

Appendix L

Wildfire Safety Investigations Memorandum



MEMO

TO	Stephanie Lauer, Hanwha Renewables
FROM	Christie Robinson, ERM Inc.
DATE	4 February 2026
REFERENCE	0756349
SUBJECT	Wildfire Safety Investigations Memorandum

1. INTRODUCTION:

Bonanza Peak Solar, LLC, a wholly owned subsidiary of Hanwha Energy USA Holdings Corp. (Applicant) is requesting a Renewable Energy Permit (REP) from Inyo County, California, to construct, own, operate, and maintain a utility scale solar photovoltaic (PV) energy generating facility on private lands. The requested term for the REP is 50 years.

As provided on Figure 1, Wildfire Risk Overview, the Bonanza Peak Energy Project (Project) would be located in the Charleston View Solar Energy Development Area in southeastern Inyo County, adjacent to the Nevada state line just north of Old Spanish Trail Highway.

The solar generation facility, including the PV arrays, substation, and other electrical equipment, would be within a 3,382-acre Project Area with a Developed Area of no greater than 2,400 acres, as dictated by the Inyo County Renewable Energy General Plan Amendment (REGPA) (Inyo County 2015). The Project has a planned net generating capacity of up to 500 megawatts alternating current and the PV panels and associated equipment will be set back 50 feet from the fenceline.

The PV electrical generation facility includes installation of fencing, access roads, PV modules, single axis tracker racking, inverters, electrical distribution equipment, overhead and underground power lines, substation, interconnection switchyard, and an overhead transmission line racking system. While the generation tie-line corridor will continue into Nevada to the northeast, only the portion of the Project within California is considered within this scope.

Construction is anticipated to begin as early as January 2027. The Project may be built in one or more phases within an approximately 18-month construction period.

This memorandum evaluates wildfire-related conditions and applicable regulatory mapping for the Project Area, documents the limited mapped hazard overlap within the fenced area of the site, summarizes the vegetation and potential fuel conditions where the overlap occurs, clarifies building-code applicability for the Operation and Maintenance (O&M) building, and describes the Project's path to compliance with REGPA Mitigation Measure (MM) HAZ-4.



2. FIRE HAZARD SEVERITY ZONE MAPPING AND LOCAL ADOPTION

Under Public Resource Code §4126(a-c), “wildland” includes lands covered wholly or partly by forests, timber, brush, undergrowth, or grass, as well as contiguous range or forage lands that are all vegetation types capable of supporting wildfire. These wildland areas form the foundation for California Department of Forestry and Fire Protection’s (CAL FIRE) Fire Hazard Severity Zone (FHSZ) modeling, which evaluates existing and potential natural vegetation (fuel) as a primary determinant of hazard. CAL FIRE classifies lands into Moderate, High, and Very High hazard categories based on fuel loading, slope, fire weather, and wind-driven fire spread identified by the Office of the State Fire Marshal (OSFM). “Hazard” reflects the physical conditions that influence fire likelihood and behavior over a 30 to 50-year period, without accounting for mitigation measures such as home hardening, recent wildfire, or vegetation management (CAL FIRE 2024).

The FHSZ for State Responsibility Areas (SRA) was updated and implemented statewide, effective 1 April 2024 (OSFM 2024). OSFM subsequently released updated FHSZ recommendations for Local Responsibility Areas (LRA) on 24 March 2025; Government Code Section 51179 requires local agencies to adopt the recommended LRA maps by ordinance and prohibits a decrease in hazard level relative to the State’s designations (OSFM 2025; California 2025). Inyo County adopted the updated LRA FHSZ designations by ordinance on 5 August 2025 (Inyo County Board of Supervisors 2025a; CivicClerk 2025). Inyo County’s public Geographic Information System (GIS) service publishes both SRA and LRA layers using the OSFM FHSZ classification nomenclature (Moderate, High, Very High) and is an appropriate local reference alongside the statewide OSFM viewer (County of Inyo GIS 2025; OSFM 2024). The Project Area is within a State-designated and County adopted LRA (County of Inyo GIS 2025).

Figure 2, Wildfire Risk, illustrates the Project Area and the overlap with County-published fire hazard classes. Within the approximately 2,441-acre fenced area, 177.7 acres (7.3 percent) lie within an area mapped as Moderate FHSZ in the LRA along the fence’s western and northern edge. The remaining acres within the fenced area (92.7 percent) are not designated as wildlands, indicating that CAL FIRE evaluated the area under its non-wildland (urban/developed) framework rather than as a fuels-driven wildland. Public Resources Code §4202, defines FHSZs based on fuel loading, slope, fire weather, and related factors. Areas lacking sufficient wildland fuels are not assigned to a wildland hazard classification.

