Appendix G-1

Geotechnical Engineering Report

Kimley»Horn

DESKTOP GEOTECHNICAL REVIEW REPORT

Desert Breeze Solar Project

San Bernadino County, CA

August 19, 2022

PREPARED FOR:

TERRA-GEN

PREPARED BY:

Westwood

Westwood

Desktop Geotechnical Review Report

Desert Breeze Solar Project

San Bernadino, CA

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Project Number: R0037422.00
Date: August 19, 2022

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Executive Summary

Westwood Professional Services (Westwood) is pleased to present this Desktop Geotechnical Review Report (Report) to Desert Breeze, LLC for the proposed Desert Breeze Solar Project (Project) located in San Bernadino County, California. This Report has revealed no subsurface conditions that would preclude the development of the Project, although consideration should be given to the Alquist-Priolo Fault Zone and its associated project risks. The following tables (Tables 1 and 2) summarize the geologic hazards that were evaluated, the associated risk level, and a recommendation for additional evaluation, if applicable. These executive summary tables should be viewed in the context of the entire Report for a full understanding of the geohazard risk potential and anticipated subsurface conditions.

Table 1: Executive Summary of Geohazard Review Findings

Geohazard	Project Risk Level	Additional Evaluation Recommendations
Earthquakes - Seismic Shaking	High	Design for seismic loads in accordance with the San Bernardino Building Code. Shear wave velocity testing may be performed to determine seismic site class.
Earthquakes – Surface Fault Rupture	Additional Investigation Required	Site-specific fault hazard study required to determine location of fault trace if critical structures are proposed within the mapped Alquist-Priolo fault zone.
Liquefaction	Low	Evaluate soil density and grain size distribution, and depth to groundwater during geotechnical investigation.
Subsidence	Moderate	Look for signs of subsidence during the geotechnical investigation. Consider differential settlement in racking system design.
Collapsible soil	Low to Moderate	Classify soils and test collapse potential if loose sand or silt is encountered during geotechnical investigation.
Expansive soil	Low	Classify soils and test volume change of shallow soil during geotechnical investigation.
Corrosive soil	Low to High	Perform corrosivity lab tests during geotechnical investigation and corrosion evaluation.
Karst features	Low	Rock core if bedrock is encountered during geotechnical investigation.
Mining	Low	None
Landslides and rock falls	Low	None
Flash flooding and debris flow	Low	Perform detailed hydrologic study as part of advance design phase.

Table 2: Summary of Project Elements and Select Geotechnical Risks

Project Element	Project Risk Level	Geotechnical Consideration
Deep Foundations	Low to Moderate	Shallow pile refusals due to restrictive layer (cobbles, boulders, bedrock) necessitating the need for pre-drilling pile locations.
	Low	Deep pile embedment depth due to weak soil capacity.
Shallow Foundations	Low to Moderate	Weak or problematic subgrade soil requiring ground improvement or alternative foundation design.
Foundation Corrosion	Moderate to High	Sacrificial steel and/or galvanization of steel piles and/or sulfate-resistant cement for slab-on-grade foundations.
Access Roads	Low	Weak or problematic subgrade soil requiring thicker aggregate section, chemical stabilization (e.g., cement), or geosynthetic reinforcement.
Underground Cable	Moderate	High thermal resistivity causing the need for increased cable sizing.
Grading/Trenching	Low	Shallow rock, if present, may require ripping/blasting and rock trenching.
Fill Placement	Low	Native soil may require moisture conditioning for adequate compaction and to minimize collapse potential.
Groundwater	Low	Shallow groundwater in excavations requiring dewatering.
Erodibility	Low to Moderate	Erosion potential, including wind scour, of shallow soils requiring minimal ground disturbance and/or potential for additional ground stabilization and erosion control measures.

1.0 Introduction

This Report presents the desktop geotechnical review conducted by Westwood Professional Services (Westwood) for the Project. The Project consists of a 923-acre Project Site comprised of an 813-acre solar array development area and a 110-acre Shared Facilities Area (SFA) in unincorporated San Bernardino County near the community of Hinkley, California, approximately 7 miles northwest of the intersection of Harper Lake Road and Mojave-Barstow Highway 58. This report is intended for the exclusive use of Desert Breeze, LLC to support the development of the proposed Desert Breeze Solar Project.

The Project Area, as shown on Exhibit 1, was considered independently in this desktop review and excludes the 110-acre “Shared Facilities Area”. In 1987, Applied Geotechnical Engineering, Inc. prepared a Geotechnical Engineering Study for the proposed Solar Energy Generating System (SEGS) facilities under California Energy Commission (CEC) jurisdiction (Applied Geotechnical Engineering, Inc. 1987). The SEGS facilities were approved by the CEC, and construction of the SFA occurred as part of SEGS VIII and IX facilities construction in the early 1990s. Existing SEGS facilities in the SFA include an operations and maintenance (O&M) building, warehouse, employee building, switchyard, other supporting facilities, electrical transmission infrastructure, and compacted access roads. The SFA has incurred comprehensive severe surface disturbance over the past 30 years as part of the two operational solar thermal facilities. The SFA is also part of the County-approved Lockhart Solar PV I and II solar facility sites and includes a new collector substation and permitted, but not yet constructed, battery energy storage system (BESS) for the Lockhart Solar I and II facilities, and would include the BESS for the Project. As geotechnical conditions within the SFA were previously reviewed as part of the SEGS VIII and SEGS IX CEC certifications, they were not included in this desktop review for the Project.

The primary focus of this Report is to present the findings of the desktop geotechnical review conducted by Westwood and discuss the preliminary risk level each type of hazard poses to the Project. Data was gathered from publicly available sources and nearby field investigations conducted by Westwood (Westwood, 2022). Recommendations are provided for subsequent investigations and investigations that are beyond the scope of this review but may be performed, as needed, to more accurately characterize the subsurface conditions and geologic hazards across the Project site and to further evaluate risk.

1.1 Regional Climate and Geology

The Project Site falls within a desert (or arid) climate zone (bordering between hot desert climate and cold desert climate), as defined by the Köppen climate classification (Geiger, 1954). This climate is characterized by hot temperatures (mean annual temperature around 18 °C), excess evaporation over precipitation, and ground surfaces being mostly bald, rocky, or sandy and holding little moisture (Arnfield, 2020).

The Project is located in the Sonoran Desert section of the Basin and Range Province within the Intermontane Plateaus Physiographic Region (USGS, 2013). The Basin and Range province extends hundreds of miles in the western U.S., spanning from central Utah to eastern California, and covering most of the state of Nevada. The province is generally considered arid and characterized by evenly spaced mountain ranges and intervening desert basins (Eaton, 1982). Gravel aprons and alluvial fans at the drainage canyon outlets comprise the sediment found in the intermittent basins. The region was formed approximately 17 million years ago, during the extension of the North America tectonic plate. The Basin and Range geology is dominated by normal faults, many of which are still active (Price, 2013). The series of alternating basin and ranges are sometimes referred to as horst and graben features (Demets, 2018). During the last glaciation period, about 10,000 years ago, many parts of the Great Basin were covered by water which deposited the lacustrine sediment that can be found there today.

