



**DESERT TORTOISE COUNCIL**

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**DESERT TORTOISE PRESERVE  
COMMITTEE, INC.**

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**Via email only**

February 11, 2025

Attn: Anne Hilborn  
California Department of Fish and Wildlife  
Wildlife Diversity Program  
P.O. Box 944209  
Sacramento, CA 94244-2090  
[wildlifemgt@wildlife.ca.gov](mailto:wildlifemgt@wildlife.ca.gov)

Re: Occurrence data for western burrowing owl

Dear Ms. Hilborn,

The Desert Tortoise Council (DTC) is a non-profit organization comprised of hundreds of professionals and laypersons who share a common concern for wild desert tortoises and a commitment to advancing the public's understanding of desert tortoise species. Established in 1975 to promote conservation of tortoises in the deserts of the southwestern United States and Mexico, the DTC routinely provides information and other forms of assistance to individuals, organizations, and regulatory agencies on matters potentially affecting desert tortoises within their geographic ranges.

The Desert Tortoise Preserve Committee (DTPC) is a non-profit organization formed in 1974 to promote the welfare of the desert tortoise in its native wild state. DTPC members share a deep concern for the continued preservation of the species and its habitat, and are dedicated to the recovery and conservation of the desert tortoise and other rare and endangered species inhabiting the Mojave and western Sonoran deserts. The DTPC has a long track record of achieving our mission through land acquisition, preserve management, mitigation land banking, and educational outreach.

Both our physical and email addresses are shared in our letterhead for your use when providing future correspondence to us. When given a choice, we prefer to communicate electronically via emails as it is faster and environmentally friendlier than mail delivered via the U.S. Postal Service.

Whereas the DTC and DTPC are primarily concerned with the protection, conservation, and recovery of desert tortoises, we note that the habitats occupied by the western burrowing owl (*Athene cunicularia hypugaea*) often coincide with tortoise-occupied habitats, and the listing of the western burrowing owl will benefit the conservation of desert tortoises. In fact, both tortoise sign and burrowing owl sign were found during 46 of the 100 surveys reported herein where burrowing owls were detected.

Herein are data related to the locations of 100 surveys where burrowing owl signs were discovered during 622 focused tortoise surveys performed by personnel of Circle Mountain Biological Consultants, Inc. (CMBC) in seven regions in the West Mojave Desert between 1989 and 2025. Since the surveys were carried out to find tortoises and color codes have been used in the citations and maps, to delineate the areas surveyed (i.e., colored polygons and linear areas), the following colors are indicative of tortoise findings:

- **dark green** = Tortoise sign found on-site
- **light green** = No tortoise sign onsite, but found in adjacent areas
- **red** = No tortoise sign found onsite
- **brown** = Only carcass found onsite

The citations are followed by the pertinent maps for each of the seven regions using the same color codes and parenthetical numbers in both the text and maps. Numbers have been removed from those sites where no burrowing owl sign was found to better view the numbered sites where sign was found. This means that no burrowing owl sign was found on colored polygons and linear rights-of-ways where there are no numbers, which included 522 of the 622 surveys.

### **Map 1 - Burrowing owl signs found during 13 of 86 Tortoise Surveys in Phelan, Pinon Hills, El Mirage, Hesperia, Western Victorville, and Adelanto Between 1989 and 2015**

(89-108) Tierra Madre Consultants, Inc. 1989. Traveler Services Rest Area: Biotic information report. Unpublished report prepared by Ed LaRue and Stephen Myers for Tom Dodson & Associates on behalf of Caltrans. Job #89-108. Riverside, CA.

- **6 acres. Undisclosed burrowing owl sign.**

(00-016) Circle Mountain Biological Consultants. 2000. Monaco Development Corporation, “Shenandoah” Project, focused survey for desert tortoise on a 16.49-acre site, Lot 19 of Tract 13990, Tentative Tract 16087, City of Victorville, San Bernardino County, California. Unpublished report prepared for Monaco Development Corporation. Job #00-016. Wrightwood, CA.

- 16.5 acres. Burrowing owl (active burrow 300 feet south).

(04-069) Circle Mountain Biological Consultants. 2004. General biological survey and focused surveys for desert tortoise and burrowing owl, with an evaluation of habitat for Mohave ground squirrel, a 30-acre site (APNs 306-581-32 through -39, and 306-581-02) in the City of Victorville, San Bernardino County, California. Unpublished report prepared for Mr. Louis Shahin. Job #04-069. Wrightwood, CA.

- 30 acres. Burrowing owl (burrow with old sign ½ mile north).

(05-003) Circle Mountain Biological Consultants. 2005a. Focused surveys for desert tortoise and western burrowing owl, habitat evaluation for Mohave ground squirrel, and a protected plant study on a ±7.5-acre site (APN 3064-411-01, Parcel #1) in the City of Hesperia, San Bernardino County, California. Unpublished report prepared for Industrial Fabricators, Inc. Job #05-003. Wrightwood, CA.

- 7.5 acres. Collapsed burrow with old sign of burrowing owl.

(05-022) Circle Mountain Biological Consultants. 2005b. Focused survey for desert tortoise and western burrowing owl, and habitat evaluation for Mohave ground squirrel on APN 3071-551-09, an 8.32-acre site in the City of Victorville, San Bernardino County, California. Unpublished report prepared for Mr. Louis Shahin. Job #05-022. Wrightwood, CA.

- 8.32 acres. Burrowing owl (sign at burrow 40’ north).

(06-006) Circle Mountain Biological Consultants. 2006. Focused survey for desert tortoise and western burrowing owl, and habitat evaluation for Mohave ground squirrel on 80 acres± in the sphere of influence for the City of Victorville (APNs 3133-261-01, -0, -03, -04, -05, -06, -07, -08, -09, -10, -11, and -12), San Bernardino County, California. Unpublished report prepared for Mr. Nashat Muwanes on behalf of Petra Engineering. Job #06-006. Wrightwood, CA.

- 80 acres. Burrowing owl (18 burrows and 2 owls).

(07-003) Circle Mountain Biological Consultants, Inc. 2007a. Focused survey for desert tortoise and western burrowing owl and general biological resource assessment for a 20-acre± site (APNs 3101-041-03 & -06, TPM 18382) near the community of El Mirage, San Bernardino County, California. Unpublished report prepared for Mr. Nashat Muwanes and Petra Group, Inc. on behalf of Mr. Thomas Thompson. Job #07-003. Wrightwood, CA.

- 20 acres. Burrowing owl (four burrow complexes and two owls).

(07-024) Circle Mountain Biological Consultants, Inc. 2007b. Mohave ground squirrel trapping data for the TriMark 80-acre site in western Victorville, San Bernardino County, California. Unpublished data collected on behalf of Sundance Biology during Mohave ground squirrel trapping between 26 March 2007 and 6 July 2007. Job #07-024. Wrightwood, CA.

- 80 acres. Burrowing owl (1 owl at several burrows in March, May, and July 2007).

(07-065) Circle Mountain Biological Consultants, Inc. 2007c. Focused survey for desert tortoise and western burrowing owl, habitat evaluation for Mohave ground squirrel, and general biological resource assessment on the Gray Butte Runway Project, a 17.8-acre± site near the community of El Mirage (APNs 3200-171-01, -08, -09, -11, -12, -13, & -14, and 3200-211-01), Los Angeles and San Bernardino Counties, California. Unpublished report prepared for General Atomics and Aeronautical Systems, Inc. Job #07-065. Wrightwood, CA.

- 17.8 acres. Burrowing owl (unoccupied burrow 300 feet north, feather 900 feet north).

(08-011) Circle Mountain Biological Consultants, Inc. 2008a. Mohave ground squirrel trapping data (no report) for the Gray Butte Facility on 100 acres± near El Mirage, San Bernardino and Los Angeles counties, California. Unpublished data collected on behalf of Sundance Biology during Mohave ground squirrel trapping between 17 March 2008 and 11 July 2008. Job #08-011. Wrightwood, CA.

- 100 acres±. Burrowing owl, including family group of two adults and at least two nestlings.

(08-012) Circle Mountain Biological Consultants, Inc. 2008b. Mohave ground squirrel trapping data (no report) for the Adelanto Prison East site, San Bernardino County, California. Unpublished data collected on behalf of Sundance Biology during Mohave ground squirrel trapping between 22 March 2008 and 23 June 2008. Job #08-012. Wrightwood, CA.

- 30-acre trapping grid. Few burrowing owl pellets at abandoned kit fox burrow.

