

## MEMORANDUM

**DATE:** April 21, 2022

**TO:** Conrad Mulligan, Principal Planner, Arcadis

**FROM:** Randi McCormick, Principal Biologist

**SUBJECT:** Biological Technical Memorandum (Revision 1.0) – SCE Gorman-Kern River Project Tipton Kangaroo Rat (*Dipodomys nitratoides nitratoides*) Reconnaissance Evaluation, Kern County, California

**Introduction:** MBI conducted a reconnaissance level survey of 35 miles of the Gorman-Kern River (GKR) Project transmission lines in central Kern County, east of Bakersfield and Arvin, and south of Arvin (Appendix A, Figure A-1). The purpose of this reconnaissance survey was to evaluate the potential for federal and state listed Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*, TKR) along the route.

Undeveloped land with no history of agriculture in San Joaquin desert communities, typically with large alkali scalds are preferred by TKR. Although the scalds themselves are not likely used extensively by TKR, presence of scalds is an indicator of high-quality alkali sink habitat. Sparse ground cover with bush seepweed (*Suaeda nigra*) and few invasive grasses also correlate with TKR presence (Cypher et al. 2021).

**Methods:** Randi McCormick, Principal Biologist with McCormick Biological, Inc., conducted a reconnaissance survey on November 15, 16 and 18, 2021. The survey consisted of windshield evaluation of the entire route, and meandering transects within potential habitat where necessary to evaluate suitability. Additionally, certain portions of the route were evaluated using binoculars due to lack of access.

Each portion of the route traversing undeveloped lands was evaluated based on habitat conditions, range of these species, and habitat requirements for each of the listed species. Maps were compiled using Google Earth imagery to show segments containing undeveloped lands. The remaining lands contain intensive agricultural development.

**Results:** According to the USFWS (2020) and Cypher et al. (2021), the project route primarily falls outside of the current and historic range of TKR. The discussion below relies on the most recent USFWS 5-year status review (USFWS 2020), Cypher et al. (2021), and the California Natural Diversity Database, which are consistent with the exception of the northern portion of the route (Appendix B, Figures B-1, B-2, and B-3). These inconsistencies are discussed with the applicable segments below.

Trapping conducted within the range of TKR as part of Cypher et al. (2021), did not include any of the far eastern portion of the range in the vicinity of the study area.

Brief results for each portion of the route where undeveloped land was present are shown below and segments are numbered north to south. The remaining portions of the route were developed or active agricultural lands. As such, these areas were not deemed to potentially support TKR. Representative photographs are shown in Appendix C.

Segment 1 (Appendix A, Figure A-3): Although this location is outside of the historic and current range for TKR (USFWS 2020; Cypher et al. 2021), a CNDDDB record is reported from 0.8 miles west of Segment 1 (Occurrence #104). This record is attributed to William Vanherweg and the location was determined as follows: “Mapped generally as best guess to provided location description of ‘10 mi. east of Bakersfield, Ca.’ 10 miles were measured from approximate Bakersfield City Center.” Mr. Vanherweg was contacted regarding this record and stated that the location is not accurate based on his recollection of his trapping activities and results during that time period. He further indicated that he did not provide the mapped location to CDFW as indicated by the “best guess” statement in the record (William Vanherweg, personal communication, April 18, 2022).

Habitat conditions in the vicinity consisted of heavily grazed annual grassland with patches of common saltbush (*Atriplex polycarpa*). Although no indication of previously agricultural development was noted, evidence of historic surface disturbance from heavy equipment was noted in the vicinity of the towers on adjacent lands. No alkali sink vegetation, alkali scalds, or other vegetation indicating high quality habitat for this species was observed. Very few small mammal burrows potentially occupied by kangaroo rats were observed.

Based on these conditions and the location of this segment compared to the current known range of TKR, TKR does not occur at the towers along Segment 1.

Segment 2 (Appendix A, Figure A-4, Photo C-1). This location is just outside of the “Approximate historical Tipton kangaroo rat range” shown on Figure 1 of Cypher et al. (2021) and very near the boundary of TKR “current distribution” shown in USFWS (2020). There are no CNDDDB records for TKR within 3 miles of this segment. The nearest TKR record in the CNDDDB is discussed in the results for Segment 1, above.

Habitat conditions in the vicinity consisted of sandy open habitat with sparse ephedra (*Ephedra californica*), cheesebush (*Ambrosia salsola*), and Bakersfield cactus (*Opuntia basilaris* var. *treleasei*) on moderate slopes with no previous development or agriculture evident. Access roads to the towers were evident, but recovering vegetation was present in the areas immediately surrounding and under towers. No alkali sink vegetation, alkali scalds, or other vegetation indicating high quality habitat for TKR species was observed. A moderate density of small mammal burrows characteristic of kangaroo rat was present.

