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# **Appendix C2**

## Biological Sensitivity Report



# McCullough-Victorville Transmission Lines 1&2 Project

## Biological Sensitivity Report

*Prepared For:*



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## Contents

|     |                                       |   |
|-----|---------------------------------------|---|
| 1.0 | Project Description and Location..... | 1 |
| 2.0 | Sensitive Plants and Animals .....    | 1 |
|     | 2.1 Sensitive Plants .....            | 1 |
|     | 2.2 Sensitive Wildlife.....           | 2 |
| 3.0 | Sensitive Habitats.....               | 4 |
| 4.0 | Recommended Mitigation .....          | 5 |
| 5.0 | References .....                      | 5 |

## Attachments

Attachment 1: Figures

## 1.0 Project Description and Location

The Los Angeles Department of Water and Power (LADWP) is planning to complete geotechnical investigation work on the 500 kilovolt (kV) McCullough-Victorville transmission lines (MCC-VIC 1&2; Project). These transmission lines extend approximately 165 miles from McCullough Substation, located outside of Henderson NV, to Victorville Substation in Victorville CA (Figure 1-1). The results of this geotechnical study will be used to plan for future maintenance upgrade work on MCC-VIC 1&2. The geotechnical investigation is anticipated to begin in March 2020 and last approximately 75 days.

The Project is in the Mojave Desert, a hot, dry desert region south of the Sierra Nevada Mountains and east-northeast of the Transverse Ranges. Climate conditions are characterized by large fluctuations in daily temperature, high seasonal winds, and low humidity. Annual precipitation ranges from three to six inches and mainly occurs in the winter and spring months. Unique years can generate increased rainfall, when subtropical air from the south moves into the area and creates monsoonal thunderstorms. Alternatively, years of drought can yield average rainfall of less than one inch for the entire year (WRCC, 2009). The region also receives periodic snowfall during cold winter storms.

The Mojave Desert is characterized by widely scattered steep mountain ranges, dry lakes (playas), relatively flat plains (basins), bajadas (alluvial fans or debris flows), intermittent drainages, sand sheets, and volcanic landforms. Over 635 species of vertebrate animals are known from the Mojave Desert alone (BLM, 1990), and a wide variety of desert and mountain species overlap in the foothills of the San Bernardino Mountains. Although only a few invertebrate species have been well studied in the region (such as insects, mollusks, and fairy shrimp), these species show widespread endemism and specialization to the unique substrates, vegetation, and water sources found in the Mojave Desert. Due to the varied topography of the region, plant communities also exhibit a wide range of diversity, ranging from creosote brush scrublands to intermittent riparian areas. These diverse habitats have the potential to support many sensitive plants and wildlife within and adjacent to the Project route.

The Project route crosses largely undeveloped state and federal lands, including lands under the jurisdiction of California State Lands Commission and the Bureau of Land Management (BLM, including Areas of Critical Environmental Concern (ACEC)). National Monuments, Wilderness Areas, California Desert Conservation Areas (CDCA), and Desert Renewable Energy Conservation Plan (DRECP) areas are located near, but not within, the Project area (Figures 1-2.1 through 1-2.3). The Project also crosses rural and low-density residential land uses on non-federal land in San Bernardino County, California and Clark County, Nevada.

## 2.0 Sensitive Plants and Animals

### 2.1 Sensitive Plants

Special-status or sensitive species include those listed as threatened or endangered under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA), species proposed for listing, Species of Special Concern, and other species that have been identified by the USFWS, CDFW, and BLM as sensitive. Most of the special-status plant species anticipated to be within or near the Project area are ranked 1B or 2B in the California Rare Plant Ranking (CRPR) system adopted by CDFW and California Native Plant Society. CRPR 1B species are defined as rare, threatened, or endangered in California and throughout their ranges; CRPR 2B species are defined as rare, threatened or endangered in California but more common elsewhere. In general, the CRPR 2B species identified below are found in eastern California where they are relatively rare, but are more common in Nevada, where they do not have special

conservation status. Field surveys conducted for other projects that are adjacent to or overlapping with the Project identified multiple CRPR-listed plant species, including:

- White-margined beardtongue (*Penstemon albomarginatus*), BLM Sensitive and CRPR 1B.1
- Clokey's cryptantha (*Cryptantha clokeyi*), CRPR 1B.2
- Short-joint beavertail (*Opuntia basilaris* var. *brachyclada*), BLM Sensitive and CRPR 1B.2
- Mojave menodora (*Menodora spinescens* var. *mohavensis*), BLM Sensitive and CRPR 1B.2
- Creamy blazing star (*Mentzelia tridentata*), BLM Sensitive and CRPR 1B.3

The special-status species that have the highest potential to occur in or near the Project area based on previous field surveys, California Natural Diversity Database (CNDDDB) queries, and the presence of suitable habitat. These include:

- Abert's sanvitalia (2B.2)
- Alkali mariposa-lily (1B.2)
- Aven Nelson's phacelia (2B.3)
- Barstow woolly sunflower (1B.2)
- Beaver Dam breadroot (1B.2)
- California androsace (1B.1)
- Cave evening-primrose (2B.1)
- Desert bedstraw (2B.2)
- Desert pincushion (2B.1)
- Gilman's cymopterus (2B.3)
- Jackass-clover (2B.2)
- Johnson's bee-hive cactus (2B.2)
- King's eyelash grass (2B.3)
- Mojave milkweed (2B.1)
- Mojave monkeyflower (1B.2)
- Mormon needle grass (2B.3)
- Nevada onion (2B.3)
- Nine-awned pappus grass (2B.2)
- Parish's club-cholla (2B.2)
- Parish's phacelia (2B.2)
- Pinyon rockcress (2B.3)
- Plains flax (2B.3)
- Polished blazing star (1B.2)
- Rusby's desert-mallow (1B.2)
- Salina Pass wild rye (2B.3)
- Scaly cloak fern (2B.3)
- Small-flowered androstephium (2B.2)
- Three-awned grama (2B.3)
- Tidestrom's milkvetch (2B.2)
- Utah beardtongue (2B.3)
- Viviparous foxtail cactus (2B.2)
- White bear poppy (2B.2)

Most of these species are most likely to be found along only small segments of the Project area (such as the presence of riparian-associated species at the crossing over the Mojave River in Victorville and Daggett, San Bernardino County) or in areas supporting native habitat. Refer to Figures 2-2.1 and 2-2.2 for an example of field data taken for a similar project that overlaps portions of the Project area.

## 2.2 Sensitive Wildlife

Special-status or sensitive species include those listed as threatened or endangered under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA), species proposed for listing, Species of Special Concern, and other species that have been identified by the USFWS, CDFW, and BLM as sensitive. The list of special-status wildlife species below includes wildlife that are most likely to occur within or immediately adjacent to the Project area based on field surveys for nearby projects, CNDDDB records, or the presence of suitable habitat:

| Mammals                        |  |
|--------------------------------|--|
| American Badger                | Palm Springs round-tailed ground squirrel  |
| Desert kit fox                 | Pallid San Diego pocket mouse  |
| Mohave ground squirrel         | Multiple bat species (such as the Pallid Bat, Townsend's big-eared bat, Western mastiff bat, Pocketed free-tailed bat) |
| Desert Bighorn sheep           | Ringtail   |
| Birds                          |  |
| Burrowing owl                  | Loggerhead shrike  |
| Golden Eagle                   | Southwestern willow flycatcher   |
| Bald Eagle                     | Black-tailed gnatcatcher   |
| Cooper's Hawk                  | Bendire's thrasher   |
| Sharp-shinned hawk             | Le Conte's thrasher  |
| Northern harrier               | Least Bell's vireo   |
| Western snowy plover           | Gray vireo   |
| California horned lark         |  |
| Reptiles and Amphibians        |  |
| Desert tortoise                | Banded Gila monster  |
| Mojave fringe-toed lizard      | Arroyo toad  |
| Rosy boa                       |  |
| Invertebrates                  |  |
| Victorville shoulderband snail | Fish slough springsnail  |
| San Emigdio blue butterfly     |  |

The most likely species to be encountered on the project is the desert tortoise (Figures 2-1.1 through 2-1.3). However, there are many other sensitive wildlife species that have the potential to occur within or near the Project area. Some species like the Tricolored blackbird, North American porcupine, Swainson's hawk, Northern goshawk, and prairie falcon may be detected within or immediately adjacent to the Project area if suitable habitat is present. Because the Project crosses over the Mojave river, rural farm developments, and other intermittent drainages that support riparian forests, species such as the yellow-breasted chat, whimbrel, two-striped garter snake, and western pond turtle have the potential to occur in a few locations. Refer to Figures 2-2.1 and 2-2.2 for an example of a collection of field data taken for a similar project that overlaps with the current Project area.

