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RE: Recommendation to remove the Development Focus Area in the North of Edwards Mohave Ground Squirrel Key Population Center under the Desert Renewable Energy Conservation Plan

Dear Andrew and Leslie:

The Desert Tortoise Council (Council) and Defenders of Wildlife (Defenders) have a long-standing interest in the management of public lands north of Kramer Junction and west of Highway 395 due to their relatively intact condition and habitats that support the desert tortoise (*Gopherus agassizii*) and Mohave ground squirrel (MGS; *Xerospermophilus mohavensis*). Both species are listed as threatened under the California Endangered Species Act (CESA), and the desert tortoise is also listed as threatened under the federal Endangered Species Act (ESA).

The Council 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 Council 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 Council is primarily focused on conservation of wild tortoises in their native habitats and has collected information on the occurrence of the species and the MGS within the MGS DFA.

Defenders is a national conservation organization founded in 1947 and dedicated to protecting all wild animals and plants in their natural communities. To this end, Defenders uses science, public education and participation, media, legislative advocacy, litigation, and proactive on-the-ground solutions to impede the accelerating rate of extinction of species, associated loss of biological diversity, and habitat alteration and destruction.

The Council and Defenders recommend (1) eliminating the Development Focus Area in the North of Edwards Mohave Ground Squirrel Key Population Center (MGS DFA) for renewable energy, which was designated in the Desert Renewable Energy Conservation Plan (DRECP) (BLM 2016); and (2) designating the area as a part of the MGS Area of Critical Environmental Concern (ACEC), a protective designation also included in the DRECP. Herein we provide compelling, new data and analysis supporting this recommendation.

## **A. MGS and DFA Background Information**

MGS has been designated by the BLM State Director as a Sensitive Species for several decades, placing it in the category of a Special Status Species that requires special management consideration. BLM's Special Status Species Management Policy (Manual 6840) (BLM 2008), requires BLM managers promote the conservation of Special Status Species on public lands and to minimize the need for listing under the federal Endangered Species Act. Manual 6840 further requires that resource management plans (e.g., DRECP amendments to the California Desert Conservation Area Plan) address BLM-designated Sensitive Species in management of public lands, and specifies that management "...should consider all site-specific methods and procedures needed to bring species and their habitats to the condition under which management under the Bureau sensitive species policies would no longer be necessary."

Although BLM designated the MGS DFA for potential renewable energy development in the DRECP pending additional information and data collection, it placed two conditions or Conservation Management Actions (CMAs) on the area based on the known occurrence of MGS and the previous inclusion of the area as a part of the MGS Conservation Area in the West Mojave Plan in 2006. The two CMAs indicate uncertainty regarding the appropriateness of renewable energy development within the approximately 19,200 acres of public land within the MGS DFA. The conditions are given in the following CMAs:

***DFA-BIO-IFS-4:*** *The DFA in the "North of Edwards" Mohave ground squirrel key population center is closed to renewable energy applications and any activity that is likely to result in the mortality (killing) of a Mohave ground squirrel until Kern and San Bernardino counties complete county General Plan amendments/updates that include renewable energy development and Mohave ground squirrel conservation on nonfederal land in the West Mojave ecoregion and the CDFW releases a final Mohave Ground Squirrel Conservation Strategy, or for a period of 5 years after the signing of the DRECP LUPA ROD, whichever comes first. If Kern and San Bernardino counties and CDFW do not complete their respective plans within the 5-year period, prior to opening the DFA to renewable energy applications and other impacting activities, BLM will assess new Mohave ground squirrel information, in coordination with the CDFW, to determine if modifications to the DFA or CMAs are warranted based on new Mohave ground squirrel information.*

***DFA-BIO-IFS-5:*** *Once the planning criteria in CMA DFA-BIO-IFS-4, are met, the DFA in the “North of Edwards” Mohave ground squirrel key population center will be reevaluated. If Kern and San Bernardino counties receive Mohave ground squirrel take authorizations from the CDFW through completed Natural Community Conservation Plans or county-wide conservation strategies that address Mohave ground squirrel conservation at a landscape level and include renewable energy development areas on nonfederal land in the West Mojave ecoregion, the “North of Edwards” key population center DFA will be eliminated and the management changed to General Public Lands, as part of adaptive management.*