The closest High FHSZ is 2.3 miles southeast of the O&M building as shown on Figure 1. It should be noted that the OSFM does not analyze fire hazard severity on federal lands; as such, fire risk areas on federal land are not provided on figures 1-4.

3. FIRE HISTORY

According to First Street’s Wildfire Map and Climate Risk Report (First Street 2026), there have been no historic wildfire events in Charleston View. The CAL FIRE Historic Fire Perimeters data (1878 to 2025) verifies the lack of historical wildfires in Charleston View. Table 1 provides the historic fires within 20 miles of the Project Area (California Natural Resource Agency 2026).

TABLE 1 NEAREST HISTORIC WILDFIRES TO PROJECT AREA

Fire Name	Year of Occurrence	Acres Burned	Direction from Project Area	Distance from Project Area (miles)
Spanish Trail	2011	74	West	2.7
Kingston	2005	3,334.9	Southwest	9.9
Kingston 3	2005	609.9	Southwest	13.1

4. PROJECT AREA VEGETATION AND FUELS WITHIN THE LRA MODERATE FHSZ

Vegetation mapping indicates that the landcover that makes up the 177.7 acres of Moderate FHSZ within the fenced area is dominated by desert shrub alliances, with scattered developed surfaces and small patches of alkali flats. Noxious weeds are also mapped because several species form continuous, dry fine fuels that can increase fire ignition and spread risk. Figure 3 focuses on the northwest portion of the Project Area to provide clearer depiction of the vegetation types in the Moderate FHSZ. Figure 4, Wildfire Risk and Noxious Weeds, is similar to Figure 3, but provides weed locations and the fire risk area. Since weeds overlay the underlying vegetation polygons and each other, weed acres cannot be added to vegetation acres or combined with one another.

Tables 2 and 3 summarize the acres of vegetation classes and weeds, respectively, within the Moderate FHSZ area located inside the fenced area.

TABLE 2 VEGETATION WITHIN MAPPED MODERATE FHSZ IN THE FENCED AREA

Vegetation type	Acres
Shadscale scrub	110.08
Creosote bush scrub	25.20
Nevada joint fir – Anderson’s boxthorn – spiny hop sage scrub	22.39
Developed	6.14
Cheesebush – sweetbush scrub	5.30
White bursage scrub	5.76
Creosote bush – white bursage scrub	0.84
Saltlover flat	2.03
Total	177.74

TABLE 3 NOXIOUS WEEDS WITHIN MAPPED MODERATE FHSZ IN THE FENCED AREA

Noxious weed type	Acres
<i>Salsola tragus</i> (Russian thistle)	106.04
<i>Halogeton glomeratus</i> (halogeton)	69.82
<i>Bromus rubens</i> (red brome)	0.64
Cumulative Area with Weeds	129.2
Total Area without Weeds	48.5

From a fire-behavior standpoint, the mapped vegetation indicates a desert shrub matrix with patchy fine fuels. In shrublands such as shadscale and creosote bush scrub, fire spread is typically constrained by discontinuous fuels unless fine fuels are abundant; shrubs themselves are generally not adapted to frequent burning, and long recovery times are common after fire (United States Forest Service [USFS] Fire Sciences Laboratory [FEIS] 2001a; USFS FEIS 1995). However, weeds and tumbleweeds (Russian thistle, halogeton, and red brome) can create flashy fine-fuel beds that increase ignition probability and wind-driven spread, especially when they accumulate along fences and structures (USFS FEIS 2001b; UC Statewide IPM Program 2025). *Halogeton glomeratus* (halogeton) is often found with shadscale as the dominant shrub and capable of adding to fine-fuel as it does not readily decompose (USFS FEIS 1992). The Applicant's Habitat Restoration, Revegetation, and Noxious Weed Management will reduce weed abundance and prevent tumbleweed accumulation at fences and around facility equipment. This operational practice is consistent with OSFM's emphasis on fuels and wind as primary hazard drivers in these landscapes (OSFM 2024; OSFM 2025).

Overall, fire potential in the portion of the fenced area mapped as Moderate FHSZ is primarily driven by the presence of fine, wind-borne fuels that can be controlled through consistent vegetation maintenance with a focus on collection points around equipment and the fenceline, as will be addressed in the Habitat Restoration, Revegetation, and Noxious Weed Management.