**Critical Habitat**

Approximately 61,890 acres of the Project area is located within designated critical habitat for desert tortoise (Figures 2-1.1 through 2-1.3). The Project route crosses desert tortoise critical habitat in 5 sections of the Right of Way (ROW) in both California and Nevada. These ROW sections include RBT 1, RBT 2 and RBT 9, RBT 50 and RBT 57, RBT 93 and RBT 112, and RBT 117 and RBT 125. In addition, approximately 230 acres of the Project area crosses Southwestern willow flycatcher critical habitat along the Mojave river. Between RBT-145 and RBT-146, the Project route crosses Southwestern willow flycatcher habitat in 1 section of the ROW (Figure 2-1.3). The Project route also crosses through potential Mohave ground squirrel habitat (Figure 2-1.6). Work is not expected to be conducted within any occupied critical habitat.

Critical habitat that is near but not within 5 miles of the Project area include Arroyo toad (approximately 15 miles S of the Project area) and Razorback sucker (approximately 13 miles E of the Project area).

**Wildlife Corridors**

Wildlife corridors are defined as areas that connect suitable habitat for a species in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features (e.g.,

canyon drainages, ridgelines, or areas with vegetation cover) provide corridors for wildlife travel. Wildlife corridors are important because they provide access to mates, food, and water; allow the dispersal of individuals away from high-population-density areas; and facilitate gene flow between populations. Wildlife corridors are considered sensitive by resource and conservation agencies.

In the Project area, mountain ranges and valleys provide corridors for wildlife movement. One such corridor, or Essential Connectivity Area (ECA), is between the Ivanpah Valley and Calico Mountains, which is overlapped by approximately 31,440 acres of the Project area between RBT 91 and RBT 111. Another ECA is between the San Bernardino Mountains and Calico Mountains, which is overlapped by approximately 15,940 acres of the Project area between RBT 115 and RBT 126. Wildlife that may use these corridors include large mammals like the desert bighorn sheep, and smaller reptiles like the desert tortoise. Migratory birds (such as raptors, wading birds, and flycatchers) that utilize the Pacific Flyway or Audubon Important Birds Areas may find suitable habitat within or near the Project area (Figures 2-1.1 through 2-1.3). If any suitable habitat is present within or near the Project area, appropriate pre-construction surveys will be conducted (See Section 4.0 Recommended Mitigation).

### 3.0 Sensitive Habitats

Sensitive natural communities are defined as communities that are of limited distribution within California<sup>1</sup> or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special-status species or their habitats. A total of six sensitive natural communities may be found within or adjacent to the Project area:

- Desert needlegrass grassland (S2 Imperiled Ranking)
- Teddy bear cholla patches (S3 Vulnerable Ranking)
- Black-stem rabbitbrush shrub (S3 Vulnerable Ranking)
- Desert almond – Mexican bladdersage scrub (S3 Vulnerable Ranking)
- Bush seepweed scrub (S3 Vulnerable Ranking)
- Joshua tree woodland (S3 Vulnerable Ranking)

#### ***Noxious Weeds***

Noxious weeds are defined as species rated as High on the California Invasive Plant Inventory Database, published by the California Invasive Plant Council, or included in the weed lists of the U.S. Department of Agriculture, Nevada State Department of Agriculture, and BLM. There are many noxious weeds that have the potential to be present within the Project area, including tumbling pigweed, slender wild oat, Sahara mustard, cheat grass, red-stemmed filaree, and tamarisk.

#### ***Rivers and Drainages***

Except for the Mojave River and several smaller intermittent streams, most of the drainages on the Project route consist of ephemeral dry washes and lakes that carry water for short periods of time as the result of seasonal precipitation. Major drainages crossed by the Project route include the Mojave River, Bell

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<sup>1</sup> The California Department of Wildlife's (CDFW's) list of California Sensitive Natural Communities was used to evaluate sensitive natural communities within the Proposed Project area in both California and Nevada. No equivalent list for sensitive natural communities in Nevada is available. All six sensitive natural communities occur in both California and Nevada. Nomenclature for sensitive communities here follows CDFW rankings. The word "community" is a general term for vegetation or habitat types. BLM generally refers to "vegetation communities," while CDFW refers to "natural communities" and classifies them into smaller units such as alliances.

Mountain Wash, Daggett Wash, Red Pass Lake (dry lake), Silver Lake (dry lake), Riggs Wash, Kingston Wash, Ivanpah Lake (dry lake), and Roach Lake (dry lake).

## 4.0 Recommended Mitigation

All geotechnical investigations will be conducted on existing access or spur roads. Ground disturbance to intact habitat will not occur. However, most of the area has the potential to support desert tortoises, small reptiles, burrowing owls, and other nesting birds.

- Aspen recommends that a qualified biologist accompany the geotechnical drillers when working in desert tortoise habitat. The monitors would ensure that desert tortoises, nesting birds or other resources are not affected by project activities.
- Aspen recommends that all equipment be washed prior to entering natural lands. Aspen would inspect vehicles to ensure that construction vehicles arrive to work sites clean and weed-free prior to entering the ROW.
- Aspen recommends that nesting bird surveys be conducted by the monitor to assess the presence of active nests within or adjacent to the Project area. Any sensitive species or active nest will be recorded, and appropriate buffers will be applied.
- Aspen will monitor for all sensitive plants and wildlife and ensure construction equipment and vehicles remain on disturbed areas.
- Aspen will ensure that vehicles or equipment are not operated in drainages. Aspen will notify LADWP of any concerns or potential non-compliance activities.

