

APPENDIX F
DESERT TORTOISE SURVEY REPORTS
(Reports for 2013, 2012, 2011)

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September 12, 2013

Felicia Serchia
United States Fish and Wildlife Service
777 E. Tahquitz Canyon Way
Palm Springs, CA 92262

Jack Crayon
California Department of Fish and Wildlife
78078 Country Club , #109
Bermuda Dunes, CA 92203

Subject: Protocol Desert Tortoise Survey Results: Southern California Edison West of Devers Upgrade Project, Morongo Indian Reservation and Unincorporated Riverside County, California; May 2013 (LSA Project Number SCE1110)

Dear Ms. Serchia and Mr. Crayon:

This letter documents the results of a protocol presence/absence survey for the Mojave desert tortoise (*Gopherus agassizii*) conducted by LSA Associates, Inc. (LSA). The Mojave desert tortoise is listed as threatened by both the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW).

The survey was conducted primarily within the portion of the Southern California Edison (SCE) West of Devers Upgrade Project alignments within the Morongo Indian Reservation, but also included unincorporated areas of Riverside County, California (Figure 1; all figures provided in Appendix A).

Desert tortoise sign was observed within portions of the survey area.

Survey Area

The overall West of Devers Upgrade Project includes two alignments (i.e., existing, proposed) and one alternative alignment. The existing alignment is in the SCE right-of-way (ROW) corridor, which extends from the Vista Substation in the City of Grand Terrace in San Bernardino County to the Devers Substation near North Palm Springs in Riverside County. The proposed alignment is south of the existing alignment and north of Interstate 10 (I-10) (Figure 1). The alternative alignment is an alternative route to the proposed alignment and is between North Hathaway Road and Malki Road, and closer to I-10 than the proposed alignment. Both the proposed alignment and the alternative alignment are being considered as they are south of the existing alignment and closer to I-10.

The SCE ROW and the proposed alternative alignment within the desert tortoise survey area are located within the Morongo Indian Reservation, which includes inholdings that are part of unincorporated Riverside County (Figure 2). The desert tortoise survey area included both existing and proposed SCE ROW between Rushmore Avenue along the east survey boundary and North Hathaway Avenue along the west survey boundary. The survey was conducted within approximately 8 linear miles of suitable habitat areas along the ROW. Specifically, the study area has easterly latitude/longitude (lat/long) coordinates of 33.932972 (North American Datum [NAD] 83 Zone 11S Universal Transverse Mercator (UTM) 516,190 easting by 3,754,738 northing), and westerly lat/long coordinates of 33.9389684, -116.850617 (NAD 83 Zone 11S UTM 513,805 easting by 3,755,399 northing) within portions of Sections 1, 2, 11, and 12, Township 1 South, Range 2 East and

9/12/13 «P:\SCE1110 - WOD\Biology\Flora Fauna JD\Reptiles Amphibians\Desert Tortoise 2013\WOD_DETTO Morongo Report_2013 v2.doc»

Sections 1, 2, 11, and 12, Township 3 South, Range 1 East, as shown on the *Whitewater and Cabazon, California* 7.5-minute series United States Geological Survey (USGS) topographic maps.

The topography within the survey area ranges from relatively flat to hilly, with elevations ranging from approximately 1,700 feet on the east end of the survey area to 2,500 feet on the west end of the survey area. The survey area is primarily undeveloped and is vegetated by a mosaic of vegetation communities including catclaw scrub, creosote bush scrub, grassland/forbland, and riparian wash/scrublands. Other land uses within the survey area include developed/disturbed areas, which include residential housing and areas that are almost completely devoid of vegetation as a result of previous ground-disturbing activities.

Methods

LSA conducted the focused desert tortoise surveys on May 8, 9, 10, 17, 21, 22, 23, and 29, 2013, in accordance with current USFWS 2010 protocol.¹ The surveys were conducted by LSA biologists Denise Woodard, Lonnie Rodriguez, Stan Spencer, Elizabeth Hohertz, Erin Martinelli, Jill Carpenter, Stefan De Barros, and Jodi Ross.

The survey area, or USFWS 2010 “Action Area,” was walked using 10 meter (30-foot) wide belt transects in all areas of potentially suitable habitat. Potentially suitable habitat areas included areas vegetated with catclaw scrub, creosote bush scrub, brittlebush scrub, and riparian wash/scrublands. In addition, small patches of grassland/forbland within the larger suitable habitat areas were surveyed.

USFWS 2010 data forms were completed for each day of survey and are provided in Appendix B. In addition, notes were taken on vegetation communities and plant and animal species observed.

Results

No live desert tortoises were observed within the survey area. However, positive desert tortoise sign was detected, which included burrows and scat. The desert tortoise sign was concentrated in an area between Deep Creek Road near the mouth of Deep Canyon on the west, and the intersection of Service Road and Penland Road and the mouth of an unnamed canyon on the east (Figure 2). The highest concentration of sign was found in areas primarily vegetated by creosote bush scrub. No sign was observed west of Deep Creek Road, and it appears likely that Deep Creek Road defines the western limit of naturally occupied habitat for the desert tortoise in the project area.² The vegetation west of Deep Creek Road is dominated by catclaw scrub and has been heavily affected by cattle grazing and development on the Morongo Indian Reservation, including residential housing and paved and dirt roads.

¹ USFWS 2010. Preparing for any Action That May Occur within the Range of the Mojave Desert Tortoise (*Gopherus agassizii*).

² Desert tortoise are purported to occur west of Deep Creek Road in association with development on the Reservation (2012 conversation between James Payne [Morongo Environmental Protection Department] and Ingri Quon [LSA biologist]), but are not known from any available biological survey reports conducted in the vicinity of the SCE West of Devers Upgrade Project.

Figure 2 shows locations of sign detected, and Figure 3 provides representative site photographs. Table A, below, summarizes the desert tortoise findings by date, type, USFWS class, number, and location observed for sign detected.

Table A: 2013 Summary of Desert Tortoise Sign Detected

Detection Number	Date (month/day)	Sign Type	Class*	Number of Sign	Location (UTM NAD 83)
1	5/8	Burrow	2	1	524173, 3754636
2	5/9	Scat	2	3	522391, 3754802
3	5/9	Burrow	2	1	522818, 3754780
4	5/9	Burrow	4	1	522457, 3754714
5	5/9	Scat	2	2	522363, 3754752
6	5/9	Scat	2	4	522164, 3754718
7	5/9	Scat	2	18	522160, 3754767
8	5/9	Scat	2	13	521289, 3754748
9	5/9	Scat	2	2	522159, 3754687
10	5/9	Scat	2	1	522197, 3754713
11	5/9	Scat	2	3	522379, 3754697
12	5/9	Scat	2	1	522385, 3754680
13	5/9	Scat	2	2	522370, 3754660
14	5/9	Scat	2	2	522443, 3754705
15	5/9	Scat	1	4	522642, 3754695
16	5/9	Scat	2	5	522661, 3754731
17	5/9	Scat	2	2	522694, 3754702
18	5/9	Scat	2	2	522764, 3754691
19	5/9	Scat	1	2	522987, 3754681

* Class identified according to Information Index for Desert Tortoise Sign, Burrows, Dens, Scat, and Shell Remains (USFWS 1992).

Class Legend

Burrow and Den:

1. Currently active, with tortoise or recent tortoise sign
2. Good condition, definitely tortoise, no evidence of recent use
3. Deteriorated condition, definitely tortoise, no evidence of recent use
4. Deteriorated condition, possibly tortoise
5. Good condition, possibly tortoise

Scat:

1. Wet, or freshly dried, obvious odor
2. Dried with glaze, some odor, dark brown
3. Dried, no glaze or odor, signs of bleaching, tightly packed material
4. Bleached, or consisting only of plant fiber

Shell Remains:

1. Fresh or putrid

If you have any questions, please contact me at (951) 781-9310 or Ingri Quon at (949) 553-0666.

Sincerely,

LSA ASSOCIATES, INC.



Denise Woodard

Associate/Senior Biologist

Attachments: Appendix A: Figures
Appendix B: Data Sheets

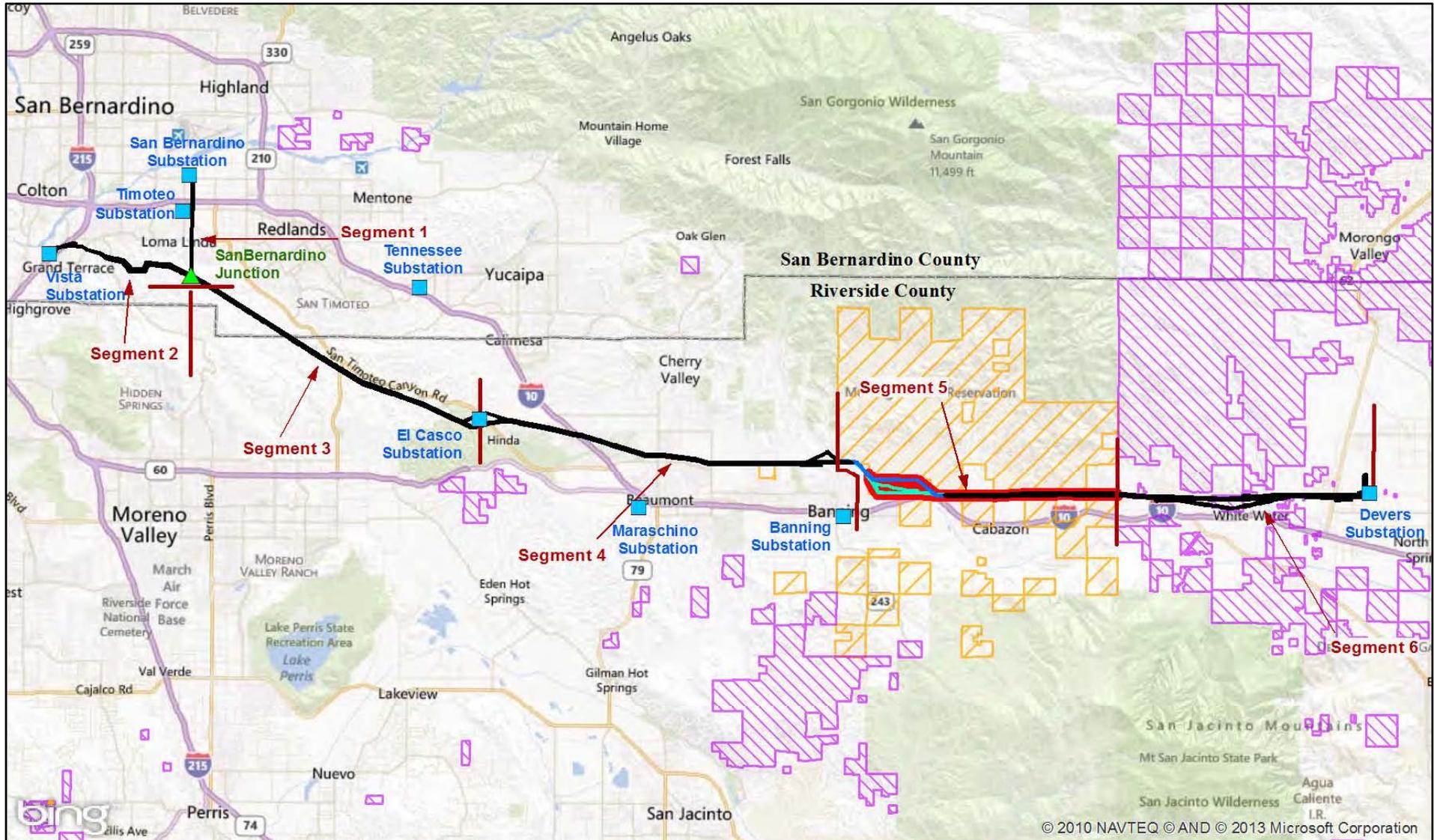
cc: Jack Goldfarb, Southern California Edison (Monrovia)
Scott Holbrook, Southern California Edison (Monrovia)

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APPENDIX A

FIGURES

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LEGEND

- Existing Transmission Line Right of Way
- Existing Transmission Line Right of Way to be Removed
- Proposed and Alternative Transmission Line Right of Ways
- Desert Tortoise Study Area (2013)
- Substation
- Junctions
- U.S. Bureau of Land Management
- Morongo Reservation

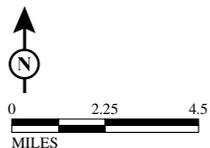


FIGURE 1

Southern California Edison
West of Devers Upgrade Project
Project Location Map

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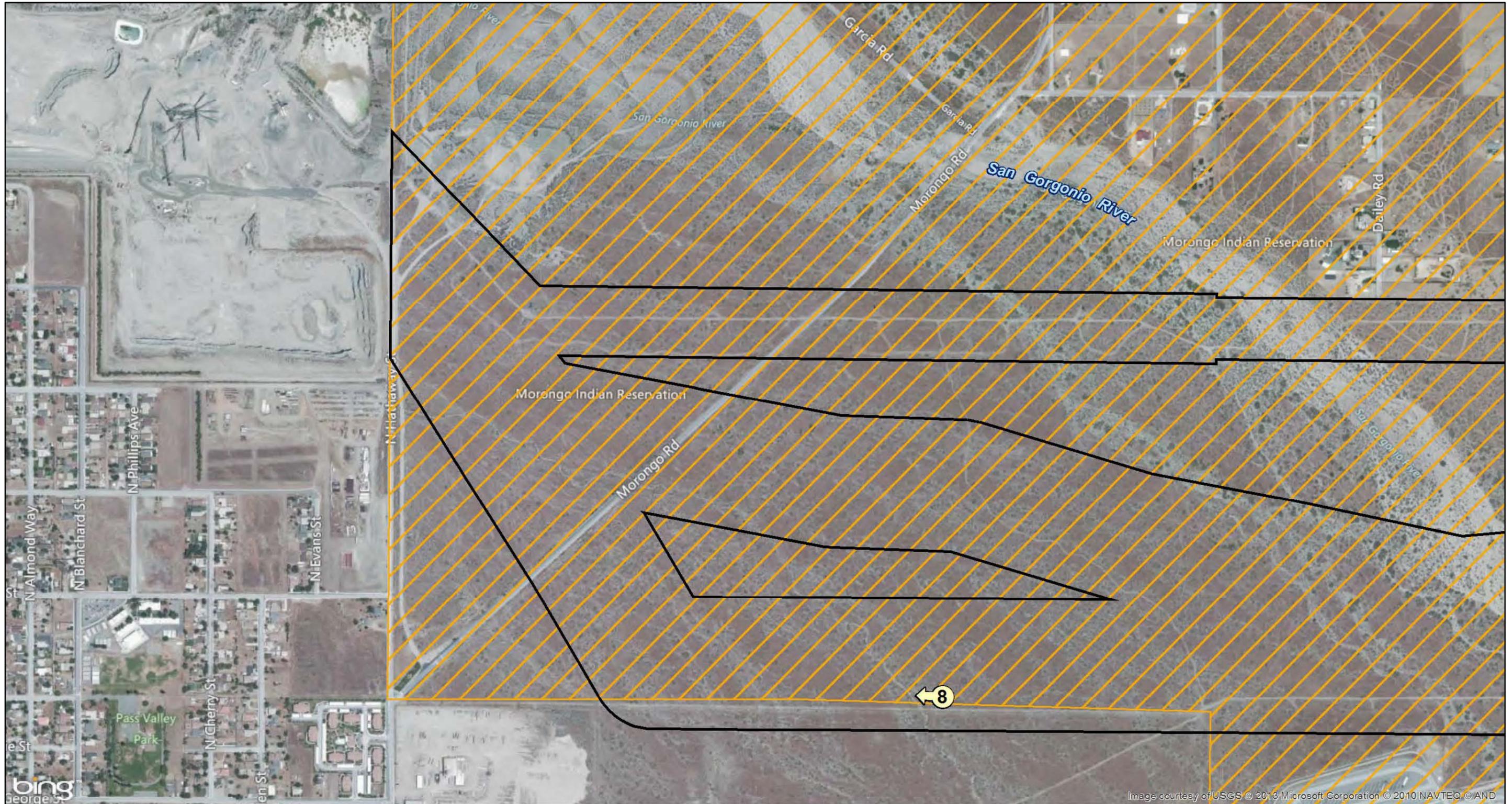
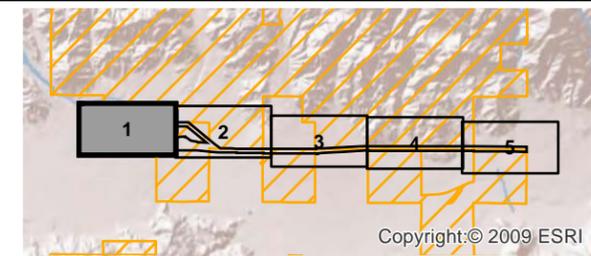
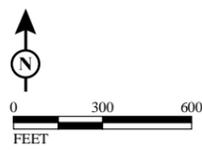