5. CLIMATIC CONDITIONS

There is no dedicated long-term official weather station present in Charleston View. Pahrump, Nevada, weather station observations are the closest and most representative. The Pahrump weather stations are located about 26 miles from Charleston View. Pahrump weather observations (from sources like Weather Underground personal stations, National Weather Service point forecasts, and others) are typically taken from locations in or near central/southern Pahrump, around coordinates such as 36.21°N, 115.99°W or 36.22°N, 115.995°W, and at elevations of between 2,600 to 2,740 feet. Charleston View sits at about 2,621-feet elevation in a similar desert basin, so topographic and climatic conditions are comparable.

The following is a summary of historic climatic information provided on the World Weather Online (2026) for the years 2009 through 2025:

- Annual average temperature range between 64 to 70 degrees Fahrenheit (°F) (18 to 21degrees Celsius [°C]). The lowest temperatures, 34 to 38°F (1 to 3°C) normally occur in January. High temperatures typically occur in July 92 to 100°F (33 to 38°C). Extreme temperatures in the summer have reached over 110°F (43°C) and winter lows below freezing occur occasionally.
- It is arid year-round, with total annual rainfall approximately 4 to 6 inches. Most rainfall occurs during winter storms (December to March) or occasional summer monsoonal thunderstorms (July to September). Many months have little to no rain. Average annual rainfall is 4.3 inches (Weather Atlas 2026).
- Winds are generally light to moderate in this desert basin, with average speeds around 5 to 9 miles per hour (mph) (8 to 15 kilometers per hour [km/h]) year-round. Winds are slightly breezier in spring (e.g., April peaks near 10 to 14 mph [16 to 23 km/h]) and calmer in summer/winter. Average wind gusts are between 14 to 17 mph (23 to 27 km/h) during passing fronts or thunderstorms, but sustained high winds are uncommon compared to more exposed desert areas. Afternoon breezes are common due to daytime heating and terrain.

6. HABITABLE BUILDINGS AND CHAPTER 7A OF THE 2010 CALIFORNIA BUILDING CODE

The Project includes an O&M building located at the eastern end of the site, near the proposed substation, as shown on Figure 2. Chapter 7A of the 2010 California Building Code applies to construction of new buildings located in any FHSZ areas (or in locally designated Wildland-Urban Interface areas where applicable). The building site is outside any FHSZ. The building will be located:

- 2.6 miles east of the Moderate FHSZ
- 2.3 miles northeast of a High FHSZ
- 11.7 miles from the nearest mapped Very High FHSZ to the southwest

The O&M building is not in any mapped FHSZ; therefore, Chapter 7A does not apply to the O&M building (OSFM 2024; Inyo County Board of Supervisors 2025a).

7. MITIGATION MEASURE HAZ-4 COMPLIANCE AND CONCLUSION

MM HAZ-4 of the REGPA Environmental Impact Report requires site-specific Wildfire Safety Investigations for projects in the Solar Energy Development Areas or Owens Valley Study Area where mapped Moderate or High wildfire hazards are present, with the investigative work to be completed prior to final project design approval. MM HAZ-4 lists investigative elements (fire history, fuels/vegetation, climatic conditions and wind, projected fire behavior modeling such as BehavePlus, documentation of onsite hazards to people and structures, and identification of remedial measures) and requires applicable results and recommendations be incorporated into final design documents (OPR/CEQAnet 2015).

Consistent with MM HAZ-4, this screening analysis concludes that no further wildfire analysis is needed at this stage given the Project's characteristics, including the following:

1. The limited extent of the mapped Moderate FHSZ overlap within the fence line (7.3 percent of the fenced area shown on Figure 2.
2. The setback of 50 feet from the fenceline for PV and equipment installation.
3. The lack of High or Very High zones in the vicinity of the Project Area or the fenced area.
4. The absence of an energy-storage system, which reduces the risk of fire.
5. The Project's location is on the desert floor, which has more favorable climatic conditions (e.g., less wind) than nearby mountainous areas.
6. The desert-shrub vegetation mosaic with patchy fine fuels, which will be proactively managed per the Habitat Restoration, Vegetation, and Noxious Weed Management Plan to be approved by the County.

In the event that the County disagrees with the above conclusion and determines that additional analysis is required under MM HAZ-4, then consistent with the timing in MM HAZ-4 this additional analysis would be completed prior to final project design approval and incorporated into management plans (e.g., the Habitat Restoration, Vegetation, and Noxious Weed Management Plan) as appropriate. No further wildfire analysis is warranted as part of California Environmental Quality Act review and approval for the REP (OPR/CEQAnet 2015).