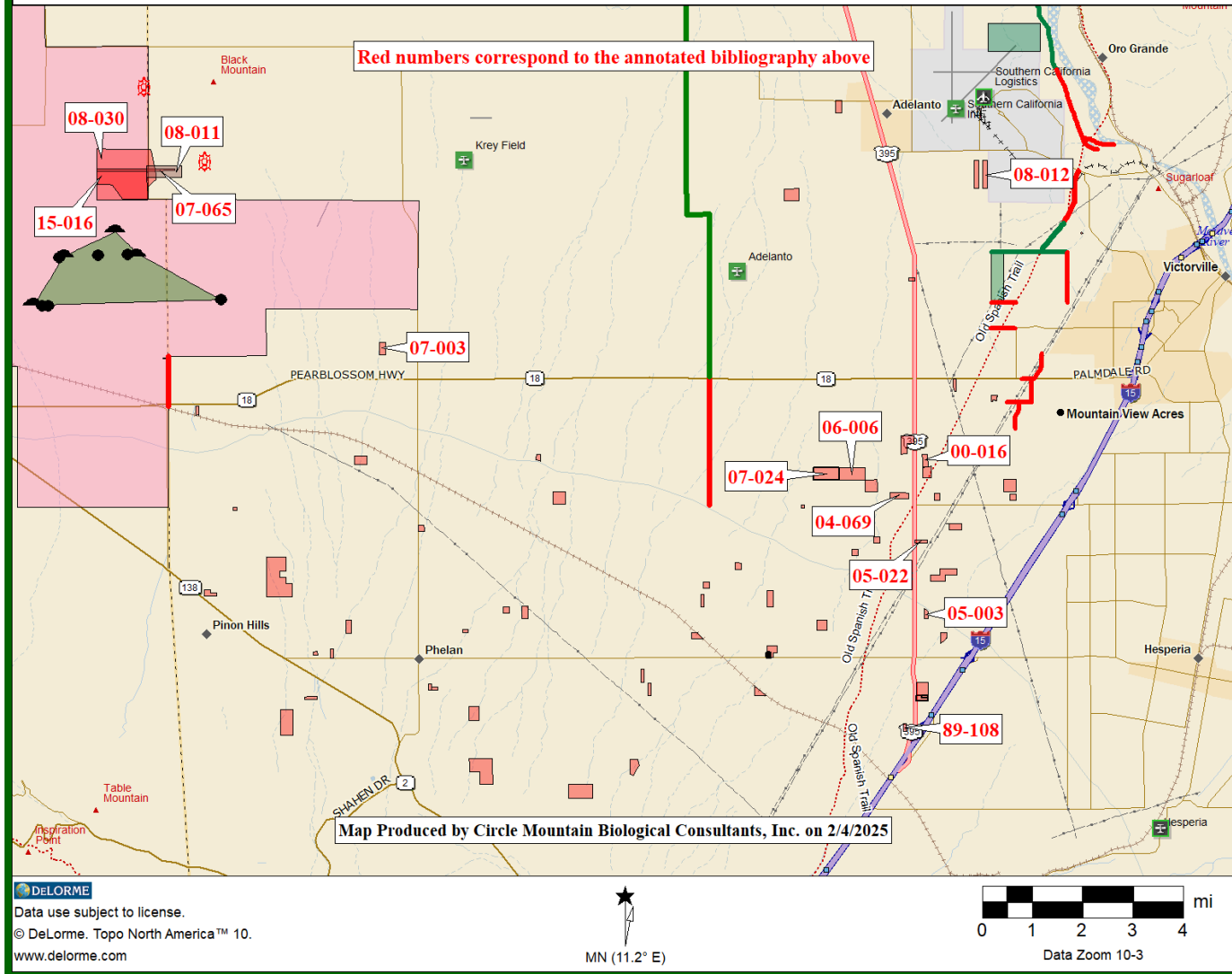
(08-030) Circle Mountain Biological Consultants, Inc. 2008c. Focused survey for desert tortoise and western burrowing owl and general biological resource assessment for the Gray Butte Facility, Los Angeles and San Bernardino Counties, California. Unpublished report prepared for General Atomics and Aeronautical Systems, Inc. Job #08-030. Wrightwood, CA.

- 700-acres±. Burrowing owl, including 2 adults/2 juvenile at one burrow, 1 owl at another, and 12 burrows.

(15-016) Circle Mountain Biological Consultants, Inc. 2015. Environmental survey of developed area for Gray Butte Flight Operation Facilities, Los Angeles County, California. An unpublished report prepared on behalf of General Atomics. Job #15-016.

- 325 acres. Burrowing owl (sign at a kit fox burrow).

# Map 1: Adelanto to Phelan: Burrowing Owl Sign on 13 of 86 Surveys between 1989-2015



## **Map 2 - Burrowing owl signs found during 7 of 51 Tortoise Surveys in Hesperia, Victorville, and Apple Valley between 1989 and 2017**

(89-257) Tierra Madre Consultants, Inc. 1989. Tentative Tract 14640: Biological assessment. Unpublished report prepared by Ed LaRue for Northstar Homes. Job #89-257. Riverside, CA.

- 20 acres. Burrowing owl (2 inactive burrows).

(98-015) Circle Mountain Biological Consultants. 1998. Focused survey for desert tortoise on a 6-acre site in the Town of Apple Valley, San Bernardino County, California. Unpublished report prepared by Sharon Dougherty for Kenyon & Associates, Inc. Job #98-015. Wrightwood, CA.

- 6.0 acres. Burrowing owl (pair observed 100 feet west).

(05-066) Circle Mountain Biological Consultants. 2005. Focused desert tortoise survey and general biological inventory for a 10-acre± site near the Town of Apple Valley (APN 0463-282-32, Tentative Parcel Map 17588), San Bernardino County, California. Unpublished report prepared by Sharon Dougherty on behalf of Petra Engineering. Job #05-066. Wrightwood, CA.

- Burrowing owl (2 birds, 1 active burrow, and 1 fresh pellet).

(06-063) Circle Mountain Biological Consultants. 2006. Focused desert tortoise survey and general biological inventory for a 40-acre± site (Tentative Parcel Map 17432, APN 0463-282-23) near the Town of Apple Valley, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of Mr. Steve Womack. Job #06-063. Wrightwood, CA.

- 40 acres. Burrowing owl (pair of owls on 11 and 17 August 2006).

(08-012) Circle Mountain Biological Consultants, Inc. 2008. Mohave ground squirrel trapping data (no report) for the Adelanto Prison East site, San Bernardino County, California. Unpublished data collected on behalf of Sundance Biology during Mohave ground squirrel trapping between 22 March 2008 and 23 June 2008. Job #08-012. Wrightwood, CA.

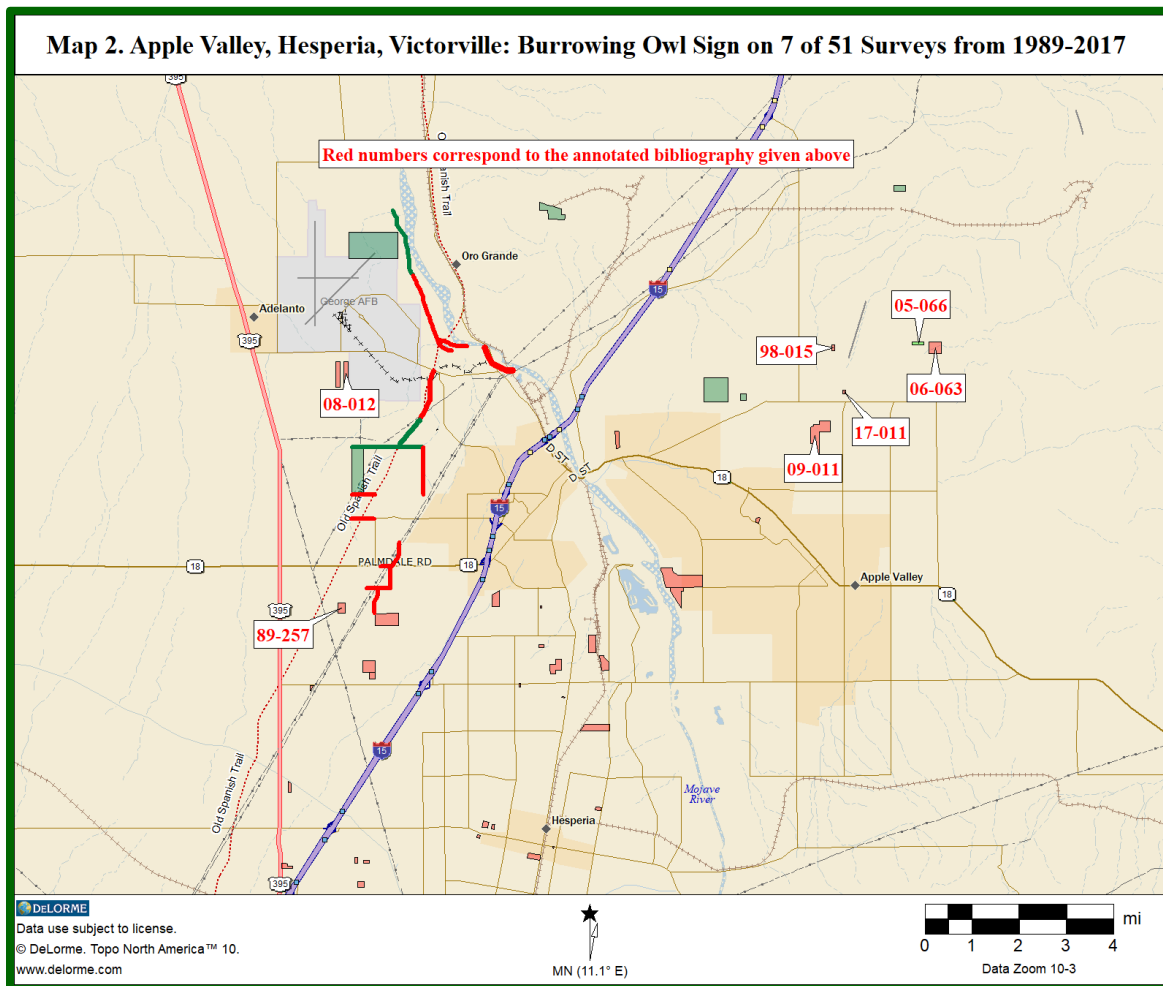
- 30-acre trapping grid. Few burrowing owl pellets at abandoned kit fox burrow.