**Status of CMA DFA-BIO-IFS-4:** Kern County has not revised its General Plan to address renewable energy development or conservation for any species and its habitat, including the MGS. San Bernardino County adopted the Renewable Energy and Conservation Element to its General Plan (as amended) on February 2, 2019, which included allowing renewable energy development on private lands within and adjacent to the MGS DFA pending the outcome of site-specific analyses on a project-by-project basis. To date, San Bernardino County has not initiated an amendment to its General Plan for conservation of any species and its habitat, including the MGS.

The CDFW published the final Mohave Ground Squirrel Conservation Strategy<sup>1</sup> in 2019, which includes CDFW’s policy for conservation and management of the species. The Strategy is intended to help guide renewable energy and other development projects, serve as a reference in the environmental review process, and help prioritize funding for research projects.

**Status of CMA DFA-BIO-IFS-5:** Since the planning criteria identified in CMA DFA-BIO-IFS-4 have not been met, and will not be met by September 15, 2021, this CMA is effectively moot.

Based on the status of both CMAs affecting the MGS DFA, and considering that the five-year closure of the MGS DFA to renewable energy project applications and any land use activity that would likely result in the mortality of MGS will end on September 14, 2021, BLM has committed to *...assess new Mohave ground squirrel information, in coordination with the CDFW, to determine if modifications to the DFA or CMAs are warranted based on new Mohave ground squirrel information* (emphasis added).

## **B. New MGS Information**

A main purpose of this letter is to ensure that BLM and CDFW have pertinent new information on MGS when they meet at the close of the five-year period following approval of the DRECP for BLM to fulfill its commitment as specified in CMA DFA-BIO-IFS-4.

**Mohave Ground Squirrel Conservation Strategy (MGS Conservation Strategy):** After several years in preparation, CDFW published its final MGS Conservation Strategy in July 2019. The MGS Conservation Strategy will help conserve MGS by guiding renewable energy and other development projects to appropriate locations, serve as a reference in the environmental review process for proposed land use actions, and help prioritize funding for research and conservation projects. Figure 1 on page 23 of the MGS Conservation Strategy shows that the MGS DFA is located within one of 11 identified *Core Population Areas* (CPA), identified as the *North of*

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<sup>1</sup> <http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=171301&inline>

*Edwards Core Population Area.* If the MGS DFA is retained and solar energy projects subsequently authorized, the MGS Conservation Strategy indicates the eastern quarter of the CPA would be lost, potentially severing east-west connectivity of MGS through suitable habitat located north of Highway 58. On page 42, CDFW states, “...large-scale development within a single MGS CPA could reduce the viability of the local population, which could in turn significantly reduce the species’ overall viability.”

The MGS Conservation Strategy specifically addresses the MGS DFA in the following excerpt from page 93: *If some of the DFAs are developed to their fullest extent, the impact on important MGS habitat could be severe. For example, significant development in the DFA just north of Kramer Junction and west of U.S. 395 (known as the “Bowling Alley” [herein, “North of Edwards DFA”]) could severely impact a core population center for the MGS and sever a viable north-south linkage between populations, as well as an east-west linkage between populations in the central part of the range. LaRue (2016) detected MGS throughout the Bowling Alley, providing a good indicator of the habitat quality and the general ecological health and importance of this area.”*

In addition, the importance of CPAs, including the North of Edwards CPA, is described as follows in the MGS Conservation Strategy:

- *Habitat Protection and Management, Objective 1, Identify and prioritize habitat protection and restoration areas, Measure 2: Emphasize the critical conservation importance of habitat protection and restoration in CPAs, PPAs [Peripheral Population Areas], and Linkages in planning and compliance documents (Page 14).*
- *Habitat Protection and Management, Objective 2, Protect habitat in currently known CPAs, PPAs, and Linkages, Measure 1: Designate public lands for long-term conservation of MGS habitat within CPAs, PPAs, and Linkages; Measure 2: For private lands within CPAs, PPAs, and Linkages, work with willing landowners and partner agencies, such as the Wildlife Conservation Board, to secure protection of MGS habitat, either through conservation easement or purchase (Page 14).*
- *MGS CPAs have been identified where MGS seem to persist even during years unfavorable for reproduction (Page 26).*
- *Based on available data, these eleven CPAs appear to support persistent MGS populations (Page 41).*
- *State, federal, and local agencies managing the MGS and its habitat support ongoing research and conservation management. These research and management efforts detailed below generally focus on reassessing and protecting the CPAs and linkages established by Leitner...(Page 86).*
- *Projects within MGS CPAs requiring an EIS [Environmental Impact Statement] must assess effects of proposed activities on the long-term function of the affected CPA. Projects must be designed to reduce any impacts to the long-term function of the affected CPA to less than significant under NEPA [National Environmental Policy Act] (Page 92).*

**New studies and data:** In response to the reference to new MGS information in CMA DFA-BIO-IFS-4, LaRue conducted MGS live-trapping in the MGS DFA in 2016 and documented the results in a technical report that was previously submitted to the MGS Technical Advisory Group and CDFW. The technical report is now formally available to BLM via this letter and link.<sup>2</sup>

For 55 days from March 8 through June 22 in 2016, 10 volunteer biologists under LaRue's supervision performed MGS protocol live-trapping surveys at 11 sites within what is now the MGS DFA, synonymous with the area referred to as the *Bowling Alley* in the MGS Conservation Strategy. Thirteen MGS, including 4 adults and 9 juveniles, were captured on 6 of the 11 live trapping sites. Eleven MGS were captured in creosote bush scrub and two were captured in saltbush scrub communities. As shown in Figure 18, below [excerpted from the LaRue (2016) report], MGS were captured at six of 11 sites located from the north to the south end of the MGS DFA. In addition, evidence of desert tortoise was found on seven of the 11 sites, and nine additional special status plant, bird and mammal species were observed.

Leitner (2021<sup>3</sup>) reports that the BLM recently funded a major MGS sampling effort in the MGS DFA [see map in Attachment 3, from Leitner (2021)]. His trapping and camera surveys collected data from 2018 through 2020 on four live-trapping and four camera sites located on BLM-managed public lands throughout the area. Pending a formal report that will soon be submitted to BLM (Leitner *in prep.*), Leitner shared that MGS were documented at all eight areas within the MGS DFA during this four-year period (personal communication to LaRue on 6/16/2021). It is essential that the BLM share these specific reports with CDFW as both agencies are members of the Renewable Energy Action Team (REAT) for the DRECP.

MGS have persisted in the MGS DFA over the past several decades, including during recent drought years, while live-capture rates elsewhere, particularly in the southern and western portions, have declined throughout its range, including within other CPAs (e.g., Coolgardie Mesa and Little Dixie Wash) [see Table 14 in LaRue (2016)]. Considering all the MGS surveys using live traps between 1998 and 2012 [Figures 16 and 17 in LaRue (2016)] and cameras between 2008 and 2012 [Figure 17 in LaRue (2016)], and documented by Leitner (2015), only several MGS have been found in the southern part of the range both north and south of Adelanto since 1998. In 1994, LaRue personally trapped the last MGS in the Bissell Hills on the western portion of Edwards Air Force Base, despite numerous subsequent trapping surveys throughout the western half of the base (see empty symbols in Attachment 3).

Continuous persistence of MGS from the north to south end of the MGS DFA between 2011 (when the first studies were conducted) and 2020 is evidence of the importance of this area to MGS conservation. We believe that MGS occurrence data in LaRue (2016) in combination with the MGS Conservation Strategy, the forthcoming report by Leitner to BLM, and supporting information in this letter, provide the necessary new information referred to in CMA DFA-BIO-IFS-4 for the BLM to coordinate with CDFW...*to determine if modifications to the DFA or CMAs are warranted based on new Mohave ground squirrel information.*

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<sup>2</sup> <https://www.dropbox.com/s/m59kao1golr1lq1/%23BOWLING%20ALLEY%202016%20MGS%20SURVEY.FINAL.pdf?dl=0>

<sup>3</sup> <https://www.dropbox.com/s/0u7kh2pset3xq7s/Leitner%202021%20%28findings%20from%202013%20to%202020%29.pdf?dl=0>

The MGS DFA is within one of only 11 CPAs for a species with a small range that is shrinking because of ongoing human development and climate change. We believe it is contrary to BLM's Special Status Species Management Policy to allow solar project development that would sever this CPA that has persisted despite recent environmental stochasticity, and will likely extirpate its MGS population if the DFA designation is not abandoned. Conversion of habitats by humans into other land uses can fragment and separate mammal populations and increase the likelihood of local population extinctions and eventual species extinction (Zahler 2001).