8. REFERENCES

- California. 2025. California Government Code §51179. Accessed 13 January 2026. Retrieved from: https://california.public.law/codes/government_code_section_51179
- California Department of Forestry and Fire Protection (CAL FIRE). 2024. Frequently Asked Questions: 2024 Fire Hazard Severity Zones. Accessed: 23 January 2026. Retrieved from: [2024 FHSZ FAQs \(18 December 2024\)](#)
- California Natural Resource Agency. 2026. California Historical Fire Perimeters. Accessed on 21 January 2026. [California Fire Perimeters \(all\) | CNRA GIS Open Data](#)
- CivicClerk. 2025. "Agenda: 5 August 2025 — Item 11, Ordinance Designating Fire Hazard Severity Zones in Local Responsibility Areas of Unincorporated Inyo County." Accessed 13 January 2026. Retrieved from: <https://inyococa.portal.civicclerk.com/event/3303/files>
- County of Inyo GIS. 2025. "FireHazardClasses MapServer (SRA and LRA Fire Hazard Classes; includes NonWildland)." Accessed 13 January 2026. Retrieved from: <https://gis.inyo.gov/server/rest/services/FireHazardClasses/MapServer/layers>
- First Street. 2026. Charleston View Fire Factor. Accessed on 16 January 2026. Retrieved from: https://firststreet.org/city/charleston-view-ca/612730_fsid/fire
- Inyo County. 2015. Final REGPA as Adopted by The Board of Supervisors Public Hearing March 24, 2015. Accessed 13 January 2026. Retrieved from: <https://www.inyocounty.us/sites/default/files/2020-04/FinalREGPA33015.pdf>

- Inyo County Board of Supervisors. 2025a. "Minutes of the Regular Meeting of August 5, 2025" (approval of Ordinance 1322). Accessed 13 January 2026. Retrieved from: <https://www.inyocounty.us/sites/default/files/2025-08/20250805Minutes.pdf>
- Office of the State Fire Marshal (OSFM). 2024. "Fire Hazard Severity Zones (program page and SRA implementation)." Accessed 13 January 2026. Retrieved from: <https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones>
- _____. 2025. "Fire Hazard Severity Zone Viewer (SRA effective 4/1/2024; LRA recommendations 3/24/2025)." Accessed 13 January 2026. Retrieved from: <https://data.ca.gov/dataset/fire-hazard-severity-zone-viewer1>
- OPR/Canet. 2015. "Renewable Energy General Plan Amendment (REGPA), SCH No. 2014061039 — CEQAnet record (Final, 3/12/2015)." Accessed 13 January 2026. Retrieved from: <https://ceqanet.lci.ca.gov/2014061039/3>
- UC Statewide IPM Program. 2025. "Russian Thistle (*Salsola* spp.) — Home and Landscape Pest Notes." Updated May 2025. Accessed 13 January 2026. Retrieved from: <https://ipm.ucanr.edu/home-and-landscape/russian-thistle/>
- USFS Fire Sciences Laboratory (USFS FEIS). 1992. "Halogeton glomeratus — Fire Effects Information System." Accessed 13 January 2026. Retrieved from: <https://www.fs.usda.gov/database/feis/plants/forb/halglo/all.html>
- _____. 1995. "Larrea tridentata — Fire Effects Information System." Accessed 13 January 2026. Retrieved from: <https://www.fs.usda.gov/database/feis/plants/shrub/lartri/all.html>
- _____. 2001a. "Atriplex confertifolia — Fire Effects Information System." Accessed 13 January 2026. Retrieved from: <https://www.fs.usda.gov/database/feis/plants/shrub/atrcon/all.html>
- _____. 2001b. "Bromus madritensis, Bromus rubens — Fire Effects Information System." Accessed 13 January 2026. Retrieved from: <https://www.fs.usda.gov/database/feis/plants/graminoid/brosppl/all.html>
- Weather Atlas. 2026. *Climate and Monthly Weather Forecast Pahrump, NV*. Accessed 20 January 2026. Retrieved from: <https://www.weather-atlas.com/en/nevada-usa/pahrump-climate>
- World Weather Online. 2026. *Pahrump, United States of America Weather Averages*. Accessed January 2026. Retrieved from: <https://www.worldweatheronline.com/pahrump-weather-averages/nevada/us.aspx>