(09-011) Circle Mountain Biological Consultants, Inc. 2009. Focused survey for desert tortoise and western burrowing owl, habitat evaluation for Mohave ground squirrel, and general biological resource assessment for the Apple Valley Water Reclamation Project, a 100-acre± site in the Town of Apple Valley, San Bernardino County, California. Unpublished report prepared by Ed LaRue for Tom Dodson & Associates on behalf of Victor Valley Wastewater Reclamation Authority. Job #09-011. Wrightwood, CA.

- 140 acres. Burrowing owl (2 separate owls in burrows, 2 other active burrows, pellet at abandoned ground squirrel burrow).

(17-011) Circle Mountain Biological Consultants, Inc. 2017. Focused survey for Agassiz's desert tortoise, habitat assessments for burrowing owl and Mohave ground squirrel, and general biological resource assessment for a 3.0-acre± site (APN 0463-403-05) in the Town of Apple Valley, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of American Commercial Investments, Inc. Job #17-011. Wrightwood, CA.

- 3 acres. Active burrowing owl burrow.



### **Map 3 - Burrowing owl signs found during 18 of 50 Tortoise Surveys in Barstow and Surrounding Areas between 1994 and 2014**

(6) Circle Mountain Biological Consultants. 1994a. Resource inventory and general biological assessment (Animals): San Bernardino County wind energy project: Iron Mountains. Unpublished report prepared by Ed LaRue on behalf of LG&E Power Engineers and Constructors Inc. and Kenetech Windpower. Job #94-004. Wrightwood, CA.

- Unknown linear distance. Undisclosed amount of burrowing owl signs.

(7) Circle Mountain Biological Consultants. 1994b. Lenwood Loop Connector project: Summary of biological monitoring from 8-1-94 to 12-9-94. Unpublished report prepared by Ed LaRue and Sharon Dougherty on behalf of the City of Barstow. Job #94-008. Wrightwood, CA.

- 2.5-mile roadway. Undisclosed amount of burrowing owl signs.

(8) Circle Mountain Biological Consultants. 1996. Biological assessment for the proposed San Bernardino County landfill conveyance project. Unpublished report prepared by Ed LaRue on behalf of San Bernardino County Public Works Group, Planning Department and U.S. Bureau of Land Management concerning the Barstow Landfill. Job #96-003. Wrightwood, CA.

- 483 acres. Burrowing owl (4 birds).

(19) Circle Mountain Biological Consultants. 1999. Barstow prison sites: Focused desert tortoise survey and general biological inventory, City of Barstow, California. Unpublished report prepared by Ed LaRue on behalf of Paul Secord and the City of Barstow. Job #99-004. Wrightwood, CA.

- 143 acres. Burrowing owl (1 owl and 1 active burrow).

(32) Circle Mountain Biological Consultants, Inc. 2007. Focused survey for desert tortoise and western burrowing owl and Mohave ground squirrel habitat evaluation for a 25-acre± site (APN 0497-201-09) in the community of Hinkley, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of Ecosystem Solar Electric Corporation. Job #07-023. Wrightwood, CA.

- 25 acres. Burrowing owl (carcass 430 feet east of site).

(35) Circle Mountain Biological Consultants, Inc. 2008a. Focused survey for desert tortoise and western burrowing owl, habitat evaluation for Mohave ground squirrel, and general biological resource assessment for a 10-acre± site (APNs 0421-033-13 and -16) near the community of Lenwood, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of Richard Ross. Job #08-009. Wrightwood, CA.

- 10 acres. 3 active burrowing owl complexes (no birds observed).



(36) Circle Mountain Biological Consultants, Inc. 2008b. Reconnaissance survey for desert tortoise and western burrowing owl, habitat evaluation for Mohave ground squirrel, and biological constraints analysis for a 320-acre± site (APNs 0420-142-59 & -60) near the community of Lenwood, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of The Planning Associates. Job #08-018. Wrightwood, CA.

- 320 acres. Burrowing owl (5 burrows including 3 with owls).

(39) Circle Mountain Biological Consultants, Inc. 2010. Reconnaissance survey for desert tortoise, western burrowing owl, Mohave Ground Squirrel, and other biological resources for a 640-acre± site (APNs 0540-081-03 and 0540-081-06) near the community of Yermo, San Bernardino County, California. Unpublished report prepared by Ed LaRue for Rodda and Associates. Job #10-006. Wrightwood, CA.

- 640 acres. Burrowing owl (1 owl flushed from burrow and 2 pellets at 2<sup>nd</sup> burrow)

(40) Circle Mountain Biological Consultants, Inc. 2010. Formal biological assessment for desert tortoise at the proposed Silver Valley 16, LLC solar facility near the community of Yermo, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of Silver Valley 16, LLC. Job #10-028. Wrightwood, CA.

- 640 acres. Burrowing owl (5 owls at burrows, 3 owls not at burrows, and 7 burrows with owl sign).

(41) Circle Mountain Biological Consultants, Inc. 2011a. Focused survey for Agassiz's desert tortoise, habitat assessments for western burrowing owl and Mohave ground squirrel, and general biological resource assessment for the Brubaker-Mann, Inc. Gold, Brown, Lilac Quarries a 68-acre± site (APN 0424-041-09) near the community of Yermo, San Bernardino County, California. Unpublished report prepared by Ed LaRue for Webber & Webber Mining Consultants, Inc. on behalf of Brubaker-Mann, Inc. Job #11-014. Wrightwood, CA.

- 68 acres. Burrowing owl (2 perch sites and 1 pile of feathers, possibly depredated).

(42) Circle Mountain Biological Consultants, Inc. 2011b. General biological survey and focused surveys for desert tortoise and burrowing owl, with an evaluation of habitat for Mohave ground squirrel on 940 acres± near the community of Yermo (APNs including 0540-031-06, -07, and parts of 0538-121-06), San Bernardino County, California. Unpublished report prepared by Sharon Dougherty for Thomas Meichtry, P.E. and Rodda & Associates. Job# 11-006. Wrightwood, CA.

- 940 acres. Burrowing owl (13 locations).

(43) Circle Mountain Biological Consultants, Inc. 2011c. Focused surveys for Agassiz's desert tortoise and special status plant species for access to the proposed Silver Valley 16, LLC solar facility near the community of Yermo, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of Silver Valley 16, LLC and Solarrus Corporation. Job #11-017. Wrightwood, CA.

- 3.0 linear mile access road. Burrowing owl (feather in tortoise burrow).

(45-1, 45-2) Circle Mountain Biological Consultants, Inc. 2014a. Focused survey for Agassiz's desert tortoise for PG&E Hinkley Groundwater Remediation Project Agricultural Unit Expansion, San Bernardino County, California. Unpublished report prepared by Ed LaRue for CH2M HILL on behalf of PG&E. Job #14-008. Wrightwood, CA.

- 155 acres among 5 sites. Burrowing owl (pellets in 7 locations).