### **C. Recommendations**

Based on the BLM's Special Status Species Management Policy, summarized above, and new MGS information provided in item B, above, the Council and Defenders recommend the following:

1. BLM and CDFW meet to discuss the importance of the MGS DFA to the continued existence of the species and its recovery prior to the expiration of the five-year moratorium, which ends on September 14, 2021. All MGS occurrence data and analysis collected within the MGS DFA should be summarized, including new information from Leitner (2021) and results of his BLM-funded surveys at eight locations performed from 2018-2020 where he documented continued persistence of the species (Leitner *in prep.*).
2. Based on the status of the CMAs DFA-BIO-IFS-4 and DFA-BIO-IFS-5, the MGS Conservation Strategy and the persistence of MGS within the MGS DFA documented by LaRue (2016) and Leitner (2015, 2021), we recommend that BLM extend the applicability of the CMA-specified moratorium on accepting new solar applications, proceed with amending the DRECP to eliminate the MGS DFA, and designate the entire area as part of the MGS ACEC. At that time BLM should formally reject any pending solar project applications for the area as being incompatible with management of the MGS ACEC and the CDFW MGS Conservation Strategy. This action would preclude solar energy project development on approximately 19,200 acres of public land managed by BLM that supports a significant population of MGS due to high quality habitat.

By eliminating the MGS DFA, the private lands within and adjacent to the area would no longer be allowed under the Renewable Energy Conservation Plan adopted by the County of San Bernardino, which allows for solar energy projects within and adjacent to the MGS DFA to be proposed and potentially permitted based on project-level analyses under the provisions of the California Environmental Quality Act. This outcome would preclude solar energy development on approximately 6,400 acres of private lands.

3. As part of the process to determine the future disposition of the MGS DFA, we recommend that BLM and CDFW review and consider all 11 DRECP criteria that characterize DFAs, which are presented below along with our consistency analysis for the MGS DFA. Our analysis indicates that 8 of the 11 criteria are inconsistent with the MGS DFA, only 1 of the 11 criteria is consistent, and 2 are partially consistent.
  - i. *Disturbed or contaminated lands*: As per LaRue (2016), the area is in near pristine condition, and is neither disturbed nor contaminated.

- ii. *Less ecologically intact lands*: The Subject Area is comprised of ecologically intact lands, supporting occupied habitats of 11 DRECP-covered species, and particularly the MGS and desert tortoise, throughout the area. Their occurrences are evidence of the habitat quality characteristic of the Subject Area.
- iii. *Non-critical habitat or crucial habitat linkage area*: Both the DRECP and the CDFW's 2019 MGS Conservation Strategy recognize this area as within the North of Edwards Key Population Center and a Habitat Linkage for MGS. These designations indicate that it is among the 11 areas requiring highest priority protection for conservation and recovery of the MGS.
- iv. *Not legislatively or legally protected lands*: A large percentage of the BLM lands in the MGS DFA were acquired in the early 1990s by BLM through land exchanges under the West Mojave Land Tenure Adjustment Project (LTA Project) to consolidate public lands for effective species conservation purposes and protection of the U.S. Air Force's Black Mountain Supersonic Flight Corridor. The LTA Project was largely funded by the U.S. Air Force at Edwards Air Force Base.
- v. *Few focal or covered species dependent upon lands*: LaRue (2016) identified 11 DRECP covered species occurring in the MGS DFA, including desert tortoise and MGS. Most of the MGS captured in 2016 (i.e., 10 of 13) occurred in the checkerboard lands pattern located in the southern part of the area.
- vi. *More fragmented ownership*: The northern half of the area, which the Council urged BLM to include as a component of the MGS ACEC under the DRECP, was consolidated in public ownership by BLM during the West Mojave LTA Project ownership (pink areas in Attachment 1 at the end of this letter), with somewhat more fragmented land ownership to the south.
- vii. *Proximity to transmission lines/grid/local communities needing electricity*: This is one of only two criteria that are partially consistent with the MGS DFA. We note that while it is near existing transmission lines and substations and within a BLM-designated transmission corridor, all the energy being generated in the West Mojave is being transmitted to large human population centers, largely to the Los Angeles and Inland Empire. Local communities, as required by this criterion, have not been serviced by recently-developed solar facilities and would not be served by facilities developed within the MGS DFA.
- viii. *Not immediately adjacent to residential areas*: The nearest residential communities are Boron and Hinkley, which are located 8 miles west and 20 miles east, respectively. Thus, this is the only criterion that is completely satisfied. However, it is equally important that the isolation of this area from residential areas is partially responsible for its current habitat quality, and persistent MGS population.

