

April 30, 2010

DOCKET

08-AFC-13

DATE

APR 30 2010

RECD. APR 30 2010

Mr. Christopher Meyer **CEC Project Manager**

Attn: Docket No. 08-AFC-13 California Energy Commission

1516 Ninth Street Sacramento, CA 95814-5512 Mr. Jim Stobaugh **BLM Project Manager**

Attn: Docket No. 08-AFC-13 **Bureau of Land Management**

P.O. Box 12000 Reno, NV 89520

RE:

Calico Solar (formerly Solar One) Project (08-AFC-13)

Applicant's Submittal of Results from Helicopter Surveys of Golden Eagle Nests and

Bighorn Sheep

Dear Mr. Meyer and Mr. Stobaugh,

Tessera Solar hereby submits the Applicant's results from helicopter surveys of golden eagle nests and bighorn sheep. I certify under penalty of perjury that the foregoing is true, correct, and complete to the best of my knowledge.

Sincerely,

Vice President of Development



Date: March 29, 2010

To: Larry LaPre, BLM

Ashleigh Blackford, USFWS

From: Patrick Mock, URS

Subject: Calico Solar Project Eagle Nest Survey, March 11-12, 2010

This memo provides a summary of the nesting raptor portion of the above-referenced survey. A photo log, data sheets, and figures are attached for your information.

Summary:

We conducted two days of helicopter surveys for nesting raptors in the Cady Mountains north of Interstate 40 and the Rodman Mountains south of I-40 in the Eastern Mojave Desert. The survey area was within a circle roughly 20 miles in diameter from the center of the proposed Calico Solar site. We recorded all locations of active and potential nests with a Garmin Oregon 550 GPS and on hard-copy data sheets. The aircraft used was a MD-500 Delta helicopter contracted from Western Helicopters, Inc. out of Rialto, California. Personnel on board included Pilot Robert Spencer, URS Corporation (URS) Senior Raptor Biologist Brian Latta, URS Principal Scientist Patrick Mock, and consultant Bighorn Sheep Biologist Tim Glenner.

We found evidence of or potential for raptor and raven nesting at 22 Cliffs (Table 1). This included 22 stick nests that ranged in size from huge (golden eagle) to small (common raven) and in condition from active (nesting) to dilapidated (falling apart). Two of the nests were active; one contained an incubating adult golden eagle and the other, an incubating adult red-tailed hawk. We identified 7 cliffs that are suitable for nesting prairie falcons based on cliff size, verticality, and presence of ledges and potholes (small caves).

The active golden eagle and red-tailed hawk nests were each occupied by an adult bird incubating an unknown number of eggs. The other members of each pair were not observed during this survey.

In addition to nests and nest cliffs, we recorded observations of flying raptors (Table 2). Coordinates for some of these observations were not recorded using a GPS, but were later determined using the TOPO! mapping program.

Additional Survey Information:

Survey time total: 12 hours Survey coverage: 732 air miles

Avg. Speed: 33.3 mph (includes transit to refueling)

GPS location format: UTM Map Datum: WGS 84

Zone: 11S

North Reference: True



The survey was conducted in six 2-hour flights over two consecutive days. The weather was sunny with good visibility and light afternoon winds. The survey was conducted with the helicopter doors off to increase visibility. Each canyon was flown up and then down to view all cliffs from the right side of the aircraft. Average speed during cliff observation flights was approximately 5-10 miles per hour. Distance from the cliffs varied from 50-200 meters. Observations were made with the naked eye and binoculars. Two to four passes were made at cliffs that had nests or large amounts of whitewash to mark, photograph, and observe the nests.