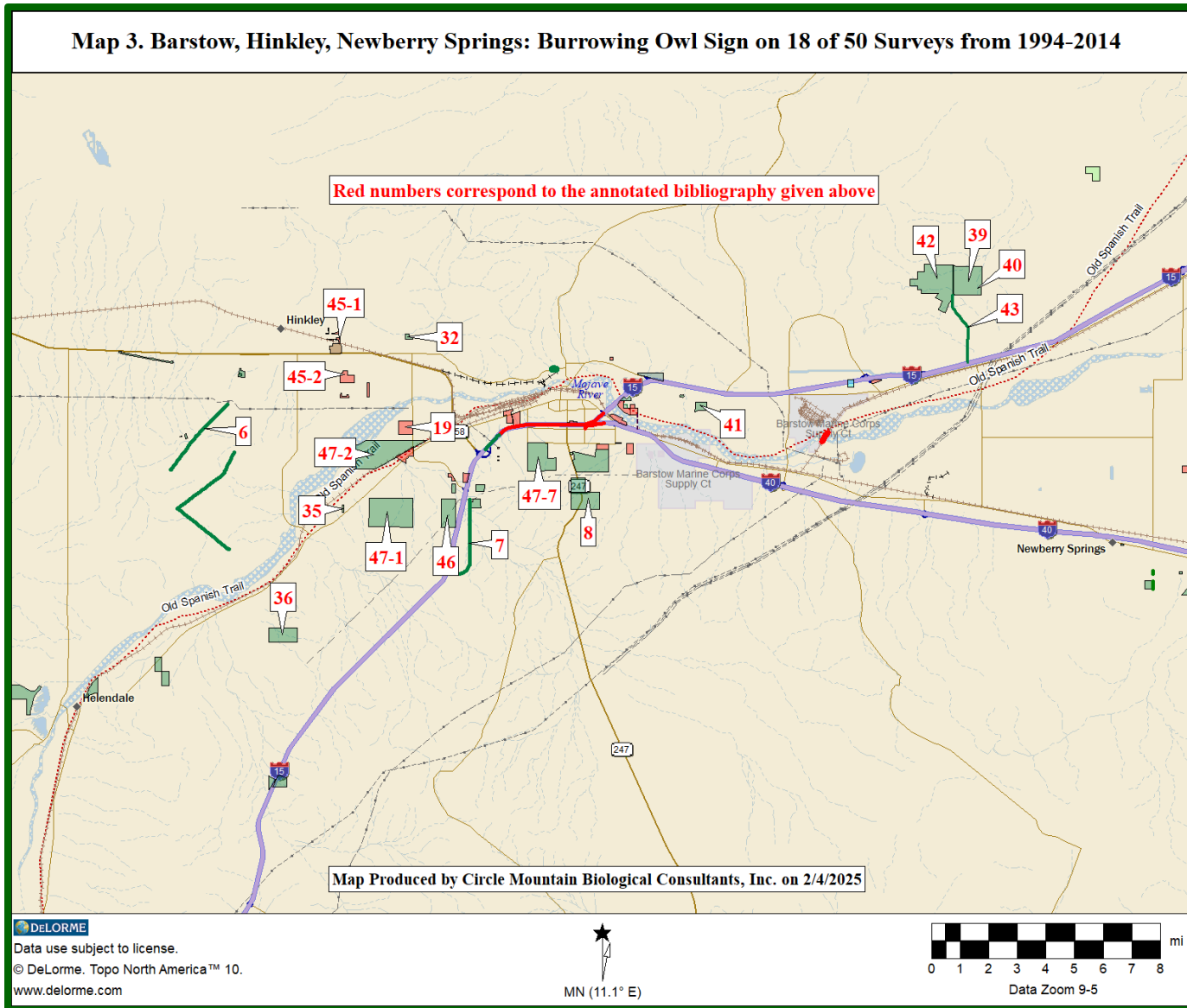
(46) Circle Mountain Biological Consultants, Inc. 2014b. Focused survey for Agassiz's desert tortoise, habitat assessments for burrowing owl and Mohave ground squirrel, and general biological resource assessment for a 314-acre± site (APN 0421-111-01) in the City of Barstow, San Bernardino County, California. Unpublished report prepared by Ed LaRue for Lansing Industries, Inc. Job #14-012. Wrightwood, CA.

- 314 acres. 13 burrowing owl signs.

(47-1, 2, 7) Circle Mountain Biological Consultants, Inc. 2014c. Reconnaissance surveys and habitat assessments for fifteen sites in the City of Barstow, in support of the Master EIR for the General Plan Update, Barstow, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of the City of Barstow. Job #14-005. Wrightwood, CA.

- 15 sites. Undisclosed amount of burrowing owl signs on Sites 1, 2, and 7.

Map 3. Barstow, Hinkley, Newberry Springs: Burrowing Owl Sign on 18 of 50 Surveys from 1994-2014



## Maps 4 - Burrowing owl signs found during 10 of 81 Tortoise Surveys in Lancaster between 1992 and 2019

(2) Tierra Madre Consultants, Inc. 1992. Amargosa Creek Channelization Project: Focused desert tortoise survey and Mohave ground squirrel evaluation. Unpublished report prepared by Ed LaRue on behalf of the City of Lancaster. Job #92-030. Riverside, CA.

- 234 acres. No tortoise sign. Other species: Burrowing owl (pair observed at burrow).

(3) Circle Mountain Biological Consultants. 2004. Calvary Chapel 10-acre site (APN 3107-006-015): General biological survey and focused surveys for desert tortoise and burrowing owl, with an evaluation of habitat for Mohave ground squirrel, City of Lancaster, Los Angeles County, California. Unpublished report prepared on behalf of Calvary Chapel. Job #04-054. Wrightwood, CA.

- 10 acres. No tortoise sign. Other species: Burrowing owl (single bird at burrow).

(19) Circle Mountain Biological Consultants. 2005. Focused survey for desert tortoise and western burrowing owl, and habitat evaluation for Mohave ground squirrel on APN 3120-001-027, a 2.5-acre± site in the City of Lancaster, Los Angeles County, California. Unpublished report prepared on behalf of Phoenix Mortgage Corporation. Job #05-079. Wrightwood, CA.

- 2.5 acres. No tortoise sign. Other species: Alkali mariposa lily (2), Burrowing owl (whitewash and pellets at a California ground squirrel burrow).

(22) Circle Mountain Biological Consultants. 2006a. Focused survey for desert tortoise and western burrowing owl, and habitat evaluation for Mohave ground squirrel on a 40-acre± site in the City of Palmdale (APNs 3150-022-17, -18, -19, -23, -29, -30, -32, -34, -37, -39, -41, -42, -43, -44, -45, -47, -48, -49, -50, -51, -52, -53, -54, -56, -57, -58, and -60), Los Angeles County, California. Unpublished report prepared on behalf of David Shamsian. Job #06-001. Wrightwood, CA.

- 40 acres. Burrowing owl (2 owls and sign at four other locations).

(23) Circle Mountain Biological Consultants. 2006b. Focused survey for desert tortoise and western burrowing owl, and habitat evaluation for Mohave ground squirrel on APN 3128-008-008, a 48-acre± site in the City of Lancaster, Los Angeles County, California. Unpublished report prepared on behalf of Antelope Valley Engineering, Inc. Job #06-002. Wrightwood, CA.

- 48 acres. Burrowing owl (active burrow with pellets and whitewash, single owl pellet).

(33) Circle Mountain Biological Consultants. 2006c. Focused survey for desert tortoise and western burrowing owl, and habitat evaluation for Mohave ground squirrel on APN 3105-022-032, a 1.25-acre site in the City of Lancaster, Los Angeles County, California. Unpublished report prepared on behalf of Antelope Valley Steel Building Services, Inc. Job #06-099. Wrightwood, CA.

- 1.25 acres. Burrowing owl (owl observed 1,200 feet north and fresh pellet 2,300 feet southeast).

(38) Circle Mountain Biological Consultants, Inc. 2007. Focused survey for desert tortoise and western burrowing owl, habitat evaluation for Mohave ground squirrel, and general biological resource assessment for a 14.47-acre site (APN 3170-007-052) in the City of Lancaster, Los Angeles County, California. Unpublished report prepared on behalf of Antelope Valley Engineering, Inc. Job #07-037. Wrightwood, CA.

- 14.5 acres. Burrowing owl (two side-by-side active burrows with feathers, pellets, and whitewash 500 feet southwest).

(53) Circle Mountain Biological Consultants, Inc. 2010. Updated focused survey for desert tortoise, habitat assessments for western burrowing owl and Mohave ground squirrel, botanical field survey, and general biological resource assessment for a 49.15-acre± site (TPM 66115) in the City of Lancaster, Los Angeles County, California. Unpublished report prepared on behalf of Antelope Valley Engineering, Inc. Job #10-013. Wrightwood, CA.

- 49 acres. Burrowing owl sign to the north.

(57a) Circle Mountain Biological Consultants, Inc. 2014. Focused Survey for Agassiz's desert tortoise, habitat assessments for burrowing owl and Mohave ground squirrel, and general biological resource assessment for a 6.5-acre± Site (APN 3203-008-045) in the City of Lancaster, Los Angeles County, California. Unpublished report prepared on behalf of Global Investment and Development, LLC. Job# 14-001. Wrightwood, CA. (Partial resurvey of Job # 10-004)