## 5.0 References

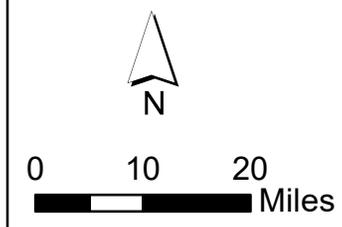
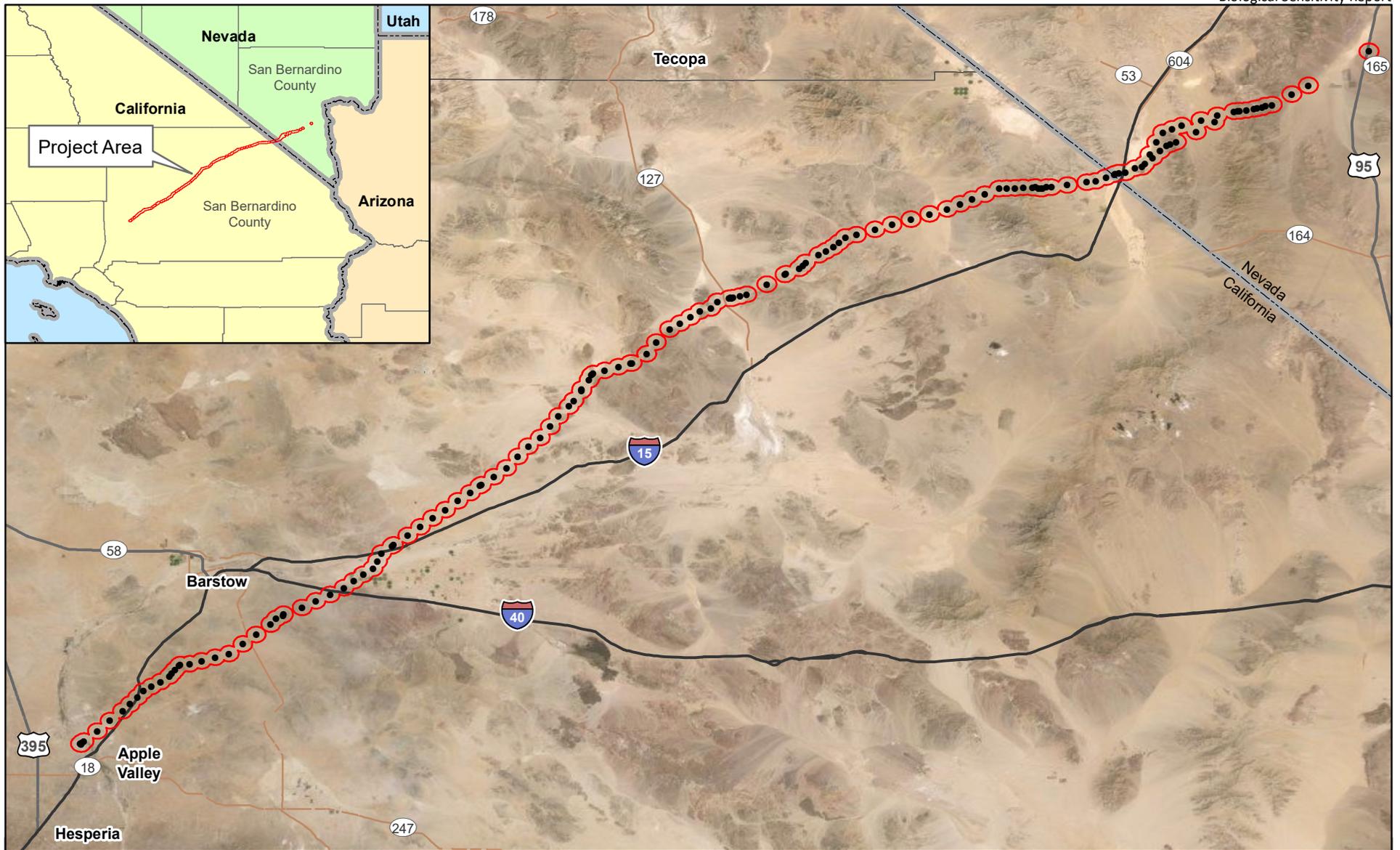
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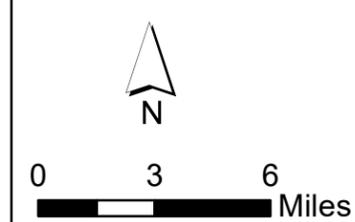
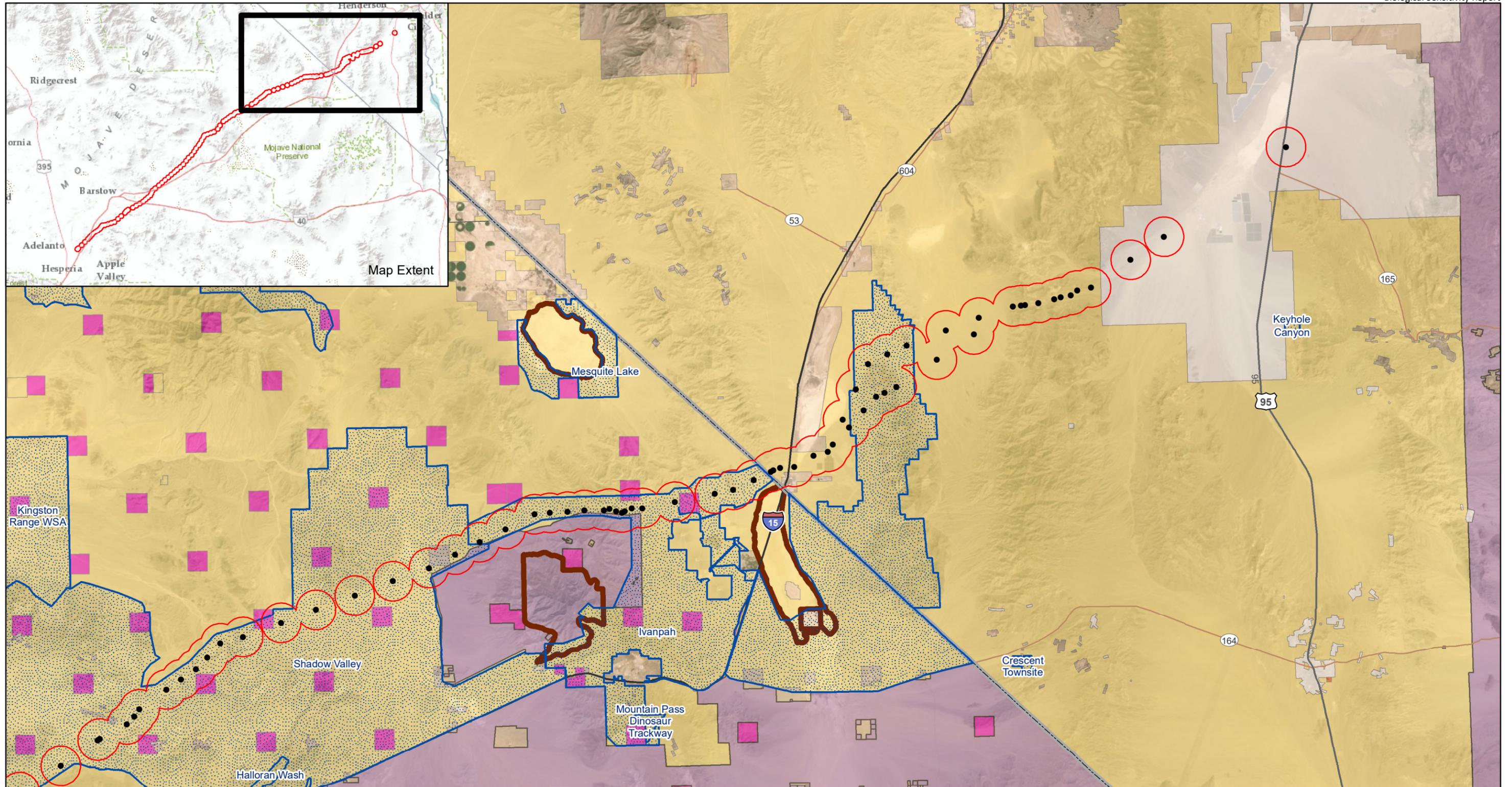
Western Regional Climate Center (WRCC). 2009. Climatological Summary: Station – Barstow-Daggett Airport; Period of Record – Jul 1996 to Dec 2008. Website: <http://www.wrcc.dri.edu/summary/dag.ca.html>. Accessed February 12, 2020.

## Attachment A – Figures



- Boring Site
- 1-mile buffer

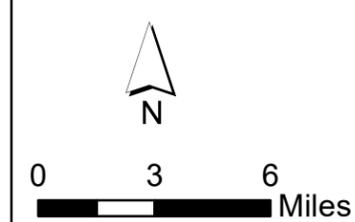
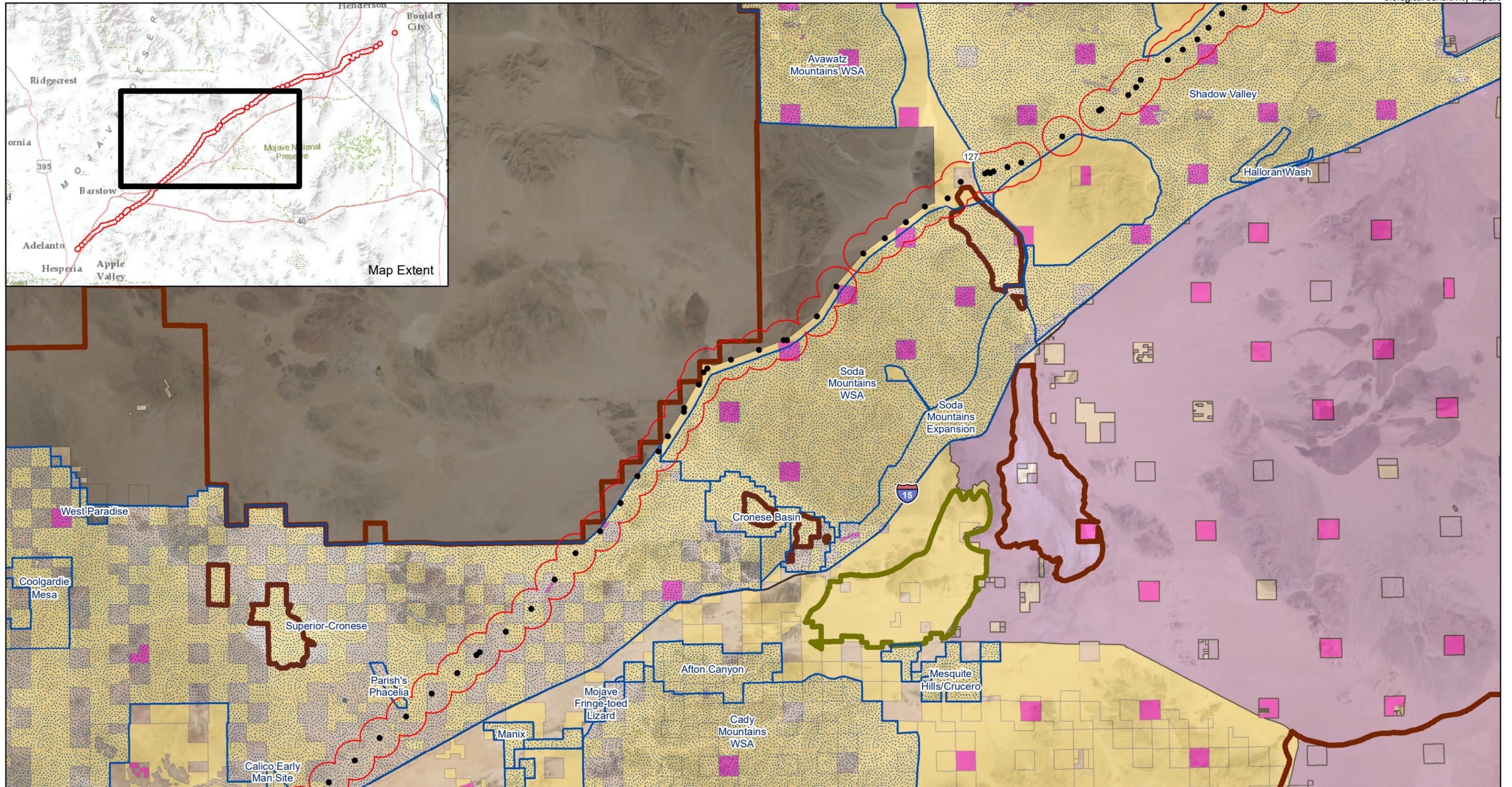
**Figure 1-1.**  
**Project Overview**