- ix. *Away from crucial military or commercial flight areas:* The entire area is in a flight path of Edwards Air Force Base, identified by the U.S. Air Force as the Black Mountain Supersonic Flight Corridor. As mentioned above, the West Mojave LTA Project was intended to consolidate lands under military flight areas, including the MGS DFA, in public ownership to prevent incompatible land uses.
- x. *Not previously acquired for the protection of imperiled species, benefit of military training or long-term conservation:* As noted above, a significant percentage of public lands within the MGS DFA were acquired through the BLM's West Mojave LTA Project, which was funded, in part, by the U.S. Air Force. In addition, the area was designated for long-term conservation of MGS in the West Mojave Plan (BLM 2005, 2006) but inexplicably removed from the MGS Conservation Area through the DRECP.
- xi. *Minimal impact to currently permitted or authorized uses:* The main conflicting authorized use of the area to MGS conservation is two ephemeral sheep grazing allotments managed by the BLM. Although sheep grazing causes localized ecological impacts, the loss of the area to renewable energy development would be far more severe than sheep grazing, as it would be permanent and irreversible in the foreseeable future, notwithstanding restoration hypothesized in decommissioning plans.

Based on the 11 criteria given above that characterize appropriately established DFAs, only two (criteria 7 and 11) are partially satisfied and only one (criterion 8) is fully satisfied. The significant number of criteria fully inconsistent with DFAs indicate the MGS DFA should be eliminated, and the area included in the MGS ACEC.

#### **D. Conclusion**

The Council and Defenders appreciate BLM's decision in the DRECP to close the MGS DFA to solar energy applications and other land use activities that would be detrimental to MGS for a period of five-years. Had that important decision not been made, at least one new solar energy project would likely be in place, the proposed and pending application for the 3,900-acre Kramer North Solar Project; in addition to other potential solar project applications that have been on hold.

The Council and Defenders also appreciate the investment BLM and CDFW have made in studying the occurrence of the MGS and its habitat in the MGS DFA following approval of the DRECP in 2016. BLM and CDFW have funded four years of MGS detection studies in the area (Leitner *in prep.*) to gather current MGS status and information in support of the upcoming analysis and decision to retain or eliminate the MGS DFA, and determine the appropriate management designation for the area. This new information augments the baseline data for MGS in the DRECP (BLM 2015) as documented by CDFW (2019), LaRue (2016), and Leitner (2015, 2021, and *in prep.*).




During the final public review and comment period on the Draft DRECP, the Council and Defenders advocated for designation of the lands north of Kramer and west of Highway 395 as part of the MGS ACEC, which provides for greater protection of the species and its habitat than under the designation as part of the MGS Conservation Area (a Habitat Management Plan designation with less protective measures) in the West Mojave Plan (BLM 2006). With new MGS occurrence and habitat data for the MGS DFA, it is clear to the Council and Defenders that the DRECP decision was unsupported by data and not based on science, and that the designation as a DFA should be removed and the area designated as part of the MGS ACEC under the DRECP.