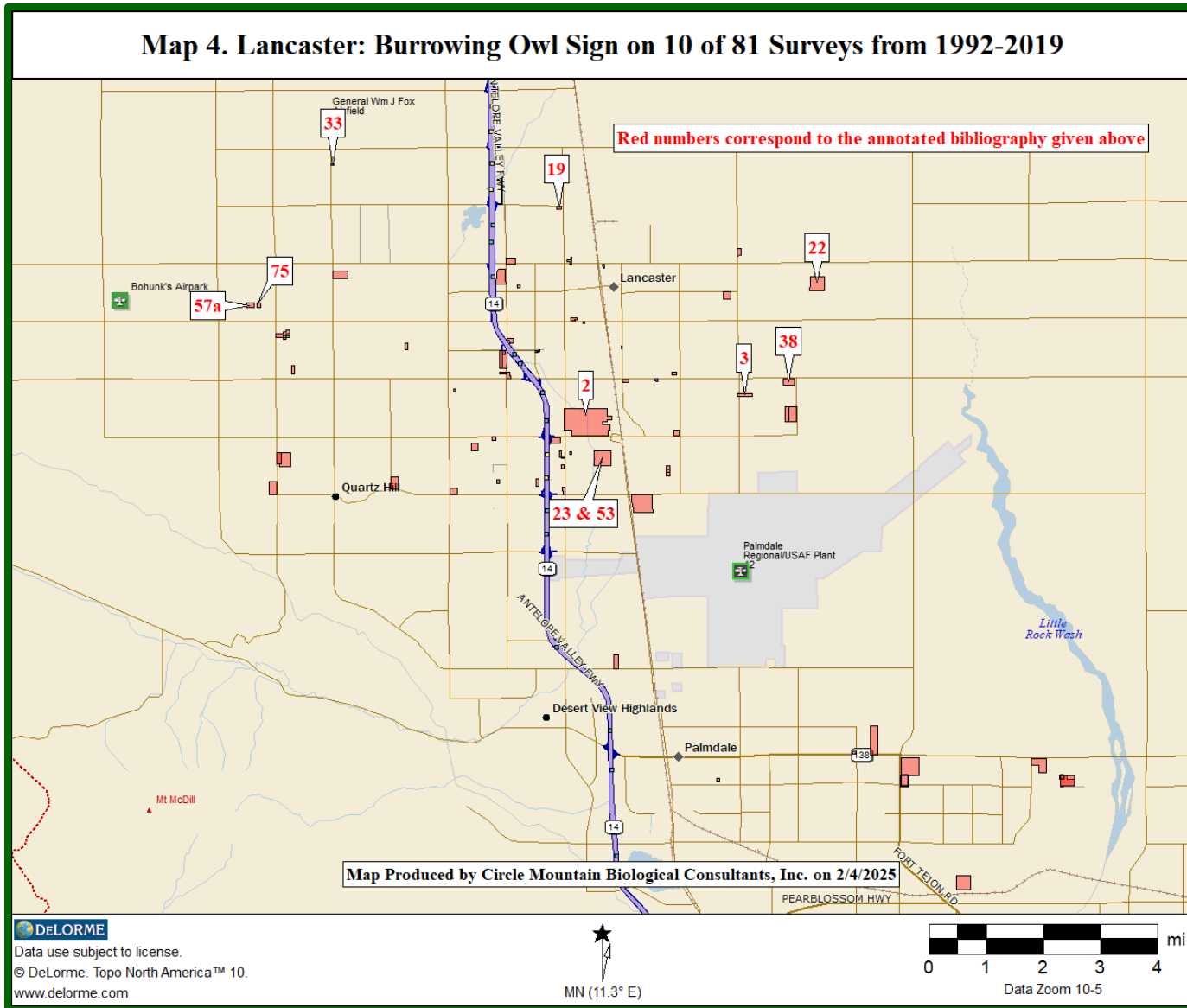
- 6.5 acres. Burrowing owl pellets at burrow and two in open, away from burrows.

(75) Circle Mountain Biological Consultants, Inc. 2019. Reevaluation of biological resources on two parcels (APNs 3203-008-045 & -046) in the unincorporated community of Del Sur, Los Angeles County, CA. Job #19-001 (resurvey of 14-001). Unpublished report prepared on behalf of Duke Engineering. Wrightwood, CA.

- 6.5 and 3.25-acre parcels. Pellet 350 feet east, two pellets 460 feet west of the northwest corner, and whitewash and three older owl pellets at an inactive domestic dog dig located 1,040 feet to the east-northeast.

It may be noteworthy that between 2005 and 2023, CMBC personnel performed 13 surveys on 12 sites in the City of Palmdale to the north and did not find any burrowing owl signs on those 12 sites.

**Map 4. Lancaster: Burrowing Owl Sign on 10 of 81 Surveys from 1992-2019**



## **Map 5 - Burrowing owl signs found during 4 of 13 Tortoise Surveys in Lucerne Valley between 2006 and 2009**

(06-089) Circle Mountain Biological Consultants. 2006. Focused survey for desert tortoise and western burrowing owl and general biological resource assessment for a 274-acre± site (APN 0464-253-01) in the vicinity of Lucerne Valley, San Bernardino County, California. Unpublished report prepared on behalf of Petra Engineering. Job #06-089. Wrightwood, CA.

- 274 acres. Undisclosed amount of burrowing owl signs.

(07-009) Circle Mountain Biological Consultants, Inc. 2007a. Focused survey for desert tortoise and western burrowing owl, general biological resource assessment, and desert native plant assessment for TPM 18531, a 5.0-acre± site (APN 0449-612-05) in Lucerne Valley, San Bernardino County, California. Unpublished report prepared on behalf of Seaman Sherwood Construction, Inc. Job #07-009. Wrightwood, CA.

- 5 acres. 1 burrowing owl in rock pile in side yard of occupied residence.

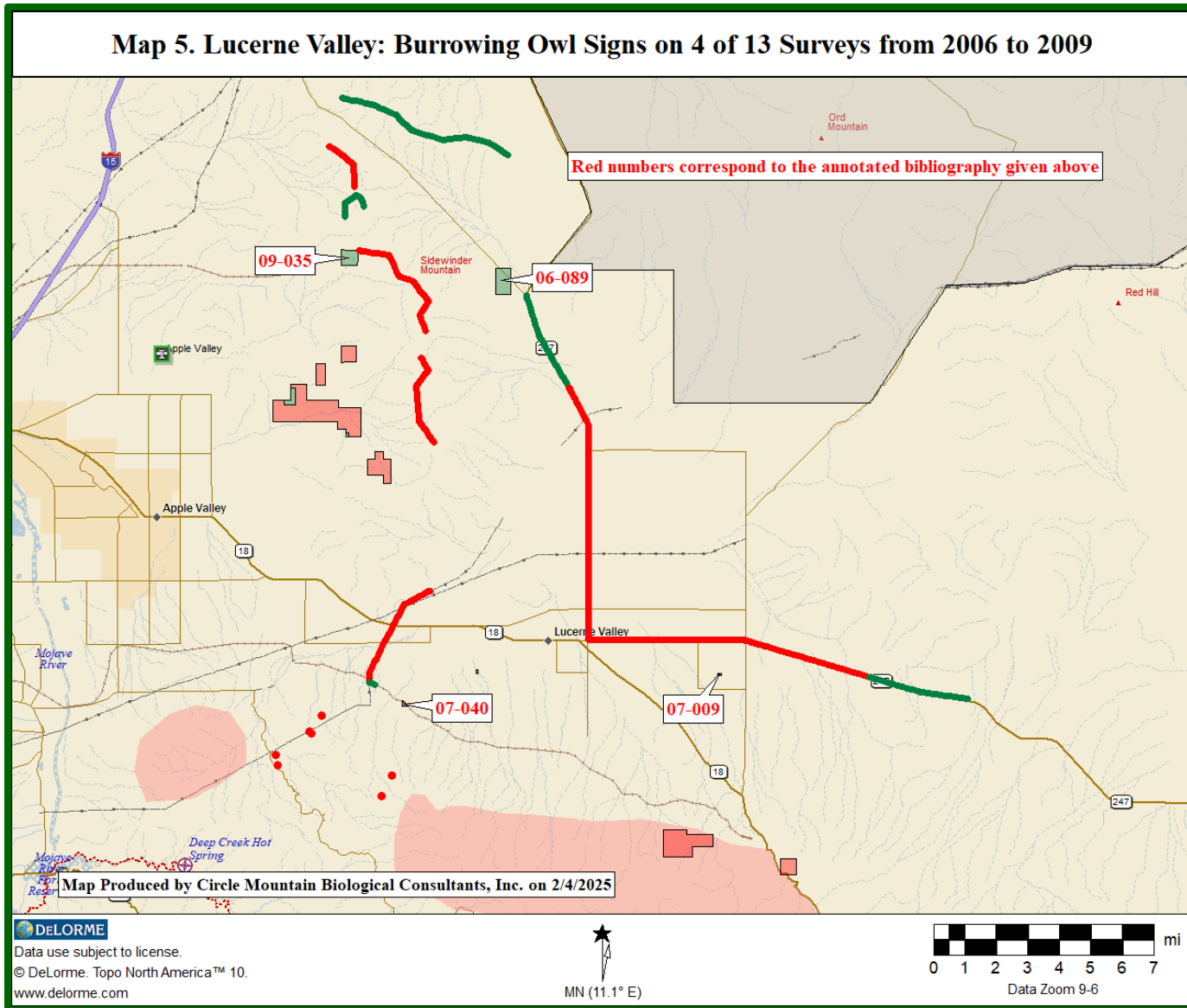
(07-040) Circle Mountain Biological Consultants, Inc. 2007b. Focused survey for desert tortoise and western burrowing owl and general biological resource assessment for a 7.8-acre± site (APN 0435-241-16, TPM 18300) near the community of Lucerne Valley, San Bernardino County, California. Unpublished report prepared on behalf of Petra Group, Inc. Job #07-040. Wrightwood, CA.

- 7.8 acres. 2 active burrowing owl burrows.

(09-035) Circle Mountain Biological Consultants, Inc. 2009. Focused survey for desert tortoise and western burrowing owl, habitat evaluation for Mohave ground squirrel, and formal Biological Assessment for a 160-acre± portion of the La Dama de Oro Mine, Bureson Claims, Sidewinder Mountain, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of Todd Land Surveying. Job #09-035. Wrightwood, CA.

- 160 acres. 2 individual burrowing owls (no sign of residency).