- Boring Site
- 1-mile buffer
- Federal Off Highway Vehicle Area**
- ▭ Closed
- Jurisdiction**
- ▭ Bureau of Land Management
- ▭ State Lands
- ▭ County
- ▭ National Park Service
- ▭ Private (no color)
- ▭ U.S. Military
- ▭ BLM Area of Critical Environmental Concern (ACEC)

Figure 1-2.1.

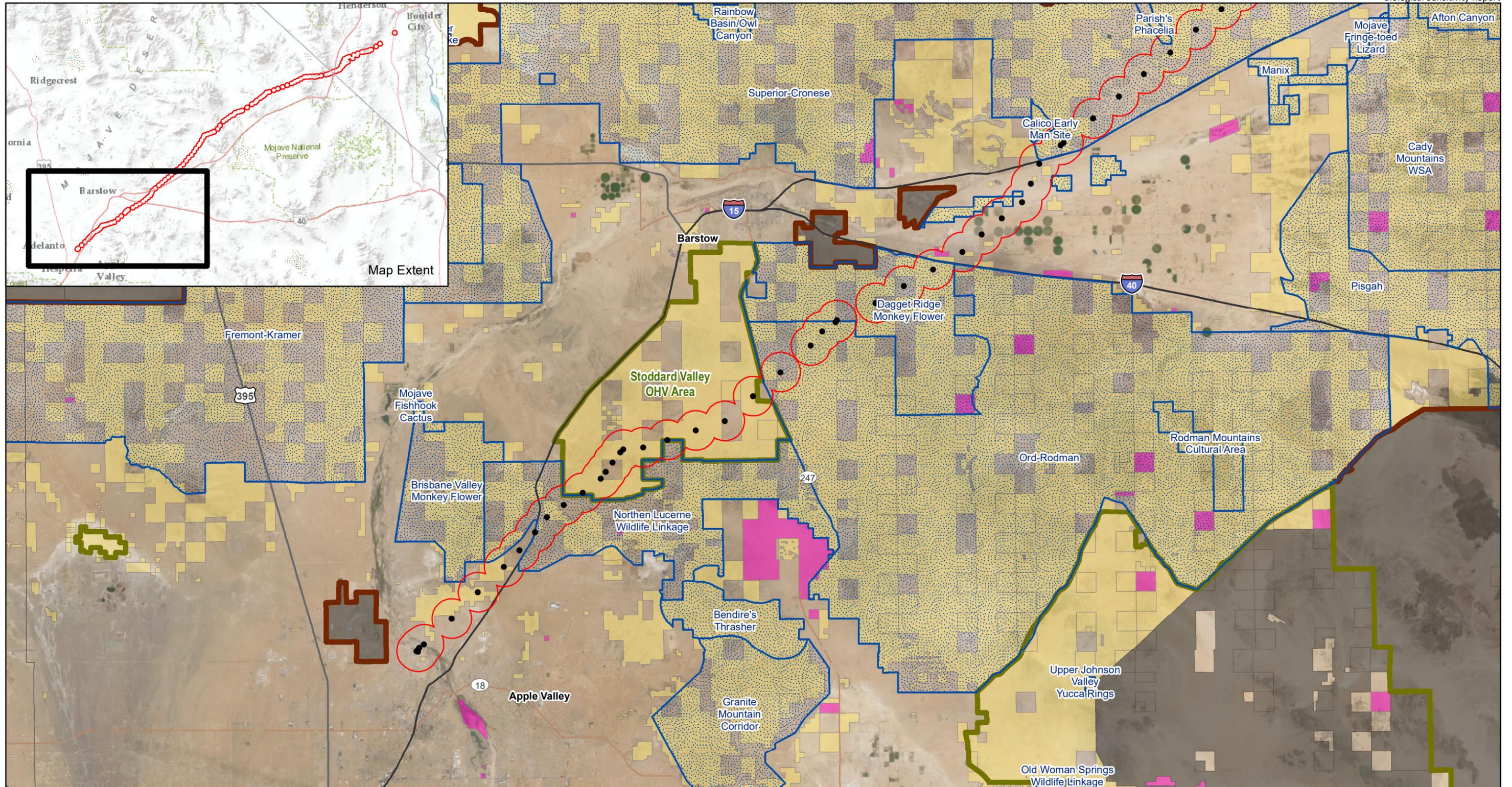
Land Ownership



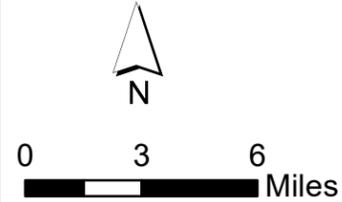
- Boring Site
- 1-mile buffer
- Federal Off Highway Vehicle Area**
  - ▬ Open
  - ▬ Closed
- Jurisdiction**
  - Bureau of Land Management
  - State Lands
  - County
  - National Park Service
  - Private (no color)
  - U.S. Military
  - BLM Area of Critical Environmental Concern (ACEC)

Figure 1-2.2.