Although the habitat found in this segment would not be considered typical of high-quality habitat for TKR, the area is contiguous with the California Department of Fish and Wildlife Bakersfield Cactus Ecological Reserve and other natural lands and little data is available for the general area. Given the presence of characteristic kangaroo rat burrows, contiguous undeveloped natural lands and the location of this segment on or near the eastern edge of the published range for TKR, this taxon could occur on this segment; but it is unlikely to occur.

Segment 3 (Appendix A, Figure A-5, Photo C-2). This location is just east of the “Approximate historical Tipton kangaroo rat range” shown on Figure 1 of Cypher et al. (2021) and east of the boundary of TKR “current distribution” shown in USFWS (2020). The nearest CNDDDB record for TKR is approximately 6.5 miles east of this segment.

Habitat conditions in the vicinity consisted of grazed annual grassland and patches of common saltbush, with no previous development or agriculture evident. No alkali sink vegetation, alkali scalds, or other vegetation indicating high quality habitat for TKR species was observed.

Based on these conditions and the location of this segment compared to the current known range of TKR, TKR does not occur at the towers along Segment 3.

Segment 4 (Appendix A, Figure A-6, Photo C-3). This location is just east of the “Approximate historical Tipton kangaroo rat range” shown on Figure 1 of Cypher et al. (2021) and east of the boundary of TKR “current distribution” shown in USFWS (2020). The nearest TKR record is approximately 5 miles east of this segment.

Habitat conditions in the vicinity consisted of grazed annual grassland and patches of common saltbush, with no previous development or agriculture evident. No alkali sink vegetation, alkali scalds, or other vegetation indicating high quality habitat for TKR species was observed.

Based on these conditions and the location of this segment compared to the current known range of TKR, TKR does not occur at the towers along Segment 4.

Segment 5 (Appendix A, Figure A-7, Photo C-4). Very little of this segment was directly evaluated due to inaccessible locked gates. Along with the literature already mentioned in this memo, a review of *Biological Resources Technical Report for the Grapevine Specific Plan* (Dudek 2016) and visual evaluation from the north terminus and from along Edmonston Pumping Plant Road were used to make a determination regarding this segment.

This location is south of the “Approximate historical Tipton kangaroo rat range” shown on Figure 1 of Cypher et al. (2021) and the boundary of TKR “current distribution” shown in USFWS (2020). Although this location is outside of historic and current range for TKR referenced by these two sources, a CNDDDB record is reported from along this portion of the route (Occurrence #95). This record is attributed to a 1903 collection at “Rose Station, Ft. Tejon”. Due to the historic nature of this collection and the location falling outside of the current expected range, this record is not considered an indicator of current presence of the taxon.

A portion of this segment is within the area evaluated during surveys conducted for the Grapevine Specific Plan project. Although no trapping was conducted directly on the segment, trapping was conducted approximately ½-mile west of the segment on the north side of the California Aqueduct in May 2014. No kangaroo rats were detected at that time and the report concluded that the site is outside of the known range for TKR (Dudek 2016).

Habitat conditions in the vicinity of Segment 5 consisted of grazed annual grassland, with no previous development or agriculture evident. No alkali sink vegetation, alkali scalds, or other vegetation indicating high quality habitat for TKR species was observed.

Based on these conditions and the location of this segment compared to the current best available information regarding the known range of TKR, TKR does not occur along Segment 5.