Image courtesy of USGS © 2013 Microsoft Corporation © 2010 NAVTEQ © AND



LEGEND

- Desert Tortoise Survey Area (2013)
- Photo Locations
- Morongo Reservation
- Burrow**
- Class 2
- Class 4
- Scat**
- Class 1
- Class 2
- No Survey Areas**
- Private Property
- Unsuitable Habitat



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FIGURE 2
Sheet 1 of 5

Southern California Edison
West of Devers Upgrade Project
Desert Tortoise Survey Results 2013

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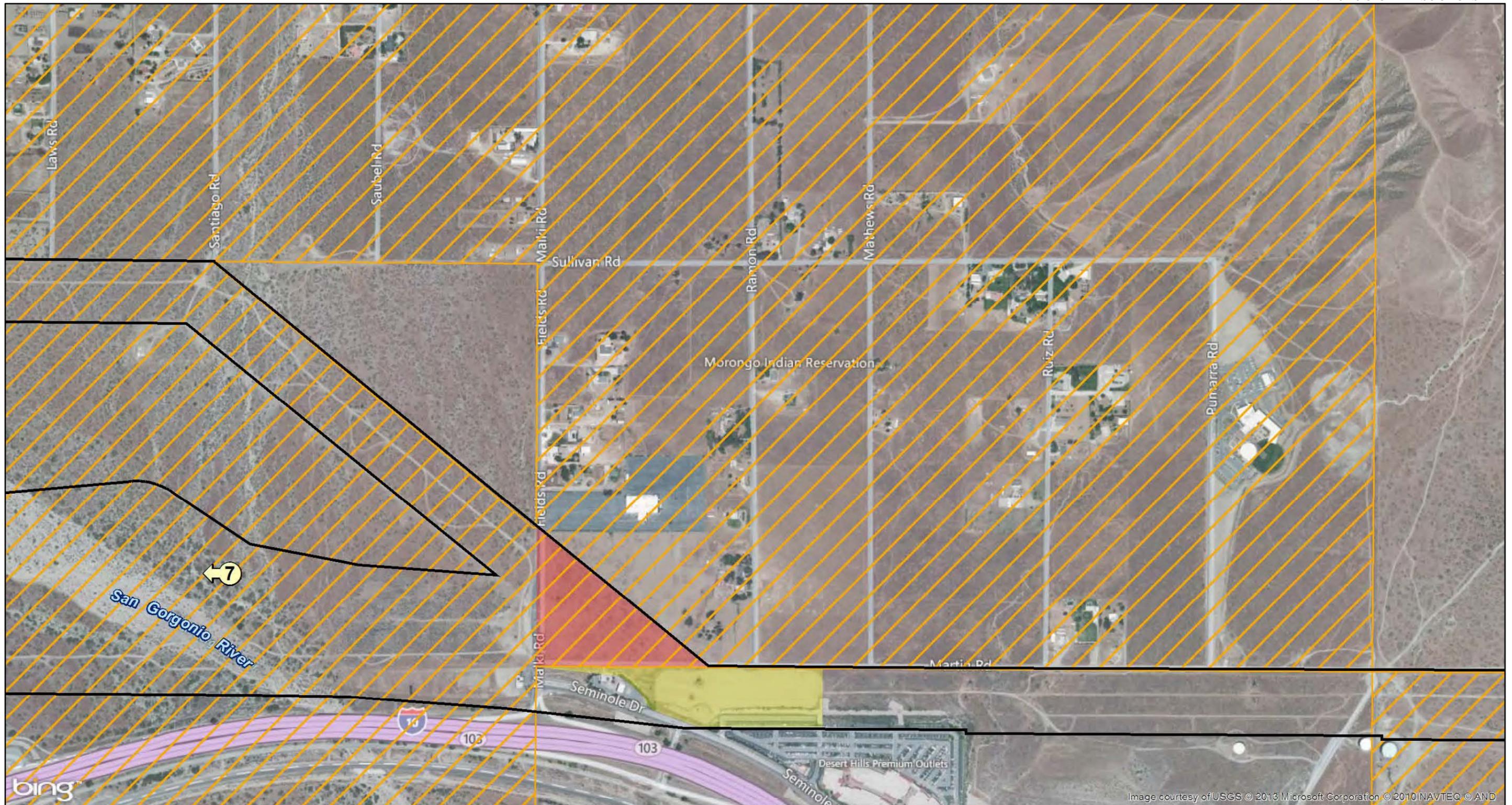
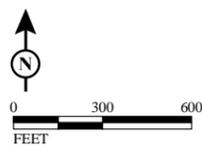


Image courtesy of USGS © 2013 Microsoft Corporation © 2010 NAVTEQ © AND

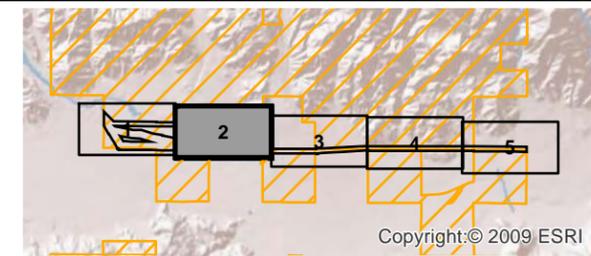


LEGEND

- Desert Tortoise Survey Area (2013)
- Photo Locations
- Morongo Reservation
- Burrow**
- Class 2
- Class 4
- Scat**
- Class 1
- Class 2
- No Survey Areas**
- Private Property
- Unsuitable Habitat



SOURCE: SCE (4/2013); Bing Maps (2012); LSA (5/2013)
 E:\SCE1110\GIS\MXD\Biology\DETOsurveyResults2013.mxd (9/12/2013)



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FIGURE 2
 Sheet 2 of 5

Southern California Edison
 West of Devers Upgrade Project
 Desert Tortoise Survey Results 2013

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LEGEND

- Desert Tortoise Survey Area (2013)
- Photo Locations
- Morongo Reservation
- Burrow Class 2
- Burrow Class 4
- Scat Class 1
- Scat Class 2
- No Survey Areas Private Property
- No Survey Areas Unsuitable Habitat

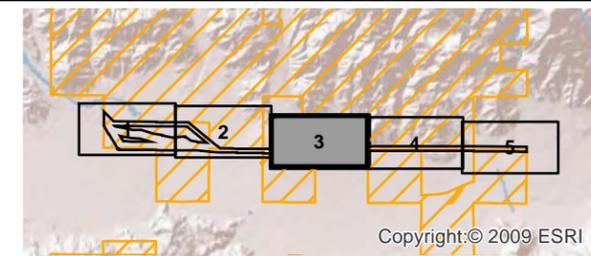
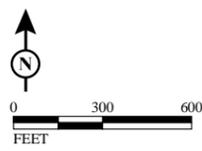


FIGURE 2
Sheet 3 of 5

Southern California Edison
West of Devers Upgrade Project
Desert Tortoise Survey Results 2013

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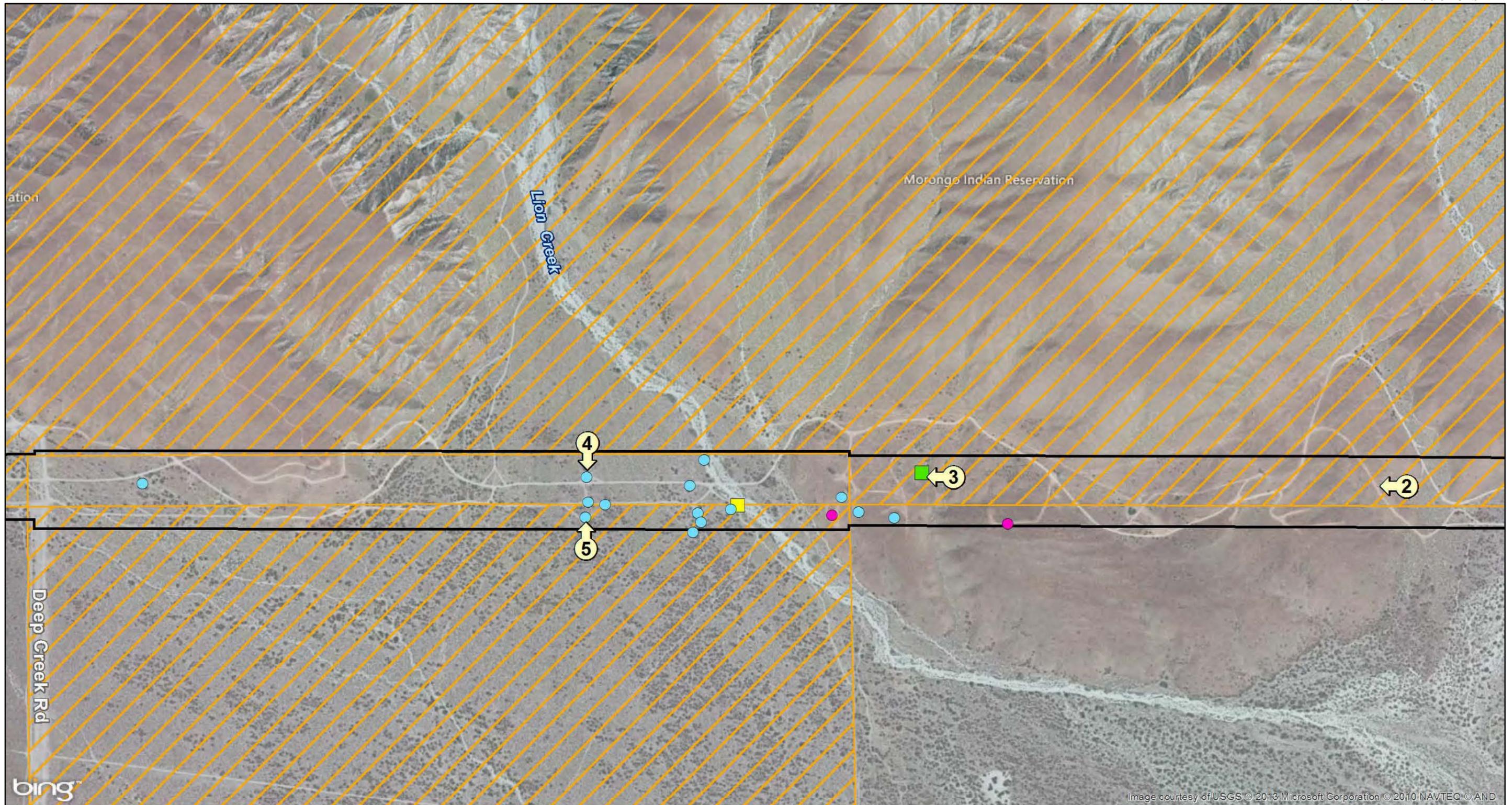
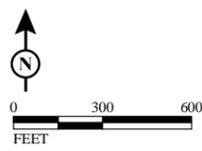


Image courtesy of USGS © 2013 Microsoft Corporation © 2010 NAVTEQ © AND

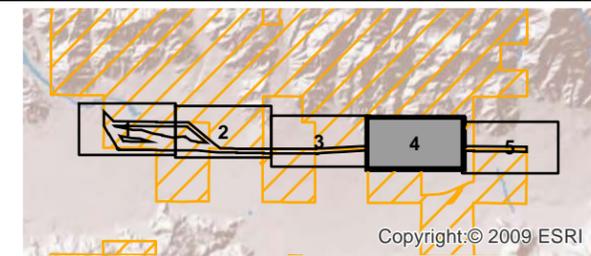


LEGEND

- Desert Tortoise Survey Area (2013)
- Photo Locations
- Morongo Reservation
- Burrow**
- Class 2
- Class 4
- Scat**
- Class 1
- Class 2
- No Survey Areas**
- Private Property
- Unsuitable Habitat



SOURCE: SCE (4/2013); Bing Maps (2012); LSA (5/2013)
 E:\SCE1110\GIS\MXD\Biology\DETOSurveyResults2013.mxd (9/12/2013)



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FIGURE 2
 Sheet 4 of 5

Southern California Edison
 West of Devers Upgrade Project
 Desert Tortoise Survey Results 2013

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LEGEND

Desert Tortoise Survey Area (2013)	Burrow Class 2	Scat Class 1	No Survey Areas Private Property
Photo Locations	Burrow Class 4	Scat Class 2	Unsuitable Habitat
Morongo Reservation			

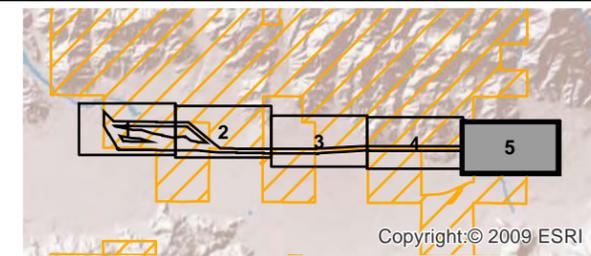


FIGURE 2
 Sheet 5 of 5

Southern California Edison
 West of Devers Upgrade Project
 Desert Tortoise Survey Results 2013

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Photo 1 - View of creosote bush scrub habitat in foreground and brittle bush scrub habitat in background on the hills.



Photo 2 - View of brittle bush scrub habitat.



Photo 3 - View of Class 2 burrow in bank of drainage.



Photo 4 - View of Class 2 scat.



Photo 5 - View of area near existing towers where abundant desert tortoise scat was observed.



Photo 6 - View of catclaw scrub habitat.



Photo 7 - View of riparian wash-scrublands habitat.



Photo 8 - View of catclaw scrub habitat in area heavily grazed by cattle.

APPENDIX B

DATA SHEETS

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USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 8 May 2013 Survey biologist(s): Denise Woodard Linnie Rodriguez
(day, month, year) (name, email, and phone number)

Site description: SCE West of Devers, Inyo
(project name and size; general location)

County: Riverside Quad: White Water Location: See start & end points
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: _____ Transect length: _____

GPS Start-point: 0525886 13754686 Start time: 9:00 am
(easting, northing, elevation in meters)

GPS End-point: 0523719 13754692 End time: 4:37 am
(easting, northing, elevation in meters)

Start Temp: 63 °F End Temp: 75 °F Sky Partly cloudy (25%) Wind West 5-10 mph.

Live Tortoises

Detection Number	GPS Location		Time	Tortoise location	Approx. MCL	Existing tag
	Easting	Northing		(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)	>160-mm? (Yes, No, or Unknown)	# and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

Tortoises Sign (burrows, scats, carcasses, etc.)