Table 1. Raptor and Raven Nests Located

Species	Size	Status	Condition	Number
GOEA	Large	Active	Active with incubating adult	1
GOEA	Large	Inactive	Good	4
GOEA	Large	Inactive	Dilapidated	4
GOEA/RTHA	Large	Inactive	Good	2
RTHA	Medium	Active	Active with incubating adult	1
RTHA	Medium	Inactive	Good	4
CORA	Small	Inactive	Recently used	1
CORA	Small	Inactive	Good	3
CORA	Small	Inactive	Dilapidated	2
PRFA	Cliff	Potential	Whitewash present	7
			Totals	29

GOEA = Golden eagle; RTHA = Red-tailed hawk; CORA = Common raven; PRFA = Prairie falcon

Table 2. Raptors Observed

Species	Age	Activity	Number
GOEA	Adult	Incubating in nest	1
RTHA	Adult	Incubating in nest	1
RTHA	Adult	Flying	3
PRFA	Adult	Flying	1
GHOW	Adult	Flushed from cliff	1
AMKE	Adult	Pair flying	2
		Totals	9

GOEA = Golden eagle; RTHA = Red-tailed hawk; PRFA = Prairie falcon; GHOW = Great horned owl; AMKE = American kestrel



Mr. Tim Glenner reported on incidental bighorn sheep sightings made during the raptor nest survey. Mr. Glenner's report is attached.

If you need any additional information or have any questions concerning the information contained in this summary, please contact Brian Latta or Dr. Patrick Mock.

Patrick J. Mock, PhD Brian Latta
Principal Scientist Senior Scientist

Attachments: Photograph Log

Completed Survey Forms

Data Dictionary

Report from T. Glenner

Figures





Photograph GOEA 1 Date: 03/11/2010

Comments: Two inactive golden eagle nests

UTM 11S 558983 3859814



Photograph GOEA 2 Date: 03/11/2010

Comments: Single inactive golden eagle nest

UTM 11S 559635 3860121





Photograph GOEA 3 Date: 03/11/2010

Comments: Three inactive golden eagle nests UTM 11S 557032 3858086



Photograph GOEA 4 Date: 03/11/2010

Comments:Potential prairie falcon cliff

UTM 11S 558643 3856347





Photograph GOEA 5 Date: 03/11/2010

Comments: Large inactive stick nest and raven nest UTM 11S 559257 3857377



Photograph GOEA 6 Date: 03/11/2010

Comments: Large inactive stick nest

UTM 11S 564305 3849625





Photograph GOEA 7 Date: 03/11/2010

Comments: Active golden eagle nest with incubating adult UTM 11S 565215 3850298



Photograph GOEA 7a Date: 03/11/2010

Comments: Close up of incubating adult golden eagle

UTM 11S 565215 3850298





Photograph GOEA 7b Date: 03/11/2010

Comments: Overview of Active golden eagle nest cliff UTM 11S 565215 3850298



Photograph GOEA 8 Date: 03/11/2010

Comments: Inactive golden eagle nest

UTM 11S 565942 3850479





Photograph GOEA 9 Date: 03/11/2010

Comments: Inactive redtailed hawk nest and potential prairie falcon ledge UTM 11S 566409 3850370



Photograph GOEA 10 Date: 03/11/2010

Comments: Single inactive golden eagle nest

UTM 11S 571388 3846519





Photograph GOEA 11 Date: 03/12/2010

Comments: Recently active raven nest UTM 11S 543699 3856591



Photograph GOEA 12 Date: 03/12/2010

Comments: Inactive raven nest

UTM 11S 545445 3854026





Photograph GOEA 13 Date: 03/12/2010

Comments: Old stick nest with large amounts of whitewash, possible prairie falcon ledge UTM 11S 543733 3854015