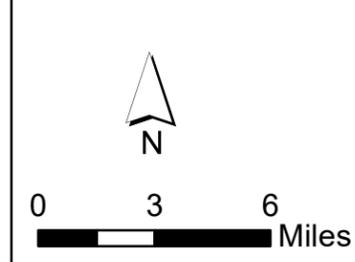
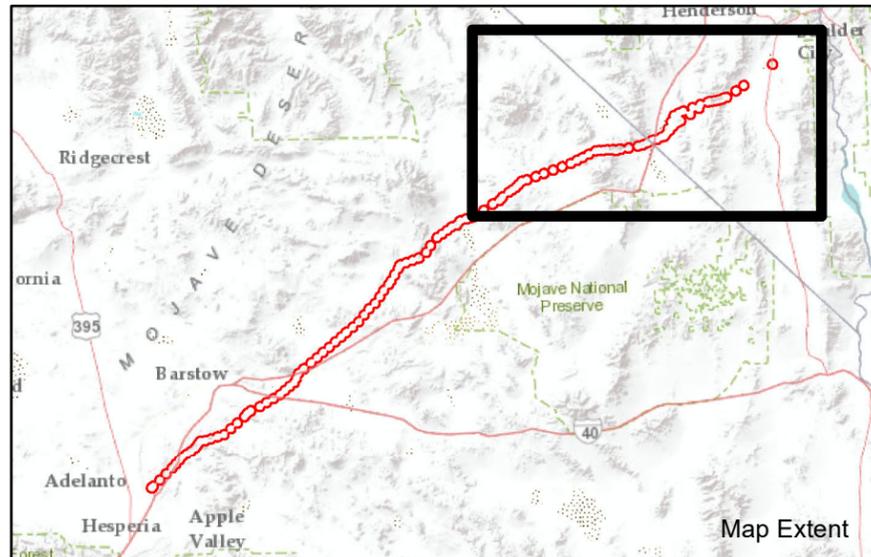
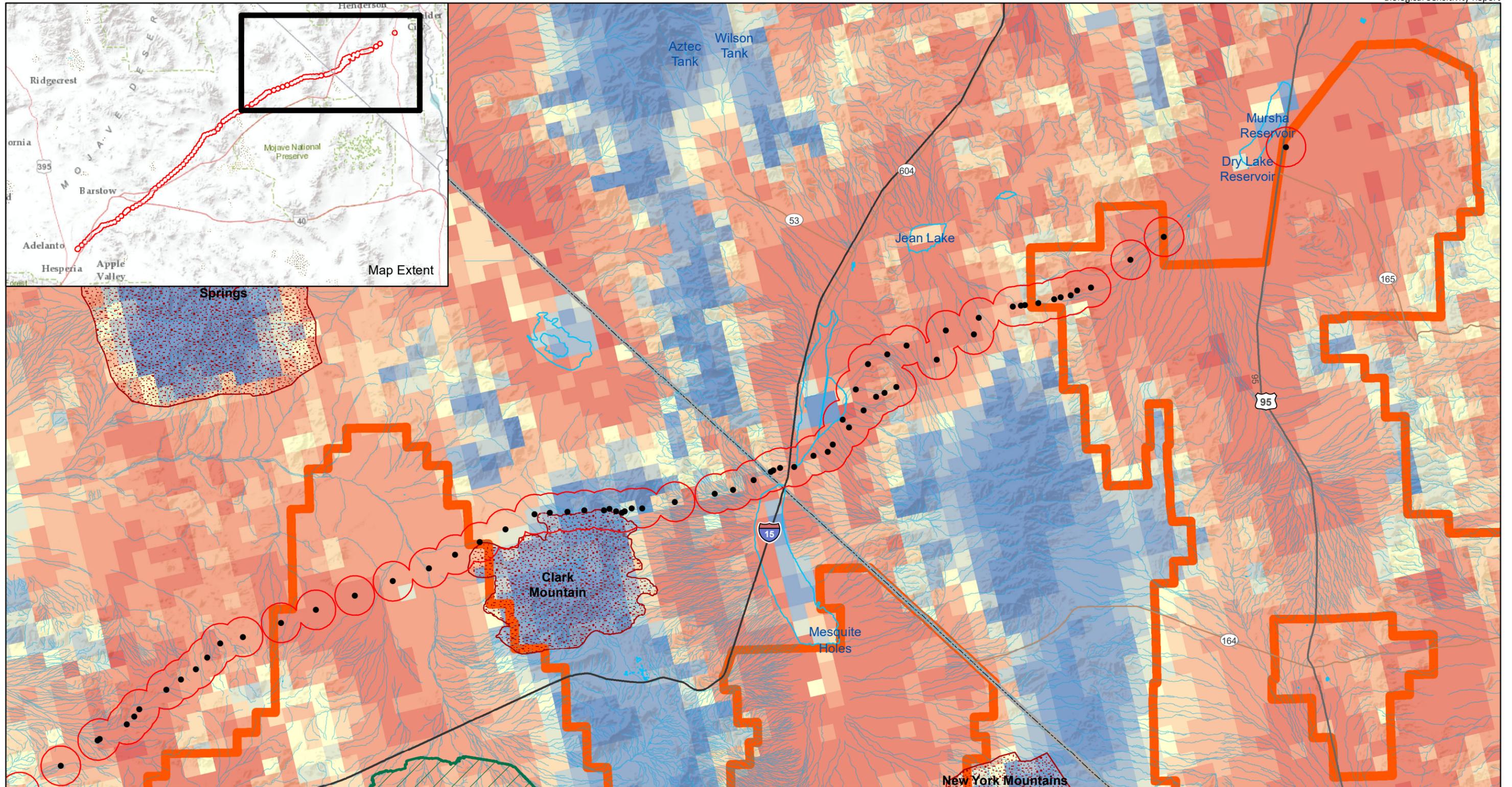
Land Ownership



- Boring Site
- 1-mile buffer
- Federal Off Highway Vehicle Area**
- Open
- Closed
- Jurisdiction**
- Bureau of Land Management
- State Lands
- County
- National Park Service
- Private (no color)
- U.S. Military
- BLM Area of Critical Environmental Concern (ACEC)

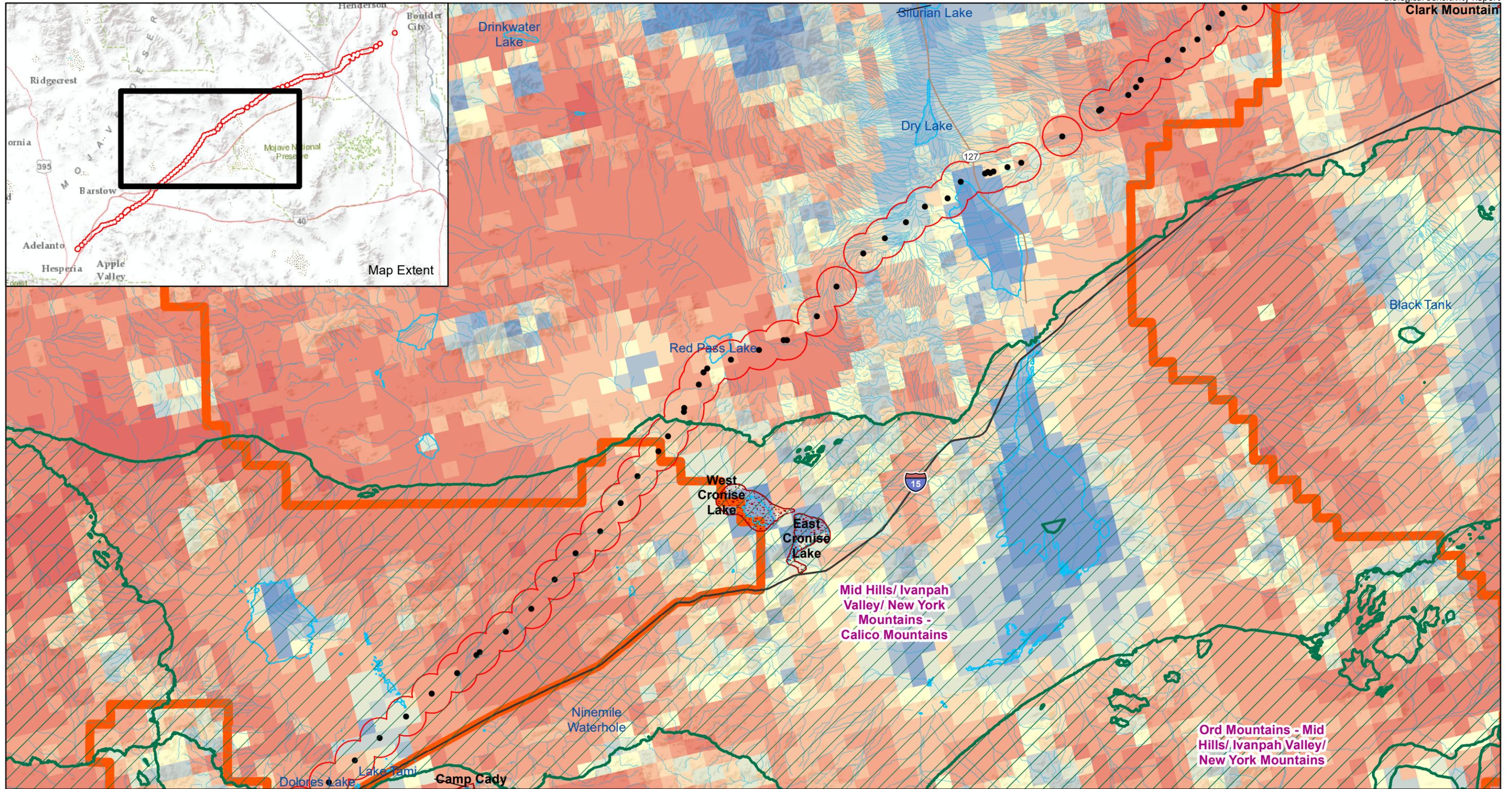


**Figure 1-2.3.**  
**Land Ownership**



- Essential Connectivity Area
- Boring Site
- 1-mile buffer
- Audobon Important Bird Area
- NHD River/Stream
- Waterbody or dry lake bed
- Desert tortoise Critical Habitat
- Modeled Habitat for Desert tortoise (*Gopherus agassizii*)**
- High Value
- Low Value

**Figure 2-1.1.**  
**Biological Resources**



|                                    |                                  |  |
|------------------------------------|----------------------------------|--|
| Essential Connectivity Area        | NHD River/Stream                 | <b>Modeled Habitat for Desert tortoise (<i>Gopherus agassizii</i>)</b> |
| Boring Site                        | Waterbody or dry lake bed        |  |
| 1-mile buffer                      | Desert tortoise Critical Habitat | Low Value  |
| <b>Audobon Important Bird Area</b> |                                  |  |
| Audobon Important Bird Area        |                                  |  |

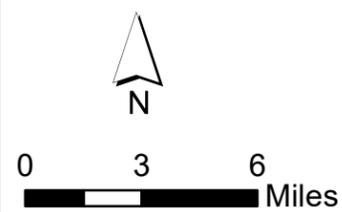


Figure 2-1.2.