Detection Number	GPS Location		Type of sign	Description and comments
	Easting	Northing	(burrows, scats, carcass, etc.)	
1	<u>0524173</u>	<u>13754686</u>	<u>Burrow</u>	<u>Class 2 - spider webs in entrance.</u>
2				
3				
4				
5				
6				
7				
8				

Burrow owl 0524164 13754667 Burrow owl White mesh / pellets in entrance Page: 1 of 1
Burrow

YUMA COPE Leptos ca. western wh. P.Tail Transect number:
Coyle Coyote Sect Sylv. and. Hol A / 15pc base / side blotch Hermosa Thrush (Fresh) dead
 L:\NATRES\Forms\LSA Data Forms\Tortoise\USFWS 2010 Desert Tortoise Pre-Project Survey Data Sheet.doc Andelope sp. 52.

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion.

Date of survey: 9 May 2013 Survey biologist(s): Lennie Rodriguez, Erin Martinelli, Denise Woodard, Stan Spencer, Jill Carpenter
(day, month, year) (name, email, and phone number)

Site description: West of Devers - Morongo
(project name and size; general location)

County: Riverside Quad: Cabazon Location: See GPS Start & End
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: _____ Transect length: _____

GPS Start-point: 0523754/3754827 Start time: 7:15 am/pm
(easting, northing, elevation in meters)

GPS End-point: _____ End time: 6:10 am/pm
(easting, northing, elevation in meters)

Start Temp: 62 °F End Temp: 70 °F partly cloudy (20%) wind NW 5-15 mph

Live Tortoises

Detection Number	GPS Location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1						
2						
3						
4						
5						
6						
7						
8						

Tortoises Sign (burrows, scats, carcasses, etc.)

Detection Number	GPS Location		Type of sign <small>(burrows, scats, carcass, etc.)</small>	Description and comments
	Easting	Northing		
1	0522391	3754819	Scat - 3 total	Class 2 Some odor, medium to dark brown.
2	0522818	3754780	Burrow	2 12" W X 8" X 18" D Class 2
3	0522457	3754714	Burrow	Class 4 - located in stream bank coyote and woodrat scat in entrance - (2 12" W X 12" D)
4	0522363	3754752	Scat - 2 total	Class 2
5	0522164	3754718	Scat - 4 total	Class 2
6	0522160	3754767	Scat - 18 total	Class 2 - found near towers on tower Road.
7	0522160	3754748	Scat - 13 total	
8	0522160	3754748	Scat - 2	

Horned lizard scat ATFL
 HoLA *Crotalus viridis* (Freshly dead)
 Antelope gr. sc. WEME
 Side blotched lizard

Page: 1 of 3

Transect number: _____

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 9 May 2013 (continued) Survey biologist(s): _____
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: _____ Quad: _____ Location: _____
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: _____ Transect length: _____

GPS Start-point: _____ Start time: _____ am/pm
(easting, northing, elevation in meters)

GPS End-point: _____ End time: _____ am/pm
(easting, northing, elevation in meters)

Start Temp: _____ °C End Temp: _____ °C

Live Tortoises

Detection Number	GPS Location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1						
2						
3						
4						
5						
6						
7						
8						

Tortoises Sign (burrows, scats, carcasses, etc.)

Detection Number	GPS Location		Type of sign <small>(burrows, scats, carcass, etc.)</small>	Description and comments
	Easting	Northing		
1	0522197	3754713	Scat - 1 total	class 2 found in same area as previous
2	0522379	3754997	Scat - 3 total	class 2
3	0522385	3754680	Scat - 1 total	class 2
4	0522770	3754660	Scat - 2 total	class 2
5	0522443	3754705	Scat - 2 total	class 2
6	0522642	3754695	Scat - 4 total	(3) class 2, (1) class 1 <small>on tower Rd</small>
7	0522661	3754731	Scat - 5 total	class 2 on tower access Road
8	0522694	3754702	Scat - 2 total	class 2

Page: 2 of 3

Transect number: _____

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 9 May 2013 ^(cont. nued) Survey biologist(s): _____
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: _____ Quad: _____ Location: _____
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: _____ Transect length: _____

GPS Start-point: _____ Start time: _____ am/pm
(easting, northing, elevation in meters)

GPS End-point: _____ End time: _____ am/pm
(easting, northing, elevation in meters)

Start Temp: _____ °C End Temp: _____ °C

Live Tortoises

Detection Number	GPS Location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1						
2						
3						
4						
5						
6						
7						
8						

Tortoises Sign (burrows, scats, carcasses, etc.)

Detection Number	GPS Location		Type of sign <small>(burrows, scats, carcass, etc.)</small>	Description and comments
	Easting	Northing		
1	0522694	3754702	Scat - 2 total	class 2
2	0522764	3754691	Scat - 2 total	class 2
3	0522987	3754681	Scat - 1 total	class 2 on tower access Rd
4				
5				
6				
7				
8				

Page: 3 of 3

Transect number: _____

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 10 May 2013 Survey biologist(s): Denise Woodard, Stan Spencer, Erin Moffatt, Lennie Rodriguez, Jill Carpenter
(day, month, year) (name, email, and phone number)

Site description: SCE West of Devers - Morongo
(project name and size; general location)

County: Riverside Quad: Cabazon Location: See GPS Start and End
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: _____ Transect length: _____

GPS Start-point: 0521088/3754806 Start time: 8:25 am
(easting, northing, elevation in meters)

GPS End-point: 0521060/3754672 End time: 3:30 am/pm
(easting, northing, elevation in meters)

Start Temp: 50 °F End Temp: 90 °F partly cloudy (5%) wind NW 1-3 mph.

Live Tortoises

Detection Number	GPS Location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1						
2						
3						
4						
5						
6						
7						
8						

Tortoises Sign (burrows, scats, carcasses, etc.)

Detection Number	GPS Location		Type of sign <small>(burrows, scats, carcass, etc.)</small>	Description and comments
	Easting	Northing		
1				
2				
3				
4				
5				
6				
7				
8				<u>Side-blatch (leopard western wh. tail)</u>

Hermit Warbler Nomophila CORA BTGN CALLY HOSP
Townsend's Warbler HOPI BEWA Antigua SA. SQ. KILL
WE ME DRSP COYOTE LOPSON CAQU
CAWH DRSP ATFL WEKI

Page: 1 of 1

Transect number: _____

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 17, May 2013 Survey biologist(s): Denise Woodard, Lonnie Rodriguez, Stan Spence, Erin Macdonelli
(day, month, year) (name, email, and phone number)

Site description: SCE West of Devers - Maranga
(project name and size; general location)

County: Riverside Quad: Cabazon Location: See start & end
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one 100% coverage or Sampling Area size to be surveyed: _____ Transect #: _____ Transect length: _____

GPS Start-point: 0517866 102754697 Start time: 8:30 am/pm
(easting, northing, elevation in meters)

GPS End-point: 0516189 13954984 End time: 2:30 am/pm
(easting, northing, elevation in meters)

Start Temp: 60 °F End Temp: 75 °F

Live Tortoises

Detection Number	GPS Location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1						
2						
3						
4						
5						
6						
7						
8						

Tortoises Sign (burrows, scats, carcasses, etc.)

Detection Number	GPS Location		Type of sign <small>(burrows, scats, carcass, etc.)</small>	Description and comments
	Easting	Northing		
1				
2				
3				
4				
5				
6				
7				
8				

RTHA EAST ATFL CAWR metalswale Coachwhip
 AMKE WEKI Nomo Lepusca. BTB-V CALT
 HOPI WEME Side blotch lizard CAQU
 HUSP
 Page: 1 of 1
 Transect number: _____

L:\NATRES\Forms\LSA Data Forms\Tortoise\USFWS 2010 Desert Tortoise Pre-Project Survey Data Sheet.doc

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30 days of survey completion

Date of survey: 21 May 2013 Survey biologist(s): Devin Woodard Erin Mortwell, Jill Carpenter Stefan DeBorras
(day, month/year) (name, email, and phone number)

Site description: SCE West of Devers - Morongo
(project name and size; general location)

County: Riverside Quad: Caba 20n Location: See start and end
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one 100% coverage or Sampling Area size to be surveyed: _____ Transect #: _____ Transect length: _____

GPS Start-point: 0516190/3754738 Start time: 8:30 am
(easting, northing, elevation in meters)

GPS End-point: 0515218/3754637 End time: 3:30 am
(easting, northing, elevation in meters)

Start Temp: 82 °F End Temp: 93 °F

Live Tortoises

Detection Number	GPS Location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1						
2						
3						
4						
5						
6						
7						
8						

Tortoises Sign (burrows, scats, carcasses, etc.)

Detection Number	GPS Location		Type of sign <small>(burrows, scats, carcasses, etc.)</small>	Description and comments
	Easting	Northing		
1				
2				
3				
4				
5				
6				
7				
8				

Name: Lopus CA HAFI Wendy Lesser Kirghawk
 Species: BTGM CAWR
 S/L: and Coyote BTSP
 Page: 1 of 1
 Transect number: _____

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office, within 30-days of survey completion

Date of survey: 22 May 2013 Survey biologist(s): Erin Martinelli, Jill Carpenter, Stefan DeBorja
(day, month, year) (name, email, and phone number)

Site description: SCE West of Devers - Morongo
(project name and size; general location)

County: Riverside Quad: Cabazon Location: See start & End
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one 100% coverage or Sampling Area size to be surveyed: _____ Transect #: _____ Transect length: _____

GPS Start-point: 0515209/3954626 Start time: 8:40 am/pm
(easting, northing, elevation in meters)

GPS End-point: 0514632/3954695 End time: 4:00 am/pm
(easting, northing, elevation in meters)

Start Temp: 63 °F End Temp: 89 °F

Live Tortoises

Detection Number	GPS Location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1						
2						
3						
4						
5						
6						
7						
8						

Tortoises Sign (burrows, scats, carcasses, etc.)

Detection Number	GPS Location		Type of sign <small>(burrows, scats, carcass, etc.)</small>	Description and comments
	Easting	Northing		
1				
2				
3				
4				
5				
6				
7				
8				

Nomo *CoRA* *W. diamond back* *Leopard* *Heard*
Syland. *side blotch* *BASW* *CAQU* *Gull SP.*
MOG *Coachwhip* *WBME* *HFTJ*

Page: 1 of 1
 Transect number: _____

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 23 May 2013 Survey biologist(s): Stefan DeBortas
(day, month, year) (name, email, and phone number)

Site description: SEE West of Devers - Morongo
(project name and size; general location)

County: Riverside Quad: Cabazon Location: see start & end
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: _____ Transect length: _____

GPS Start-point: 05138986/3955250 Start time: 7:30 am/pm
(easting, northing, elevation in meters)

GPS End-point: 0513292/3954925 End time: 4:00 am/pm
(easting, northing, elevation in meters)

Start Temp: 56 °F End Temp: 81 °F

Live Tortoises

Detection Number	GPS Location Easting Northing	Time	Tortoise location (in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)	Approx MCL >160-mm? (Yes, No, or Unknown)	Existing tag # and color, if present
1					
2					
3					
4					
5					
6					
7					
8					

Tortoises Sign (burrows, scats, carcasses, etc.)

Detection Number	GPS Location Easting Northing	Type of sign (burrows, scats, carcass, etc.)	Description and comments
1			
2			
3			
4			
5			
6			
7			
8			

WE ME CORN CAQU Coahuila
 Coyote Jack Lepus ca. MUSA W. Whiptail
 Cows Western Adorned buck RT HA
 Sp. Bee

Page: 1 of 1
 Transect number: _____

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 29 May 2013 Survey biologist(s): Lannie Rodriguez, Stefan De Barros, Erik Martinelli, David Woodard, Steve Spencer, Jill Cooper, Peter
(day, month, year) (name, email, and phone number)

Site description: SCE West of Devers - Morongo
(project name and size; general location)

County: Riverside Quad: Cabazon Location: see start to end
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: _____ Transect length: _____

GPS Start-point: 0513835/3755505 Start time: 7:45 am/pm
(easting, northing, elevation in meters)

GPS End-point: 0513805/3755399 End time: 14:20 am/pm
(easting, northing, elevation in meters)

Start Temp: 66 °F End Temp: 87 °F

Live Tortoises

Detection Number	GPS Location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1						
2						
3						
4						
5						
6						
7						
8						

Tortoises Sign (burrows, scats, carcasses, etc.)

Detection Number	GPS Location		Type of sign <small>(burrows, scats, carcass, etc.)</small>	Description and comments
	Easting	Northing		
1				
2				
3				
4				
5				
6				
7				
8				

WEME Side blotch lizard LASP Lepus mado Fledglins
 BBBS Nomo Phain cows Syl. and. Red tail
 ATFL BTSP CAQU RTHA HOFI
 Page: 1 of 1
 Transect number: _____

September 21, 2012

Ms. Ingri Quon
LSA Associates
20 Executive Park, Suite 200
Irvine, CA 92614

Subject: Desert tortoise results on the Southern California Edison West of Devers Project, Devers Substation to the Morongo Band of Mission Indians Reservation. LSA Job Number SCE1110.

Summary

This letter documents the results of a presence/absence/density and habitat assessment survey for the federally and state threatened desert tortoise (*Gopherus agassizii*) along the eastern approximately eight miles of a potential alignment for Southern California Edison's (SCE's) future West of Devers Project (WOD Project). The project would upgrade the existing transmission facilities to afford additional transmission capacity between the Devers Substation at the eastern end and the San Bernardino and Vista substations at the western end. The survey was lead by Alice E. Karl and Associates, under contract to LSA Associates, Inc. (LSA) in April 2012.

No definitive desert tortoise sign was observed on the portion of the right-of-way (ROW) surveyed, although low quality habitat was identified at both ends of the study area.

Project Area Description

The preliminary alignment being considered for the WOD Project occurs within an SCE Right-of-Way (ROW) and extends along an existing transmission line corridor from the Vista Substation in the City of Grand Terrace, San Bernardino County, to the Devers Substation, near North Palm Springs, Riverside County (Figure 1). The project would also include re-conductoring and transmission facility upgrades extending up to the San Bernardino Substation between the Cities of San Bernardino and Redlands, San Bernardino County.

Study Area Description

The portion of the WOD Project surveyed for desert tortoises and discussed in this report extended for approximately seven miles from Devers Substation, in the western Coachella Valley, to the eastern edge of the Morongo Band of Mission Indians (Morongo) Reservation (Figure 1). Access onto the reservation was not granted to SCE during the spring survey window when this survey was conducted.

The transmission right-of-way (ROW) follows the existing utility corridor, which is populated by several high-voltage transmission lines. Other anthropogenic influences in the immediate project area include: (a) windfarms immediately adjacent to the ROW, from the Devers Substation to the Whitewater River; (b) ranchette-type residential development south of the Devers Substation and west of State Route 62 (SR-62); (c) suburban residential development at the town of Whitewater and the eastern edge of the Morongo Reservation; (d) cattle grazing near the Morongo Reservation; and (e) a rock quarry in the Whitewater River. Dirt roads and scattered trash are

common throughout, more so near housing and windfarms. Interstate 10 (I-10) lies south of the ROW, often within a mile, and SR-62 intersects the ROW near the Devers Substation.

Vegetation communities alone, often merely a list of the dominant couple of species, are typically used as surrogates to describe habitats. While they may provide some initial insight into the potential for presence of a particular species, only attention to the suite of biotic and abiotic conditions present can provide sufficient information to accurately assess the potential for presence of those species. Accordingly, habitat, when discussed in the context of wildlife and plants, is best described by aspects of vegetation (e.g., structure, dominants, common species, cover), topography, substrates (e.g., coarse particle size, density and evenness), soils (texture and consistence), hydrology and elevation, at a minimum. Additional important information related to anthropogenic influences, including the presence of exotic invasive species, is critical to the assessment.