## **List of Appendices**

**Appendix A:** Kern River TLRR Maps

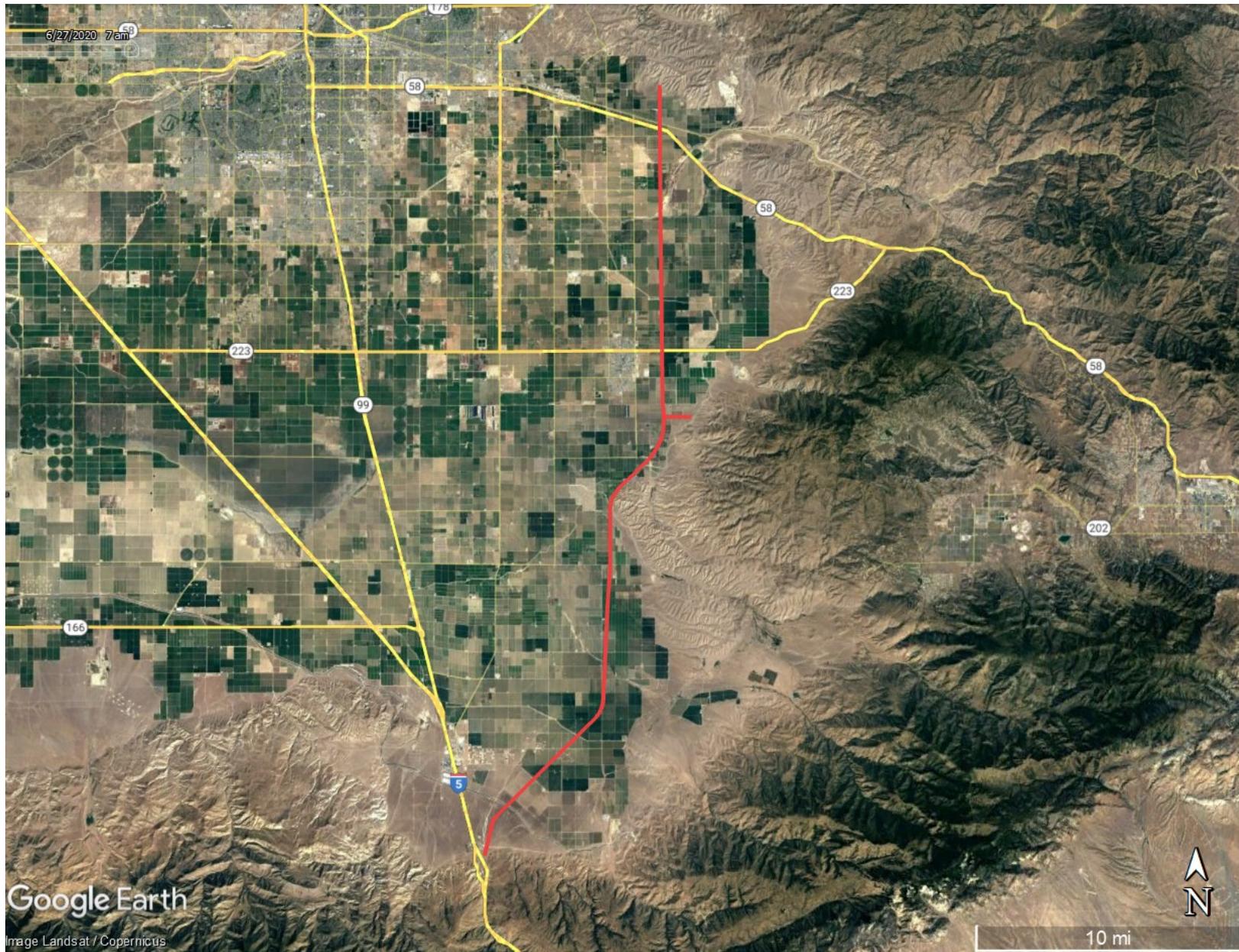
**Appendix B:** Maps – CNDDDB, USFWS (2020) and Cypher et al. (2021)

**Appendix C:** Representative Photographs

## **References**

- Cypher, B. L., S. E. Phillips, T. L. Westall, E. N. Tennant, L. R. Saslaw, E. C. Kelly, and C. L. Van Horn Job. 2021. Conservation of endangered Tipton kangaroo rats (*Dipodomys nitratooides nitratooides*): status surveys, habitat suitability, and conservation recommendations. California Fish and Wildlife Special CESA Issue: 382-397.
- Dudek. 2016. Biological Resources Technical Report for the Grapevine Specific Plan. January. Prepared for the Tejon Ranch Company, Inc. 1576 pp.
- U.S. Fish and Wildlife Service (USFWS). 2020. Tipton kangaroo rat (*Dipodomys nitratooides nitratooides*) 5-year review: Summary and evaluation. United States Fish and Wildlife Service, Sacramento, CA.