Regards,



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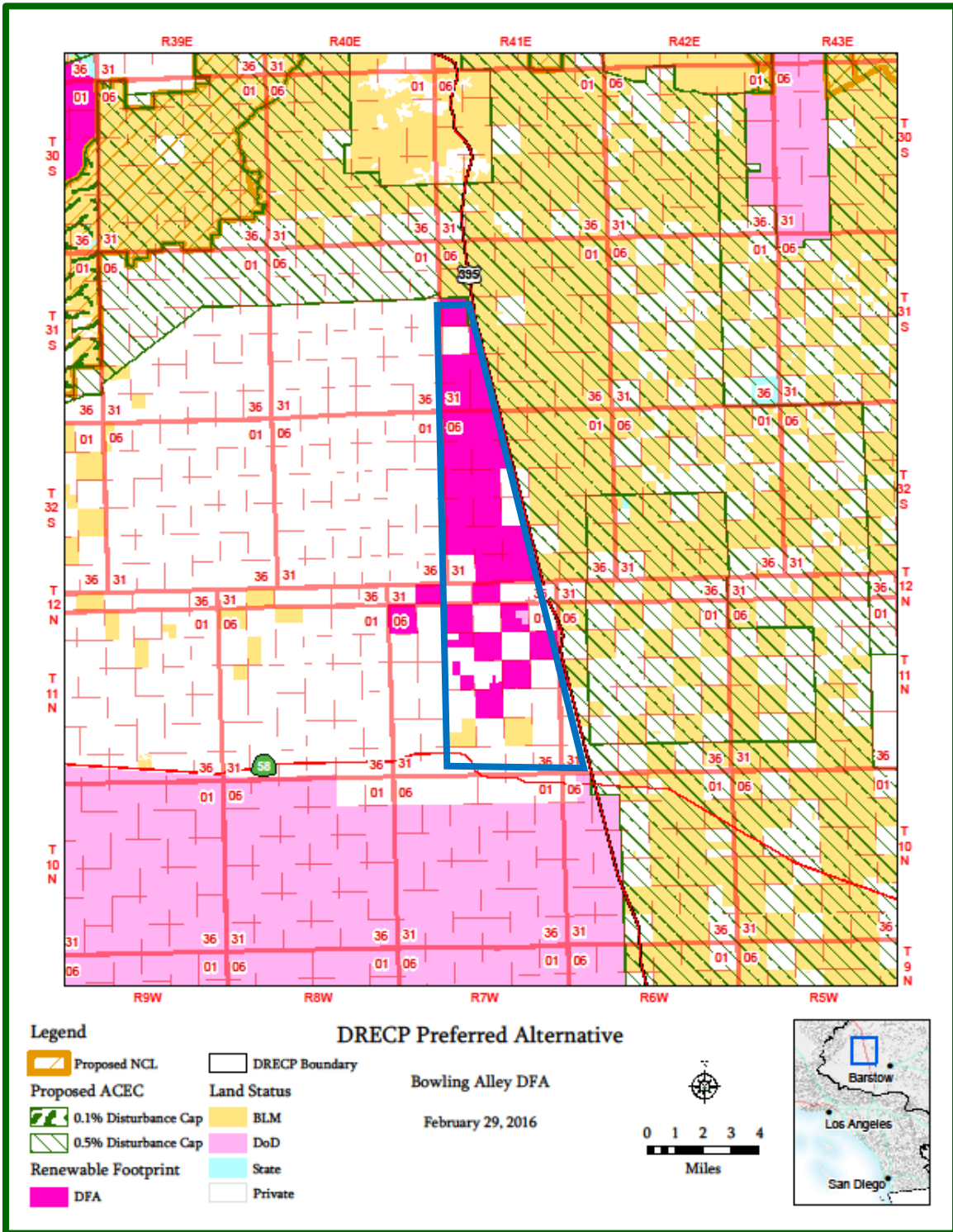
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### **Attachments**