Near the Devers Substation, the ROW travels across a moderately flat mid-bajada, characterized by sheet flow plus scattered, shallow washes, and one low hill. A moderately sparse (7-8% cover) creosote bush (*Larrea tridentata*) and white burr sage (*Ambrosia dumosa*) community, with the associates cheesebush (*Ambrosia salsola*), white rhatany (*Krameria bicolor*), brittlebush (*Encelia farinosa*), chuckwalla bush (*Bebbia juncea*), and wire lettuce (*Stephanomeria pauciflora*) characterizes the shrub vegetation (Figure 2). Soils typically comprise slightly hard, silty sand to soft, loamy coarse sand, covered primarily with fine gravel and scattered coarse gravel; cobbles, with scattered, small boulders, are common on the hill. The elevation is approximately 330 meters (m).

Between SR-62 and the Whitewater River is a long, gentle slope reaching a height of approximately 513 m (Figure 3). Lower on this slope, vegetation is similar to that near the Devers Substation, although several species of cacti (*Opuntia basilaris*, *Cylindropuntia echinocarpa*, *C. acanthocarpa*, *C. bigelovii*, *Echinocereus engelmannii*, and *Ferocactus cylindraceus*) are far more common. Upslope, diversity diminishes to a creosote bush-dominated community, with the subdominant species white burr sage, white rhatany, brittlebush, cheesebush and Mormon tea (*Ephedra californica*). Washes are small and relatively infrequent and soils become substantially sandier and softer near the summit. The invasive species, Sahara mustard (*Brassica tournefortii*), is abundant (Figure 4).

The Whitewater River channel is dominated by the river, with a steep cliff forming the eastern bank. In the channel, west of the river, there is a narrow strip of robust creosote bush-white burr sage-brittlebush scrub on soft to slightly hard coarse-sandy loam with decomposed granite substrates; granitic boulders are scattered to slightly rilled. Out of the channel to the west, the ROW splits, with both routes rising sharply over steep, tall hills (Figure 5). Both routes are characterized by very low shrub cover ($\leq 6\%$), dominated by brittlebush and creosote bush, with little diversity. Soils are soft, gravelly sand with gravelly substrates and scattered boulders and cobbles. The southern route has very steep, south-facing exposures that are even more poorly vegetated than the northern route (Figure 6). On both routes, the Mediterranean weed red brome (*Bromus madritensis rubens*) is dense; the similarly exotic weed, Sahara mustard, is patchy on the northern route and abundant on the southern.

The northern route continues west through steep, relatively shrub-barren foothills (Figure 7) to approximately a kilometer east of the town of Whitewater, where the hills diminish to a rolling bajada. Brittlebush is the predominant upland species, and exotic weeds prevail in the understory: red brome, Sahara mustard, and wild oat (*Avena fatua*) are continually to patchily abundant (Figure 8). The soil is soft, coarse sand and gravel, with cobbles and boulders reaching 50%

cover in the substrate. The southern route is similar to the northern in its eastern extent (Figure 9), but there are more alluvial fans out of the hills. Boulders and cobbles diminish and creosote bush is more common. Near the town of Whitewater, the topography flattens to a bajada with sheet flow.

From the town of Whitewater to the west, the terrain is relatively flat (Figure 10); sheet flow with occasional distinct channels characterizes the hydrology. Vegetation in areas without residences is characterized by robust brittlebush with Mormon tea, patchy creosote bush, cheesebush and occasional Mojave yucca (*Yucca schidigera*). The more well-developed washes have distinct wash vegetation: rabbitbrush (*Ericameria paniculata*, *E. nauseosa*), desert willow (*Chilopsis linearis*), and four-winged saltbush (*Atriplex canescens*). Exotic species - red brome, Sahara mustard, filaree (*Erodium cicutarium*), and split grass (*Schismus* sp) – are abundant. Soils are soft, coarse sands with decomposed granite and substrates of fine gravel and occasional boulders and cobbles (<5% cover)

Methods

Surveys were conducted from 9 through 14 April 2012 and were consistent with the methods, timing and temperature requirements in the current U.S. Fish and Wildlife Service (FWS) survey protocol¹.

Four biologists experienced with both tortoises and tortoise surveys conducted the surveys: Alice Karl, Paul Frank, and Art Schaub (Alice E. Karl and Associates) and Denise Woodard (LSA). In order to survey 100% of the surface, they walked adjacent transects, spaced 10 m apart within the ROW. The ROW width changed throughout the surveyed length, and often split, but averaged approximately 140 m. In addition, a single 10 m-wide buffer transect was walked at 200 m, 400 m, and 600 m from the edge of the ROW (Figure 11). Transects were programmed into Global Positioning System (GPS) units to ensure accurate and complete ROW coverage and buffer transect location. Survey teams in the ROW were limited to two or three people to minimize the searching and focus inefficiencies that are common with larger teams.

All potential desert tortoise habitat was surveyed. Non-habitat was either not walked or was only sampled. For instance, where the ROW traveled across very steep, poorly vegetated, south-facing hills for approximately 700 m immediately west of the Whitewater River, the northern route was fully surveyed, but on the southern route pockets of the best potential habitat were searched, while the steepest slopes that were not tortoise habitat were avoided. The northern buffers from the Whitewater River west to the town of Whitewater were not surveyed because the foothills were too steep and poorly vegetated to support tortoises (Figure 11). The sheer cliff face along the eastern side of the ROW at the Whitewater River was not walked and residential and industrial properties (e.g. Whitewater River rock quarry, Devers Substation) were not surveyed. Lastly, those portions of buffer transects that were south of I-10 were not surveyed.

On all transects, all observed tortoise sign (tortoises, burrows, shells, scat, tracks, drinking depressions) observed was measured, mapped, and described relative to condition, age (see Attachment 1) and, if possible, gender. Coversite locations were described relative to location and associated sign. Tortoise location relative to its burrow (e.g., aboveground, visible in burrow,

¹ FWS. 2010. Preparing for any action that may occur within the range of the Mojave desert tortoise (*Gopherus agassizii*). 2010 Field Season. Available at: http://www.fws.gov/ventura/speciesinfo/protocols_guidelines/. 18 pp.

not visible in burrow) was recorded; no tortoises were touched. Shells and shell parts also were evaluated relative to the cause of death, if possible.

The topography, drainage patterns, soils, substrates, plant cover, and aspect-dominant, common and occasional plant species were described and mapped. All incidental sightings of common ravens, other known tortoise predators, and other site features (e.g., anthropogenic influences) that could assist in the analysis of tortoise population condition were recorded and mapped. Mapping was facilitated using a GPS unit. All transect data were recorded on specially-designed data forms (Attachment 1) and photographs taken of representative habitats throughout both the ROW and along the buffer transects.

Current and recent weather conditions were recorded throughout each day. Generally, the weather was cool. It was very windy on the afternoon of April 10, with rain the following morning and rain most of the day on 13 April. We avoided surveying during most of the rain storm on April 11 and during all of the storm on 13 April.

To comply with safety issues around the windfarms, we telephoned agents of the wind companies who had requested that we call before entering their properties. Hard hats and safety vests were worn where requested or when we worked on wind farms that had not requested notification.

Results and Discussion

The WOD Project, near Devers, lies at the western edge of the desert tortoise's range in California. This portion of the project lies within the Colorado Desert Recovery Unit², but it is near neither designated critical habitat nor a Desert Wildlife Management Area (DWMA). Critical Habitat provides legal protection for areas that are considered to have essential features for tortoise survival. DWMA's act as reserves in recovery units within which recovery actions are implemented.

No definite tortoise sign was found on the ROW or in the buffer transects during the focused survey reported herein. Only a single questionable burrow was observed during the survey, east of SR-62 (Figure 12). However, one of the managers at the Devers Substation showed the tortoise team a recently dead adult tortoise near the ROW, just west of the substation. The team leader (Karl) also has observed occasional tortoise sign near the Devers Substation in recent years. Other WOD Project biologists reported a burrow above the eastern cliff of the Whitewater River, but this has not been confirmed; the very marginal tortoise habitat and sandy substrates in that area provide some basis for questioning the use of this burrow by a tortoise, especially in the absence of any other local tortoise sign. Additional WOD Project crews working on the Morongo Reservation in March also reported two locations on the Reservation where definitive desert tortoise sign was observed (a burrow with scat and a tortoise near its burrow).

Without live desert tortoises observed, density cannot be calculated per the FWS protocols. The dead tortoise near the Devers Substation, plus earlier observations by the team leader, are sufficient to verify desert tortoise presence in the area of the Devers Substation. Moderately low quality desert tortoise habitat extends from the Devers Substation west to the lower portion of the long slope across SR-62; tortoises are probably present in low numbers, undoubtedly also affected by mortality associated with both SR-62 and the residential developments in that area.

² U.S. Fish and Wildlife Service. 2011. Revised recovery plan for the Mojave population of the desert tortoise (*Gopherus agassizii*). U.S. Fish and Wildlife Service Pacific Southwest Region, Sacramento, CA. 222 pp.

From this point west to the Whitewater River is very marginal tortoise habitat; tortoises may not be present or, if present, there would be very few animals.

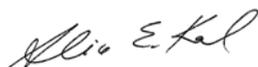
The Whitewater River channel has habitat characteristics (soils, vegetation, topography) consistent with tortoise presence, but the size and location of this habitat patch suggests that tortoises are unlikely to be present. This patch is a narrow strip, bordered by a river and cliff on one side and very poor to non-habitat on the other. The possibility that this patch remains connected to the remnant tortoise population south of the I-10 is remote.

Between the Whitewater River and the town of Whitewater, there is virtually no tortoise habitat on either ROW, although tortoises are probably present in low numbers of the bajada south of the ROW. Between the town of Whitewater and the edge of the Morongo Reservation, overall habitat quality suggests that tortoises are present on the ROW and vicinity at low to moderate densities. The presence of houses, with the ancillary impacts from dogs, children, ravens, and recreation, would likely decrease the density of the local tortoise population.

GANDA³ (2011) previously assessed habitat along the WOD route and suggested that most of the route between the Devers Substation and approximately the eastern edge of the Morongo Reservation is desert tortoise habitat. This assessment was partially based on habitat modeling in the Coachella Valley Multiple Species Habitat Conservation Plan⁴. BioResource Consultants⁵ 2003 habitat assessment was more restricted, estimating that there was a low potential for tortoises in the eastern three miles of the Morongo Reservation and in an approximately one-mile segment that spanned SR-62. This is similar to our assessment and survey results.

I am available to field any questions or comments. I can be reached at (530) 304-4121 (cell) or by e-mail at heliophile@mindspring.com.

Sincerely,



Alice E. Karl, Ph.D
Alice E. Karl and Associates

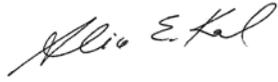
Attachments: Appendix A. Figures
Appendix B. Data Form and Key

³ Garcia and Associates (GANDA). 2011. West of Devers Project habitat assessment report. Prepared for Southern California Edison Company, Rosemead, CA. 118 pp.

⁴ Dudek and Coachella Valley Association of Governments. 2007. Final recirculated Coachella Valley Multiple Species Habitat Conservation Plan and Natural Communities Conservation Plan and associated Santa Rosa and San Jacinto Mountains Trails Plan. Prepared for the Coachella Valley Association of Governments, U.S. Fish and Wildlife Service, U.S. Bureau of Land Management and California Department of Fish and Game.

⁵ BioResource Consultants. 2003. West of Devers 230kV Transmission Line Upgrade biological resources inventory report. Prepared for Southern California Edison Company. 65 pp.

**I CERTIFY THAT THE INFORMATION IN THIS SURVEY REPORT AND
ATTACHED EXHIBITS FULLY AND ACCURATELY REPRESENT MY WORK:**



Alice E. Karl, Ph.D

August 31, 2012

Date

APPENDIX A
FIGURES

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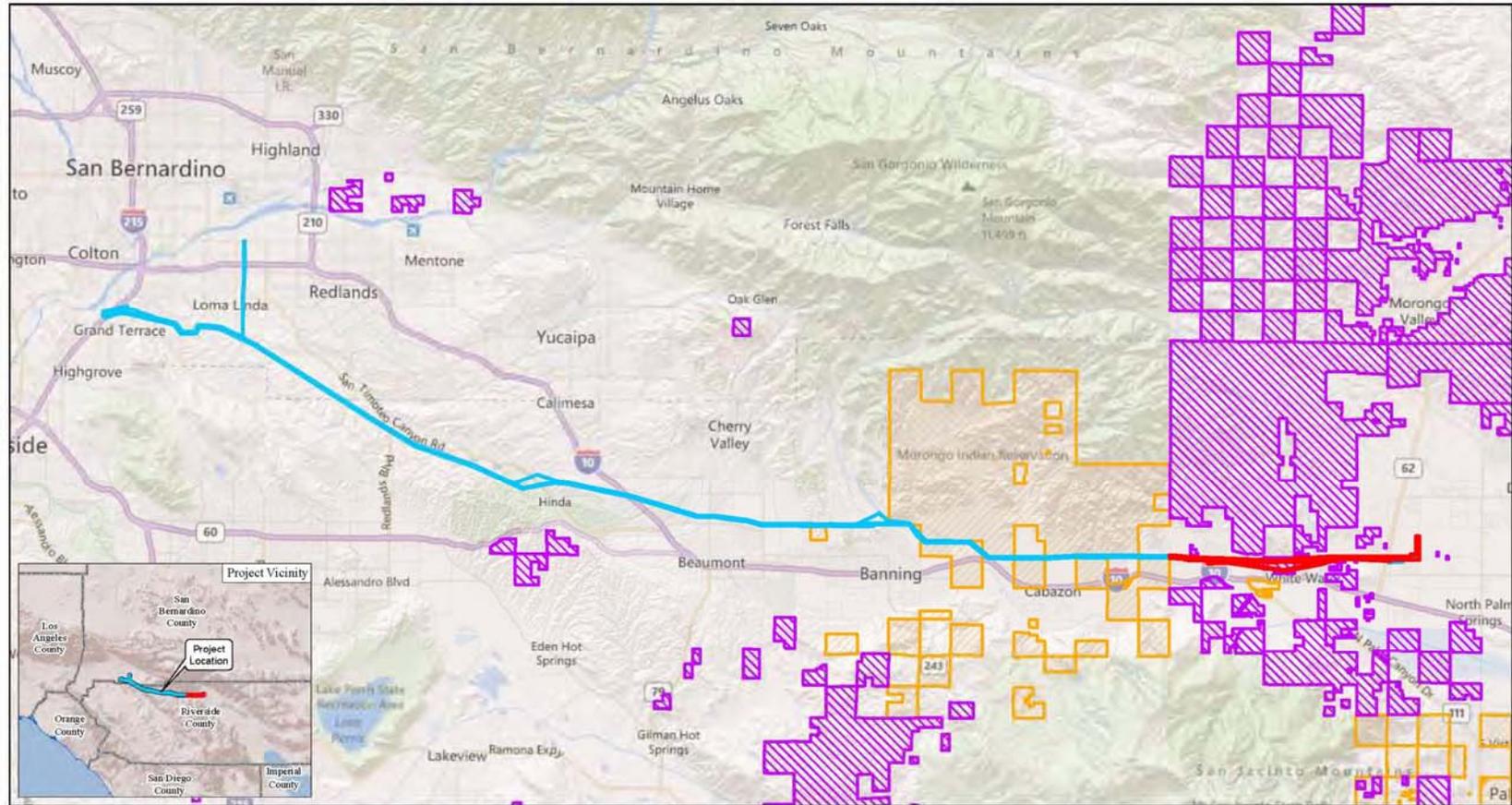


FIGURE 1

LEGEND

- Transmission Right-of-Way (ROW)
- Project Extent Surveyed for Desert Tortoise in Spring 2012
- Morongo Indian Reservation Lands
- U.S. Bureau of Land Management Lands

SOURCE: Bing Maps, SCE, LRA
 I:\Q3\11\PROJ\G07\Biology\FIG1_ProjectLocation.mxd (9/21/2012)

PROTECTED MATERIALS
 Contains Critical Energy Infrastructure Information

West of Devers Project
 Project Location Map



Figure 2. Habitat near the Devers Substation.