Biological Resources

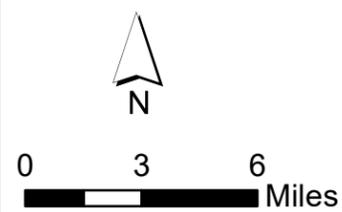
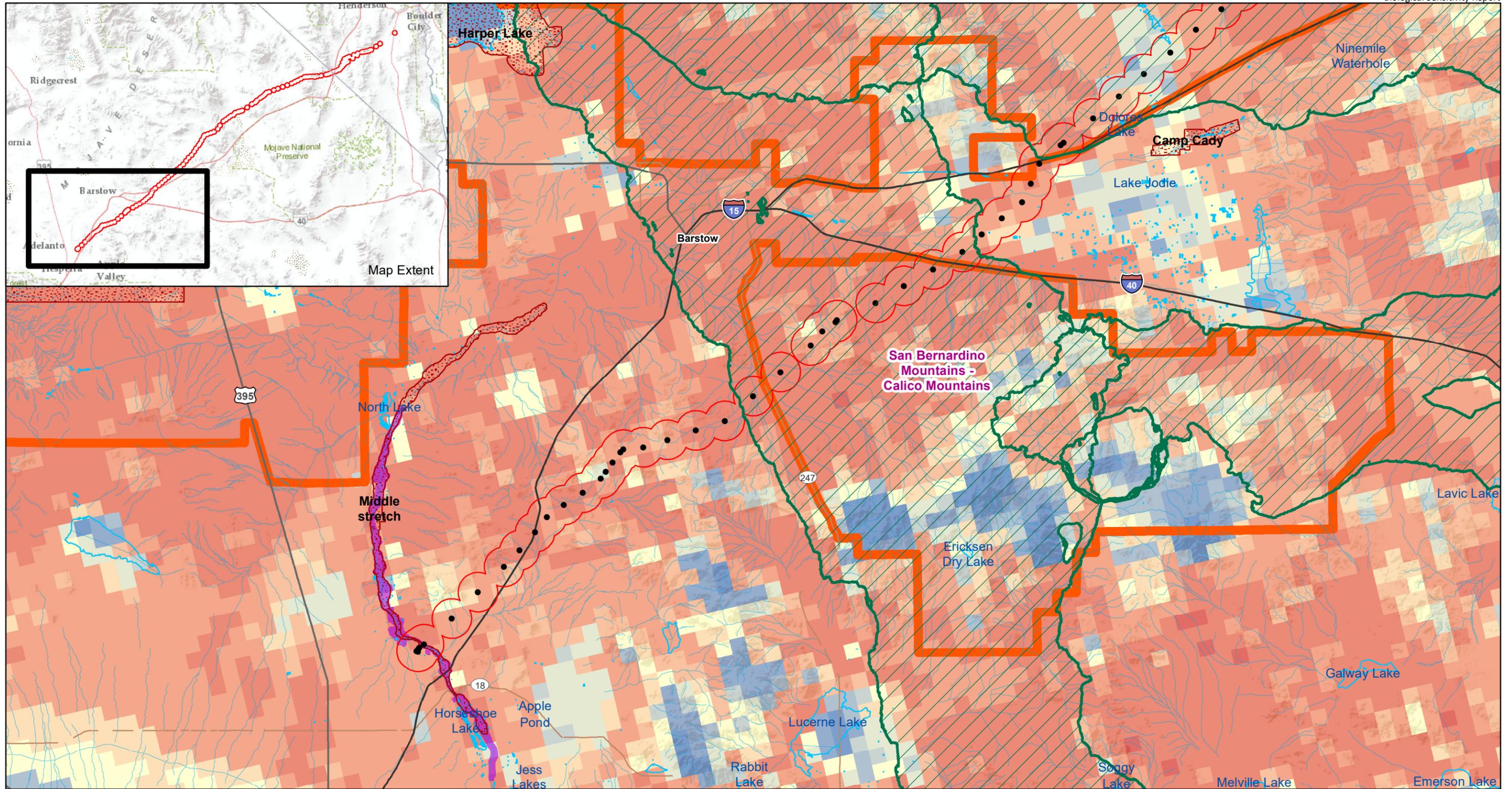
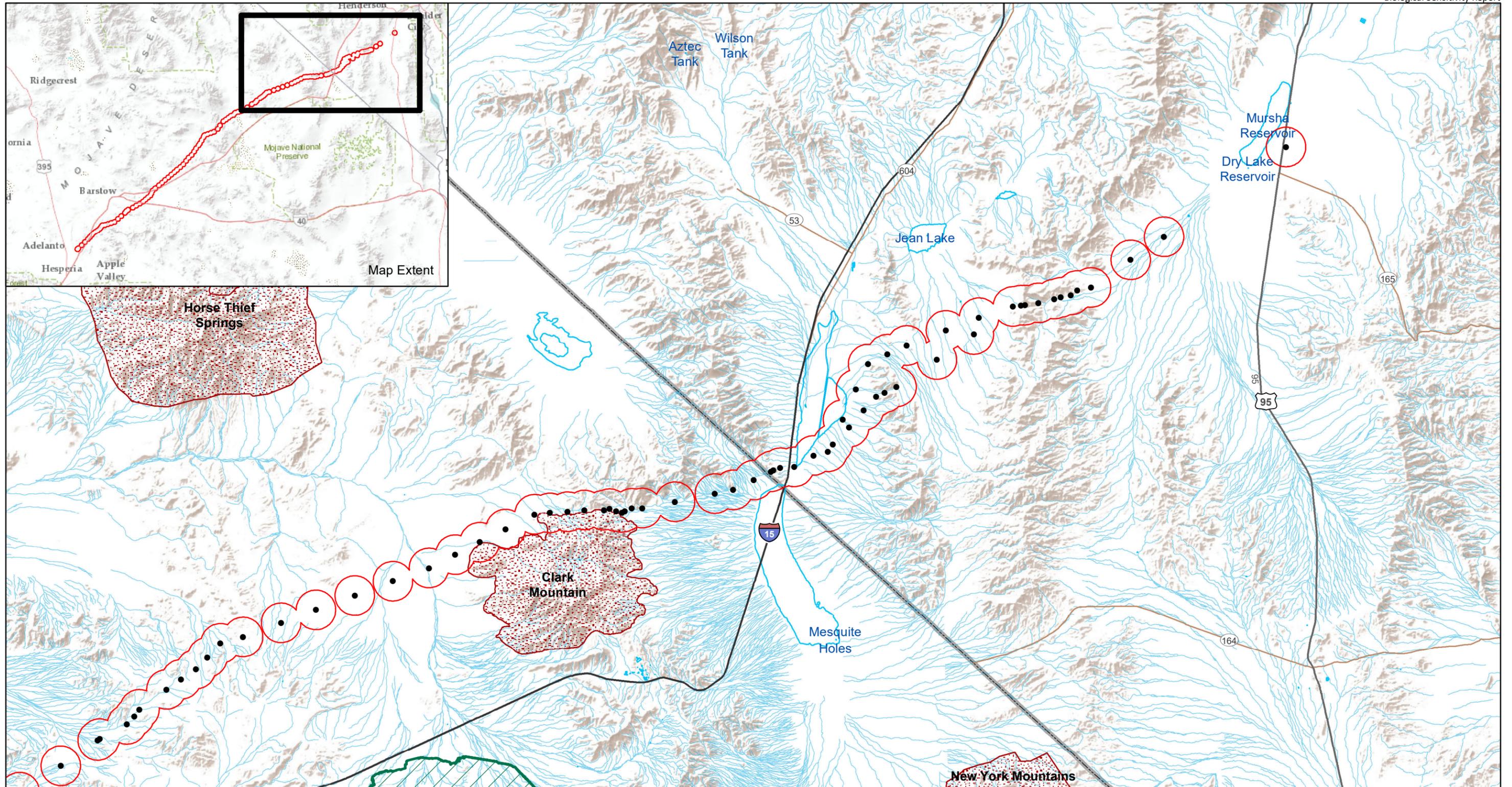