**Appendix A: Gorman-Kern River Project Survey Maps**



**Figure A-1:** Gorman-Kern River Project 35-mile Route Evaluated; Kern County, CA



**Figure A-2:** Gorman-Kern River Project Survey Segment 1



**Figure A-3:** Gorman-Kern River Project Survey Segment 2



**Figure A-4-:** Gorman-Kern River Project Survey Segment 3

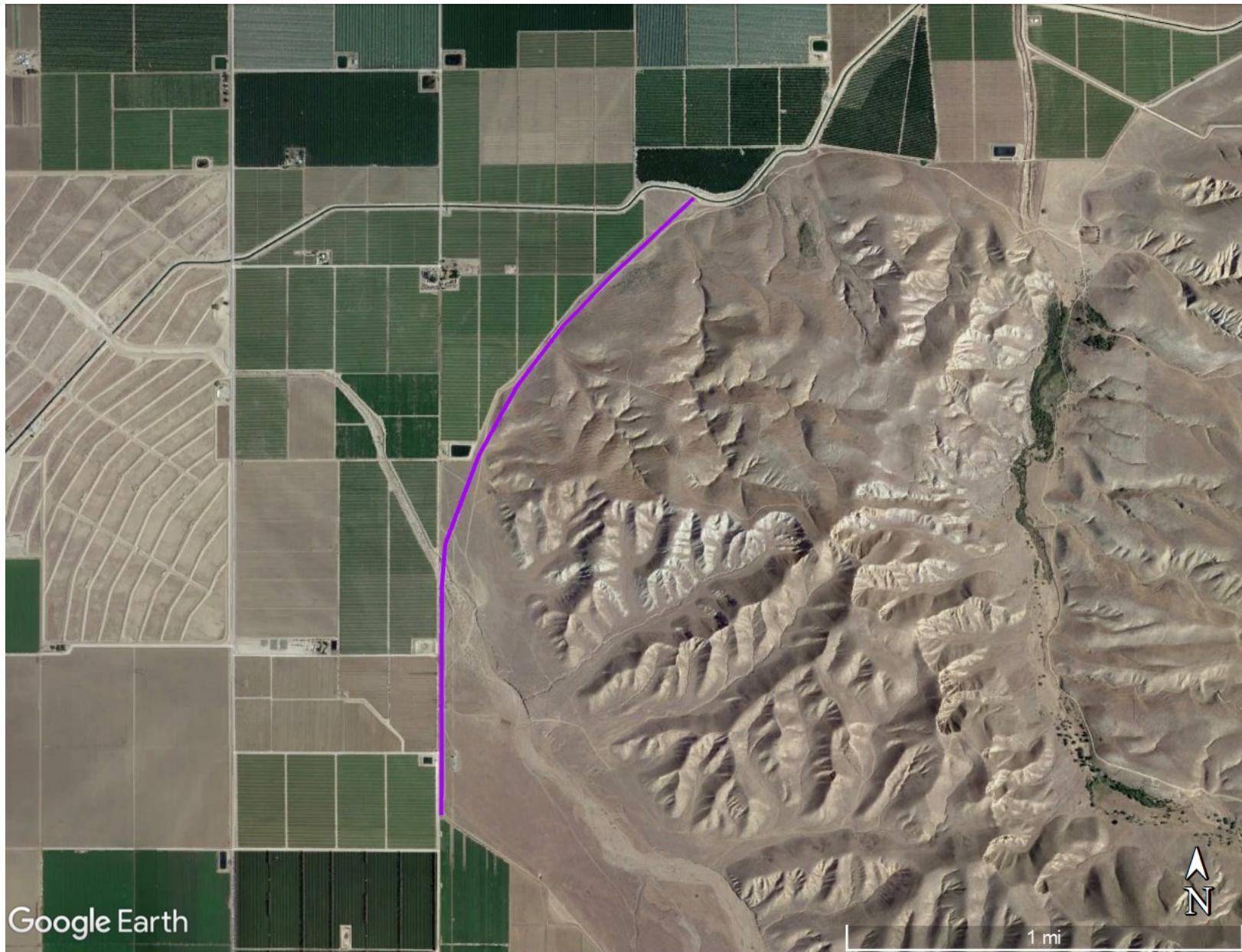
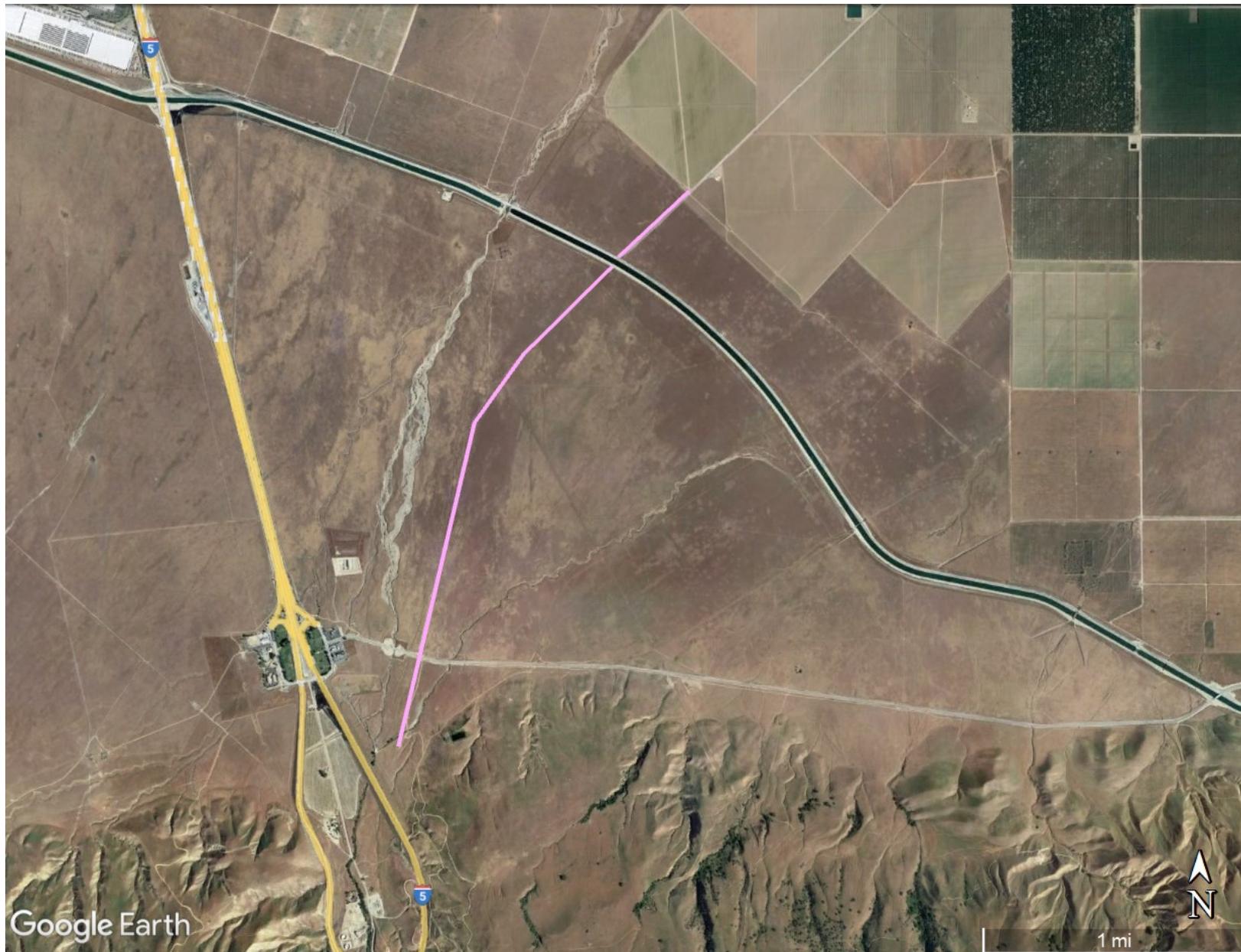