Figure 3. Facing west from near Highway 62.



Figure 4. Along the long slope east of the Whitewater River. Note the hummocky soils, indicative of the loose-sandy conditions often found on this part of the ROW. Also note the abundant Sahara mustard, both remnant stalks from 2011 and seedlings from 2012.



Figure 5. ROW over steep hills west of the Whitewater River.



Figure 6. South ROW route immediately west of the Whitewater River, characterized by steep, south-facing, poorly vegetated exposures. Foothills diminish to the west (see Figure 9).



Figure 7. Northern ROW route from approximately a kilometer east of the town of Whitewater, east nearly to approximately 700 m west of the Whitewater River. Photo is taken from the southern ROW, approximately 700 m west of the Whitewater River.

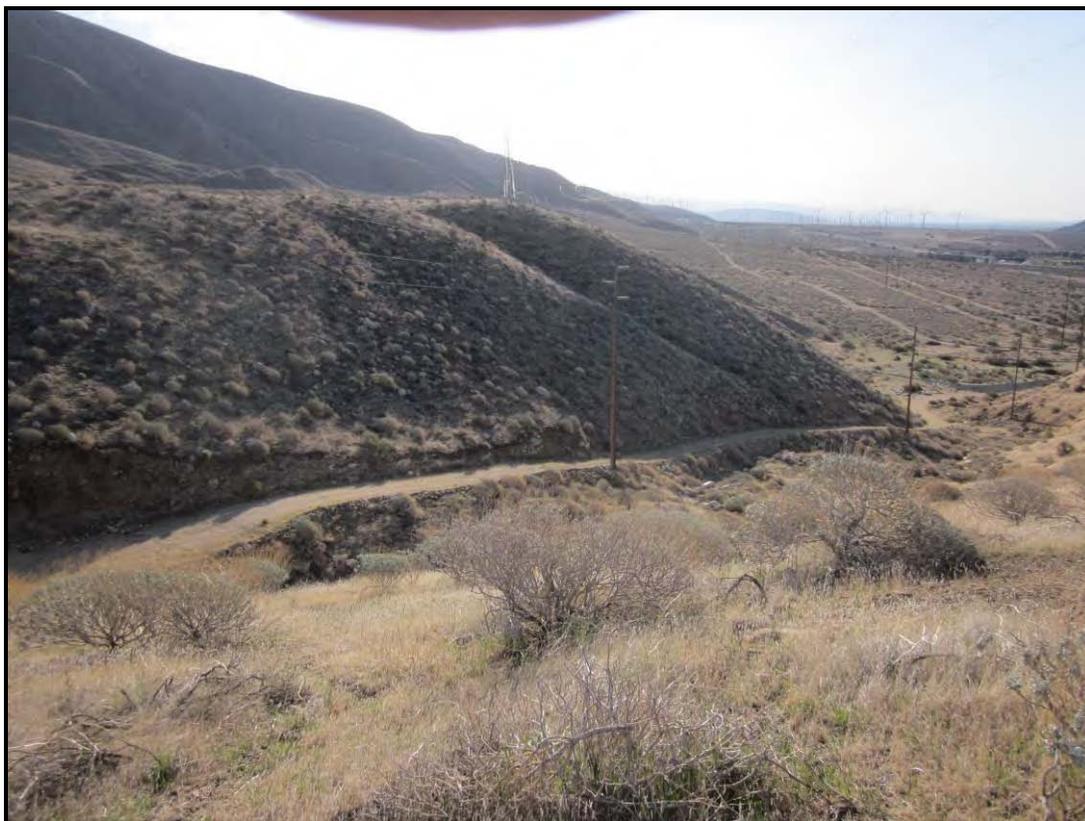


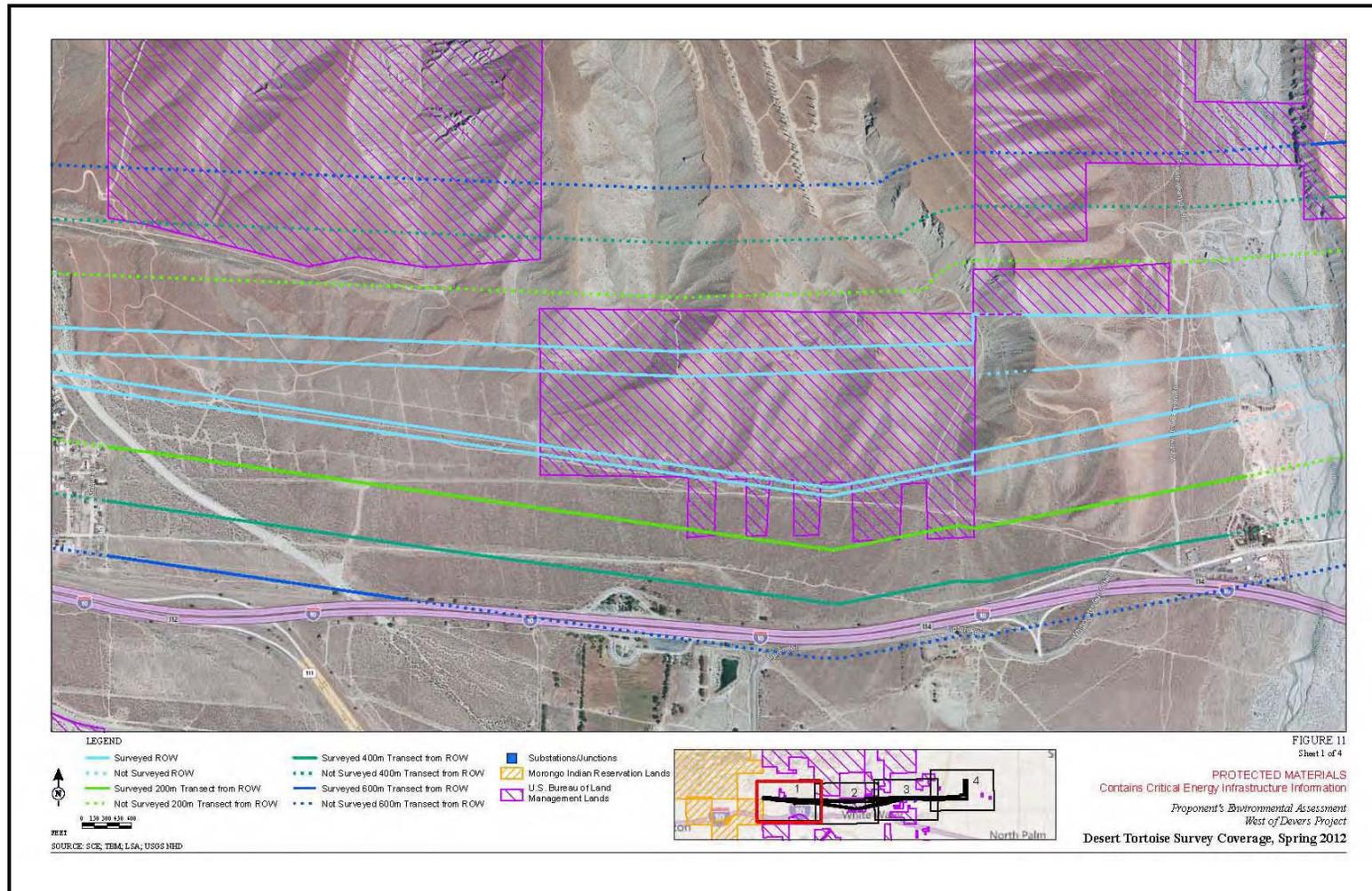
Figure 8. Foothills on the northern ROW route, immediately east of the town of Whitewater. Note the abundant exotics in the understory (red brome, wild oat, and Sahara mustard). The southern route travels along the bajada to the south.

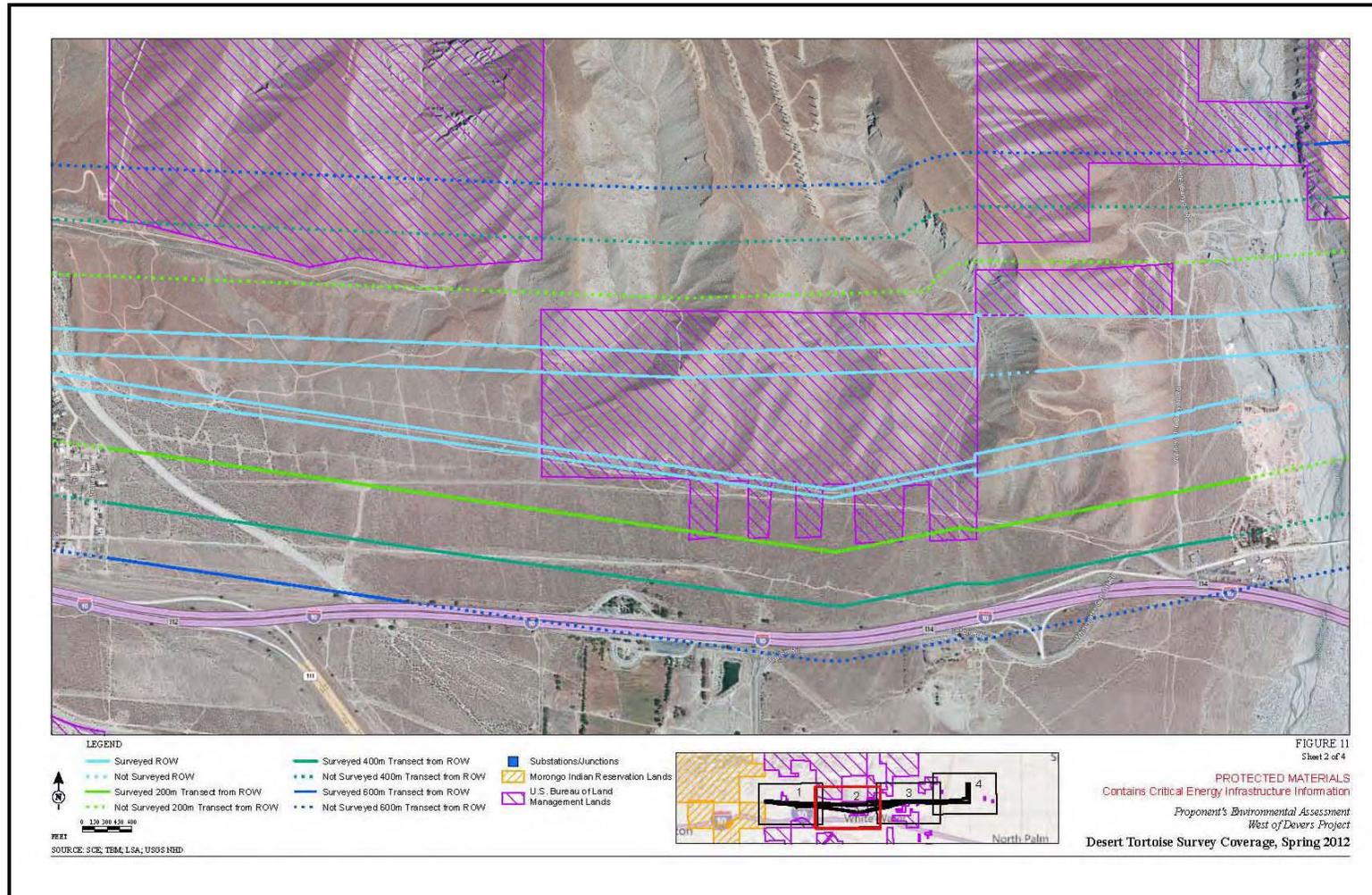


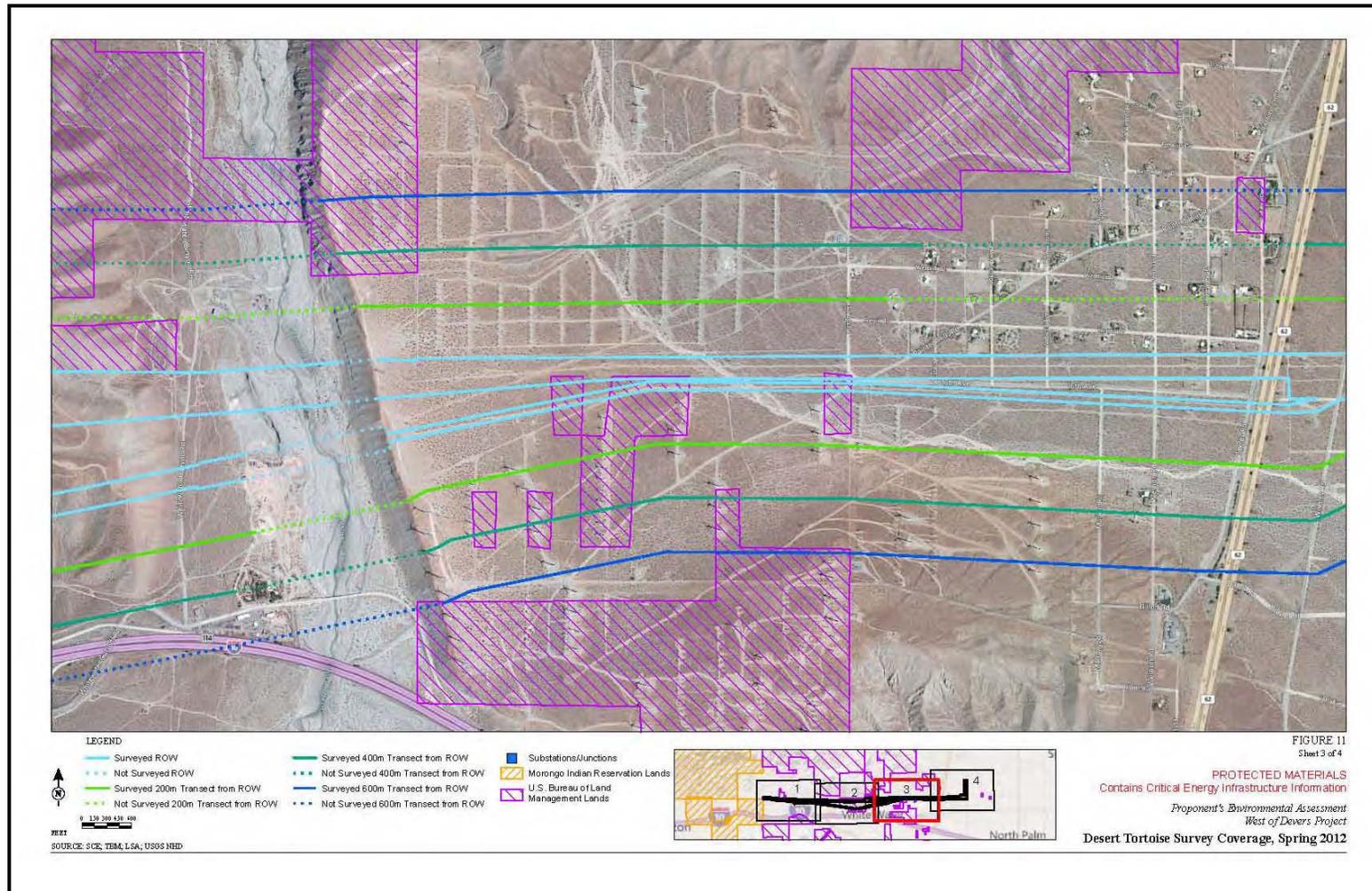
Figure 9. Foothills on the southern ROW route between the town of Whitewater and the Whitewater River, near the eastern end of this segment.