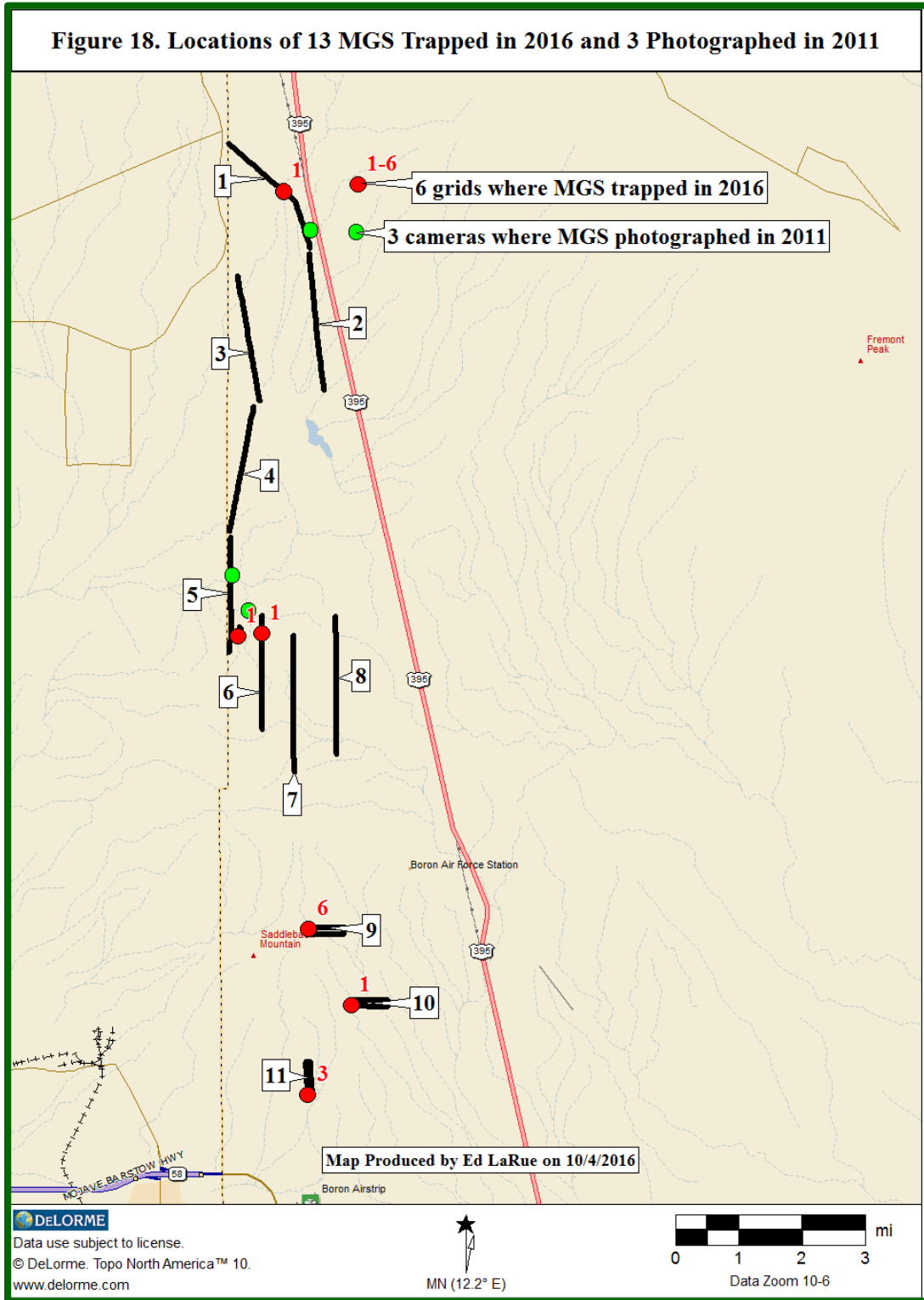
Following are a series of maps displaying (1) the MGS DFA (Attachment 1); (2) live-trapping and camera survey sites from 2011 and 2013 within the MGS DFA (Attachment 2); and (3) MGS survey results in the Western Mojave from Leitner (2021) (Attachment 3).