According to the Geologic Map of California (Jennings, 1977), the major geologic unit at the Project Site is Quaternary alluvium and lacustrine deposits consisting of unconsolidated and semi-consolidated sediment. The minor unit that intersects the western border of the Project Site is mapped as undivided Precambrian rocks and consists of various metamorphic and igneous rocks including granitic rocks. This unit forms a hill with approximately 200-250 feet of relief located on the western border of the Project Site, as seen on Exhibit 2. The geologic units are shown on Exhibit 4.

Publicly available water well logs from the California Department of Water Resources (DWR) indicate that the depth to competent bedrock is typically between 450 and 500 feet below ground surface (bgs), though some logs noted shale as shallow as 50 feet bgs (CDWR, 2022). In addition, many logs recorded coarse gravel and sand as shallow as 10 to 50 feet bgs. The Web Soil Survey shows bedrock at the ground surface on the hill on the western border of the Project Site, as shown on Exhibit 3 (USDA, 2022).

1.2 Surficial Soils and Groundwater

Based on Web Soil Survey data available through the United States Department of Agriculture (USDA, 2022), there are two primary soil units mapped within the Project Site, and a number of additional minor units. The primary soil units are:

- Cajon Sand (approximately 46% of Project Site): Described as alluvium derived from granite sources and are classified as poorly graded sand with silt (SP-SM) near the ground surface.
- Norob-Halloran Complex (approximately 38% of Project Site): Described as alluvium derived from granite sources and are classified as clayey sand (SC) near the ground surface.

The minor units are generally identified as alluvium derived from granite and are classified as silty sand (SM) near the ground surface, with the exception of playas mapped in the northeastern portion of the Project Site that are described as mixed lacustrine deposits and classified as poorly graded sand with silt (SP-SM). The soil units on site are mapped with low to moderate erodibility factors (k), with the upper 12 inches of soil across the majority of the site having k factors between 0.10 and 0.37 (out of 0.70 maximum). Surficial soils are shown in Exhibit 3.

Publicly available water well logs near the Project Site were reviewed for estimations of water table depth. According to well logs that are near the Project Site, the static water level ranges from between 100 and 184 feet bgs (CDWR, 2022).

2.0 Geologic Hazards

2.1 Earthquakes and Surface Fault Ruptures

San Bernardino County is historically a seismically active region and at high risk for continued seismic activity. In the past 50 years, 20 earthquake events greater than 4.0 magnitude on the Richter scale and more than 700 events greater than 2.5 magnitude have been mapped within 25 miles of the Project Site (see Exhibit 5) (USGS, 2021a). The largest of these events was a 4.8 magnitude earthquake located approximately 23 miles east of the Project Site recorded in 1992. The nearest of these events was a 4.1 magnitude earthquake located approximately 8 miles southeast of the Project Site. The most recent of the events greater than a 4.0 magnitude earthquake was located approximately 21 miles east of the Project Site, recorded in 2000.

The Project Site is located near a number of mapped faults, including the Lockhart Section of the Lenwood-Lockhart Lockhart fault zone which, based on United States Geologic Survey (USGS) mapping, appears to intersect the northeast portion of the Project Site (USGS, 2021b). Several other faults are mapped within 10 miles of the Project Site. The Lenwood-Lockhart fault complex is contained within a mapped Alquist-Priolo Fault Zone, as shown on Exhibit 6. This fault is Holocene-aged (last 11,650 years) and runs northwest to southeast with a vertical dip direction and a right-lateral slip at a rate between approximately 0.2 and 1.0 millimeters per year (mm/yr) (USGS, 2021b; CGS, 2020; ICC, 2019). The Alquist-Priolo Fault Zoning Act by the State of California was enacted with the purpose to "…assist cities, counties, and state agencies in the exercise of their responsibility to prohibit the location of developments of structures for human occupancy across the trace of active faults". The San Bernardino County Building Code requires critical facilities be located at least 150 feet from any active earthquake fault trace. It is unknown to Westwood if the Project qualifies as a critical facility under County Building Code. Additional studies, such as fault trenching or quantitative age-dating of alluvial soils, may be required for certain infrastructure proposed to be installed within this Alquist Priolo Fault Zone. County officials should be contacted to determine any additional studies required for facilities construction near the fault.

Per USGS mapping, several other quaternary faults are mapped near the Project Site, which include:

- **Harper fault zone.** Latest to undifferentiated Quaternary (last 15,000 or 1.6 million years), unspecified dip direction and slip rate. Mapped location of the fault zone is approximately 6 miles northeast of the Project Site.
- **Blackwater fault zone.** Latest to undifferentiated Quaternary aged (last 15,000 or 1.6 million years) faults with unspecified dip direction and slip rates between 0.2 and 1.0 mm/yr. Mapped location of the fault zone is approximately 13 miles east of the Project Site.
- **Helendale-South Lockhart fault zone.** Includes late, latest, and undifferentiated (last 15,000, 130,000, and 1.6 million years) Quaternary aged faults. This zone has a slip rate between 0.2 and 1.0 mm/yr and a vertical dip direction. Mapped location of the fault zone is approximately 7 miles southwest of the Project Site.
- **Kramer Hills fault zone.** Late to undifferentiated (last 130,000 or 1.6 million years) Quaternary faults, unspecified dip direction and slip rate. Mapped location of the fault zone is approximately 13 miles southwest of the site.
- **Mt. General fault.** Latest to unspecified (last 15,000 or 1.6 million years) Quaternary fault that runs through the town of Barstow, CA. This fault has unspecified dip direction and slip rate and the closest mapped location is approximately 9 miles southeast of the Project Site.

Refer to Exhibit 5 and 6 for nearby mapped earthquakes and faults. Based on USGS mapping of local fault zones in the vicinity of the Project Site, the potential for regional seismicity to affect Project design is considered high. Shear wave velocity studies may be performed to classify the seismic site class according to the ASCE standard. Structures built within active fault zones, as determined by the Alquist-Priolo Fault Zone Act and site-specific geologic studies, contain a risk of surface rupture. Site specific fault studies, including locating and dating the fault trace, may be performed to further delineate project setbacks and assess surface rupture risk. Structural design of Project infrastructure should account for seismic shaking, in accordance with applicable codes and standards, including the California and San Bernardino County Building Codes.

2.2 Liquefaction

Liquefaction is the loss of soil strength from a rapid change in stress condition (most commonly earthquake seismicity), causing the soil to lose shear strength and behave like a liquid. In order for liquefaction to occur, several conditions are typically present: loose to medium dense poorly-graded sands with low fines content, saturated soil conditions (typically due to a shallow groundwater table), and large seismic shaking events (generally greater than magnitude 6.5). The Project Site is mapped as primarily sandy shallow subsurface; however, nearby geotechnical investigations (Westwood, 2022) have revealed the sands in the area to typically be medium dense to dense with small pockets of loose sand and no shallow groundwater. In general, the potential for liquefaction to occur is considered low, although some differential settlement of shallow foundations may be expected due to seismically-induced settlement if a large earthquake event occurs over the lifespan of the Project.