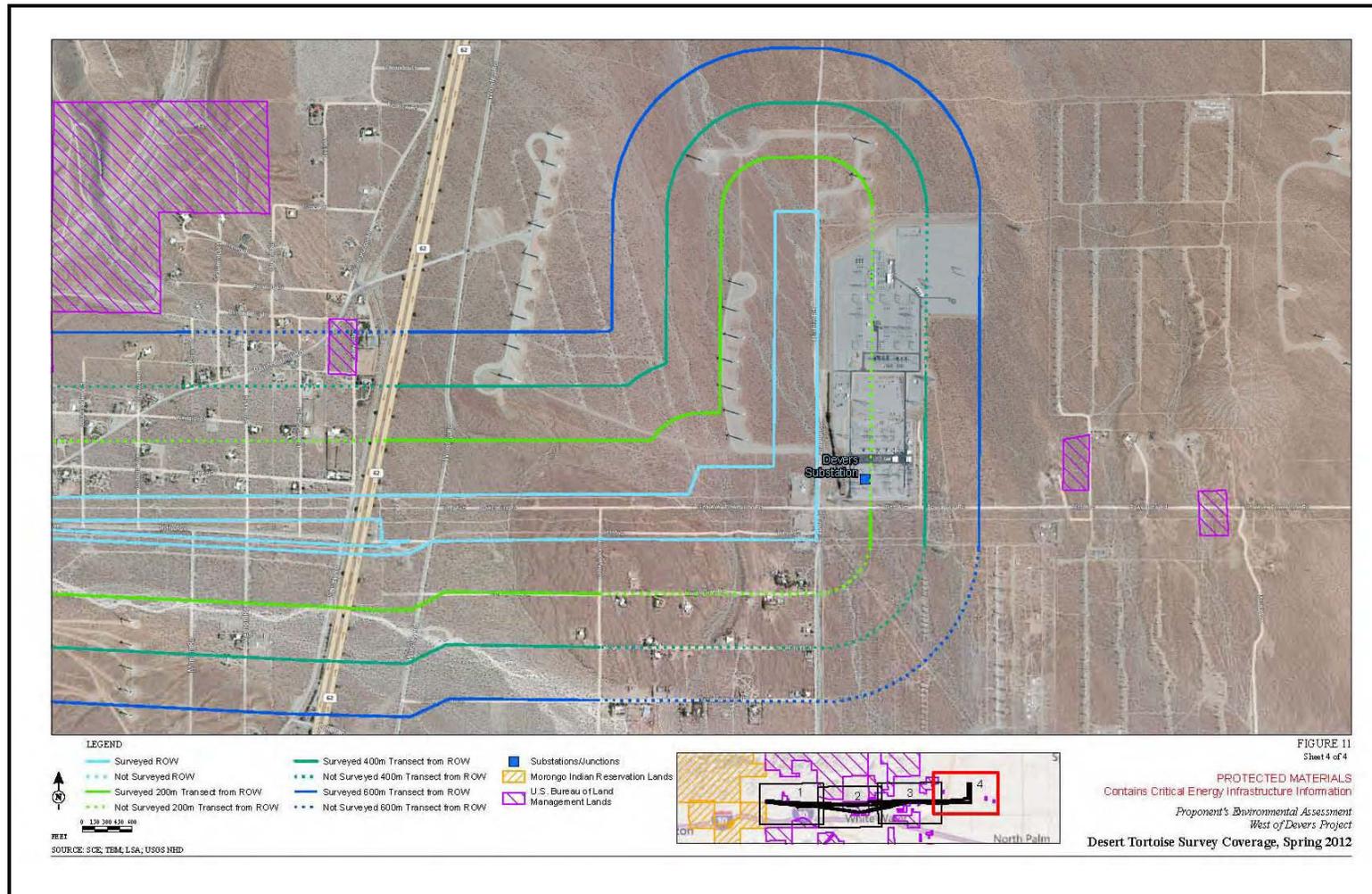


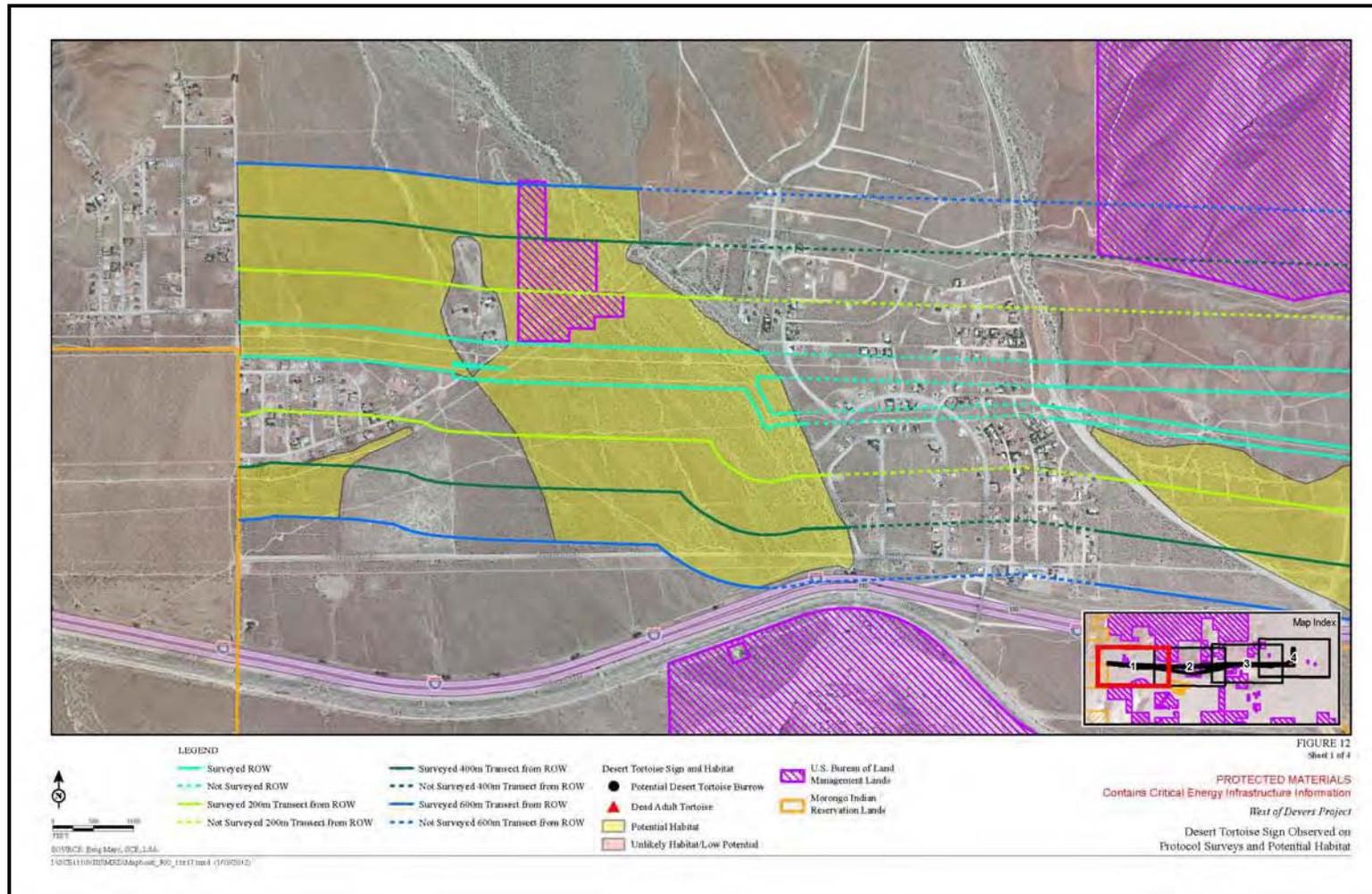
Figure 10. Habitat between the town of Whitewater and the Morongo Reservation.

