> GOOD FAIR POOR CLOUD COVER (%) 0% 02 TEMP (°F) 72.3 74.8WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S <sup>1,2</sup> SW W NW n/a SPEED (MPH) Low: 5.7 1.2 High: 6.4 7.3 Ave: 7.8 3.8

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			LEGO								
2			HOWR								
3			ATFL								
4			SPTO								
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_

WIFL/LBV

LBV Survey #5 | WIFL #2

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey #

STATION: 4

DATE: 6/16/10 OBSERVER: CRJ, JMC START TIME: 0504 END TIME: 0645 GPS: M14 PAGE 1 OF 2

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) <sup>2</sup>GOOD <sup>1</sup>FAIR <sup>2</sup>POOR CLOUD COVER (%) <sup>2</sup>0% <sup>1</sup>10% TEMP (°F) 56.8/63.1WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S <sup>2</sup>SW W <sup>1</sup>NE n/a SPEED (MPH) Low: 0.2/0 High: 3.9/3.7 Ave: 1.0/1.6PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) <sup>1</sup>None <sup>2</sup>light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			BHOR								
2			YWAR			III					
3			WEWP								
4			RWBL								
5			ACWO								
6			SOSP								
7			COYE								
8			MODO								
9			BUOW								
10			BUSH								
11			WEBL								
12			BEWR								
13			ATFL								
14			NUWO								
15			HOWR								
16			SPTO								
17			RTHA							✓	
18			CORA								
19			LEGO								
20			CLSW								

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_



LBN Survey #5 / WFL #2  
94

BIRD AREA SEARCH DATASHEET CAMPO WIND ENERGY PROJECT Survey # STATION:

DATE: 6/10/10 OBSERVER: ERI, JMC START TIME: 1016 END TIME: 1029 GPS: SM14 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) ~~GOOD~~ FAIR POOR CLOUD COVER (%) 0% / 0% TEMP (°F) 70.9 / 70.9

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW ~~W~~ NW n/a SPEED (MPH) Low: 1.9 / 1.9 High: 5.9 / 5.9 Ave: 3.5 / 3.5

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) ~~None~~ light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			ALWD								
2			YWAR								
3			SSP								
4			CORA								
5			BEWR								
6			LAGO								
7			HOWR								
8			BCSP								
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only  
\* Age: (A) Adult, (SA) Subadult, (F) Fledgling  
<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

LBI Survey #5 | WIFL #2

BIRD AREA SEARCH DATASHEET CAMPO WIND ENERGY PROJECT Survey # 1 STATION: 2

DATE: 6/10/10 OBSERVER: ERI, JMC START TIME: 0922 END TIME: 1004 GPS: SM14 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 0% 10% TEMP (°F) 78.9 78.4

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW n/a SPEED (MPH) Low: 1.5 26 High: 79 80 Ave: 2.4 13.1

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			WBNV								
2			OPTI								
3			INEST								
4			SOSP								
5			MODO								
6			YWAR								
7			LEGO								
8			BCSP								
9			SPTO								
10			CLSW								
11			NOFL								
12			CORA								
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only  
 \* Age: (A) Adult, (SA) Subadult, (F) Fledgling  
<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

LBV/SWFL

LBV #3/SWFL #3

BIRD AREA SEARCH DATASHEET

CAMPO WIND ENERGY PROJECT

Survey #

STATION: 6

DATE: 6/21/10 OBSERVER: Elna START TIME: 1035 END TIME: GPS PAGE OF

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 0/0 TEMP (°F) 78/80

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW n/a SPEED (MPH) Low: 2/2 High: 5/5 Ave: 3.244.6

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			HOWF								
2			OATI								
3		LAGO	<del>HOWF</del>	M+FA	5	Perched	WRF	-	-		Perched & Calling
4			ATFL								
5			WSJA								
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: LAGO Added to map By hand

LBV/SWFL

LBV#6/SWFL#3

BIRD AREA SEARCH DATASHEET

CAMPO WIND ENERGY PROJECT

Survey #

STATION: 4A

DATE: 6/21/10 OBSERVER: Erik Lauste START TIME: 700 END TIME: 715 GPS - PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 010 TEMP (°F) 51/51

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N <sup>1/2</sup> NE E SE S SW W NW n/a SPEED (MPH) Low: 010 High: 212 Ave: 111