2.3 Subsidence

The Project Site is located within the Harper Lake Basin, which lies within the larger Mojave River Groundwater Basin. According to published maps (USGS, 2017), groundwater levels have declined as much as 50 feet in the Harper Lake Basin within the last 60 years. When groundwater elevations decline within a basin, the potential for subsidence generally increases. Long term ground subsidence was measured at 0.4 inch/year during 1992-2009, resulting in more than 6 inches of subsidence over that time period (USGS, 2017). In more recent years, 1 inch of subsidence occurred between 2014-2019 at a rate of 0.25 inch/year (Brandt and Sneed, 2022).

The effects of subsidence in the Harper Lake Basin are typically regional in scale and unlikely to be isolated to the Project Site or result in significant differential movement of Project infrastructure. The overall risk of land subsidence impacting Project infrastructure is generally considered low to moderate. The geotechnical investigation should look for earth fissures or other signs of subsidence. Regional differential settlement should also be considered in racking system design.

2.4 Collapsible Soil

Soil collapse occurs when a relatively loose, dry, low-density material is inundated with water and subjected to a load. Loess and alluvially deposited silty material are often particularly prone to collapse, as their depositional environment facilitates a loose, low-density profile. The potential for hydrocollapse does exist in un-stabilized (e.g., uncompacted and potentially loose at the surface) areas when subjected to large quantities of applied surface water (e.g., significant rain events) and/or external vibrations. The shallow soil mapped on site is expected to be dry, sandy alluvium deposits, which generally have a high potential for collapse at shallow depths. Nearby geotechnical investigations (Westwood, 2022) have shown sands in the area to be typically medium dense to dense with small pockets of loose sand and no shallow groundwater. Medium dense and dense sands have reduced collapse potential; however, the loose sands may have a high collapse potential. Collapse potential tests are recommended during the geotechnical investigation to better quantify collapse and settlement potential. The risk of hydrocollapse occurring beneath shallow foundations is generally considered low due to the expected relatively dense soil conditions and limited moisture anticipated on site. However, driven pile foundations may have moderate risk of localized soil collapse during pile driving activities that subject the subsurface to large vibrations and should be monitored and remediated during construction as determined by a comprehensive geotechnical evaluation.

2.5 Expansive Soil

Expansive or swelling soils have the potential to undergo volume expansion upon wetting or drying. Swell potential depends strongly on physicochemical interactions between particles, and swelling soils predominantly occur in arid and semiarid areas where the soil contains large amounts of lightly weathered clay minerals. Volume increase may cause uplift forces that can create foundation instability and localized tension zones where cracking may occur. Soil shrinkage may also occur with drying of these clays and can cause differential settlement. According to the Web Soil Survey (USDA, 2022), the shallow sandy soil on site is expected to have low linear extensibility ratings and is expected to have low potential for expansion. Grain size distribution and Atterberg limits tests should be performed during the geotechnical investigation to confirm the expected soil classifications. Swell tests may be performed if clay is encountered.

2.6 Corrosive Soil

Corrosive soils have the potential to create electrochemical or chemical reactions that may corrode or weaken buried concrete and steel foundations over time. To assess this hazard, soil composition data was analyzed from the USDA Web Soil Survey pertaining to soils considered corrosive to concrete and corrosive to steel (USDA, 2022). The potential for concrete corrosion was characterized as low to high across the Project Site by the USDA with consideration to sulfate and sodium content, texture, moisture content, and acidity (pH) of the soil. The potential for corrosion of (uncoated) steel is considered low to high with consideration to soil moisture, particle-size distribution, acidity (pH) and electrical conductivity of the soil (USDA, 2022). Maps of where these corrosion hazard levels are expected in relation to the Project Site are provided in Exhibits 7 and 8.

Corrosivity tests, including sulfate content, chloride content, and electrical resistivity, should be performed on shallow soil samples collected within the Project Site during the geotechnical investigation to better characterize the potential for corrosion of buried steel and concrete structures. A detailed corrosion evaluation should also be performed as part of advanced design phase.

2.7 Karst Features

Karst features generally develop in areas with wet subsurface conditions and soluble bedrock including carbonate rock (limestone and dolomite) or evaporite rock (e.g., gypsum, anhydrite, and halite minerals) that may dissolve over time to form underground caves and create ground instability. Karst geology can be particularly hazardous as caves develop slowly while failures are rapid, often causing several feet of subsidence and sinkholes at the surface.

According to the USGS Karst Hazard Potential in the United States (Weary, 2014), the Project Site is not mapped within an area with karst potential, and the nearest region with mapped karst potential is approximately 8 miles southeast of the Project Site in the form of carbonate rocks at or near the surface in a dry climate. The Karst Map of the Conterminous United States (USGS, 2020) maps volcanic bedrock in the area and the nearest sinkhole hotspots as more than 50 miles to the north in Inyo County. The potential for karst-prone units at the Project Site is considered low.

2.8 Mining

Historic mining operations in San Bernadino County, California includes extraction of minerals such as copper, silver, lead, gold, zinc, and has occurred for several hundred years (NPS, 2020). There are no active underground mines mapped within the Project Site. However, there are several historic quarries, mine shafts, and prospect pits in and around the Project Site, including one on the far western edge of the Project Site within the precambrian rocks geologic unit (USGS, 2022c; Exhibits 4 and 9). Publicly available aerial imagery dating back to 1994 shows no obvious indication of ongoing mining-related disturbance within or around the Project Site. The potential for ground subsidence due to the collapse of an underground mines is considered low for this site due to the lack of mapped underground mines.

2.9 Landslides and Rock Falls

Landslides and rock falls are typically associated with steep slopes composed of loose or erodible soils, weak rock formations, unfavorable loading, and a triggering mechanism such as heavy rainfall or a seismic event. Landslides are rotational or translation slides of a land mass over a well-defined slipping plane. Debris flows are similar to landslides but are typically differentiated by viscous flow of sliding material.

The Project Site has a relatively flat topography with grades typically less than 1%, although the western edge of the site is bordered by a nearby hill. The soil units on site are mapped with low to moderate erodibility factors (k), with the upper 12 inches of soil across the majority of the site having k factors between 0.10 and 0.37 (out of 0.70 maximum). According to the California Department of Conservation (CDC, 2019), there are no mapped landslides, rock falls, or debris flows mapped within the greater Project vicinity. The nearest mapped landslides occurred approximately 40 miles south of the Project Site just outside of Victorville, CA (CDC, 2015). The overall potential for landslides and rock falls is generally considered low, although wind scour and soil erodibility should be considered, including erosion on steep slopes including the hill on the western edge of the Project.

2.10 Flash Flooding and Debris Flow

Flash flooding refers to a sudden, rapid flooding of low-lying areas, usually after a heavy rainfall. Flash floods can carry very large debris such as boulders and trees, and it can destroy buildings and other man-made structures quickly. Flash flooding can occur anywhere, and California's rainy season typically occurs between November and April (CDWR, 2019).

Alluvial fan and debris flow flooding are unpredictable flooding events which have the capability to transport large amounts of debris. Alluvial fans in particular can cause uncertainty on where water will flow when flooding occurs due to their shallow depths, high velocity, and sediment movement (CDWR, 2019). The mapped soils on site are indicative of past alluvial fan floods, and the nearby higher relief features have potential to shed large amounts of debris during flooding events.