**Map 5. Lucerne Valley: Burrowing Owl Signs on 4 of 13 Surveys from 2006 to 2009**





## **Map 6 - Burrowing owl signs found during 33 of 308 Tortoise Surveys in Morongo Basin (Yucca Valley, Joshua Tree, 29 Palms) between 1999 and 2021**

(6) Circle Mountain Biological Consultants. 1999. Biological Assessment for the Joshua Basin Water District's Copper Mountain Well Project. Unpublished report prepared by Ed LaRue on behalf of the Joshua Basin Water District. Job 99-002. Wrightwood, CA.

- 18.5 mile pipeline + 4 tank sites. Undisclosed amount of burrowing owl signs.

(10) Circle Mountain Biological Consultants. 2000. Joshua Basin Water District Copper Mountain Mesa Well and Pipeline: Results of focused desert tortoise survey. Unpublished letter report from Ed LaRue to Tom Dodson & Associates. Job 00-013. Wrightwood, CA.

- 2.0-mile pipeline. Burrowing owl (1 dead young and 1 live adult) at five burrows.

(38) Circle Mountain Biological Consultants. 2004a. Twentynine Palms 100-acre Barrett Property: Focused survey for desert tortoise and general biological survey, City of Twentynine Palms, California. Unpublished report prepared by Ed LaRue on behalf of Mr. Bill Barrett. Job 04-015. Wrightwood, CA.

- 100 acres. Undisclosed amount of burrowing owl signs.

(50) Circle Mountain Biological Consultants. 2004b. Proactive Properties 320-acre site (APN 0612-201-01): Focused survey for desert tortoise and general biological survey, City of Twentynine Palms, California. Unpublished report prepared by Sharon Dougherty on behalf of Proactive Properties, LLC. Job 04-042a. Wrightwood, CA.

- 320 acres. 2 Burrowing owls.

(51) Circle Mountain Biological Consultants. 2004c. Proactive Properties 80-acre site (APN 0621-031-03): Focused survey for desert tortoise and general biological survey, City of Twentynine Palms, California. Unpublished report prepared by Sharon Dougherty on behalf of Proactive Properties, LLC. Job 04-042b. Wrightwood, CA.

- 80 acres. Undisclosed amount of burrowing owl signs.

(62) Circle Mountain Biological Consultants. 2004d. Penca Capital 40-acre site (TTN 17172): Focused survey for desert tortoise and general biological survey, City of Twentynine Palms, California. Unpublished report prepared by Sharon Dougherty on behalf of Penca Capital. Job 04-059. Wrightwood, CA.

- 40 acres. 3 Burrowing owls.

(76) Circle Mountain Biological Consultants. 2005. Focused desert tortoise survey and general biological inventory for a 160-acre site (APN 612-201-02) in the City of Twentynine Palms, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of Proactive Properties, LLC. Job 05-015. Wrightwood, CA.

- 160 acres. Undisclosed amount of burrowing owl signs.

(105) Circle Mountain Biological Consultants. 2005a. Focused desert tortoise survey and general biological inventory for a 640-acre± Site (APNs 631-151-03 and -04) in the community of Joshua Tree, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of Mr. William Deane. Job 05-032. Wrightwood, CA.

- 640 acres. Undisclosed amount of burrowing owl signs.

(111) Circle Mountain Biological Consultants. 2005b. Focused desert tortoise survey and general biological inventory for a 40-acre± site within the proposed Copper Mountain College expansion area, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of Copper Mountain Community College District. Job 05-053. Wrightwood, CA.

- 40 acres. Undisclosed amount of burrowing owl signs.

(119) Circle Mountain Biological Consultants. 2005c. Focused desert tortoise survey and general biological inventory on a 376-acre± site (APNs 591-341-001, -004, -005, -006, -007, and -008) in the City of Twentynine Palms and San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of Kjelstrom & Associates. Job 05-050. Wrightwood, CA. (Same as Job 07-026, #249 and Job 08-010, #250).

- 376 acres. 6 Burrowing owls.

(123) Circle Mountain Biological Consultants. 2005d. Focused desert tortoise survey and general biological inventory on a 40-acre± site (APNs 614-241-09 & -10) in the City of Twentynine Palms, San Bernardino County, California. Unpublished report prepared by Sharon Dougherty on behalf of Neil Wilson. Job 05-061. Wrightwood, CA.

- 40 acres. 2 Burrowing owl signs.

(136) Circle Mountain Biological Consultants. 2006a. Focused desert tortoise survey and general biological inventory for a 2.2-acre± site (APN 0602-211-01) in the community of Joshua Tree, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of Abby Gill. Job 06-010. Wrightwood, CA.

- 13 acres. Undisclosed amount of burrowing owl signs.

(137) Circle Mountain Biological Consultants. 2006b. Focused desert tortoise survey and general biological inventory for a 40-acre± site (APNs 0614-241-09 and -10) in the City of Twentynine Palms, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of Neal Wilson. Job 05-061. Wrightwood, CA.

- 40 acres. 2 active burrowing owl burrows.

(139) Circle Mountain Biological Consultants. 2006c. Focused desert tortoise survey and general biological inventory for a 140-acre± site (APNs 0601-041-01 and 0601-021-04, -05, -18, & -19) in the Town of Yucca Valley, San Bernardino County, California. Report prepared by Ed LaRue on behalf of Verismo Investment Group, LLC. Job 06-014. Wrightwood, CA. (Same as #04-045, #56).

- 140 acres. 2 Burrowing owls.

(142) Circle Mountain Biological Consultants. 2006d. Focused desert tortoise survey and general biological inventory for an 8-acre± site (APNs 608-161-09 & -11) in the community of Joshua Tree, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of Target Construction. Job 06-032. Wrightwood, CA.

- 8 acres. Undisclosed amount of burrowing owl signs.

(165) Circle Mountain Biological Consultants. 2006e. Focused desert tortoise resurvey for a 15-acre± site (APN 0598-291-26, TPM 17419) in the Yucca Mesa area of San Bernardino County, California. Unpublished letter report prepared by Ed LaRue on behalf of HomeLife Realty. Job 06-067. Wrightwood, CA. (Same as Job 04-065, #65).

- 15 acres. 1 Burrowing owl, not at burrow.

(169) Circle Mountain Biological Consultants. 2006f. Focused desert tortoise survey and general biological inventory for a 4.75-acre± site (APN 0608-161-05) and a 1.0-acre± site (APN 0608-161-10) in the community of Joshua Tree, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of Target Construction. Job 06-072. Wrightwood, CA.

- 4.75 acres + 1.0 acre. Undisclosed amount of burrowing owl signs.

(172) Circle Mountain Biological Consultants. 2006g. Focused survey for desert tortoise and western burrowing owl and general biological resource assessment for a 640-acre± site (APN 0629-181-01) in the vicinity of Yucca Valley, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of Danmark Development, LLC. Job 06-080. Wrightwood, CA. (Same as Job 06-012).

- 640 acres. 4 Burrowing owls.

(175) Circle Mountain Biological Consultants. 2006h. Focused survey for desert tortoise and western burrowing owl and general biological resource assessment for a 20-acre± site (TPM 17669, APN 0632-081-54) in the community of Joshua Tree, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of Steve Glenn. Job 06-084. Wrightwood, CA.

- 20 acres. Burrowing owl = 3 tortoise burrows with whitewash, pellets, feathers.

(176) Circle Mountain Biological Consultants. 2006i. Focused survey for desert tortoise and western burrowing owl, general biological resource assessment, and desert native plant assessment for a 10-acre± site (APN 0605-161-33) in the community of Joshua Tree, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of Avian Rogers. Job 06-091. Wrightwood, CA.

- 10 acres. Undisclosed amount of burrowing owl signs.

(179) Circle Mountain Biological Consultants. 2006j. Focused survey for desert tortoise and western burrowing owl and general biological resource assessment for a 5.0-acre± site (APN 0607-241-55) near the community of Joshua Tree, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of Upstart Properties. Job 06-086. Wrightwood, CA. (Same as Job 08-022, #218).

- 5.0 acres. 11 burrowing owl signs.

(196) Circle Mountain Biological Consultants, Inc. 2007a. Focused survey for desert tortoise and western burrowing owl and general biological resource assessment for a 25-acre± site (APN 0629-091-07) in the community of Flamingo Heights, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of Robert Rojas. Job 07-038. Wrightwood, CA.

- 25 acres. Burrowing owl (inactive burrow).

(249) Circle Mountain Biological Consultants, Inc. 2007b. Resurvey of 195-acre Granite Construction, Inc. mine expansion site, 29 Palms, California. Unpublished letter report prepared by Ed LaRue on behalf of Kjelstrom & Associates. Job 07-026. Wrightwood, CA. (Same as Job 05-050, #119 and Job 08-010, #250).

- 195 acres. Undisclosed amount of burrowing owl signs.

(218) Circle Mountain Biological Consultants, Inc. 2008a. Focused resurvey for desert tortoise, western burrowing owl, and Little San Bernardino Mountains gilia on a 5.0-acre± site (TPM 18310, APN 0607-241-55) near the community of Joshua Tree, San Bernardino County, California. Unpublished letter report completed by Ed LaRue on behalf of Upstart Properties. Job 08-022. Wrightwood, CA. (Same as Job 06-086, #179).