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			SO P								
2			AMLR								
3			HOWR								
4			ATFL								
5			INRO								
6			ROWR								
7			BHLR								
8			ANTU								
9			LEGY								
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_



LBV/SWFL

LBV #8/SWFL #3  
6

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey #

STATION: 4

DATE: 6/21/10 OBSERVER: ELA START TIME: 830 END TIME: 1020 GPS - PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 010 TEMP (°F) 69, 75

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW n/a SPEED (MPH) Low: 214 High: 416 Ave: 244.9

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			WWPE								
2			HOWR								
3			WSJA								
4			LEGO								
5			RTHA								
6			SOSP								
7	040	- 1	YEWA	?	?	1	Perch	WRF	-		
8			ATFL								
9			RWBAL								
10			NRWS								
11			ANHU								
12			BLPA								
13			NUWO								
14			ACWO								
15			SPTO								
16			AMCO								
17			COYE								
18			BHGR								
19			WEKI								
20	1000	- 2	YEWA	?	?	1	Perch	WRF	-		

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: NO GPS - YEWA put on map by hand

LBV/SWFL

LBV#8/SWFL#3

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey #

STATION: 3

DATE: 6/21/10 OBSERVER: ELA START TIME: 515 END TIME: 645 GPS: PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 0/1 TEMP (°F) 48/46

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW ~~W~~ SPEED (MPH) Low: 0/1 High: 2/2 Ave: 1/1

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1		SPTO									
2		LE60									
3		AMCR									
4		ATFL									
5		WSJA									
6		<del>WUWO</del>	HOWR								
7		OATI									
8		COHA									
9		ACWO									
10		BCSP									
11		SOSP									
12		WUWO									
13		MOQU									
14		CORA									
15		ANHU									
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_

LBV/SWFL

LBV#5/SWFL#3

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey #

STATION: 2DATE: 6/21/10 OBSERVER: Erik Lagarde START TIME: 730 END TIME: 800 GPS — PAGE 1 OF 1WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 01 0 TEMP (°F) 58 64WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW n/a SPEED (MPH) Low: 0 2 High: 0 4 Ave: 0 3.2PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) (None) light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			ATFL								
2			OATI								
3			SO SP								
4	0740		YEWA	?	?	1	PE	WRS	—	—	Percher, Singing
5			MO DO								
6			WSCJ								
7			CORA								
8			Lego								
9			CATH								
10			STJA								
11			WE BL								
12			<del>WRS</del>								
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptorsComments per observation #: DOGS!

LB1#7 WIFL#4

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey #

STATION: BAS 6

DATE: 6 July 2010 OBSERVER: Dany Willard / Jimmy McManus START TIME: 0517 END TIME: 0532 GPSSM14 PAGE 1 of 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 21 TEMP (°F) 48 48WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW n/a SPEED (MPH) Low: 0.80 High: 3.21 Ave: 1411.6PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			ATPL								
2			SPTD								
3			SOSP								
4			CORA								
5			WESS								
6			BLOR								
7			HCF1								
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #:



LBV#7 WIFL#4

## BIRD AREA SEARCH DATASHEET CAMPO WIND ENERGY PROJECT

Survey # 1 STATION: 4DATE: 7/6/10 OBSERVER: Dave J. Wells START TIME: 0543 END TIME: 0720 GPS SM14 PAGE 1 OF 1WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 21 TEMP (°F) 43 53WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W SW 1 SPEED (MPH) Low: 0 / 0 High: 12 / 19 Ave: 8 / 1PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			MOJO								
2			WOWP	♂		1					
3			BHGR	♂	ad	3					
4			YBOA	♂							
5			WRNH								
6			BRBL								
7			CRAB?								
8			CRAB								
9			AMCR								
10			ATRL								
11			WEST								
12			NWOD								
13			SPTO								
14			WREN								
15			LABI?								
16			LEGO								
17			LACD								
18		JMCB7-701	BUSH								
19			BHCO								
20			WEST								
21			WEKI								
22		JMCOHA-0701	COHA		ad. 1		Flying over	Rapine			
23			LABI								
24			CHTO								
25			HOWR								
26			COYE								
27			SOSP								
28			HUWI		2						
29			BEWR								
30		JMCB7-702	WBHO			1					
31			DATI		3						
32			REHA								
33			ACTOO								
34			BLPH								

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

MALL:

MOJO:

② = Singing

Comments per observation #: \_\_\_\_\_

LBV#7 WIFL#4

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey # 1 STATION: A3DATE: 7/6/10 OBSERVER: Doug W. [unclear] START TIME: 0730 END TIME: 0837 GPS SM14 PAGE 1 OF 1WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 10 / 10 TEMP (°F) 64 / 80WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW <sup>2</sup>/<sub>1</sub> na SPEED (MPH) Low: 0 / 0.9 High: 14 / 3.7 Ave 06 / 1.3PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other \_\_\_\_\_

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			NWLO NWV1:								
2			LEGO ATP								
3			SPTO								
4		JWCH7-702	COHA								
5			WBNH OAT								
6			H2OR ATNA								
7			SPTO SPTO juv.								
8			DECR (S)								
9			COHA WSTJ								
10			NWLO BAGR								
11			LAGO								
12			ATTH CAGY								
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_

LBN #7 WIFL #4

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey #

STATION: #2

DATE: 7/6/10 OBSERVER: Jimmy McHerron, Dorey Cillek START TIME: 0900 END TIME: 0942 GPS: 5M12/ PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) <sup>1,2</sup> GOOD FAIR POOR CLOUD COVER (%) <sup>1,2</sup> 0 / 0 TEMP (°F) 75 / 75WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) <sup>1,2</sup> N NE E SE S SW W NW n/a SPEED (MPH) Low: 0.7 / 1 High: 5.7 / 5.5 Ave: 2.7 / 2.0PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) <sup>1,2</sup> None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			WOWP								
2			LAGO								
3			WEST								
4			HEAR								
5			SESP								
6			BHGR								
7			LAGO								
8			NUHO								
9			NUHO								
10			NUHO								
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

LAVANOR Dancer?

SARA in vic.

Comments per observation #: \_\_\_\_\_

LBV#7 WIFL#4

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey #

STATION: #49

DATE: 7/6/10 OBSERVER: Jimmy McHenry / Doug Giddick START TIME: 0953 END TIME: 1003 GPS: SM14 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 18 TEMP (°F) 76, 76

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW 173 SPEED (MPH) Low: 010 High: 2620 Ave: 11.3

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1			OATI								
2			YEDA:								
3			SPID 365A								
4			BUSH HOUR								
5			ABOR ③ ATFL								
6			N4600								
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_



SWFL/LBV

BIRD AREA SEARCH DATASHEET

CAMPO WIND ENERGY PROJECT

Survey # 5/8 STATION: 2

DATE: 7/16/10 OBSERVER: B.M. JER START TIME: 0941 END TIME: 1003 GPS 8 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 0 / 0 TEMP (°F) 86.6 / 90.0

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW n/a SPEED (MPH) Low: 0.0/1.3 High: 2.6/3.1 Ave: 1.6/1.9

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1	0941		CORA						N	✓	
2			HOFI						/	X	
3			ATFL								
4			WEST								
5		BNLLG10	LAGO								
6			ORTI								
7			BNKR		FL					X	Conf. breeding
8			BGGN							X	
9			BUSH						✓		
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_

SOFL/LBU

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

SOFL/LBU  
Survey # 5/8STATION: 3DATE: 7/16/10 OBSERVER: BMU START TIME: 0759 END TIME: 0930 GPS 5 PAGE 1 OF 1WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 0/10 TEMP (°F) 80.2/86.7WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW WNW n/a SPEED (MPH) Low: 0/10 High: 0/15 Ave: 0/11.0PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1	0759		NAND						N		strange location ID by voice + bill size + plumage
2			ACWD						N	X	
3			RTHA	U	1/FL	3			R		
4			DATI						N		
5			LEGO								
6			CORA							X	
7			SPTO							X	
8		BML609	LALGO								
9			PRAI								
10			LAZB								
11			ATFL								
12			HOWR								
13			NUWO						Y	X	
14		BMC006	COLA	U	FL				R		
15			BNGR						N	X	
16			WESS								
17			HUYI								
18			CALT								
19			WBNU								
20			SOSP		FL						