Several small streams are mapped around the Project Site. The California DWR maps the northern portion of the Project Site in a 100-year floodplain based on an approximate assessment procedure (CDWR, 2012; CalOES, 2015). The risk of flooding on the Project Site is considered to be moderate. A detailed hydrologic study should be performed to better quantify flood depths and hydrologic scour potential.

2.11 Subsurface Obstructions

Subsurface obstructions, such as very dense/hard/cemented soil, boulders, cobbles, and bedrock, may cause challenges to the construction of excavations and driven pile foundations. As discussed in Section 1.1, the depth to bedrock is generally expected to be greater than 50 feet bgs across the majority of the Project Site. However, the hill that intersects the western border of the Project Site contains mapped shallow bedrock outcropping at the surface, according to the Web Soil Survey (USDA, 2022). In addition, cobbles and boulders may be present at higher terrain elevations near the aforementioned hill. Constructability of driven piles, while generally feasible, may require alternative foundation installation methods, such as predrilling, where such obstructions are encountered. Additional geotechnical studies, such as test pits, soil borings, or pile drivability tests, are recommended on the western border of the Project Site.

3.0 Supplemental Geotechnical Investigations

Supplemental geotechnical evaluations should be performed on site to assist with development, design, and construction of the Project. A geotechnical investigation should be performed, including soil borings with standard penetration test (SPT) sampling of overburden soil. Soil samples should be collected from soil borings for laboratory testing, including index properties, corrosivity, and thermal resistivity. Electrical resistivity tests should also be performed for grounding design and corrosion evaluation. A detailed pile load test program should be completed to assess pile constructability and capacity. Pile drivability in the far western portion of the Project Site should be investigated through a combination of pile drivability testing, soil borings, and/or test pits. Seismic shear wave velocity measurements performed to a depth of 100 feet is recommended to accurately determine the seismic site class in accordance with ASCE standards. Additional site-specific seismic and fault hazard studies may be required in accordance with state and county jurisdiction if constructing Project facilities near active fault traces.

4.0 Limitations

This Report has been prepared in accordance with generally accepted geotechnical engineering practice for the exclusive use by Desert Breeze, LLC for the Project. The desktop geohazard review in this Report was based on a review of available resources and is dependent on the accuracy of data compiled by others, as well as extrapolation of data collected from nearby sites. Careful consideration and judgment were used to choose reliable sources; however, a subsequent detailed geotechnical investigation will be necessary to validate conditions and more accurately characterize the geologic hazards and subsurface conditions across the Project Site. The primary focus of this Report was to identify the potential risk of various geohazards and to provide recommendations for additional analyses and investigations. In the event that any changes in the nature, design, or location of the Project Site are made, the conclusions and recommendations contained in this Report should not be considered valid unless the changes are reviewed, and the conclusions of this Report are modified or verified in writing by Westwood. Westwood is not responsible for any claims, damages, or liability associated with the interpretation of this data by others.

5.0 References

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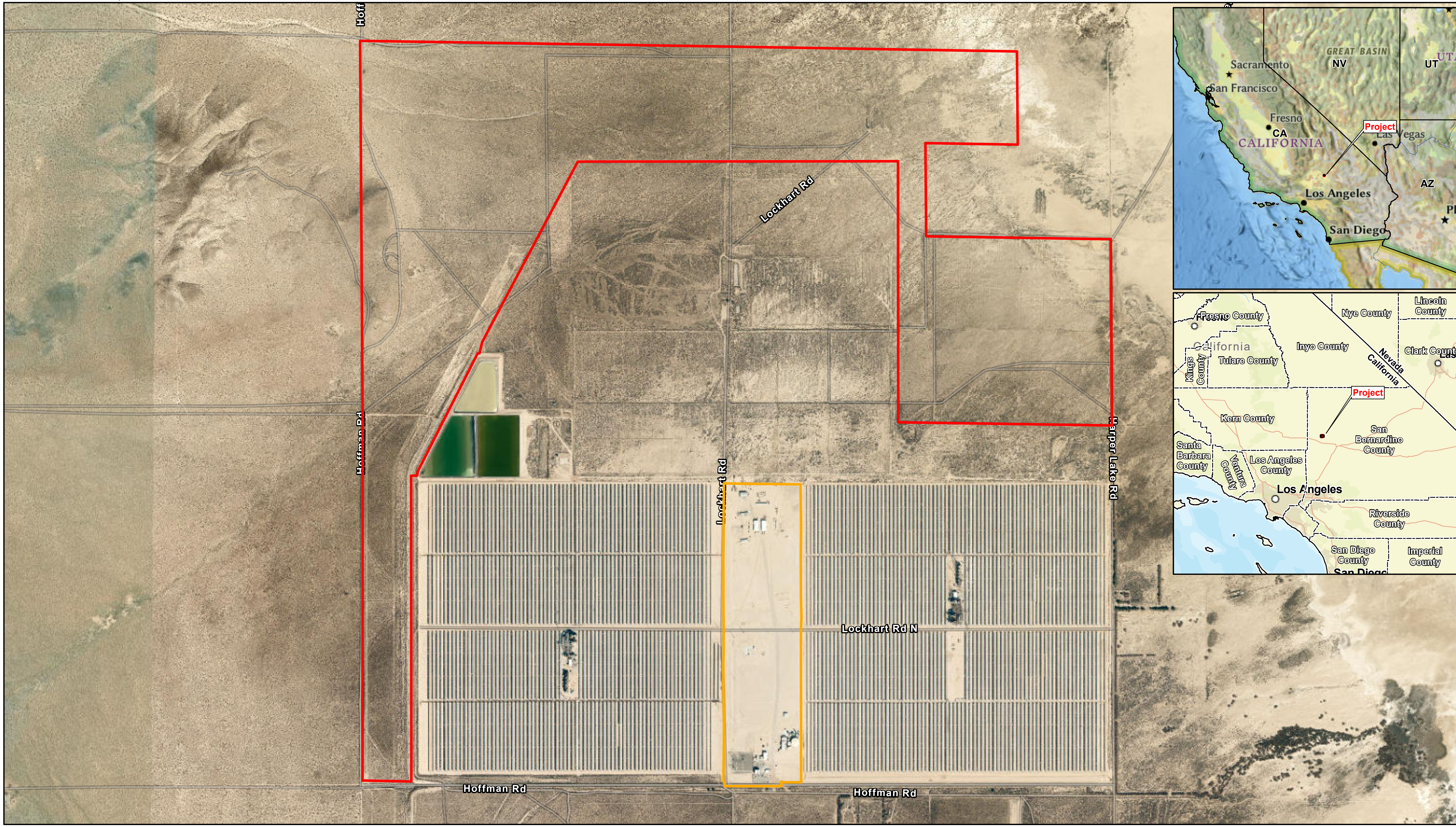
Exhibits



Data Source(s): Westwood (2022); ESRI WMS National Geographic & World Streets Basemaps (Accessed 2021); Census Bureau (2020).