FIGURES

Figure 1 Wildfire Risk Overview

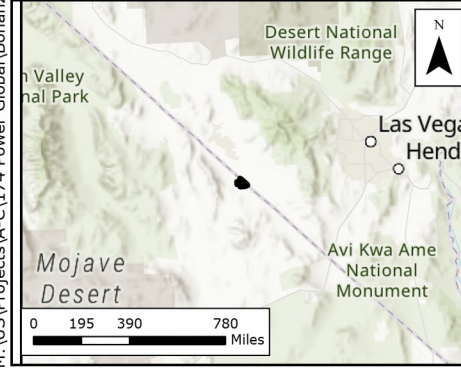
Figure 2 Wildfire Risk

Figure 3 Wildfire Risk and Vegetation

Figure 4 Wildfire Risk and Noxious Weeds

M:\US\Projects\A-C\174 Power Global\Bonanza Peak\ArcGIS\BonanzaBio_working\BonanzaBio_working.aprx, REVISED: 02/02/2026, SCALE: 1:125,000when printed at 11x17

DRAWN BY: GIS



Legend

Gen-tie Alignment

Project Area

O&M Building

Electrical Substation

Fenceline

Charleston View Solar

Energy Development Area

Local Responsibility Area

Moderate

High

Very High

Non Wildland

Notes:

1. No State Responsibility Areas occur in the vicinity of the Project site.
2. Lands outside the Local Responsibility Area that are under federal ownership are classified as Federal Responsibility Areas that are not subject to the State Fire Marshal's Fire Hazard Severity Zone program.

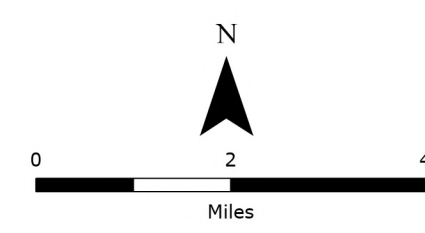


Figure 1

Wildfire Risk Overview

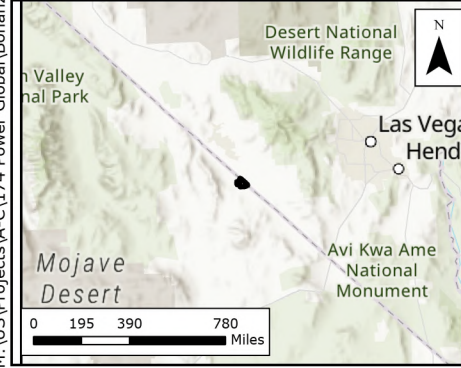
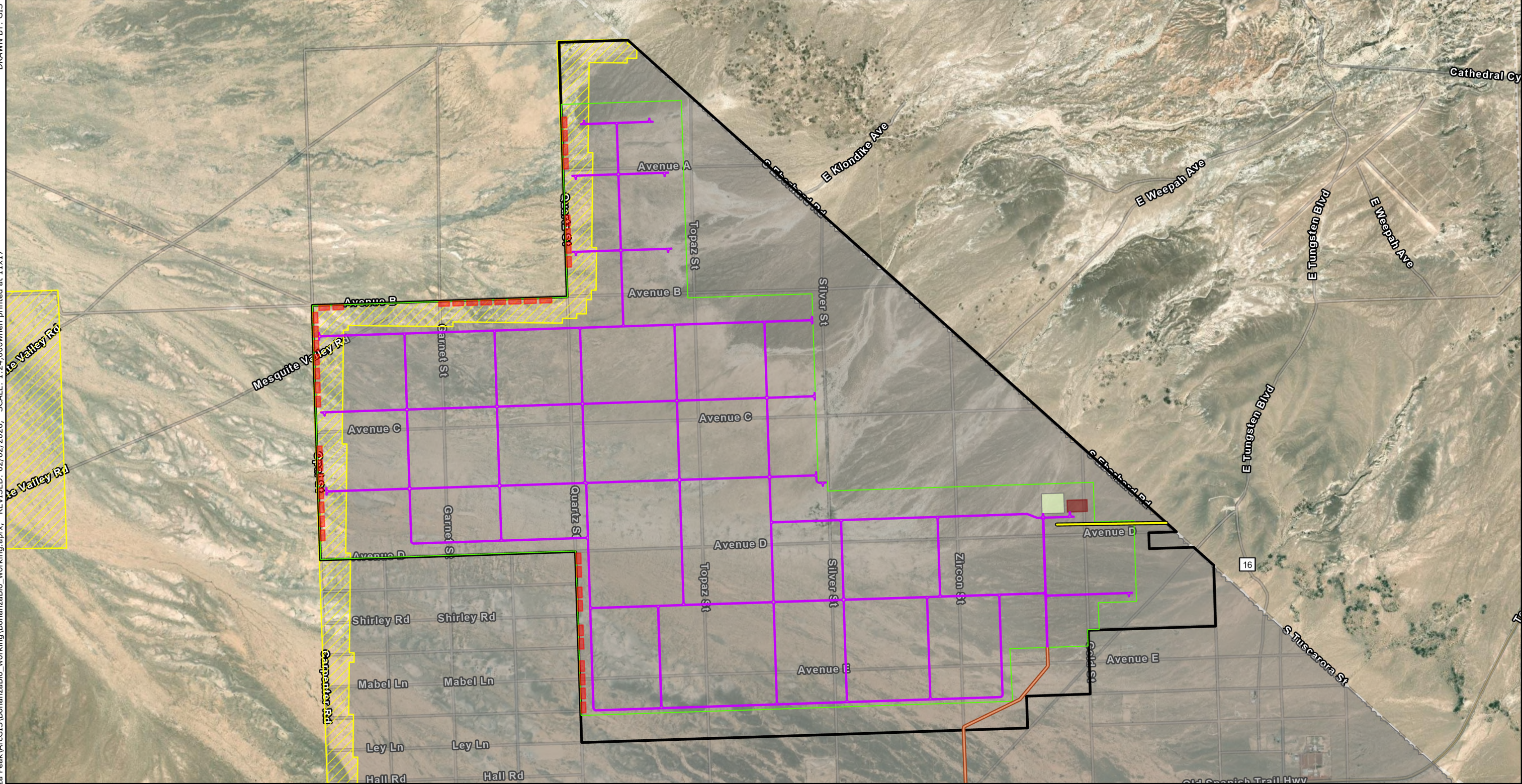
Bonanza Peak Energy Project