Photograph GOEA 14 Date: 03/12/2010

Comments: Active red-tailed hawk nest with incubating adult

UTM 11S 535671 3841756





Photograph GOEA 14a Date: 03/12/2010

Comments: Overview of active red-tailed hawk nest cliff UTM 11S 535671 3841756



Photograph GOEA 15 Date: 03/12/2010

Comments: Inactive redtailed hawk nest

UTM 11S 543358 3840950





Photograph GOEA 16 Date: 03/12/2010

Comments: Good prairie falcon type of cliff UTM 11S 541304 3841057



Photograph GOEA 17

Date: 03/12/2010

Comments: Good prairie falcon type of cliff UTM 11S 557456 3868360



Calico Solar Golden Eagle Nest Survey Form

Survey Location: <u>Cady Mountains</u>

Page: 1 of 3

Date: 11 March 2010

Personnel: BL, PM, TG, RS

Weather: Sunny, Clear, Cool, No wind

Survey Start: 0800

Survey End: 1500

WAY POINT	SPECIES	AGE	TYPE	LOC	HGT	ASP	SIZE	COND	OCC/PRO	ELEV	UTM E	UTM N	UTM ZONE	PHOTOS	NOTES
1	GOEA		1	1	2	NW	1	2, 4	0		557032	3858086	11 S	GOEA 3	3 Inactive GOEA nests
2	GOEA		1	1	1	NW	1	2, 4	0		558983	3859814	11 S	GOEA 1	2 inactive GOEA nests
3	GOEA		1	1	2	NW	1	1, 4	0		559635	3860121	11 S	GOEA 2	1 inactive GOEA nest
4	RTHA		1	1	2	S	2	3, 4	0		556877	3857126	11 S		Inactive RTHA nest
5	CORA		1	1	2		3	3, 4	0		557967	3858103	11 S		Raven/Woodrat nest
6	PRFA		2,4	1	1,2	SE		4	0		558643	3856347	11 S	GOEA 4	Good PRFA type cliff
7	RTHA/GOEA		1	1	2	SE	1	2	0		559257	3857377	11 S	GOEA 5	Large inactive stick nest
8	CORA		1	1	2	SE	3	2	0		559257	3857377	11 S		Raven nest
9	CORA		1	1	2	SE	3	2	0		560508	3855456	11 S		Raven nest
10	GOEA/RTHA		1	1	2	E	1	2	0		564305	3849625	11 S	GOEA 6	Large inactive stick nest
11	GOEA		1	1	2	NW	1	1	2		565215	3850298	11 S	GOEA 7, 7a, 7b	Active GOEA nest w/ incubating adult
12	GOEA	А							2		565215	3850298	11 S	GOEA 7a	Incubating adult GOEA
13	GHOW	Α							_		565577	3848740	11 S		GHOW flushed from low cliff
14	GOEA		1	1	2	N	1	3	0		565942	3850479	11 S	GOEA 8	Inactive GOEA nest



Calico Solar Golden Eagle Nest Survey Form

Survey Location: <u>Cady Mountains</u>

Page: 1 of 3

Date: 11 March 2010

Personnel: BL, PM, TG, RS

Weather: Sunny, Clear, Cool, No wind

Survey Start: 0800

Survey End: 1500

WAY POINT	SPECIES	AGE	TYPE	LOC	HGT	ASP	SIZE	COND	OCC/PRO	ELEV	UTM E	UTM N	UTM ZONE	PHOTOS	NOTES
15	RTHA		1	1	2	NW	2	2, 4	0		566409	3850370	11 S	GOEA 9	Inactive RTHA nest
16	PRFA		2,3	1	2	NW	2	4	0		566409	3850370	11 S	GOEA 9	Good PRFA type cliff
17	GOEA		1	1	1	N	1	2, 4	0		571388	3846519	11 S	GOEA 10	Inactive GOEA nest, lots of whitewash
18	CORA		1	1	2	W	3	2, 4	0		543699	3856591	11 S	GOEA 11	Raven nest
19	PRFA		2	1	2	W		4	0		543699	3856591	11 S	GOEA 11	Good PRFA type cliff
20	CORA		1	1	2	NW	3	3	0		543333	3855179	11 S		Raven/Woodrat nest
21	RTHA	А									542024	3854352	11S		Adult RTHA flying
22	PRFA	А									542872	3854144	11 S		Adult PRFA flying
23	CORA		1	1	1	SE	3	2	0		545445	3854026	11 S	GOEA 12	Raven nest
24	RTHA	А									545170	3853960	11 S		Adult RTHA flying
25	RTHA		1	1	2	W	2	3, 4	0		543733	3854015	11 S	GOEA 13	Medium stick nest on ledge
26	PRFA		2	1	2	W	2	4	0		543733	3854015	11 S	GOEA 13	Possible PRFA ledge
27	RTHA		1	1	1		2	1, 4	2		535671	3841756	11 S	GOEA 14, 14a	Active RTHA nest w/ incubating adult
28	RTHA	Α							2		535671	3841756	11 S	GOEA 14	RTHA in incubation posture