Legend

- Desert Breeze Project Area
- Shared Facilities Area
- County Boundary

N

0 — 2,500 Feet

Desert Breeze Solar Project

San Bernardino County, CA

Project Area Map

EXHIBIT 1

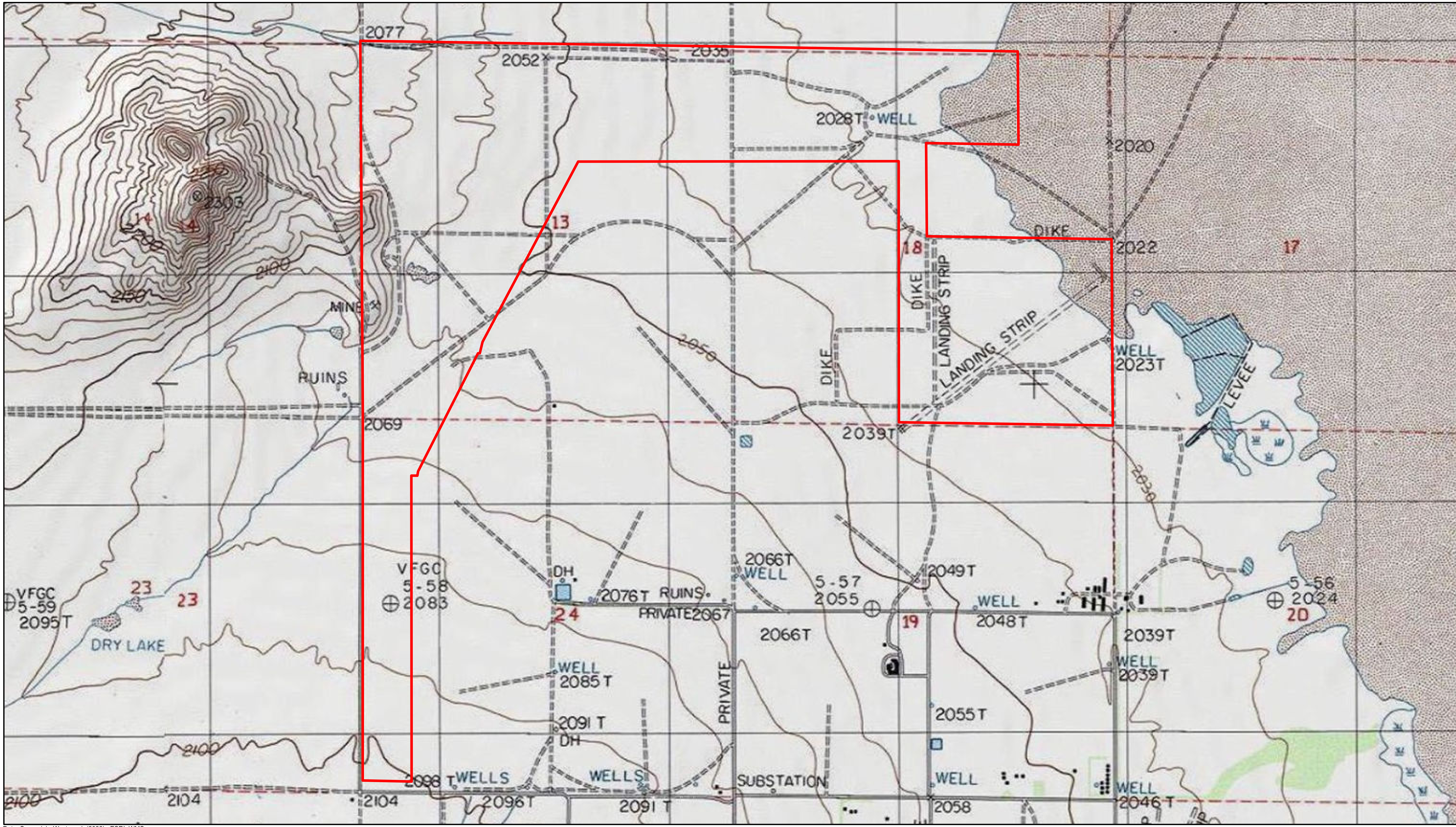
August 11, 2022

Westwood

Toll Free (888) 937-5150 westwoodps.com

Westwood Professional Services, Inc.

Map Document: N:\0037422.00_GIS\R0037422_080_DB_DesktopExhibits\R0037422_080_DB_DesktopExhibits.aprx 8/11/2022 9:41 AM NAKegel



Data Source(s): Westwood (2022); ESRI WMS USA Topo Basemap (Accessed 2021); Census Bureau (2019).

Legend

Desert Breeze Project Area

Desert Breeze Solar Project

San Bernardino County, CA

USGS Topography Map

EXHIBIT 2

N

0 2,500 Feet

August 11, 2022

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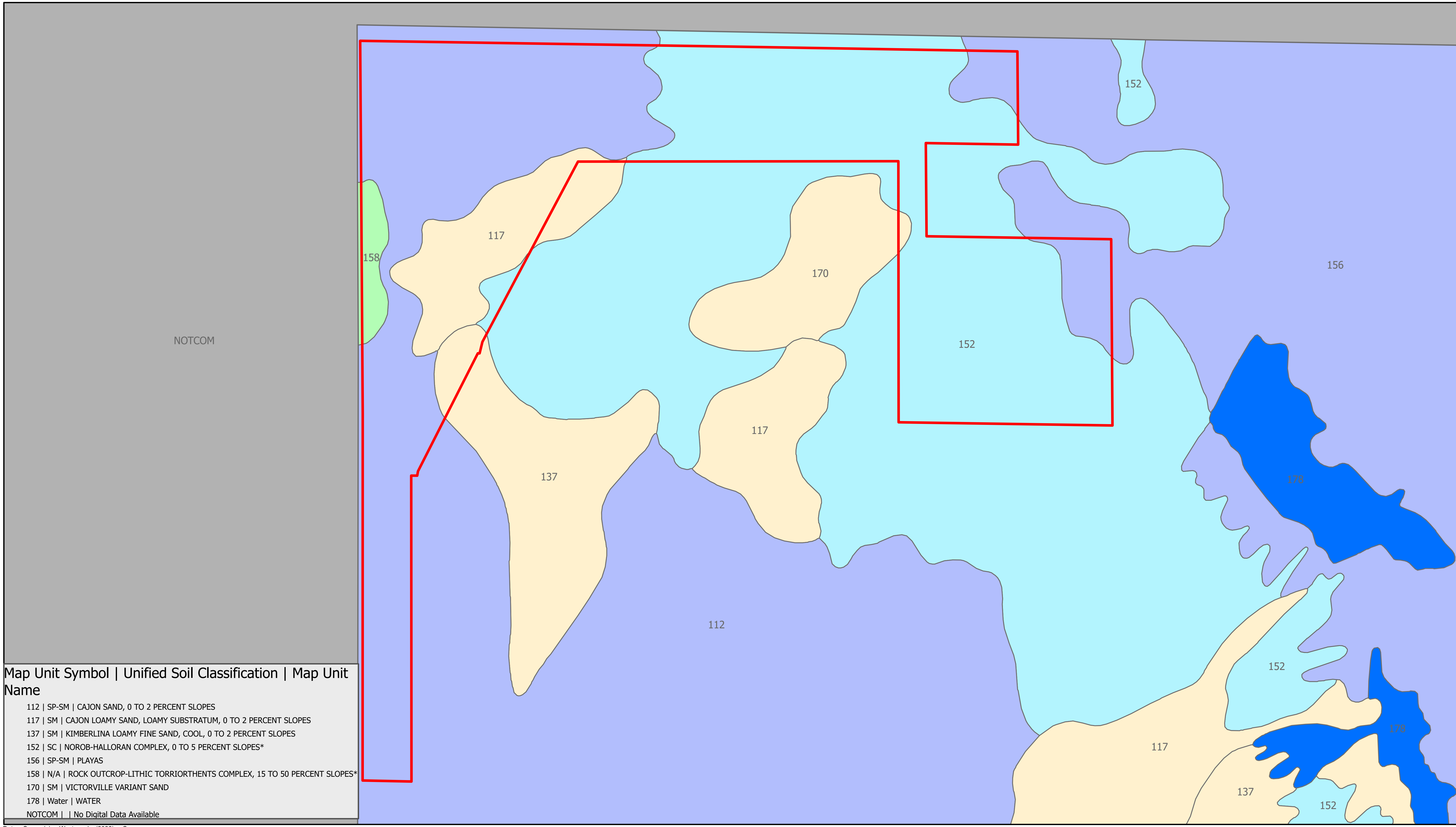
Map Document: N:\0037422.00_GIS\R0037422_080_DB_DesktopExhibits\R0037422_080_DB_DesktopExhibits.aprx 8/11/2022 9:42 AM NAKegel