174 Power Global

Charleston View, CA

M:\US\Projects\A-C\174 Power Global\Bonanza Peak\ArcGIS\BonanzaBio_working\BonanzaBio_working.aprx, REVISED: 02/02/2026, SCALE: 1:24,000when printed at 11x17

DRAWN BY: GIS



Legend

- | | |
|-----------------------|---------------------------|
| Gen-tie Alignment | Site Access Route |
| Project Area | Internal Access Roads |
| Fenceline | Local Responsibility Area |
| Electrical Substation | Moderate |
| O&M Building | Non Wildland |
| Retention Basins | |

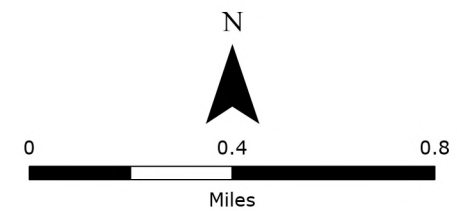
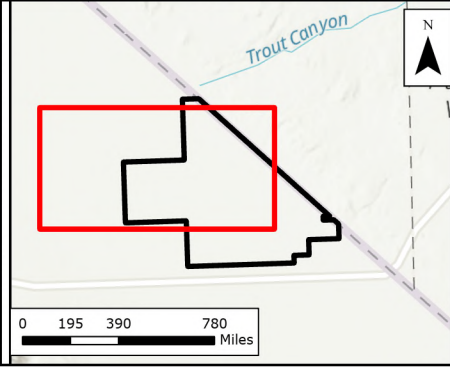
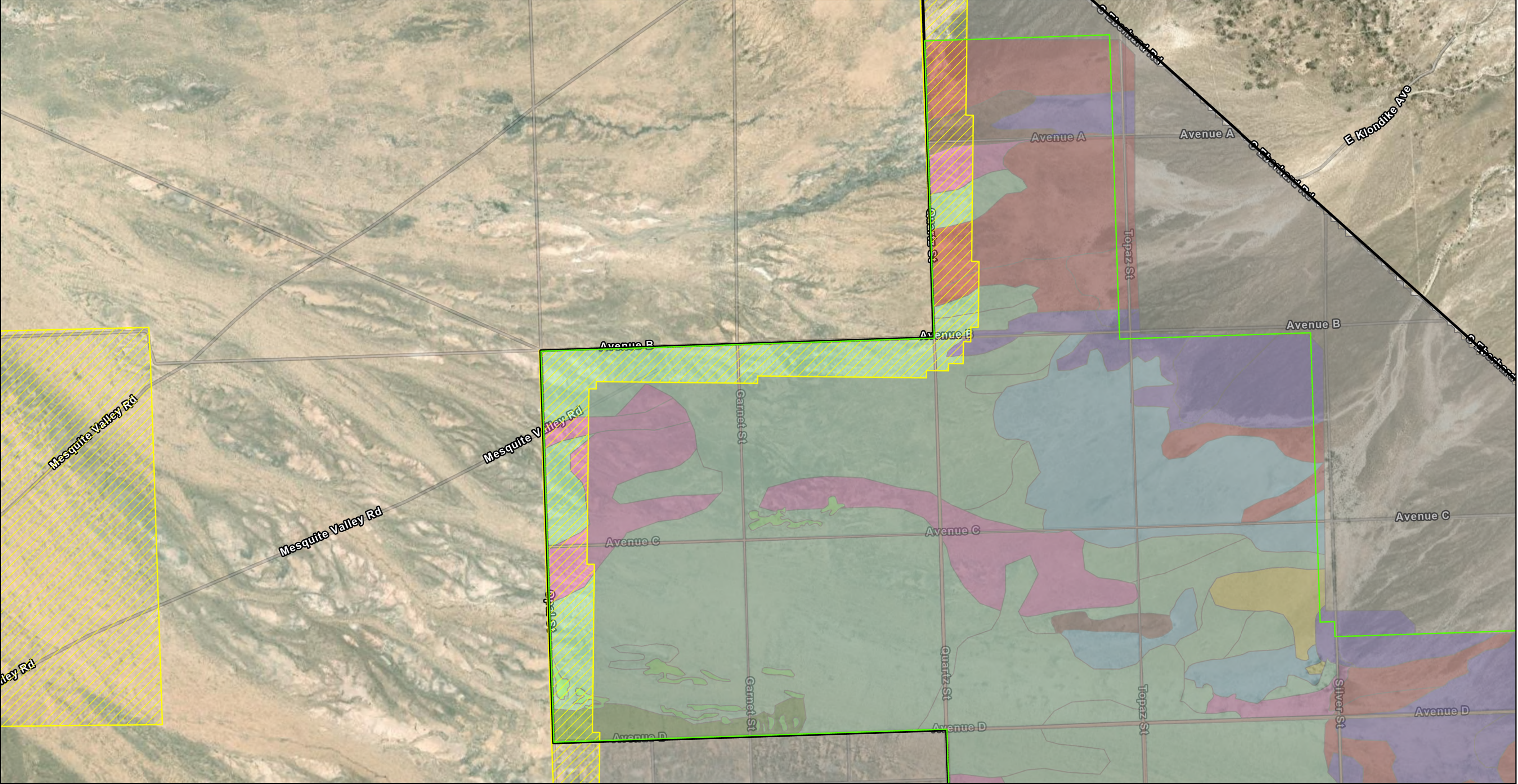


Figure 2
Wildfire Risk
Bonanza Peak Energy Project
174 Power Global
Charleston View, CA





Legend

- Project Area
- Fenceline
- Local Responsibility Area
- Moderate
- Non Wildland

Vegetation Type

- Cheesebush - sweetbush scrub
- Creosote bush - white bursage scrub
- Creosote bush scrub
- Desert globemallow herbaceous scrub
- Developed
- Fourwing saltbush scrub
- Nevada joint fir - Anderson's boxthorn - spiny hop sage scrub
- Saltlover flat
- Shadscale scrub
- White bursage scrub