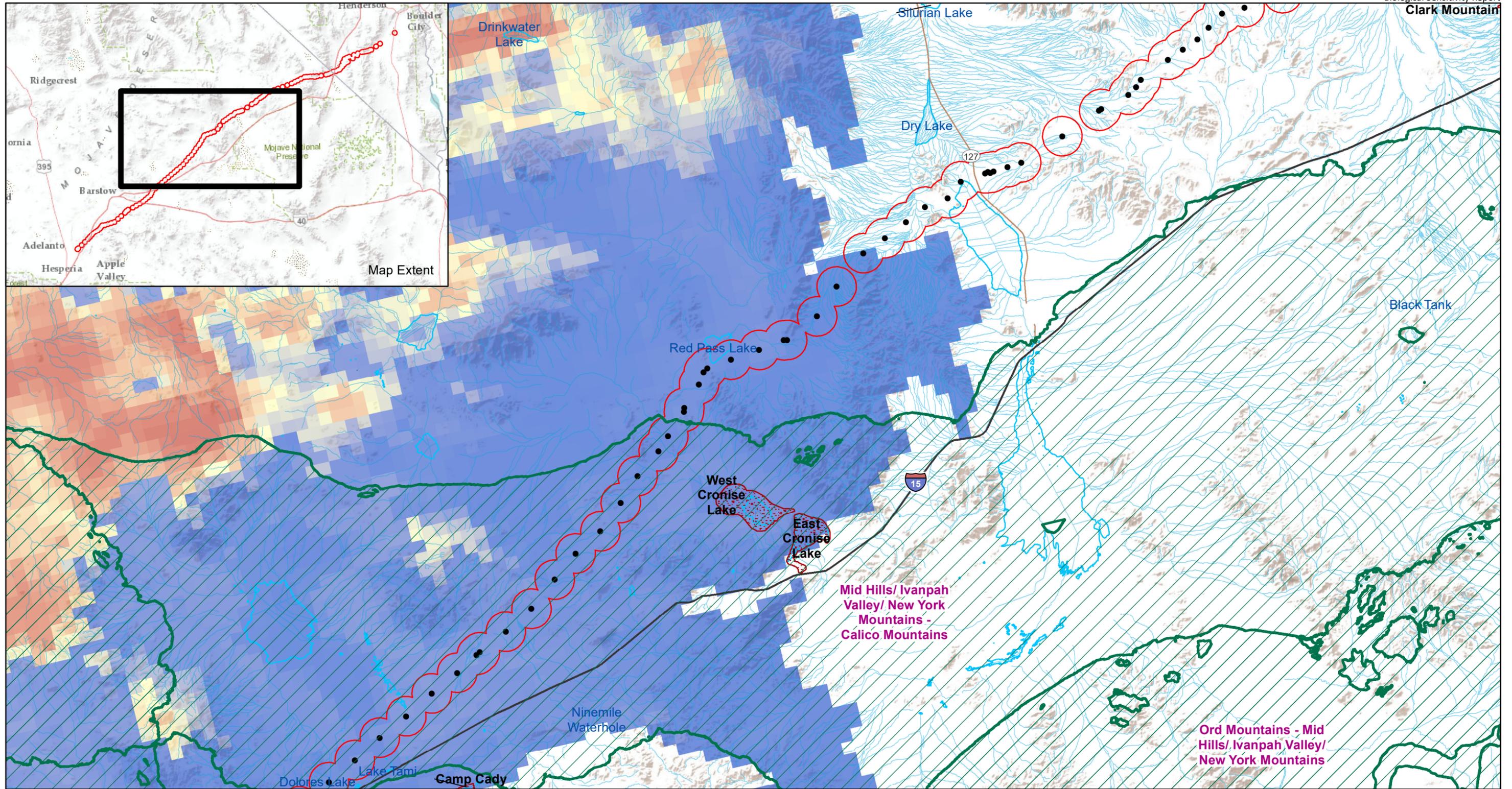
Figure 2-1.3.

Biological Resources



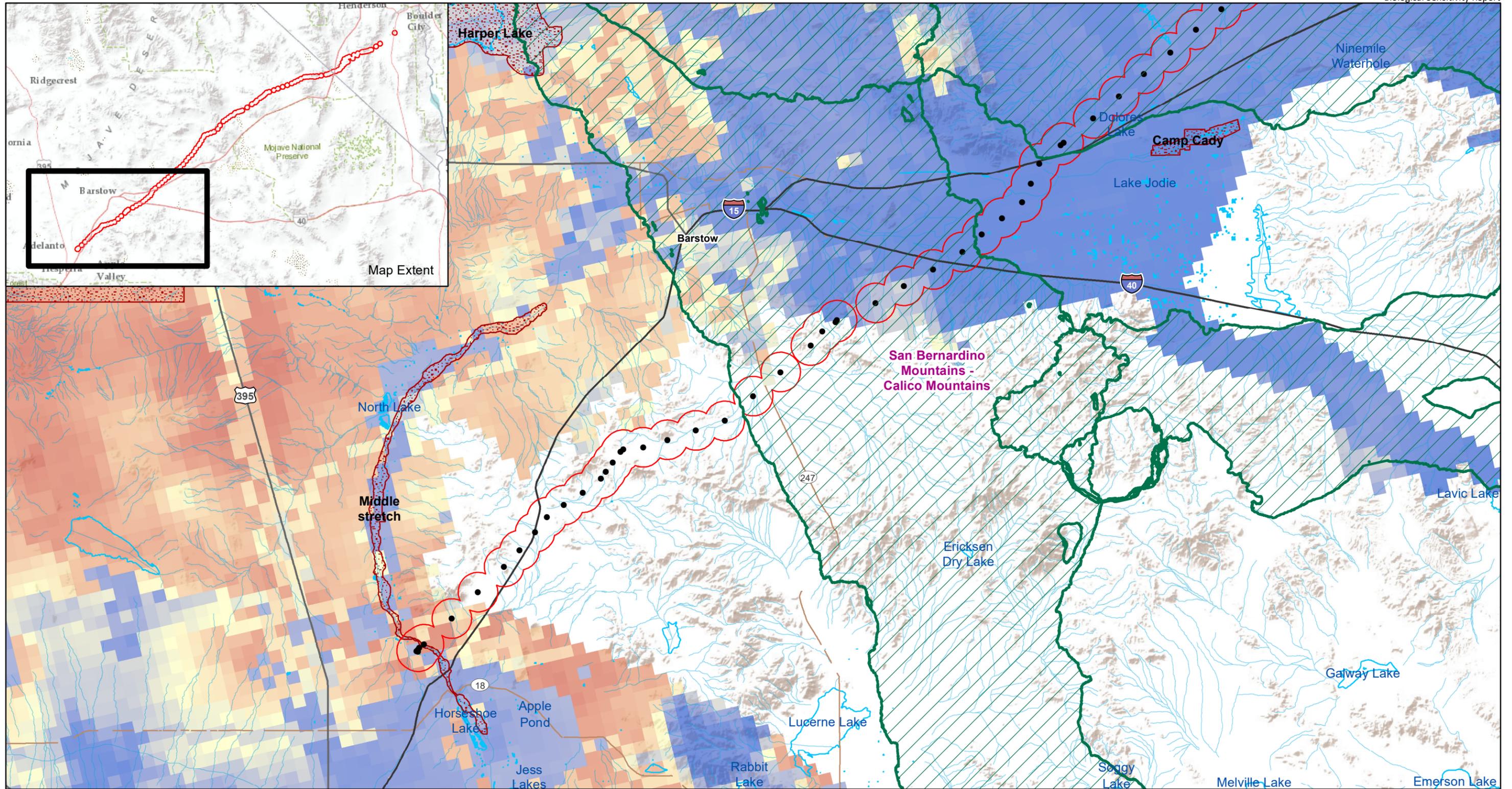
|      |  |   |  |
|------|--|---|--|
| <br> | <ul style="list-style-type: none"> <li> Essential Connectivity Area</li> <li> Boring Site</li> <li> 1-mile buffer</li> </ul> | <ul style="list-style-type: none"> <li> NHD River/Stream</li> <li> Waterbody or dry lake bed</li> </ul> | <p><b>Modeled Habitat for Mohave ground squirrel (none in this area)</b></p> <ul style="list-style-type: none"> <li> High Value</li> <li> Low Value</li> </ul> |
|------|--|---|--|