Figure A-5: Gorman-Kern River Project Survey Segment 4



**Figure A-6: Gorman-Kern River Project Survey Segment 5**

**Appendix B:** Maps - CNDDDB, USFWS (2020) and Cypher et al. (2021)

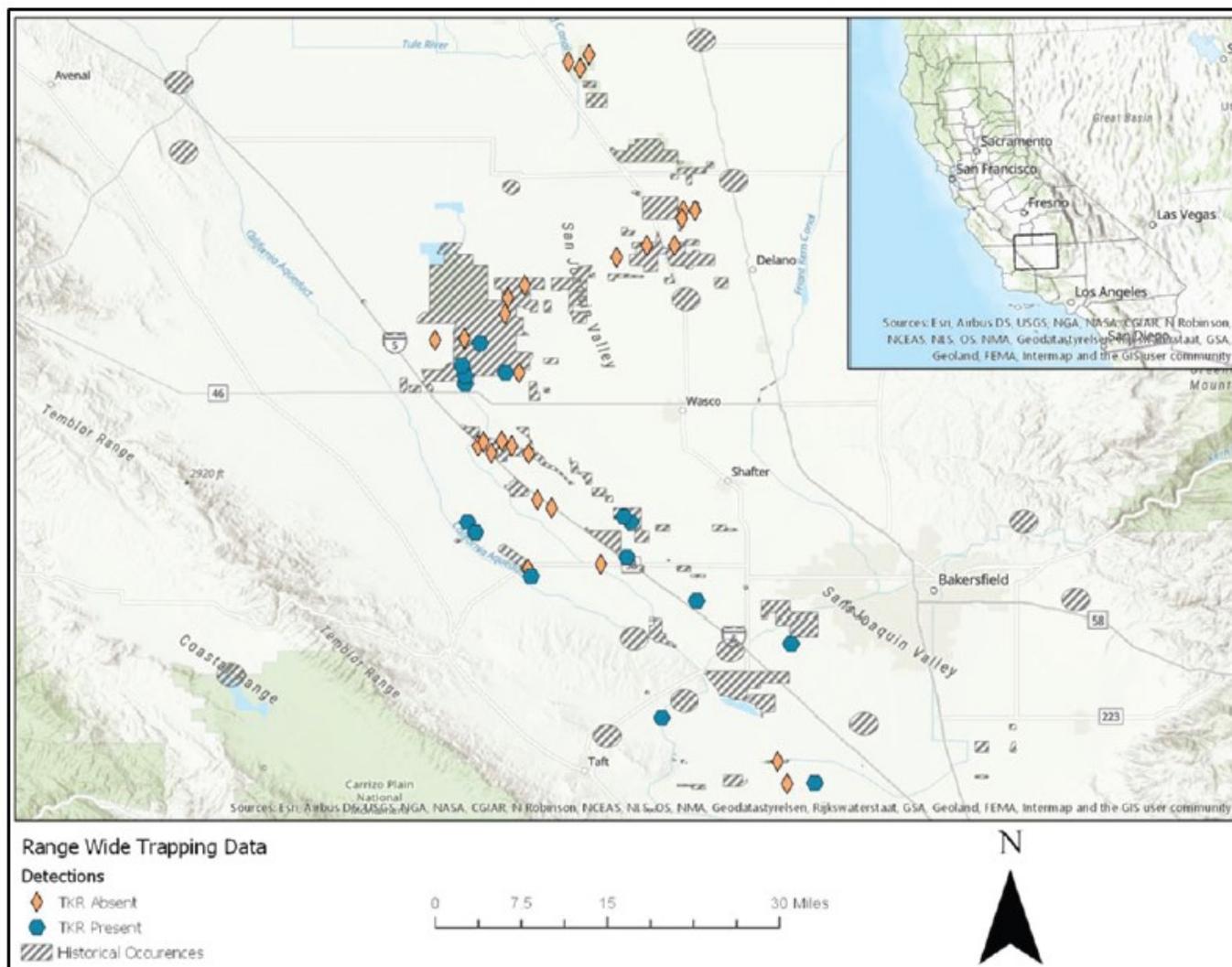
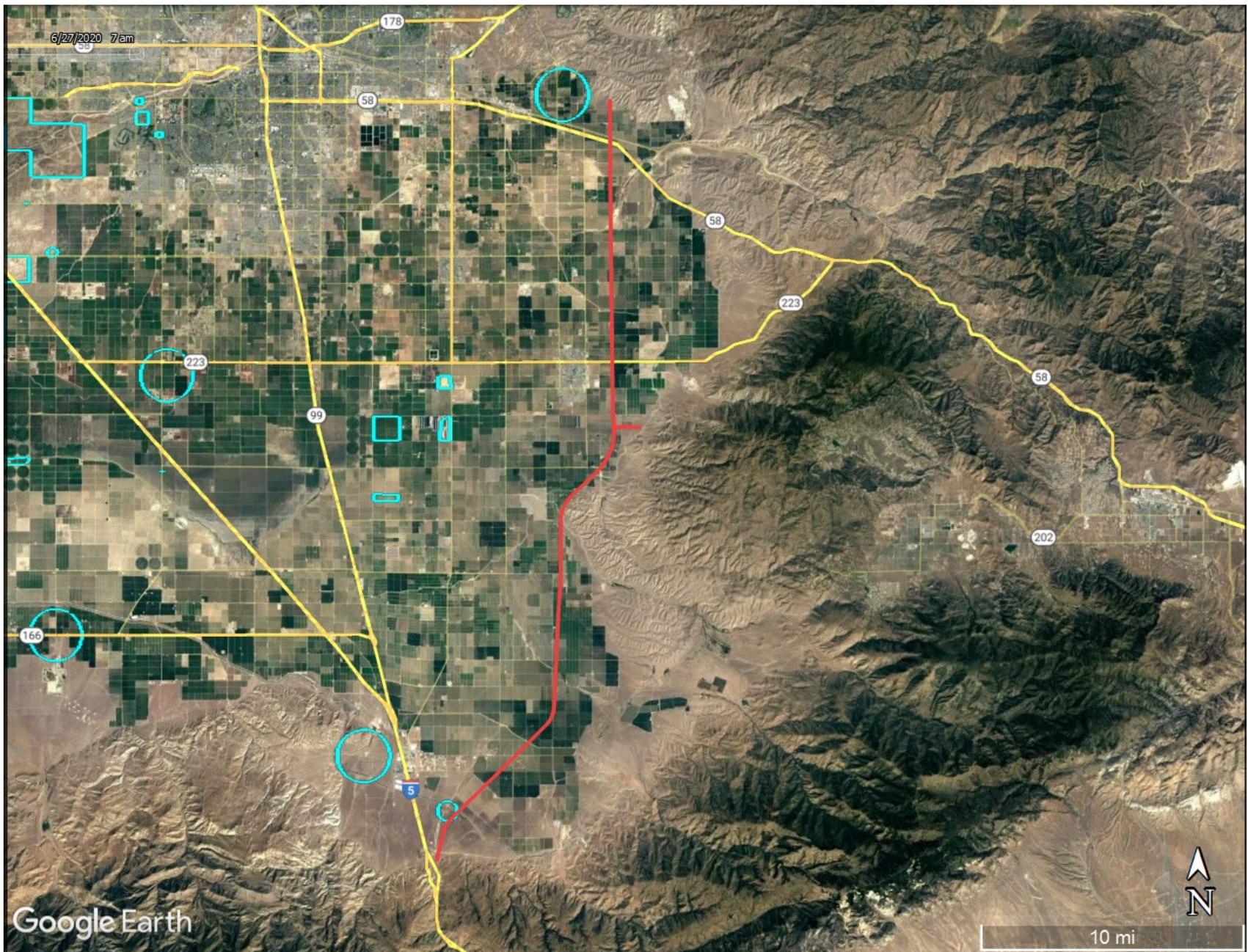
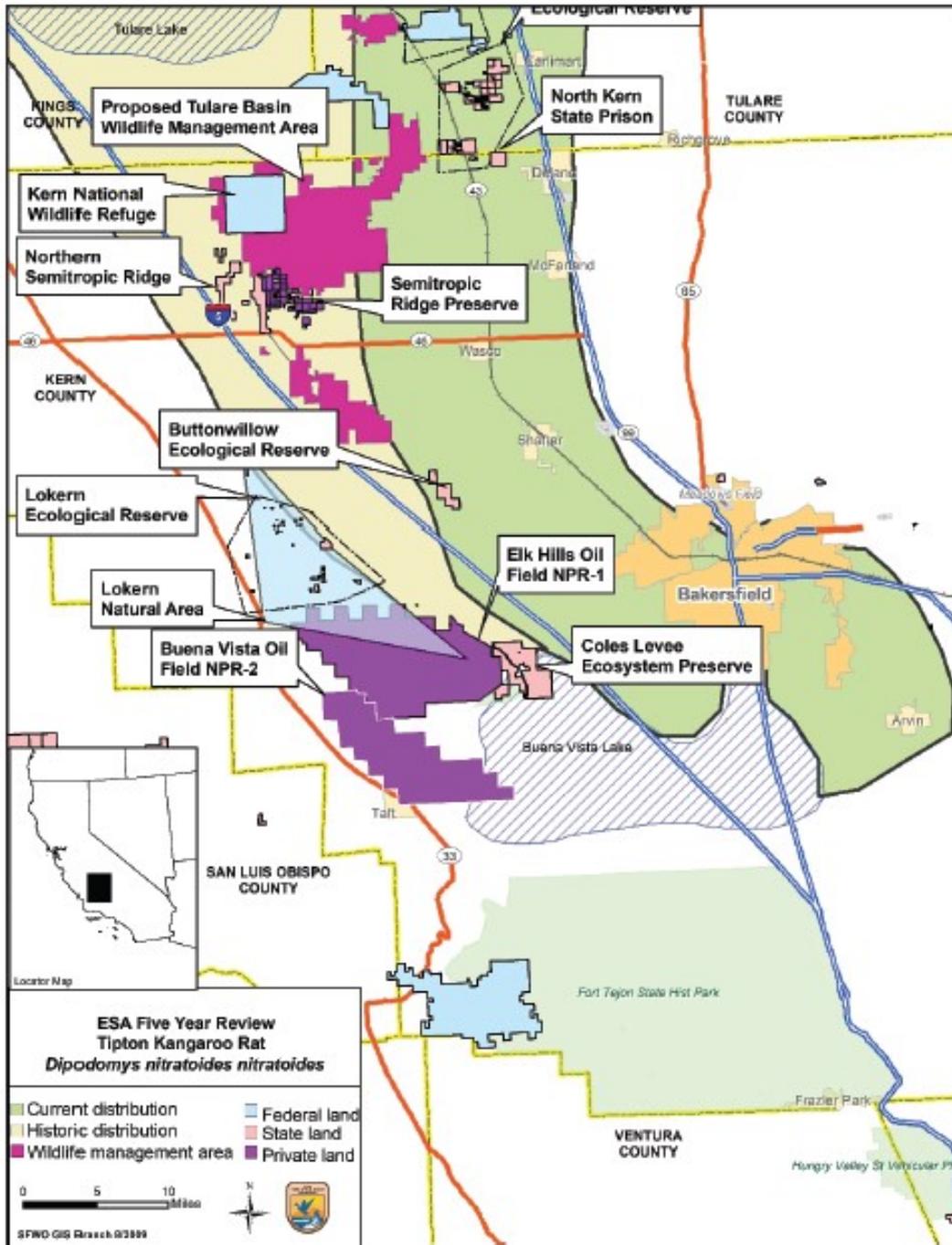