Data Source(s): Westwood (2022); Census Bureau (2019); U.S. Department of Agriculture, Natural Resources Conservation Service (2021). USGS Web Soil Survey data (https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx)

Legend

Desert Breeze Project Area

USCS Rating

- Bedrock
- SC
- SM
- SP-SM
- Water
- No Classification Available

N

0 2,500 Feet

Desert Breeze Solar Project

San Bernardino County, CA

Surficial Soils Map

EXHIBIT 3

August 11, 2022

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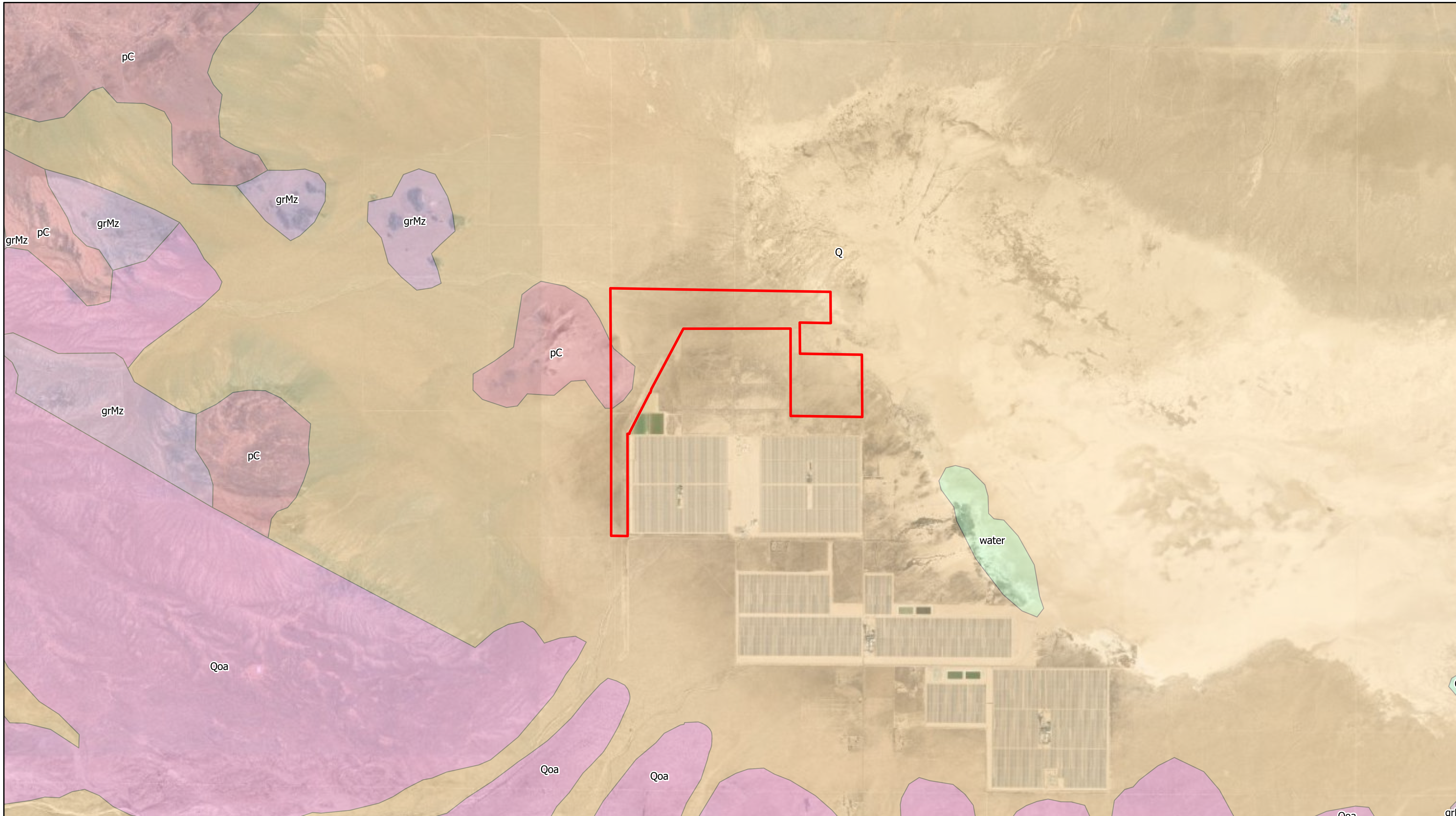

Data Source(s): Westwood (2022); Iowa NAIP Imagery (2019); Census Bureau (2020); USGS (2018).

Legend

Desert Breeze Project Area

Geologic Unit Symbol | Geologic Unit Name | Geologic Unit Age

- Q | Quaternary alluvium and marine deposits | Phanerozoic - Cenozoic - Quaternary - Holocene
- Qoa | Older Quaternary alluvium and marine deposits | Phanerozoic - Cenozoic - Quaternary - Pleistocene
- Qs | Quaternary sand deposits, unit 2 (inland) | Phanerozoic - Cenozoic - Quaternary
- grMz | Mesozoic granitic rocks, unit 3 (Sierra Nevada, Death Valley area, Northern Mojave Desert and Transverse Ranges) | Phanerozoic - Cenozoic - Tertiary
- pC | Precambrian rocks, undivided, unit 2 (Mojave Desert and Transverse Ranges) | Phanerozoic - Cenozoic - Tertiary-Neogene - Miocene
- water | water |