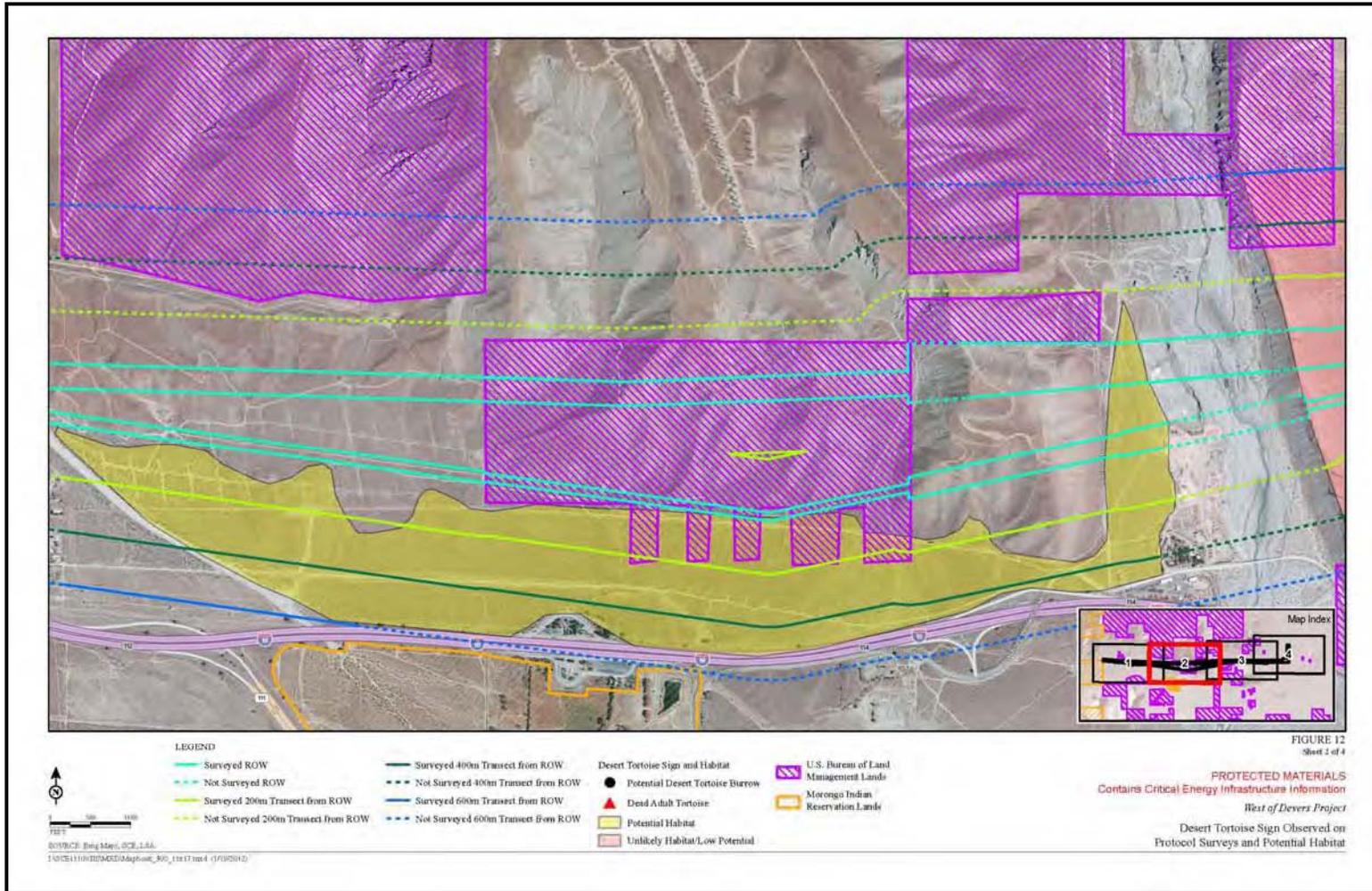


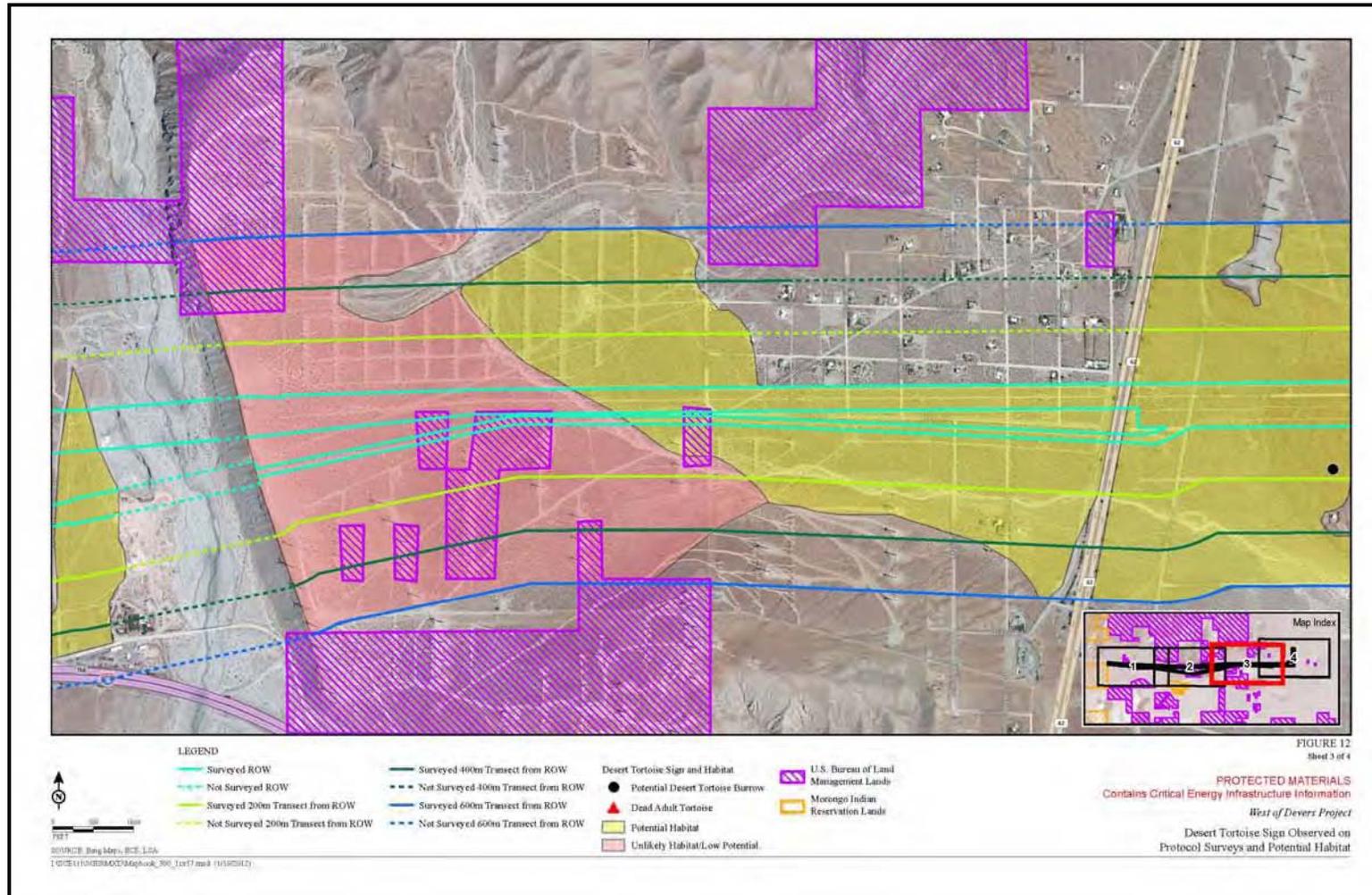


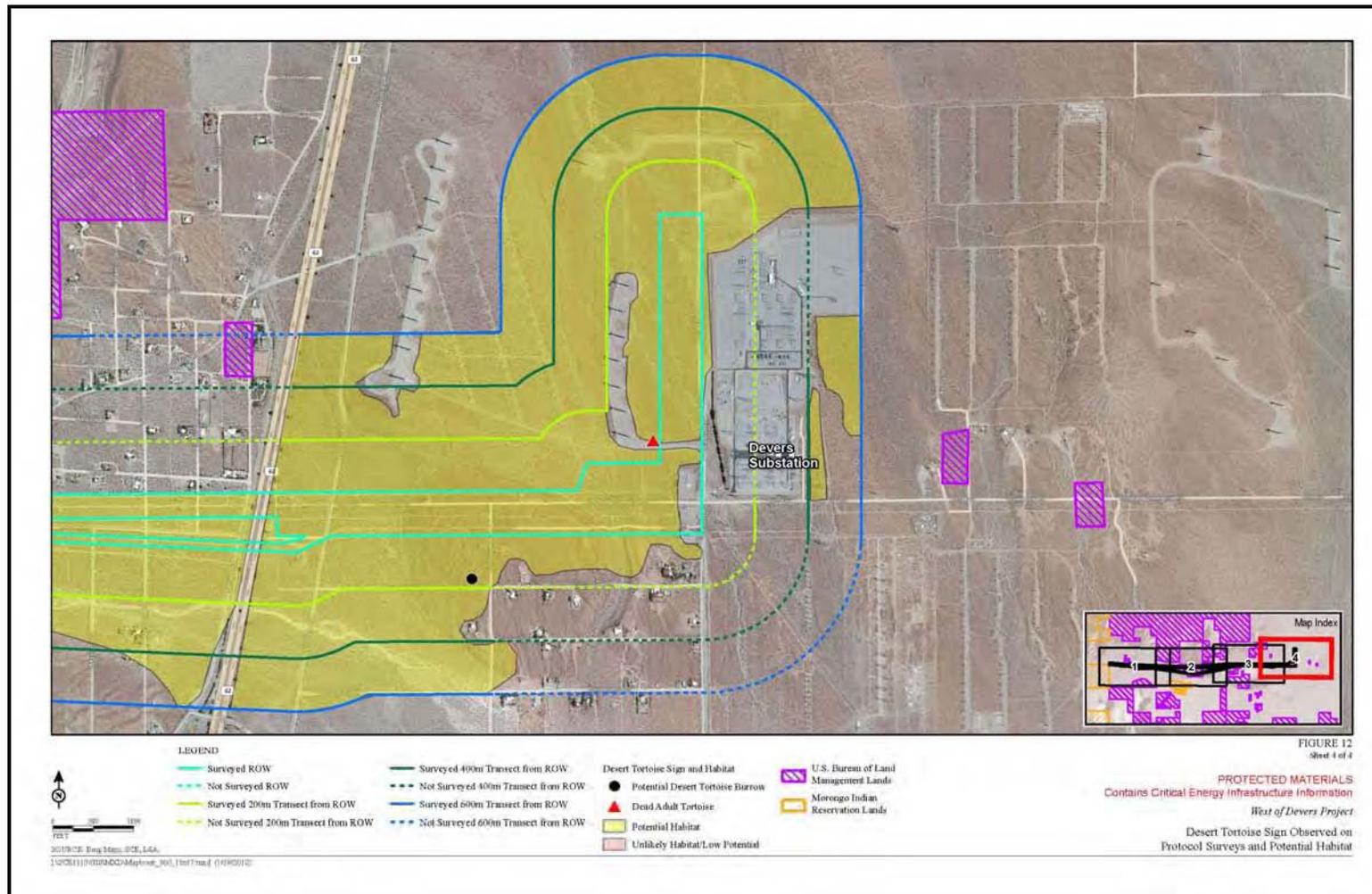












APPENDIX B
DATA FORM AND KEY

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**PROJECT - SCE WEST OF DEVERS TRANSMISSION LINE
DESERT TORTOISE SURVEYS**

Page 1

DATE 14 APR 2010
TIME: Start 16 30
End 17 48

400 MS

SURVEYOR(S): ART SCHAUB
ZOID DESCRIPTION 400 MS FROM RT 62
ROW DESCRIPTION → WEST TO PT 321 (EDGE OF WHITE WATER CANYON)

WEATHER:

	Ta	ScmTg	Cloud Cover	Wind
Start	16	18/21	30%	5-10
End	15	17/19	25%	15-25

STARTING UTM 53 69 5 2 E 37 54 236 N

Reference Pole Number

ENDING UTM 53 399 7 E 37 54 104 N

Reference Pole Number

(NAD 83)

TRANSECT WIDTH 1 x 10 m = 10 m

GENERAL SITE DESCRIPTION:

VEGETATION SHRUB LAYER AND BUNCH GRASSES)

Aspect Dominants LATR AMDU

Common Species AMSA

Occasional Species CROCAL

% Cover 8
Avg. Height of Dominant Shrub Species LATR 1.5 AMDU 1.0

UNDERSTORY

Abundant Species SPARCE UNDERSTORY

Exotics (Map concentrations and describe here relative to population size and geographic breadth.)

BRTO - abundant throughout

TOPOGRAPHY

Landform HILL, UPPER BAJADA

Drainage Type RUNNEL, INCISED NARROW WASIS, SHEET

Elevation (state meters or feet) 1536

SUBSTRATE

Color TAN

Coarse Particles (Type, % Cover) FINE 5%, COURSE 5%, COBB/BOULD <1%

Soil Texture and Consistence SOFT SANDY LOAM

PRESENCE OF PREDATORS: Ravens - # Detected 0 # Nests

Coyotes - # Detected 0 Scat? Scat Piles

HUMAN-RELATED DISTURBANCES (Onsite and Adjacent) WIND MILLS, FENCES, ROADS

SITE PICTURE: Photographer A.S.

- A - Form
- B - From end (identify)
- C - From other end (identify)
- D - Other



COMMENTS

KEY TO SIGN CLASSES

BURROWS

- 1 – DEFINITELY TORTOISE – FRESH (TRACKS, TORTOISE INSIDE, FRESHLY DISTURBED SOIL ON MOUND/RUNWAY)
- 2 – DEFINITELY TORTOISE – USED THIS SEASON (CLEARED OF ANNUALS, BUT NO FRESHLY DISTURBED SOIL)
- 3 – DEFINITELY TORTOISE – NOT USED THIS SEASON (PROBABLY HAS ANNUALS GROWING IN RUNWAY)
- 4 – POSSIBLY TORTOISE – IN GOOD CONDITION BUT UNSURE OF SPECIES USING BURROW
- 5 – DEFINITELY TORTOISE – DETERIORATED SUCH THAT IT WOULD REQUIRE SUBSTANTIAL REMODELING TO BE USABLE
- 6 – POSSIBLY TORTOISE – DETERIORATED

SCAT

- TY1 – WET OR FRESH DARK, ODORIFEROUS
- TY2 – DRIED, POSSIBLE GLAZE ON PART; UNEXPOSED SURFACES DARK BROWN; SLIGHT ODOR
- TY3 – DRIED, NO GLAZE; AT LEAST PARTIALLY FADED ON EXTERIOR; VERY SLIGHT ODOR
- NTY3 – DRIED, NO GLAZE; AT LEAST PARTIALLY FADED ON EXTERIOR; NO ODOR (DISTINGUISHES FROM TY3)
- NTY4 – DRIED, LOOSENING, PALE OR BLEACHED

CARCASSES – GENERAL INDICATORS FOR TIME SINCE DEATH

- <1 YR – UNEXPOSED SCUTES NORMAL COLOR AND SHEEN, ADHERE TIGHTLY. EXPOSED SCUTES PALING AND MAY BE LIFTING OR OFF. UNEXPOSED BONE WAXY AND SOLID.
- 1–2 YRS – UNEXPOSED SCUTES NORMAL COLOR WITH SLIGHT SHEEN, MOSTLY TIGHTLY ATTACHED. EXPOSED SCUTES SLIGHTLY PALE WITH NO SHEEN AND NO TO SLIGHT GROWTH RING PEELING. NO ODOR. UNEXPOSED BONE SILKY.
- 2–3 YRS – UNEXPOSED SCUTES PALE AND WITHOUT SHEEN BUT NO GROWTH RING PEELING. EXPOSED SCUTES PALE WITH SLIGHT PEELING, SCUTES LOOSE, OFF AND/OR TIGHT. BONE SUTURES GENERALLY TIGHT.
- 4 YRS – UNEXPOSED SCUTES NORMAL COLOR TO SLIGHTLY PALE, NO SHEEN, NO PEELING. EXPOSED SCUTES LOOSE, PALE, DULL, WITH MODERATE PEELING. SUTURES SEPARATING AND BONE SURFACE IS FISSURED, EDGES ARE ROUGHENED (FISSURED UNDER HAND LENS) AND CHIP FAIRLY EASILY.
- >>4 YRS – DISARTICULATED AND DISARTICULATING. BONE EDGES CHIP AND CRUMBLE EASILY. SCUTES ARE PEELING AND CURLED.

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Southern California Edison West of Devers Upgrade Project



Focused Survey for Desert Tortoise

Devers Substation to Morongo Indian Reservation,
Riverside County, California

January 2012

Prepared By

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SCE West of Devers Upgrade Desert Tortoise Survey
January 2012

Summary

AMEC Environment and Infrastructure, Inc. was contracted by Southern California Edison (SCE) to perform a variety of focused surveys for sensitive herpetofauna along an approximately 26.5 mile segment of the SCE power line corridor that extends from the Devers substation on the east to the Interstate 10 corridor west of the City of Beaumont, Riverside County, California. The survey area is largely within the San Geronio Pass, in an area that transitions from Sonoran Desert to a coastal-influenced ecotone. Because the Project area is within suitable habitat for the desert tortoise (*Gopherus agassizii*), AMEC was contracted to perform a focused survey for that species on the Project alignment. The survey was performed in accordance with the current USFWS protocol (USFWS 2010). Ten meter transects were walked within the Biological Study Area (BSA) for the SCE alignment. The BSA consisted of the Project footprint or right-of-way (ROW).

A focused survey for the desert tortoise was initiated on 11 October 2011 and completed on 21 October 2011 by AMEC biologists. No live desert tortoises were observed on or adjacent to the Project alignment. However, positive tortoise sign was detected in the BSA. One Class 4 (possible) tortoise burrow was located in a wash bank just west of Cottonwood Road near the community of Verbena. This was the only tortoise sign found on the alignment that was not located on the Morongo Indian Reservation (Reservation). The remaining tortoise sign was all found on the portion of the Project alignment that crossed the Reservation.

The tortoise sign found on the Reservation consisted of: one Class 3 tortoise scat and two Class 4 scats found individually (and not associated with a burrow), two Class 4 (possible) tortoise burrows, one Class 2 tortoise burrow with one Class 3 scat in the entrance, and one Class 3 tortoise burrow with twelve Class 3 scat in and around the burrow opening, as well as one Class 4 scat associated with the burrow.

At the time of the focused survey no live tortoises were detected in the BSA/ Action Area. However, the presence of positive tortoise sign within the BSA indicates that there is a low density tortoise population in that area of the alignment that passes through mixed Sonoran creosote bush scrub/Sonoran mixed woody and succulent scrub on the Morongo Indian Reservation. Thus, tortoises could potentially enter this portion of the Project area at any time. Appropriate measures for the avoidance of impacts to the desert tortoise will be required, following the recommendations of the USFWS and other agencies.

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List of Acronyms & Abbreviated Terms

AMEC	AMEC Environment & Infrastructure, Inc.
BLM	Bureau of Land Management
BSA	Biological Study Area
CDFG	California Department of Fish and Game
CNDDDB	California Natural Diversity Database
FESA	Federal Endangered Species Act
I-10	Interstate 10
kV	Kilovolt
Project	SCE West of Devers Upgrade Project
Reservation	Morongo Indian Reservation
SCE	Southern California Edison
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

SCE West of Devers Upgrade Project-Focused Survey For Desert Tortoise

1.0 INTRODUCTION

AMEC Environment and Infrastructure was contracted by Southern California Edison (SCE) to perform a variety of focused surveys for sensitive herpetofauna along an approximately 26.5 mile segment of the SCE power line corridor that extends from the Devers substation on the east to the Interstate 10 corridor west of the City of Beaumont, Riverside County, California (see Map 1). The eastern end of the alignment is located on the southern edge of Section 5, Township 3 South, Range 4 East, as shown on the USGS 7.5 minute *Desert Hot Springs, Calif.* quadrangle. The western end of the survey segment is located in the northeast $\frac{1}{4}$ of Section 31, Township 2 South, Range 1 West, as shown on the USGS 7.5 minute *El Casco, Calif.* quadrangle. The purpose of the project is to upgrade existing transmission lines to provide for delivery of additional energy resources, including renewable energy, to the power grid. The Project will involve the removal and replacement of the existing 220 kilovolt (kV) transmission lines with new double-circuit 220 kV transmission lines between the existing Devers Substation (located near Palm Springs), El Casco Substation (located in Western Riverside County), Vista Substation (located in Grand Terrace), and San Bernardino Substation (located in San Bernardino).

AMEC biologists assessed a segment of this alignment for potential habitat for sensitive reptiles including: desert tortoise (*Gopherus agassizii*), Coachella Valley fringe-toed lizard (*Uma inornata*), flat-tailed horned lizard (*Phrynosoma mcallii*), San Diego (coast) horned lizard (*Phrynosoma blainvillii*), and a variety of other non-listed California Department of Fish and Game (CDFG) "Species of Special Concern" (CSC).

A portion of the Project alignment is within suitable habitat for the desert tortoise. AMEC biologists conducted a United States Fish and Wildlife (USFWS) protocol survey, utilizing the current 2010 guidelines, for that portion of the alignment that had potential tortoise habitat (approximately 13.8 miles extending from the Devers Substation on the east to a point on the Morongo Indian Reservation where the potential tortoise habitat ended – See Map 2). AMEC biologists consulted Dr. Larry LaPre (BLM Desert District Biologist) and Tom Egan (former BLM Barstow, also an AMEC biologist) for concurrence regarding which sections of the proposed project represented potential tortoise habitat. AMEC biologists used their knowledge of tortoise distribution and habitat; together with advice from Mr. LaPre and Mr. Egan in deciding how far west to perform the focused tortoise surveys. This report presents the results of that focused survey.

2.0 BACKGROUND ON THE DESERT TORTOISE

The Mohave population of the desert tortoise was emergency listed by the USFWS as an endangered species in August 1989 (USFWS 1989) and subsequently listed as threatened on April 2, 1990 (USFWS 1990). As provided for by the Endangered Species Act of 1973 (ESA - Section 9), the "taking" of any federally listed species without first obtaining necessary authority from the USFWS is prohibited. The term "taking" includes "harming, harassing, pursuing, hunting, shooting, wounding, killing, capturing, collecting or attempting to engage in any such conduct" {Section 3(19) Endangered Species Act of 1973 [USFWS 2010a]}. Harm is further

defined to include "significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering" [50 CFR 17.3 (c)]. The desert tortoise is also listed as threatened by the State of California.