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_

SWFL / LBU  
 BIRD AREA SEARCH DATASHEET CAMPO WIND ENERGY PROJECT Survey # 5/8 STATION: 4  
 DATE: 7/16/10 OBSERVER: BMS, ER START TIME: 0549 END TIME: 0745 GPS 8 PAGE 1 OF 2  
 WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) GOOD FAIR POOR CLOUD COVER (%) 0 / 0 TEMP (°F) 68.4 / 78  
 WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW n/a SPEED (MPH) Low: 0 / 0 High: 0 / 0 Ave: 0 / 0  
 PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1	0549	RSHA	BUSHTON		A/FL	2+			R	Y	≥ 1 FL
2		RSHA			A				R		
3		WELP							N	X	
4		PLWR								Y	
5		ATFL								Y	
6		NUWO								Y	
7		WEST								Y	
8		BRBL								Y	
9		NDFL								Y	
10		MWBO								Y	
11		RWBL								X	
12		COYE								X	
13		LEBO								X	
14		MALL									
15		BHGR									
16		PHAI									
17		WBNU									
18		CALT								X	
19		HOWR									
20		BLGR							Y	X	

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A*	Breeding Status/Behavioral Notes
21			BEUR						N	X	
22			ACWD								
23			SPTD								
24	0643	BALB01	BHCO	M							flyby
25			HUVI								
26			ANHU							X	
27			WREN							X	
28			ELSW								
29		BML608	LAGO							X	
30			COHU							X	
31			QATI							X	
32			CORA								
33			CAJU							X	
34			CATW							X	
35			BLPH								
36			ERRD							X	

\* check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

\* Special Status species and all raptors

WEKI

↓

#### Activity Codes

PE Perched  
SO Soaring  
FL Flapping  
CS Circle  
HU Hunting/  
OT Other

#### Habitats

CCH Chamise Chaparral  
RSC Red Shank  
Chaparral  
BSS Big Sagebrush  
Scrub  
SSS Upper Sonoran  
Subshrub Scrub  
SOCH Scrub Oak Chaparral  
CLOW Coast Live Oak  
Woodland  
SWS Southern Willow  
Scrub  
NNG Nonnative Grassland

#### Sensitive Species Codes

BE Bald eagle	CO Cooper's hawk	SA Sharp-shinned hawk
BL Bank swallow	FH Ferruginous hawk	SW Short-eared owl
BS Belding's Savannah sparrow	GS Grasshopper sparrow	WF Southwestern willow flycatcher
SG Bell's sage sparrow	GV Gray vireo	SU Summer tanager
CB Brown headed cowbird	GE Golden eagle	SH Swainson's hawk
BW Burrowing owl	LG Lawrence's goldfinch	TB Tricolored blackbird
CC California condor	BV Least Bell's vireo	VF Vermilion flycatcher
LA California horned lark	LH Loggerhead shrike	WK White-tailed kite
RP California rufous-crowned sparrow	LO Long-eared owl	YB Western yellow-billed cuckoo
CW Coastal cactus wren	ME Merlin	YW Yellow warbler
CG Coastal California gnatcatcher	NH Northern harrier	YC Yellow-breasted chat
	PF Peregrine falcon	
	FA Prairie falcon	
	PU Purple martin	

Comments per observation #:



SWFL/LBV

## BIRD AREA SEARCH DATASHEET

## CAMPO WIND ENERGY PROJECT

Survey #

SWFL LBV

58

STATION:

6

DATE: 7/16/10 OBSERVER: BMU/ER START TIME: 0522 END TIME: 0538 GPS 8 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE; 1=START; 2=END) <sup>1,2</sup> GOOD FAIR POOR CLOUD COVER (%) 0, 0 TEMP (°F) 71.3, 71.5

WIND DIRECTION: (CIRCLE ONE; 1=START; 2=END) N NE E SE S SW W NW n/a SPEED (MPH) Low: 0/0 High: 0/0 Ave: 0/0

PRECIPITATION: (CIRCLE ONE; 1=START; 2=END) <sup>1,2</sup> None light rain rain light snow snow sleet hail other

Obs No.	Time	GPS Code	Species	Sex	Age*	# Inds.	Activity (1st, 2nd, 3rd)	Habitat	Raptor/ Non-Raptor	A <sup>a</sup>	Breeding Status/Behavioral Notes
1	0522		SPTO						NX		
2			ATEL							X	
3			BEAR							X	
4			YWAR							X	
5			CALT							X	
6			SOXP								
7			LEBJ								
8			HOFI								
9			CATE							X	
10			BUSH						✓		
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

<sup>a</sup> check if Auditory only

\* Age: (A) Adult, (SA) Subadult, (F) Fledgling

<sup>1</sup> Special Status species and all raptors

Comments per observation #: \_\_\_\_\_