**Figure 2-1.4.**  
**Biological Resources**



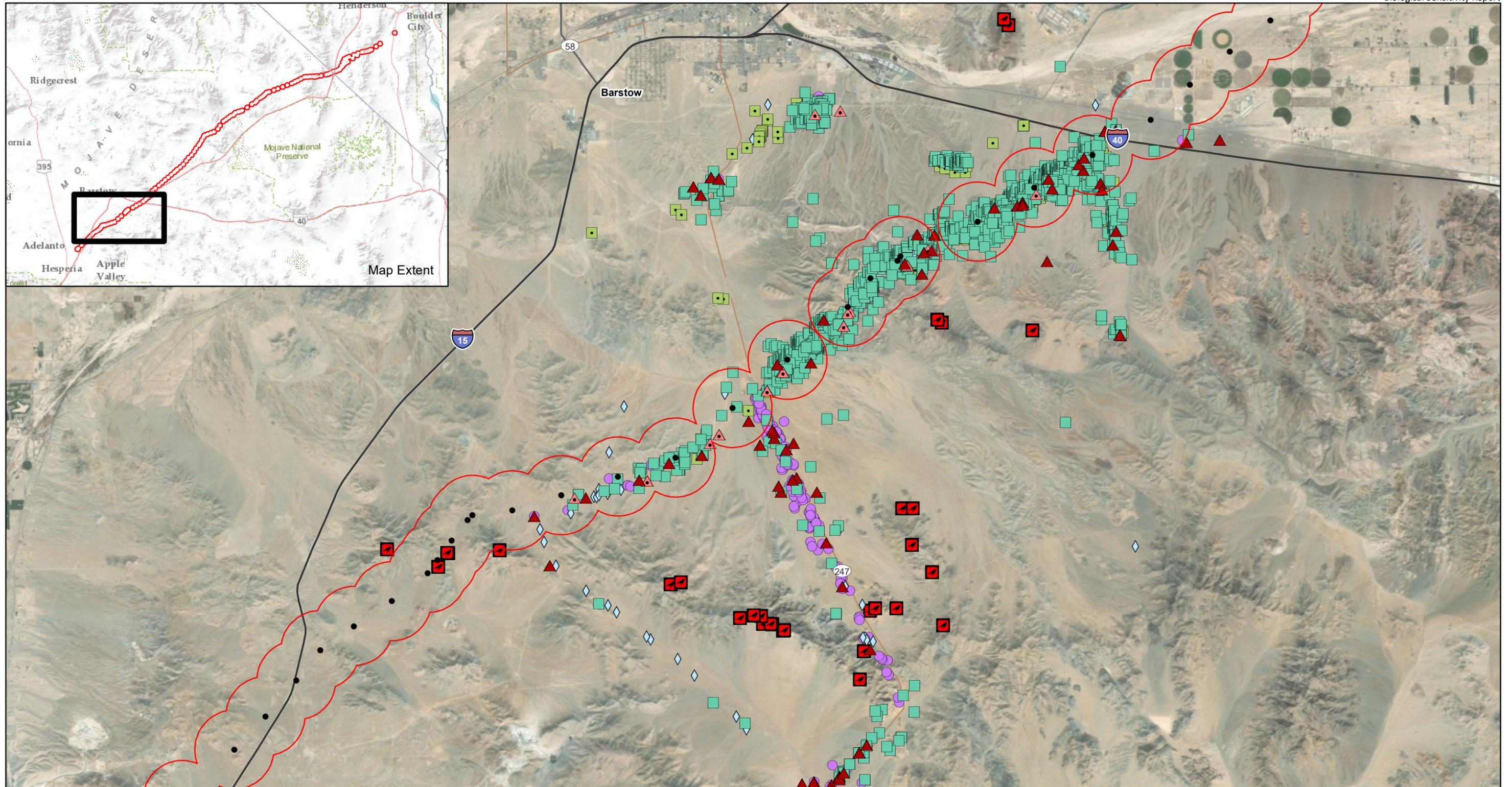
|      |                             |                           |  |
|------|-----------------------------|---------------------------|--|
| <br> | Essential Connectivity Area | NHD River/Stream          | <b>Modeled Habitat for Mohave ground squirrel</b><br>High Value<br>Low Value |
|      | Boring Site                 | Waterbody or dry lake bed |  |

**Figure 2-1.5.**  
**Biological Resources**

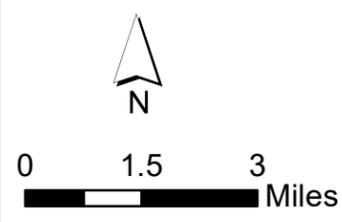


|      |                             |                  |  |
|------|-----------------------------|------------------|--|
| <br> | Essential Connectivity Area | NHD River/Stream | <b>Modeled Habitat for Mohave ground squirrel</b><br>High Value<br>Low Value |
|      | Boring Site                 | 1-mile buffer    |  |

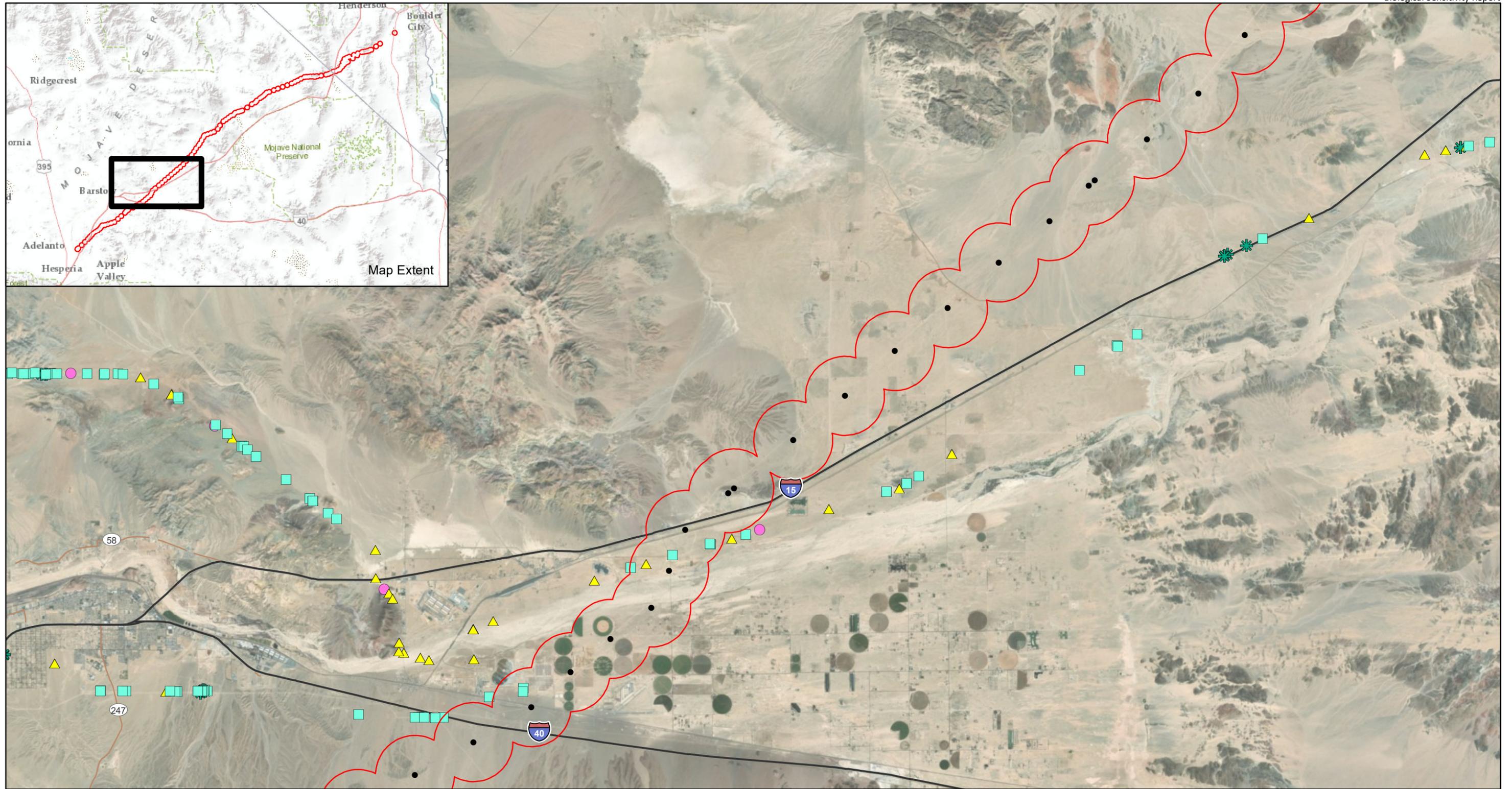
**Figure 2-1.6.**  
**Biological Resources**



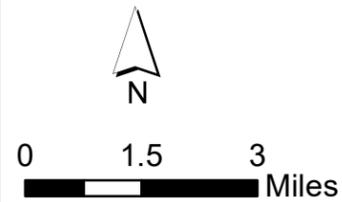
- Boring Site
- ▲ BUOW Protocol Observations
- ◇ General Avian Observation
- 1-mile buffer
- ▲ General Burrowing Owl Observations
- General Botanical Observations
- DETO Protocol Observations
- General Mammal Observations
- General Observations DETO
- Golden Eagle Observations



**Figure 2-2.1.**  
**Previous Biological Surveys**



- Boring Site
- Desert Tortoise Observation
- 1-mile buffer
- ▲ Nesting Bird Observation
- ✱ Botanical Observation
- Wildlife Observation



**Figure 2-2.2.**  
**Previous Biological Surveys**