URS

Calico Solar Golden Eagle Nest Survey Form

Survey Location: <u>Cady Mountains</u>

Page: 1 of 3

Date: 11 March 2010

Personnel: BL, PM, TG, RS

Weather: Sunny, Clear, Cool, No wind

Survey Start: 0800

Survey End: 1500

WAY POINT	SPECIES	AGE	TYPE	LOC	HGT	ASP	SIZE	COND	OCC/PRO	ELEV	UTM E	UTM N	UTM ZONE	PHOTOS	NOTES
29	RTHA		1	1	1	N	2	2, 4	0		543358	3840950	11 S	GOEA 15	Inactive RTHA nest
30	PRFA		1	1	2	N	2	4	0		544713	3840548	11 S		Good PRFA type cliff
31	PRFA		1	1	2	N	3	4	0		541304	3841057	11 S	GOEA 16	Good PRFA type cliff
32	AMKE	А									531527	3843921	11 S		Pair of AMKE flying
33	PRFA		2,3	1	2	N	2	4	0		557456	3868360	11 S	GOEA 17	Good PRFA type cliff
34	RTHA	А									554105	3864934	11 S		RTHA flying



Calico Solar Golden Eagle Helicopter Survey Data Dictionary

Waypoint: From GPS locations

Species: AOU code (GOEA: golden eagle, RTHA: red-tailed hawk, CORA: common

raven, PRFA: prairie falcon, AMKE: American kestrel)

Age Class: A Adult

S Sub-adult

J Juvenile

Nest Type: 1 Stick nest

2 Open ledge3 Pothole

Location: 1 Cliff

2 Transmission tower

3 Tree

Height: 1 Upper third of cliff

2 Middle third3 Lower third

Size: 1 Large (5' to 8' diameter)