Figure 3

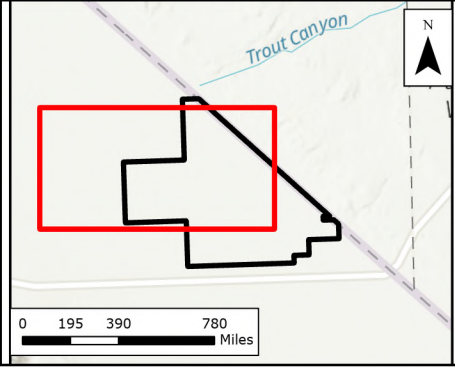
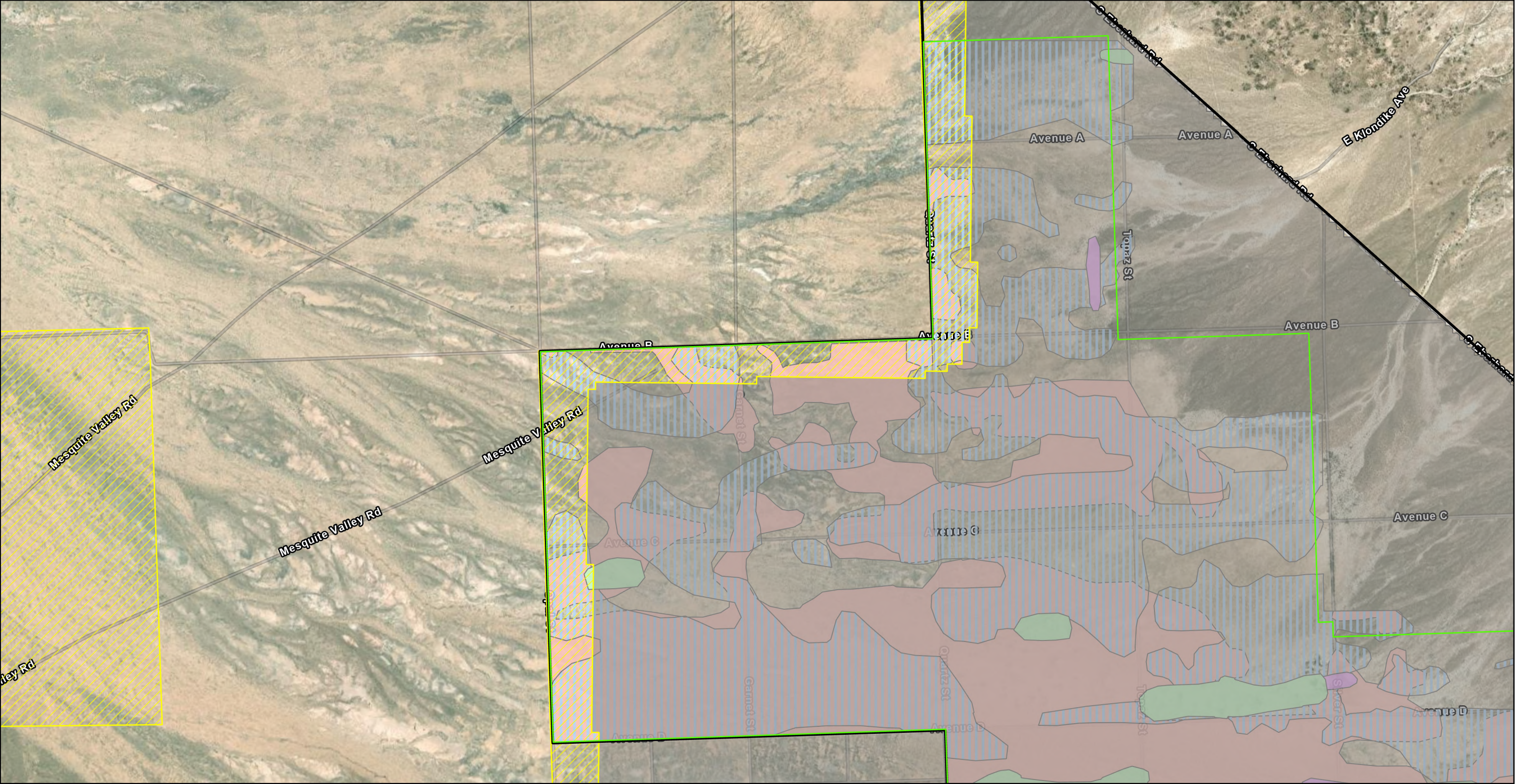
Wildfire Risk and Vegetation

Bonanza Peak Energy Project

174 Power Global

Charleston View, CA

0 0.25 0.5 Miles



- Legend**
- Project Area
 - Fenceline
 - Local Responsibility Area
 - Moderate
 - Non Wildland
- Noxious Weeds**
- Bromus rubens
 - Bromus tectorum
 - Halogeton glomeratus
 - Salsola tragus

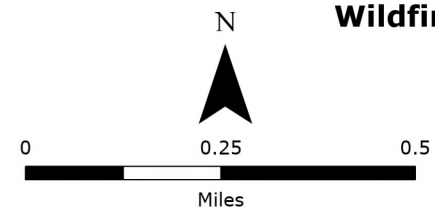


Figure 4
Wildfire Risk and Noxious Weeds
Bonanza Peak Energy Project
174 Power Global
Charleston View, CA