- 5.0 acres. Burrowing owl feathers, whitewash, and pellet at burrow approximately 100 feet east of site.

(224) Circle Mountain Biological Consultants, Inc. 2008b. Focused survey for desert tortoise and western burrowing owl and general biological resource assessment for the Bighorn-Desert View Water Agency's planned Water Infrastructure Restoration Program (WIRP) in the communities of Landers and Flamingo Heights, San Bernardino County, California. Unpublished report prepared by Ed LaRue for Candida Neal, AICP on behalf of Bighorn-Desert View Water Agency. Job 08-048. Wrightwood, CA.

- 11-mile pipeline + 40-acre recharge basin. Undisclosed amount of burrowing owl signs.

(228) Circle Mountain Biological Consultants, Inc. 2008b. Results of tortoise survey of 4 March 2008: Survey of the 57-acre impact area at Copper Mountain College. Unpublished report prepared by Ed LaRue on behalf of Copper Mountain College. Job 08-017. Wrightwood, CA. (Same as Job 02-018, #15, #229, #230, #231, #232, #242).

- 57 acres. Old evidence of burrowing owl.

(250) Circle Mountain Biological Consultants, Inc. 2008c. Focused survey for desert tortoise and western burrowing owl and general biological resource assessment for a 356-acre± site (APN 591-341-001, -004, -005, -006, -007, and -008) in the City of Twentynine Palms, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of The Planning Associates. Job 08-010. Wrightwood, CA. (Same as Job 05-050, #119 and Job 07-026, #249).

- 356 acres. Undisclosed amount of burrowing owl signs.

(244) Circle Mountain Biological Consultants, Inc. 2009. Focused survey for desert tortoise and western burrowing owl and formal biological assessment for the Bighorn-Desert View Water Agency's alternative recharge basin near the community of Flamingo Heights, San Bernardino County, California. Unpublished report prepared by Ed LaRue for Candida Neal on behalf of Bighorn-Desert View Water Agency. Job 09-034. Wrightwood, CA.

- 55-acre survey area. 3 signs of burrowing owl.

(264) Circle Mountain Biological Consultants, Inc. 2012. Reconnaissance survey for Agassiz's desert tortoise, habitat evaluation for burrowing owl, and general biological resource assessment for the Coyote Valley Acquisition Project, a 365-acre± site (APNs 0632-221-02 & -03) near the City of Twentynine Palms, San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of The Trust for Public Lands. Job 12-023. Wrightwood, CA.

- 365 acres. 3 burrowing owl signs.

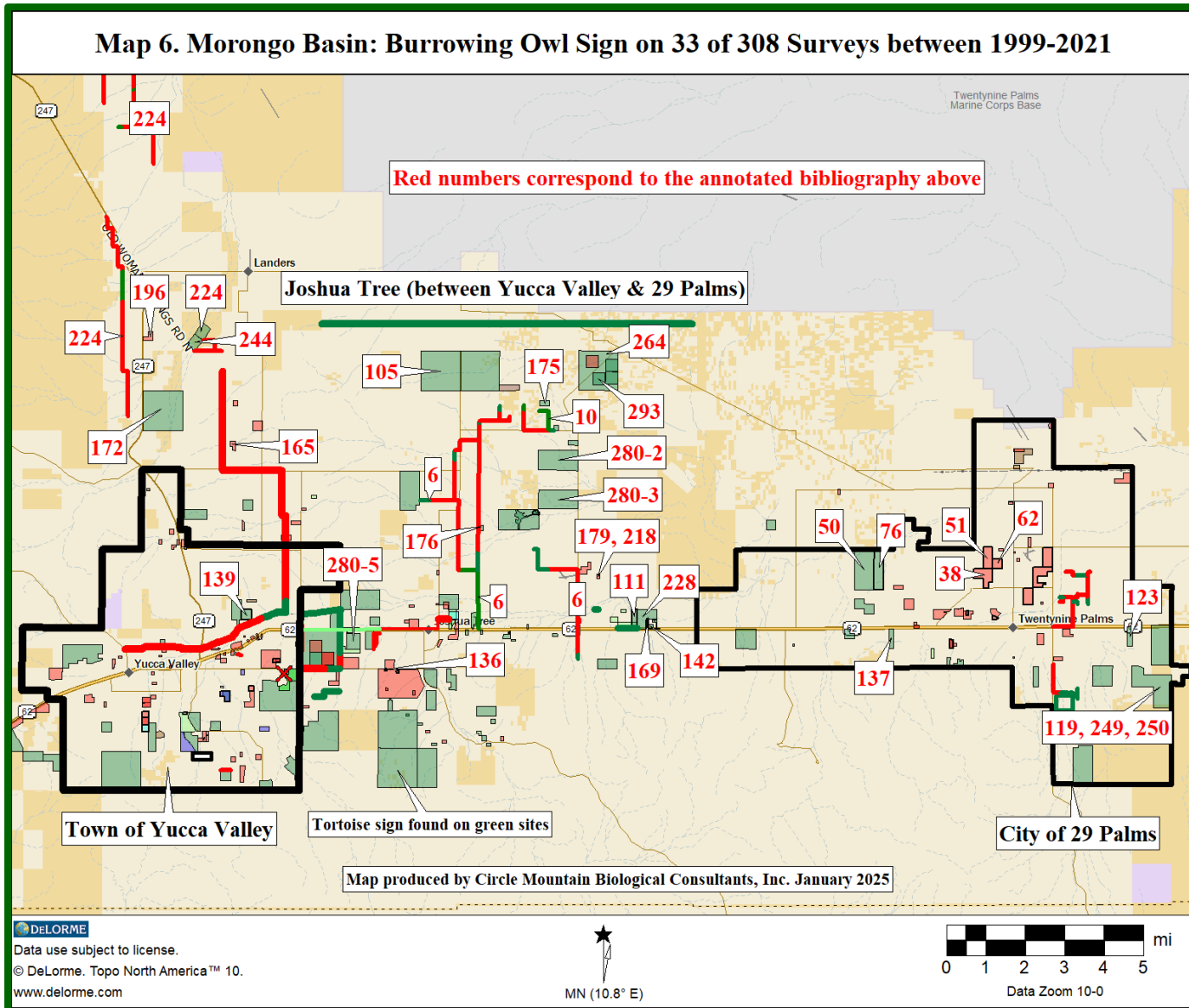
(280) Circle Mountain Biological Consultants, Inc. 2017. Reconnaissance surveys and habitat assessments for desert tortoise and other special status species in San Bernardino County, California. Unpublished report prepared by Ed LaRue on behalf of Mojave Desert Land Trust. Job #17-012. Wrightwood, CA.

- Site 2 (Vuthoori), 314 acres. 1 burrowing owl sign at kit fox dig.
- Site 3 (McKone), 315 acres. 1 burrowing owl sign at kit fox den.
- Site 5 (Vuthoori), 87 acres. Burrowing owl pellet at old dog dig.

(293) Circle Mountain Biological Consultants, Inc. 2021. Focused surveys and habitat evaluations for desert tortoise and other special status species on two plots located in Mojave Desert Land Trust's Coyote Valley Reserve in the community of Joshua Tree, San Bernardino County, California. Unpublished report prepared by Sharon Dougherty on behalf of Mojave Desert Land Trust. Job 21-035. Wrightwood, CA.

- 2, 61-acre± plots. Plot 2 to southeast = 1 burrowing owl flushed.

**Map 6. Morongo Basin: Burrowing Owl Sign on 33 of 308 Surveys between 1999-2021**



## **Map 7 - Burrowing owl signs found during 15 of 33 Tortoise Surveys on 12 sites in Ridgecrest and Inyokern between 2002 and 2022**

(9) Circle Mountain Biological Consultants. 2002. General biological survey and focused survey for desert tortoise on a  $\pm$  1.5-mile pipeline right-of-way in the city of Ridgecrest, Kern County, California. Unpublished report prepared by Sharon Dougherty for Krieger & Stewart, Inc. on behalf of Indian Wells Valley Water District. Job #02-024. Wrightwood, CA.

- 1.5-mile pipeline. Undisclosed amount of burrowing owl signs.

(11) Circle Mountain Biological Consultants. 2003 (Revised 2004). General biological survey and focused survey for desert tortoise on a  $\pm$  10.5-acre site in the city of Ridgecrest, Kern County, California. Unpublished report prepared by Sharon Dougherty for Krieger & Stewart, Inc. on behalf of Indian Wells Valley Water District. Job #03-033. Wrightwood, CA.

- 10.5 acres. Undisclosed amount of burrowing owl signs.

(13) Circle Mountain Biological Consultants. 2006. Focused desert tortoise survey and general biological inventory for two Capital Improvement Projects: D-Zone Reservoir and Well 35 in Kern County, California. Unpublished report prepared by Ed LaRue for Indian Wells Valley Water District. Job #06-018. Wrightwood, CA.

- Well 35/36 are two 0.5-acre sites within two 20-acre areas. 11 burrowing owl burrows with owl(s) at 6 of them.