The desert tortoise is found in a variety of desert habitats, including the type of scrub communities found on and around the eastern 13.8 miles of the Project alignment. Desert tortoises feed on grasses and a variety of herbaceous annuals. They retreat into their horizontal burrow to avoid high and low temperatures. Desert tortoises mate in spring and can lay 2-3 clutches of eggs. Their populations have decreased dramatically in recent years for a variety of reasons, including habitat loss and a serious respiratory disease.

For purposes of the ESA, desert tortoise habitat is defined as 1) areas with presence of desert tortoises or desert tortoise sign (*e.g.*, shells, bones, scutes, scats, shelter sites, tracks, egg shell fragments, courtship rings, drinking sites, etc.) that are likely to be part or all of a lifetime home range, 2) dispersal areas (*i.e.*, habitat corridors), or 3) areas suitable for desert tortoises as identified by the USFWS or in the most recent recovery plan for the Mojave population of the desert tortoise (USFWS 1994a).

The Project is within the Western Mojave Recovery Unit for the desert tortoise (USFWS 2011), but is not within critical habitat. The nearest designated critical habitat (USFWS 2011) is in the Pinto Mountain Unit, approximately 33 miles northeast of the Devers Substation. Critical habitat is defined as "the specific areas within the geographic area occupied by a species on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection" (USFWS 1994). The Project is not within a Desert Wildlife Management Area (DWMA).

3.0 METHODS

3.1 Review for Existing Records

Prior to the initiation of field work, a review of pertinent literature was performed to check for desert tortoise records from the vicinity of the Project site. One source of known records was the CNDDDB RareFind application (CDFG 2011), from which data was obtained for the Desert Hot Springs, White Water, Cabazon, Beaumont, and El Casco, California USGS quadrangles. The review also included an overview of other unpublished data from the Project site and vicinity including previous AMEC work in the area. Additionally, experienced naturalists, biologists, and persons with knowledge of and/or experience in the vicinity of the Project site were consulted regarding tortoise occurrences in the area. Additional references are included in Section 6 below.

3.2 Focused Survey

A focused survey for the desert tortoise was initiated on 11 October 2011 and completed on 21 October 2011 by AMEC biologists Nathan T. Moorhatch, Zsolt Kahancza, Michael Wilcox, Matt Amalong, Mimi Velten, Robert Johnson, and Stephen Myers (see Appendices 4 and 5). Additionally, AMEC subconsultants Ted Rado and Greg Winton participated in the survey, as

well as Lonny Rodriguez from the Morongo Indian Reservation during the two days he escorted the survey crew on Morongo Indian lands. The survey was performed in accordance with the current USFWS protocol (USFWS 2010). Ten meter transects were walked within the BSA for the SCE alignment. The BSA consisted of the Project footprint or ROW (see Figure 2). The Project BSA encompasses all permanent and temporary impacts. The BSA is also the “Action Area” for the purpose of USFWS 2010.

Binoculars, GPS units, and cameras were utilized to help detect and record tortoise sign and other biological resources. Representative photos are included in Appendix 2. All plant and vertebrate species observed were recorded in field notes. Surveys were not conducted when the air temperature as measured ~5 centimeters above the soil surface in the shade of the observer exceeded 40°C (104°F).

4.0 RESULTS

The survey area is largely within the San Gorgonio Pass, in an area that transitions from Sonoran Desert to a coastal-influenced ecotone. The topography in the BSA varies from fairly level near the Devers Substation to medium height rolling hills cut by smaller washes west of Whitewater Canyon. Elevation ranges from approximately ~1,081 feet above mean sea level (AMSL) near the Devers Substation to a high of ~2,035 feet AMSL in the hills west of Whitewater Canyon, to ~1,985 feet AMSL at the western end of the survey area.

4.1 Plants and Vegetation Communities

Forty-five (45) plant taxa were identified in the BSA by AMEC during the focused tortoise survey (see Appendix 1, Table 1). These taxa are believed to represent the majority of the perennial and some of the annual species that could occur on-site. The fall survey period is after many of the current year’s annuals have bloomed and died, and many annuals are more easily detectable in the spring or early summer.

The portion of the alignment surveyed for desert tortoise starts in sparse Sonoran creosote bush scrub near the Devers Substation, gradually grades into almost monotypic areas of brittlebush (*Encelia farinosa*) at the base of the slopes west of Whitewater Canyon, continues on through ecotonal Sonoran creosote bush scrub/Riversidean sage scrub east of the Morongo Indian Reservation, and eventually reenters better quality Sonoran creosote bush scrub/Sonoran mixed woody and succulent scrub on the Morongo Indian Reservation. The desert influence within the onsite vegetation communities was closely tied to the distribution of creosote bush (*Larrea tridentata*). Where presence of creosote bush ended, the vegetation exhibited a more cismontane influence, which desert tortoises are not typically associated with. For this reason, the desert tortoise surveys were conducted only within the desert influenced vegetation communities (i.e., Sonoran creosote bush scrub/Sonoran mixed woody and succulent scrub) along the alignment. The Riversidean alluvial fan sage scrub areas do not represent suitable habitat for the desert tortoise and thus were not surveyed. Plant species characteristic of the potential tortoise habitat present on the Morongo Indian Reservation include: catclaw (*Acacia greggii*), smoke tree (*Psoralea spinosa*), calico cactus (*Echinocereus engelmannii*), California barrel cactus (*Ferocactus cylindraceus*), Mormon tea (*Ephedra nevadensis*), creosote bush, Mojave yucca

(*Yucca schidigera*), and lotebush (*Ziziphus parryi* var. *parryi*). Some of these same species are also found east of the Indian Reservation along the various small washes that cross the project alignment.

The vegetation communities in the BSA all suffer some level of degradation, due to the proximity of I-10, State Highway 62, well-used paved and dirt roads, presence of wind farms, residential development, and cattle grazing on the Morongo Indian Reservation.

4.2 Wildlife

Fifty-five (55) vertebrates or their sign were identified on or adjacent to the BSA. These included eight reptiles, 41 birds, and six mammal species, most of which were commonly observed species in our desert and cismontane habitats. The full list of vertebrate species observed is in Appendix 1, Table 2.

No amphibians were detected within the BSA, likely due to a lack of suitable aquatic habitat. The exception being Whitewater Creek, although this area is spanned by power lines and no ground impacts are expected due to project implementation. Common reptiles of the area were encountered, including side-blotched lizard (*Uta stansburiana*), Great Basin whiptail (*Aspidoscelis t. tigris*), and red coachwhip (*Masticophis flagellum piceus*). It should be noted that AMEC biologists observed two red diamond rattlesnakes (*Crotalus ruber*) on the project BSA at the base of the rolling hills west of Whitewater Canyon. Red diamond rattlesnake is a CDFG CSC.

Forty-one species of birds were detected by AMEC biologists on the Project; these included: red-tailed hawk (*Buteo jamaicensis*), common raven (*Corvus corax*), verdin (*Auriparus flaviceps*), cactus wren (*Campylorhynchus brunneicapillus*) and black-throated sparrow (*Amphispiza bilineata*).

Common mammals of the area were detected, including desert cottontail (*Sylvilagus audubonii*), black-tailed jackrabbit (*Lepus californicus*), white-tailed antelope squirrel (*Ammospermophilus leucurus*), and gray fox (*Urocyon cinereoargenteus*). Sign of several mammals was seen, including coyote (*Canis latrans*) and fossorial rodent burrows characteristic of kangaroo rats (*Dipodomys* spp.) and pocket mice (*Chaetodipus* and/or *Perognathus* spp.).

4.3 Desert Tortoise

No live desert tortoises were observed on or adjacent to the project alignment. However, positive tortoise sign was detected in the BSA. One Class 4 (possible) tortoise burrow was located in a wash bank just west of Cottonwood Road near the community of Verbena. This was the only tortoise sign found on the alignment that was not located on the Morongo Indian Reservation (see Map 3a). The remaining tortoise sign was all found on that portion of the project alignment that crossed the Reservation (see Map 3b). This tortoise sign is summarized in Table 1 on the next page, and consisted of: one Class 3 tortoise scat and two Class 4 scats found individually (and not associated with a burrow), two Class 4 (possible) tortoise burrows, one Class 2 tortoise burrow with one Class 3 scat in the entrance, and one Class 3 tortoise burrow

SCE West of Devers Upgrade Desert Tortoise Survey
January 2012

with twelve Class 3 scat in and around the burrow opening, as well as one Class 4 scat associated with the burrow.

Table 1. West of Devers Upgrade Desert Tortoise Sign Detections

Sign Type	Class	Number	Location (UTM)	Date
Burrow	4	1	527920 E, 3754640 N	10/17/11
Scat	4	1	524627 E, 3754715 N	10/18/11
Burrow	2	1	524353 E, 3754730 N	10/18/11
Scat (w/ burrow above)	3	1	524353 E, 3754730 N	10/18/11
Scat	4	1	522174 E, 3754732 N	10/19/11
Scat	3	1	522389 E, 3754676 N	10/19/11
Burrow	3	1	522846 E, 3754775 N	10/19/11
Scat (in burrow above)	3	12	522846 E, 3754775 N	10/19/11
Scat (in burrow above)	4	1	522846 E, 3754775 N	10/19/11
Burrow	4	1	522457 E, 3754713 N	10/19/11
Burrow	4	1	521461 E, 3754694 N	10/20/11

INFORMATION INDEX FOR DESERT TORTOISE SIGN (USFWS 1992)

Burrows and Dens:

1. currently active, with tortoise or recent tortoise sign
2. good condition, definitely tortoise; no evidence of recent use
3. deteriorated condition; definitely tortoise
4. deteriorated condition; possibly tortoise
5. good condition; possibly tortoise

Scats:

1. wet (not from rain or dew) or freshly dried; obvious odor
2. dried with glaze; some odor; dark brown
3. dried; no glaze or odor; signs of bleaching (light brown), tightly packed material
4. dried; light light brown to pale yellow, loose material; scaly appearance
5. bleached, or consisting only of plant fiber

Shell Remains:

1. fresh or putrid
2. normal color; scutes adhere to bone
3. scutes peeling off bone
4. shell bone is falling apart; growth rings on scutes are peeling
5. disarticulated and scattered

5.0 CONCLUSION

At the time of the focused survey no live tortoises were detected in the BSA/ Action Area. However, the presence of positive tortoise sign within the BSA indicates that there is a low density tortoise population in that area of the alignment that passes through mixed Sonoran creosote bush scrub/Sonoran mixed woody and succulent scrub habitat on the Morongo Indian Reservation. Thus, tortoises could potentially enter this portion of the Project area at any time. Appropriate measures for the avoidance of impacts to the desert tortoise will be required, following the recommendations of the USFWS and other agencies.

6.0 CONTACTS, LITERATURE CITED AND REFERENCES**6.1 Contact**

Larry LaPre: BLM Desert District Biologist who was contacted regarding the western extent of tortoise surveys on the alignment.

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APPENDIX F: BIOLOGICAL RESOURCES

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APPENDIX 1

PLANT AND VERTEBRATE WILDLIFE SPECIES LISTS

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**Vascular Plants Observed on the SCE West of Devers Project Alignment,
Riverside County, California**

September - October 2011

GNETAE**Ephedraceae***Ephedra californica**Ephedra nevadensis***JOINT FIRS****Ephedra Family**

California joint fir

Nevada joint fir

ANGIOSPERMAE**DICOTYLEDONEAE****DICOT FLOWERING PLANTS****Asteraceae***Acamptopappus sphaerocephalus**Ambrosia dumosa**Artemisia californica**Bebbia juncea**Chrysothamnus paniculatus**Dicoria canescens**Encelia farinosa**Hymenoclea salsola**Lepidospartum squamatum**Stephanomeria exigua***Sunflower Family**

Rayless goldenhead

Burrobush

California sagebrush

Sweetbush

Black-banded rabbitbrush

Desert twinbugs

Brittlebush

Cheesebush

Scale-broom

Small wirelettuce

Bignoniaceae*Chilopsis linearis***Bignonia Family**

Desert-willow

Boraginaceae*Cryptantha* sp.**Borage Family**

Cryptantha

Brassicaceae**Brassica tournefortii***Mustard Family**

Sahara mustard

Cactaceae*Cylindropuntia bigelovii**Cylindropuntia echinocarpa**Cylindropuntia ramosissima**Echinocactus polycephalus* var. *polycephalus**Echinocereus engelmannii**Ferocactus cylindraceus**Mammillaria* sp.*Opuntia basilaris***Cactus Family**

Teddy-bear cholla

Golden cholla

Diamond cholla

Cottontop cactus

Calico cactus

California barrel cactus

Fish-hook cactus

Beavertail cactus

**Vascular Plants Observed on the SCE West of Devers Project Alignment,
Riverside County, California
(Continued)**

Capparaceae
Isomeris arborea

Caper Family
Bladderpod

Chenopodiaceae
Atriplex canescens
**Salsola tragus*

Goosefoot Family
Four-wing saltbush
Russian thistle

Euphorbiaceae
Croton californicus
Euphorbia polycarpa

Spurge Family
California croton
Desert sand mat

Fabaceae
Acacia greggii
Psoralea arborescens var. *simplicifolia*
Psoralea spinosa

Pea Family
Catclaw
Indigo bush
Smoke tree

Krameriaceae
Krameria grayi

Rhantany Family
White Rhatany

Lamiaceae
Hyptis emoryi
Salvia columbariae

Mint Family
Desert-lavender
Chia

Plantaginaceae
Plantago ovata

Plantain Family
Woolly plantain

Polemoniaceae
Eriogonum sp.

Phlox Family
Woollystar

Polygonaceae
Eriogonum inflatum
Eriogonum fasciculatum

Buckwheat Family
Desert trumpet
California buckwheat

Rhamnaceae
Ziziphus parryi var. *parryi*

Buckthorn Family
Lotebush

Rutaceae
Thamnosma montana

Rue Family
Turpentine-broom

Solanaceae
Lycium sp.

Nightshade Family
Box thorn

**Vascular Plants Observed on the SCE West of Devers Project Alignment,
Riverside County, California
(Continued)**

Tamaricaceae <i>*Tamarix ramosissima</i>	Tamarisk Family Saltcedar
Zygophyllaceae <i>Larrea tridentata</i>	Caltrop Family Creosote bush
MONOCOTYLEDONEAE	MONOCOT FLOWERING PLANTS
Liliaceae <i>Yucca schidigera</i>	Lily Family Mohave yucca
Poaceae <i>*Schismus barbatus</i>	Grass Family Mediterranean schismus

*- denotes a nonnative species

**Vertebrates Observed or Detected on the SCE West of Devers Project Alignment,
Riverside County, California**

September - October 2011

REPTILES

True Land Tortoises

Desert tortoise (sign)

Horned Lizards and allies

Side-blotched lizard

Zebra-tailed lizard

Collared and Leopard Lizards

Long-nosed leopard lizard

Whiptails and relatives

Great Basin whiptail

Night Lizards

Desert night lizard

Harmless Egg-laying Snakes

Red coachwhip

Rattlesnakes, New World Pitvipers

Red diamond rattlesnake

BIRDS

New World Vultures

Turkey Vulture

Kites, Eagles, Hawks, and allies

Red-tailed Hawk

Caracaras and Falcons

Prairie Falcon

American Kestrel

New World Quail

California Quail

REPTILIA

Testudinidae

Gopherus agassizii

Phrynosomatidae

Uta stansburiana

Callisaurus draconoides

Crotaphytidae

Gambelia wislizenii

Teiidae

Aspidoscelis tigris tigris

Xantusiidae

Xantusia vigilis

Colubridae

Masticophis flagellum piceus

Crotalidae

Crotalus ruber

AVES

Cathartidae

Cathartes aura

Accipitridae

Buteo jamaicensis

Falconidae

Falco mexicanus

Falco sparverius

Odontophoridae

Callipepla californica