N

Feet
0 2,500

Desert Breeze Solar Project

San Bernardino County, CA

Local Geology Map

EXHIBIT 4

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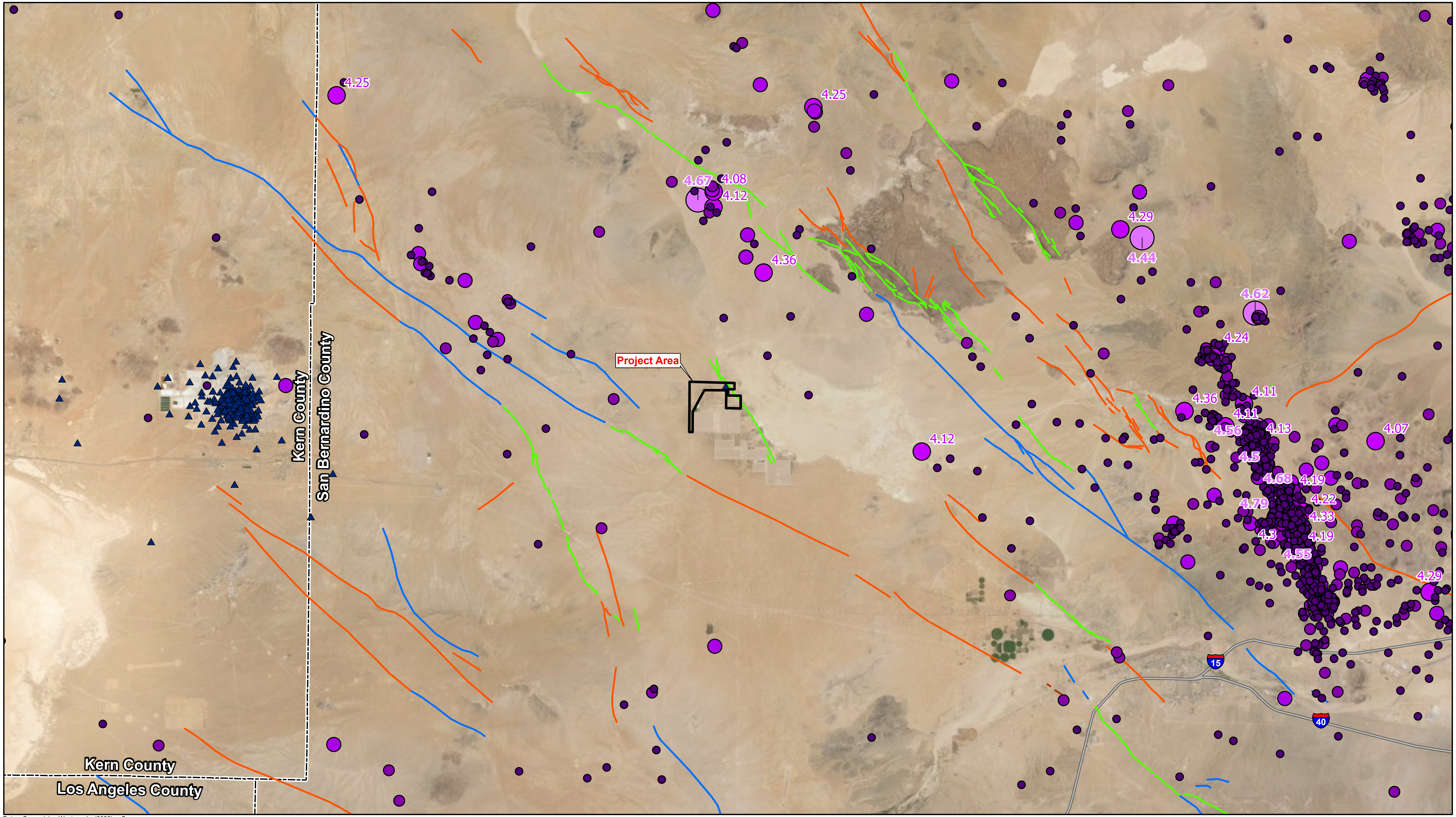

Data Source(s): Westwood (2022); Census Bureau (2019); ESRI Aerial Imagery Basemap (Accessed 2020); USGS (2020).

Legend

- Major Highway
- Desert Breeze Project Area
- County Boundary

Earthquake Magnitude

- < 3.0
- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.4
- > 4.4

Quarry Blast Magnitude

- < 3.0
- 3.1 - 3.5
- 3.6 - 4.0
- 4.1 - 4.4
- > 4.4

National Fault Dataset

- Historic
- Late Quaternary Fault
- Latest Quaternary Fault
- Undifferentiated Quaternary Fault

N

0 5 Miles

Desert Breeze Solar Project

San Bernardino County, CA

Seismic Hazards Map

EXHIBIT 5

August 11, 2022

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Data Source(s): Westwood (2022); Census Bureau (2019); ESRI Aerial Imagery Basemap (Accessed 2020); USGS (2020). California Geological Survey. (2022), Official Maps of Earthquake Fault Zones

Legend

- Desert Breeze Project Area
- Major Highway
- Alquist-Priolo Fault Zone

National Fault Dataset

- Late Quaternary Fault
- Latest Quaternary Fault
- Undifferentiated Quaternary Fault

N

0 5,000 Feet

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Desert Breeze Solar Project

San Bernardino County, CA

Fault Zone Map

EXHIBIT 6

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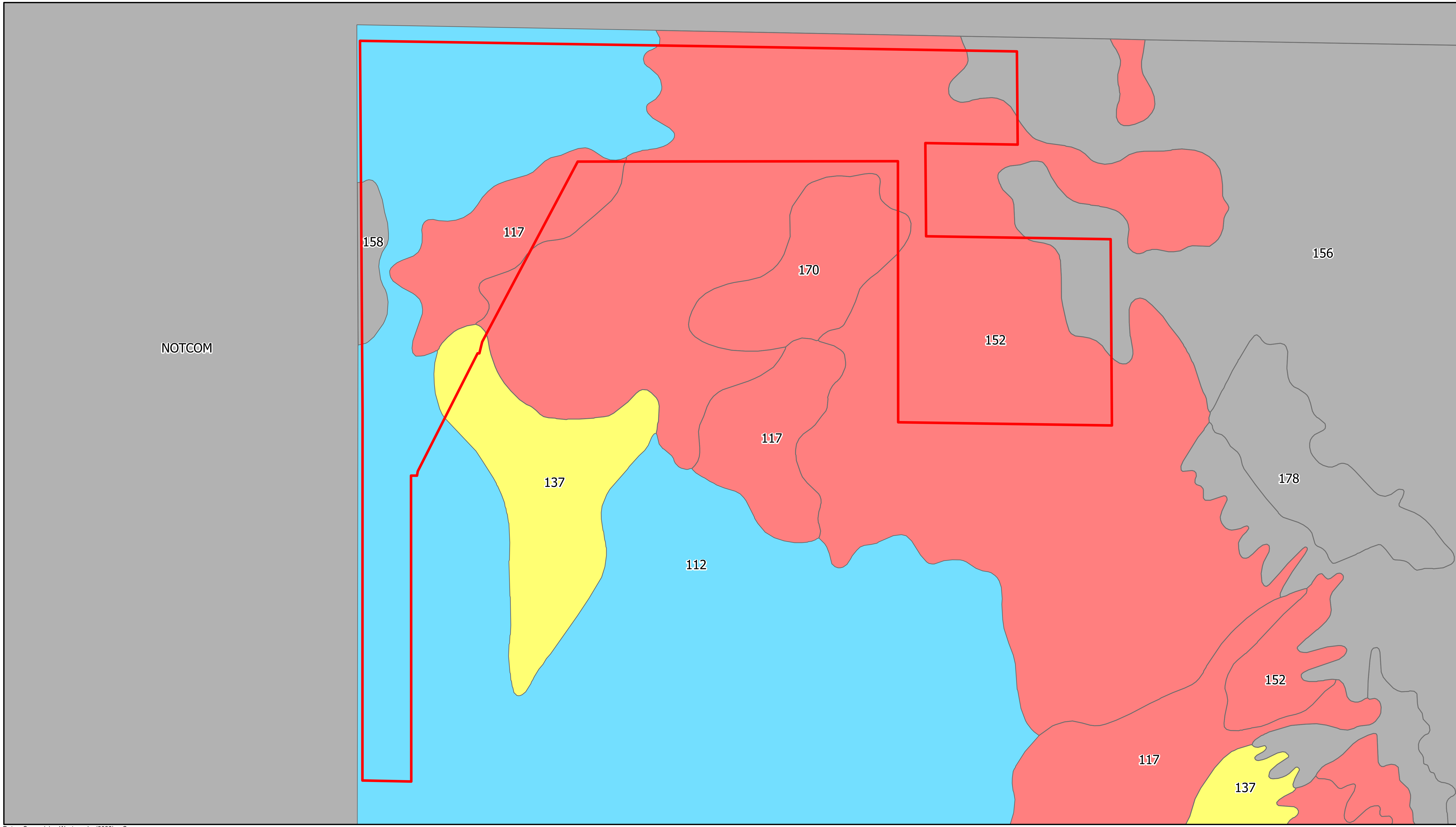