(15) Circle Mountain Biological Consultants, Inc. 2007a. Focused survey for desert tortoise and western burrowing owl, habitat evaluation for Mohave ground squirrel, and general biological resource assessment for a 2,900-foot $\pm$  water pipeline at the Northwest Well Field of Indian Wells Valley Water District, Kern County, California. Unpublished report prepared by Ed LaRue for Indian Wells Valley Water District. Job #07-055. Wrightwood, CA.

- 2,900-foot pipeline. Burrowing owl (4 owls at 6 active burrows with 3 other pieces of sign).

(16) Circle Mountain Biological Consultants, Inc. 2007b. Focused survey for desert tortoise and western burrowing owl, habitat evaluation for Mohave ground squirrel, and general biological resource assessment for the 1.86-acre Well Site 35 (APN 0431-234-03) in the vicinity of Inyokern, Kern County, California. Unpublished report prepared by Ed LaRue for Krieger & Stewart, Inc. on behalf of Indian Wells Valley Water District. Job #07-066. Wrightwood, CA.

- 1.86 acres. Burrowing owl (1 owl at 3 burrow complexes).

(19) Circle Mountain Biological Consultants, Inc. 2010. Focused survey for desert tortoise and western burrowing owl, habitat evaluation for Mohave ground squirrel, and general biological resource assessment for the Ward Avenue 12" Mainline Extension near the city of Ridgecrest, Kern County, California. Unpublished report prepared by Ed LaRue on behalf of the Indian Wells Valley Water District. Job #10-001. Wrightwood, CA.

- 1.5-mile pipeline. 4 burrowing owl signs at perch sites.

(22) Circle Mountain Biological Consultants, Inc. 2011. General biological resource inventory, focused survey for Agassiz's land tortoise, and habitat assessments for western burrowing owl and Mohave ground squirrel on two well sites and associated pipeline right-of-way for the Indian Wells Valley Water District Water Supply Improvement Project in the vicinity of Ridgecrest, Kern County, California. Unpublished report prepared by Sharon Dougherty and Ed LaRue on behalf of ECORP Consulting, Inc. and Indian Wells Valley Water District. Job #11-001. Wrightwood, CA.

- 3.9-acre site, 20.3-acre site, and 4,000-foot pipeline. Undisclosed amount of burrowing owl signs.

(24) Circle Mountain Biological Consultants, Inc. 2015. Focused surveys for Agassiz's desert tortoise and Mohave ground squirrel, habitat assessment for burrowing owl, and general biological resource assessment for the proposed R.B. Inyokern Solar Project, a 200-acre± site in the community of Inyokern, Kern County, California. Unpublished report prepared by Ed LaRue on behalf of Valleywide Construction Services, Inc. Job #15-007. Wrightwood, CA.

- 200-acre site. Burrowing owl (no birds; three sites).

(25-1, 25-2, 25-3) Circle Mountain Biological Consultants, Inc. 2016a. Focused surveys for Agassiz's desert tortoise, habitat assessment for burrowing owl and Mohave ground squirrel, and general biological resource assessment for six solar sites in the city of Ridgecrest and Kern County, California. Unpublished report prepared by Ed LaRue on behalf of Indian Wells Valley Water District. Job #16-001. Wrightwood, CA.

- 6 sites totaling 7.24 acres. Burrowing owl signs at Sites 1 (feather), 2 (signs at two abandoned kit fox dens), and 3 (one feather and signs at a dog dig and old kit fox den).

(26) Circle Mountain Biological Consultants, Inc. 2016b. Results of a reconnaissance survey performed on 10 May 2016 on Indian Wells Valley Water District's 120-acre mitigation parcel. Unpublished report prepared by Ed LaRue on behalf of Indian Wells Valley Water District. Job #16-015. Wrightwood, CA.

- 120 acres. Burrowing owl sign at tortoise burrow.

(28) Circle Mountain Biological Consultants, Inc. 2017. Results of focused desert tortoise survey on a 120-acre site (APN 341-154-10) located west of Ridgecrest, Kern County, California. Letter report prepared by Ed LaRue on behalf of the Indian Wells Valley Water District. Job #17-042. Wrightwood, CA.

- 120 acres. Burrowing owl sign found in 2023 during Mohave ground squirrel trapping.

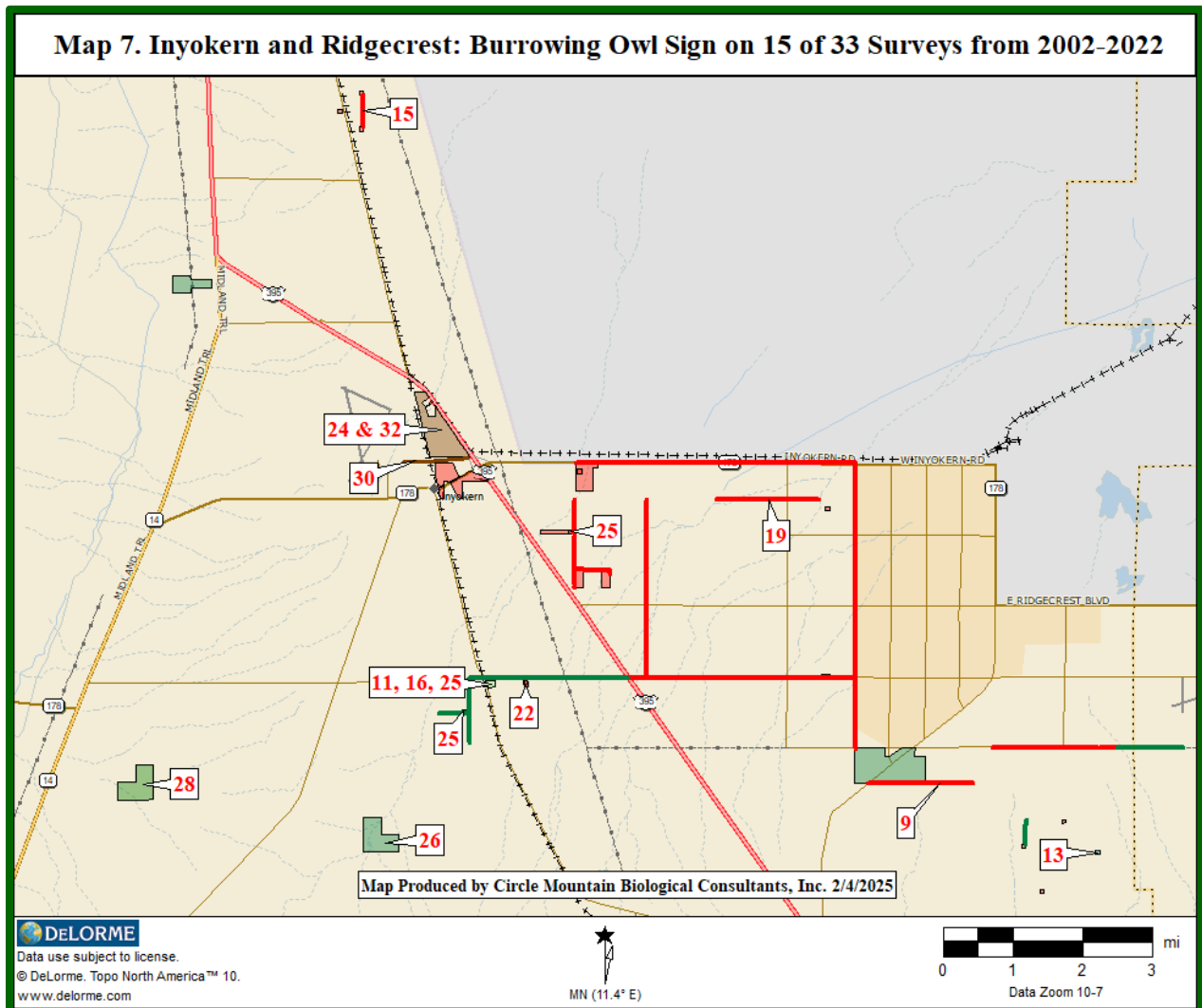
(30) Circle Mountain Biological Consultants, Inc. 2020. Biological survey results for Phase 2 Repair Harvey Field Water Main in the community of Inyokern, Kern County, California. Unpublished report prepared by Ed LaRue on behalf of PVC Plumbing & Mechanical, Inc. Job #20-007. Wrightwood, CA.

- 5,000 foot pipeline. 4 burrowing owls at 4 active burrows (maybe two pairs?).

(32) Circle Mountain Biological Consultants, Inc. 2022. Results of focused re-survey for Agassiz's desert tortoise, focused survey for special-status plants, and general biological resource assessment for the R.B. Inyokern Solar Site in the Community of Inyokern, Kern County, California. Unpublished report prepared by Sharon Dougherty on behalf of Valleywide Construction Services, Inc. Job #22-045. Wrightwood, CA.

- 177-acre survey. 7 burrowing owl burrows; nesting confirmed, suspect two family groups.





The sites were mapped using Topo USA 10.0 and were located in the field using North American Datum 83 (NAD 83) coordinates. Additional information in terms of locations, elevations, habitat types, and human disturbances are in the reports.

Respectfully,

Edward L. LaRue, Jr., M.S.  
Desert Tortoise Council, Ecosystems Advisory Committee, Chairperson

Roger Dale  
Desert Tortoise Preserve Committee, President