2 Medium (3' to 5' diameter) 3 Small (1' to 3' diameter)

Condition: 1 New material

2 Weathered material

3 Dilapidated

4 Whitewash present

Occupancy/ 0 Nest vacant, no raptor present

Productivity: 1 Pair present

2 Raptor in incubation posture

3 Eggs in nest4 Chicks in nest

Raptor perched on nest
Raptor perched near nest
Raptor in general area of nest

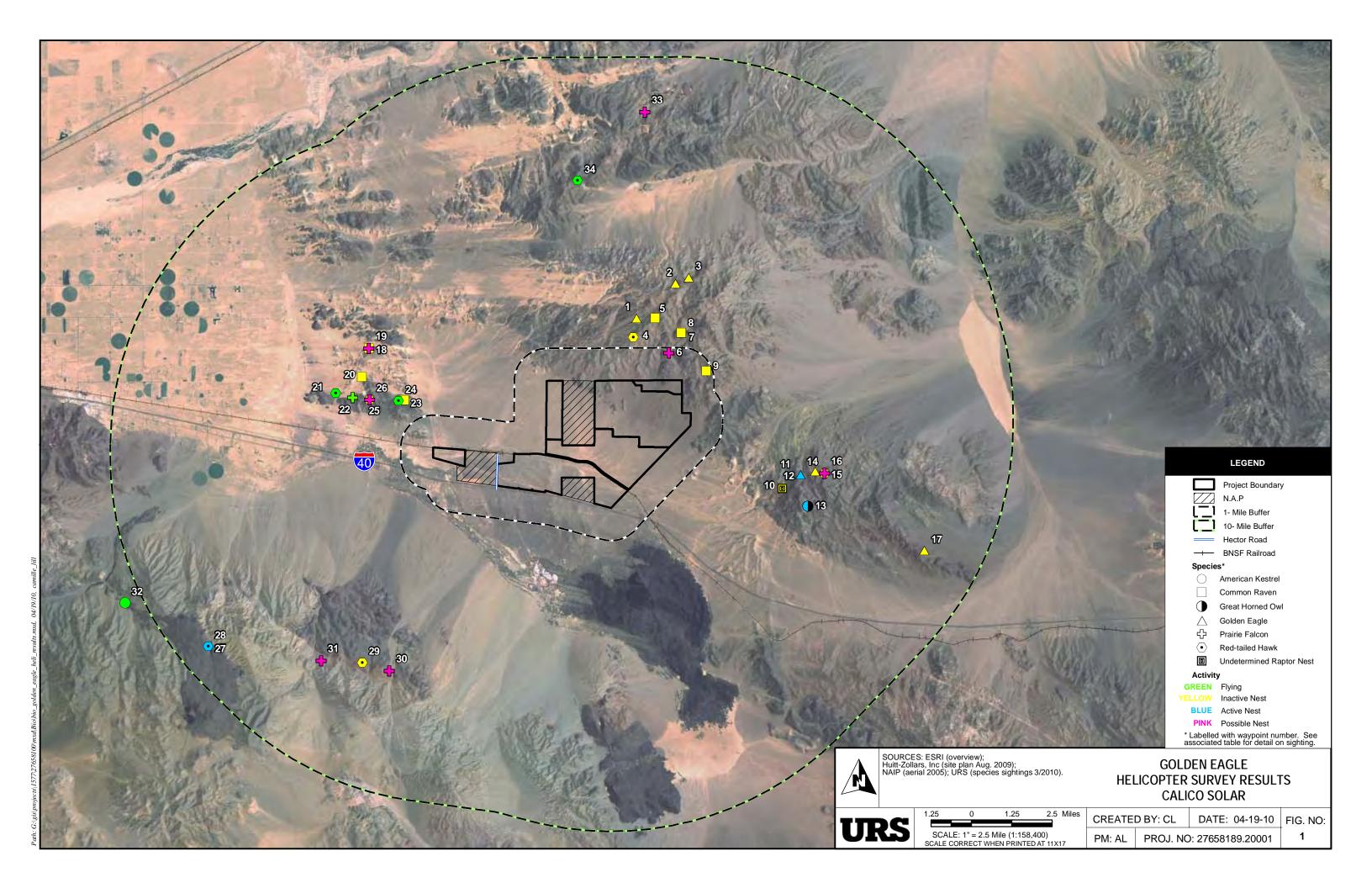
Elevation: Of nest(s) in feet above sea level

Notes: Sex of raptor if known

of eggs/chicks

Presence of prey remains in nest

Other items of interest



Dr. Patrick Mock URS Corporation 1615 Murray Canyon Road Suite 1000 San Diego, CA 92108

RE: Calico Solar Project Survey, March 11-12, 2010

This letter provides a summary of the bighorn sheep sightings during the above-referenced survey. A photo log and data sheets are attached for your information.

Summary:

During two days of helicopter surveys for raptors in the Cady Mountains region of the East Mojave Desert, I viewed eight separate groups of desert bighorn sheep. These sightings were documented at the time of observation using data log sheets and GPS. The data sheets are attached. In addition, photos were taken of six of the groups. The attached photo log contains images of three separate groups. Additional photos are available upon request.

The following is a tabular summary of the desert sheep observations:

Category	Day One 3/11/10	Day Two 3/12/10	Total
Class I Rams	1	0	1
Class II Rams	3	1	4
Class III Rams	3	3	6
Class IV Rams	0	1	1
Ewes	26	12	38
Lambs	9	3	12
Totals	42	20	62

Additional Information:

Survey time total: 12 hours

GPS location format: hddd mm.mmm

Map Datum: WGS 84 North Reference: True

Survey Information:

Whenever desert bighorn sheep were detected, I directed the helicopter to back off a considerable distance so as not to disturb the sheep. It appears that air traffic in the area is fairly common. While we were conducting surveys, two military helicopters and an air ambulance were observed flying in the vicinity of the survey zone. In addition, there is an airport near the south boundary of the survey zone.

Calico Solar Survey Summary March 19, 2010 Page 2

In my experience, sheep will not normally use wide-open flat areas, away from escape terrain. Escape terrain is usually hillsides or steeper terrain they can access to avoid predators. In addition, in the Cady Mountain range, the freeways prohibit sheep movement. Sheep characteristically lamb on open, steep rocky hillsides. The Calico Solar site does not support habitat suitable as a lambing area.

If you need any additional information or have any questions concerning the information contained in this summary, please contact me.