## Attachment 1. MGS DFA = Subject Area



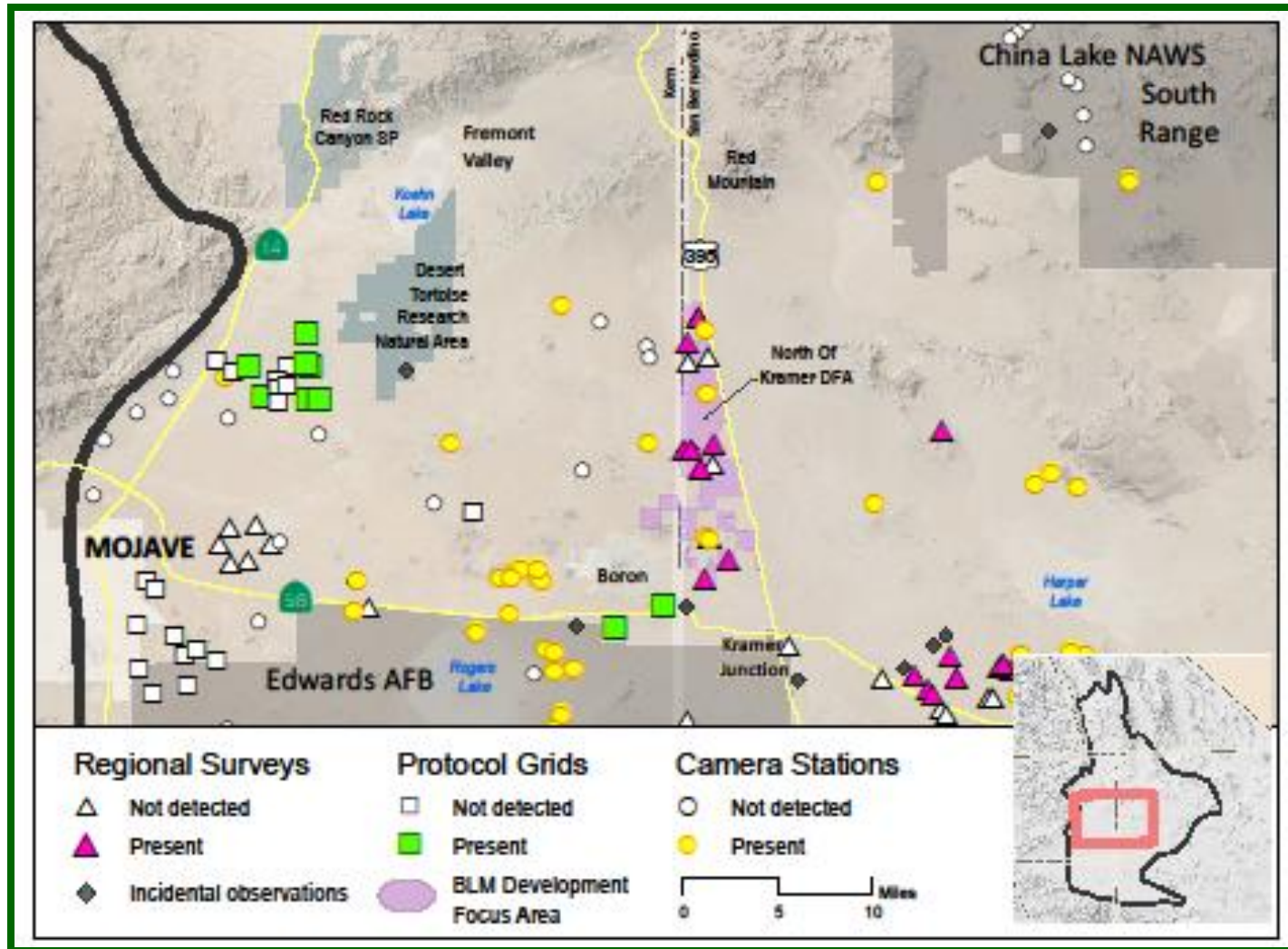
Map source: DRECP (BLM 2016). Public lands managed by the BLM within the Subject Area are shown in dark pink in the DRECP map above

## Attachment 2. Locations of MGS in 2011 and 2016



Map source: LaRue (2016). Grid locations are shown as black lines with MGS as red (2016) and green (2011) symbols.

### Attachment 3. MGS survey results in the Western Mojave



Map source: Leitner (2021). Note only three locations in the DFA (white triangles) where MGS were not detected compared to numerous negative results elsewhere throughout the western part of the range.