Data Source(s): Westwood (2022); Census Bureau (2020); U.S. Department of Agriculture, Natural Resources Conservation Service (2021). USGS Web Soil Survey data (https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx)

Legend

Desert Breeze Project Area

Corrosion Of Steel Classification

- No Classification Given
- High
- Moderate
- Low

N

Feet
0 2,500

Desert Breeze Solar Project

San Bernardino County, CA

Corrosion Of Steel Map

EXHIBIT 7

August 11, 2022

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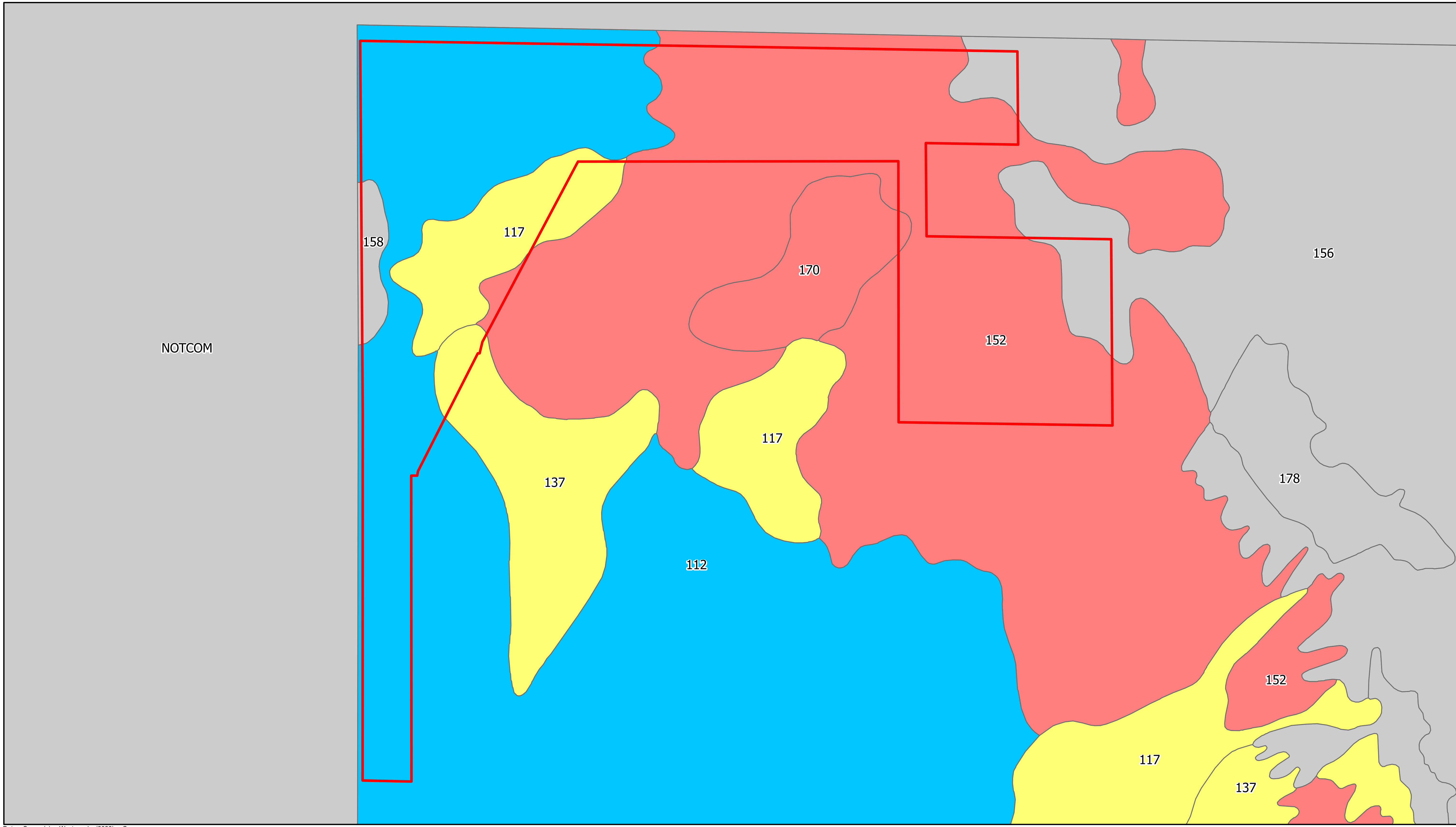

Data Source(s): Westwood (2022); Census Bureau (2020); U.S. Department of Agriculture, Natural Resources Conservation Service (2021). USGS Web Soil Survey data (https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx)

Legend

Desert Breeze Project Area

Corrosion Of Concrete Classification

- No Classification Given
- High
- Low
- Moderate

Desert Breeze Solar Project

San Bernardino County, CA

Corrosion Of Concrete Map

EXHIBIT 8

N

0 2,500 Feet

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Data Source(s): Westwood (2022); Census Bureau (2020); ESRI Aerial Imagery Basemap (Accessed 2021); Surface Mining Reclamation Program, Washington State Department of Natural Resources, Geology and Earth Resources Division (2020).

Legend

- Mine Shaft
- Pit
- Quarry
- Major Highway
- Desert Breeze Project Area

Westwood

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Westwood Professional Services, Inc.

N

0 5,000 Feet

Desert Breeze Solar Project

San Bernardino County, CA

Mining Map

EXHIBIT 9

August 11, 2022

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