Tim Glenner P.O. Box 2966 Wrightwood, CA 92397

Tel: (909) 560-0039 t.glenner@verizon.net



Photograph #1

Date: 03/11/10

Comments:

N34 47.251 W116 17.824

Group of 16 sheep: One ram, ten ewes, and five lambs.



Photograph #2

Date: 03/11/10

Comments:

N34 47.251 W116 17.824

Group of 16 sheep: One ram, ten ewes, and five lambs.



Photograph #3

Date: 03/12/10

Comments:

N34 57.275 W116 21.941

Group of 7 sheep: four ewes and three lambs



Photograph #4

Date: 03/12/10

Comments:

N34 54.938 W116 25.692

Six ewes, part of a larger group of nine sheep.

Bighorn	Sheep	o Survey	/ Form
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Date: 03/11/10	Start Time: approx. 08:00	Stop Time: approx. 15:30

Group Size	Time			(Classif	ication			Way Point Data/Photo Log Reference
		Ra	ms		Ewes	Yrlgs	Lambs		
	I	11	Ш	IV					
3	09:11			3					Way Point 1: N34 52.548 W116 19.277 Altitude: 3609 No Photo
3	09:13		3						Way Point 2: N34 51.640 W116 19.465 Altitude: 3959 No Photo
5	12:16					4		1	Way Point 3: N34 51.330 W116 20.323 Altitude: 4048 No Photo
16	13:42	1				10		5	Way Point 4: N34 47.251 W116 17.824 Altitude: 2949 Photo #1 and Photo #2
15	13:56					12		3	Way Point 5: N34 47.213 W116 17.507 Altitude: 3713 No Photo

Totals: Class I Rams: 1

Class II Rams: 3
Class III Rams: 3
Class IV Rams: 0
Ewes: 26
Yearlings: 0
Lambs: 9