Figure 1. Recent detections of Tipton kangaroo rats within the species' range. Trapping data indicate where Tipton kangaroo rats were detected by the Endangered Species Recovery Program (ESRP) at California State University, Stanislaus. Areas where Tipton kangaroo rats were present are shown by blue hexagons, while negative trapping data is shown by coral diamonds (Cypher *et al.* 2016). Occurrence data from CNDDDB\* is represented by the grey hash-marked areas. These data show the decline of the species in the northern and eastern portions of its range (CDFW 2019).

**Figure B-1:** USFWS 5-year Review – TKR Records (Source: USFWS 2020)

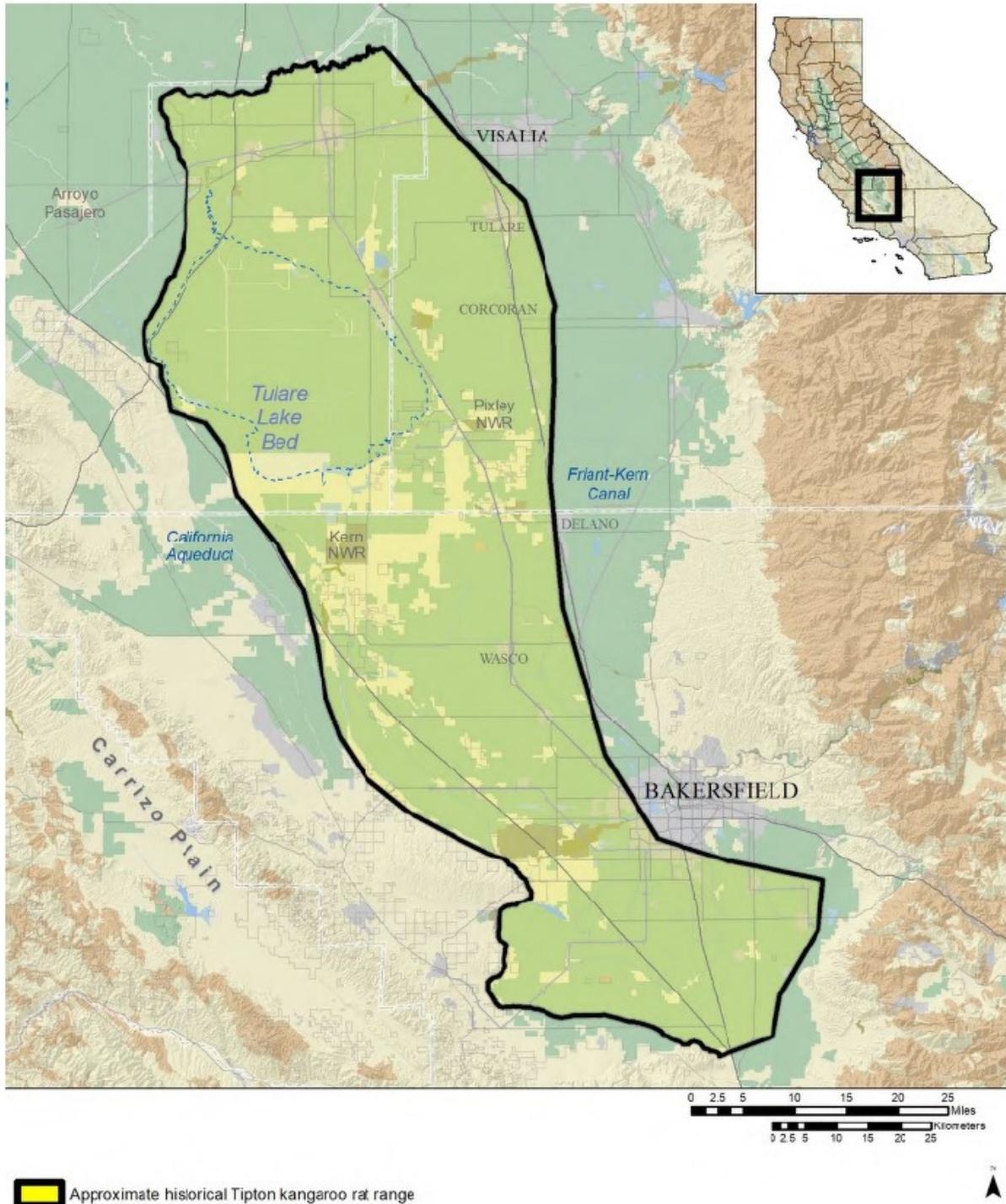


**Figure B-2:** CNDDDB Records – TKR (light blue polygons)



Appendix 4. Geographic distribution of proposed conservation and restoration areas for the Tipton kangaroo rat in California (Service 2010).

Figure B-3: USFWS 5-year Review – TKR Current Distribution (Source: USFWS 2020)



**Figure 1.** Historic range of the Tipton kangaroo rat in the San Joaquin Valley, California, USA.

**Figure B-4:** Approximate TKR Historical Range (Source: Cypher et al. 2021)

**Appendix C: Representative Photographs**



**Photo C-1: Photo showing Segment 2, view north**



**Photo C-2: Photo showing Segment 3, view east**



**Photo C-3: Photo showing Segment 4, view northeast**



**Photo C-4: Photo showing Segment 5, view north**