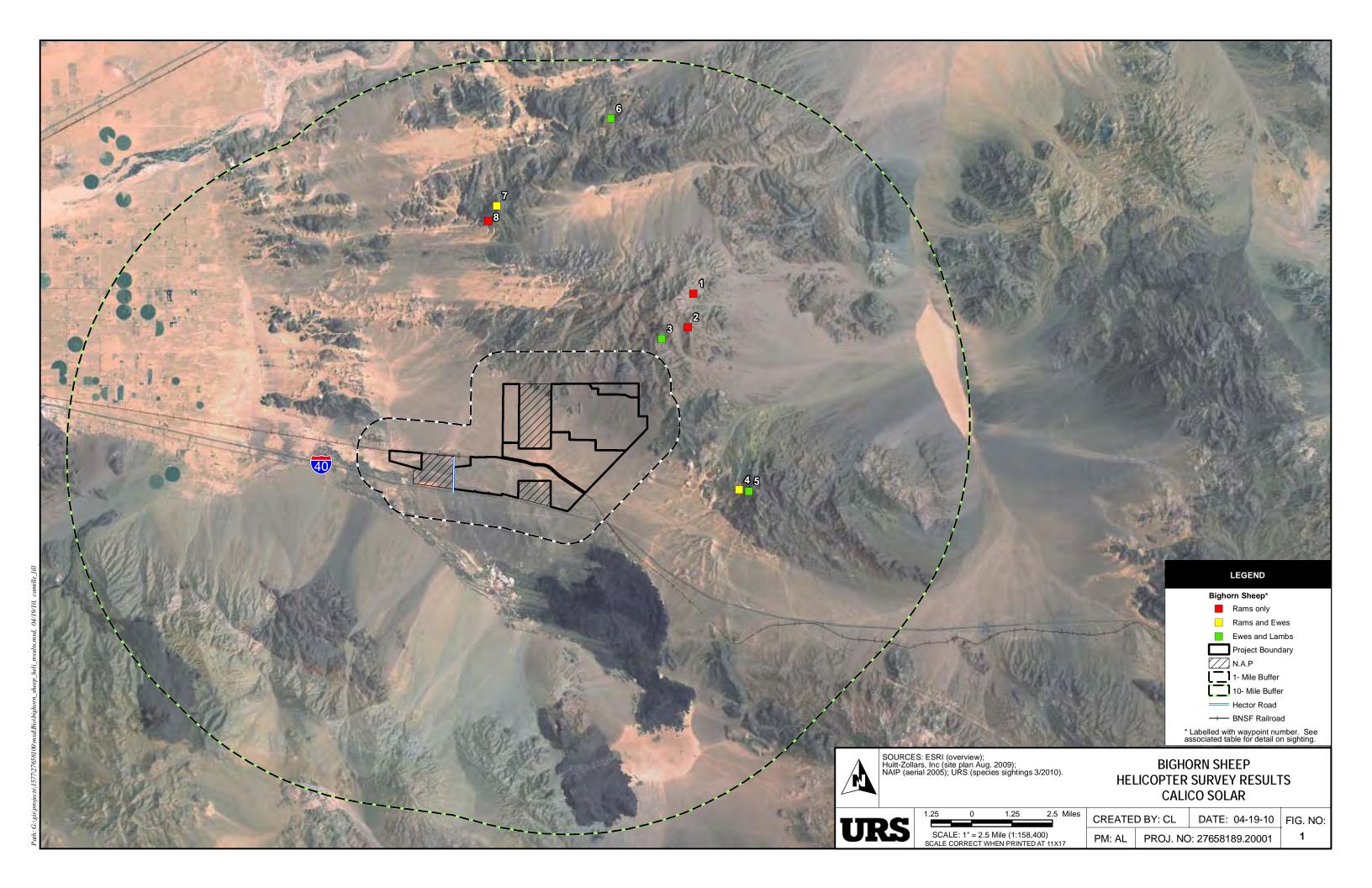
Total for 3/11/10: 42 sheep

Date: 03/	12/10		Sta	rt Tim	e: app	orox. 0 9	:00	Stop Ti	me: approx. 15:30		
Group Time Size	Time			(Classif	ication		.1	Way Point Data/Photo Log Reference		
		Ra	ms		Ewes	Yrlgs	Lambs				
	ı	П	Ш	IV							
7	13:47					4		3	Way Point 6: N34 57.275 W116 21.941 Altitude: 2911 Photo #3		
9	14:00		1			8			Way Point 7: N34 54.938 W116 25.692 Altitude: 3404 Photo #4 (photo shows 6 ewes out of this group)		
4	4 14:03			3	1				Way Point 8: N34 54.531 W116 25.979 Altitude: 3448 No Photo		

Totals: Class I Rams: 0

Class II Rams: 1
Class III Rams: 3
Class IV Rams: 1
Ewes: 12
Yearlings: 0
Lambs: 3

Total for 3/12/10: 20 sheep





BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA

1516 NINTH STREET, SACRAMENTO, CA 95814 1-800-822-6228 – www.energy.ca.gov

APPLICATION FOR CERTIFICATION For the CALICO SOLAR (Formerly SES Solar One)

Docket No. 08-AFC-13

PROOF OF SERVICE

(Revised 2/8/10)

APPLICANT

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APPLICANT'S COUNSEL

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INTERVENORS

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DECLARATION OF SERVICE

I, <u>Corinne Lytle</u>, <u>declare</u> that on A<u>pril 30</u>, <u>20</u>10, I served and filed copies of the attached App<u>licant's Submitt</u>al of <u>Golden E</u>agle and Bighorn Sheep Survey Results. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page [www.energy.ca.gov/sitingcases/solarone].

The documents have been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(Check all that Apply)

(Check	all that Apply)
	FOR SERVICE TO ALL OTHER PARTIES:
X	sent electronically to all email addresses on the Proof of Service list;
X	by personal delivery or by depositing in the United States mail at with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses NOT marked "email preferred."
AND	
	FOR FILING WITH THE ENERGY COMMISSION:
X	sending an ori ginal paper copy and one electronic copy, mailed and emailed respectively, to the address below (<i>preferred method</i>);
OR	
	depositing in the mail an original and 12 paper copies, as follows:
l declar	CALIFORNIA ENERGY COMMISSION Attn: Docket No. <u>08-AFC-13</u> 1516 Ninth Street, MS-4 Sacramento, CA 95814-5512 docket@energy.state.ca.us e under penalty of perjury that the foregoing is true and correct.
	Original Signed By
	Corinne Lytle