

DOCKET

09-AFC-9

DATE MAY 10 2010

RECD. MAY 17 2010

May 10, 2010

Eric Solorio
Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

RE: Ridgecrest Solar Power Project (RSPP), Docket No. 09-AFC-9, CEC Staff Workshop Solar Millennium PowerPoint Presentations

Dear Mr. Solorio:

As requested, attached please find Solar Millennium's PowerPoint presentations presented during the CEC Staff Workshops on April 22-23 and May 3- 4, 2010. This has being docketed in accordance with CEC requirements.

If you have any questions, please feel free to contact me at 510-809-4662 (office) or 949-433-4049 (cell).

Sincerely,



Billy Owens
Director, Project Development

Air Quality

Ridgecrest Solar Power Project



Figure DR-AIR-6-1 Revised Area Sources Used in Annual Construction Modeling

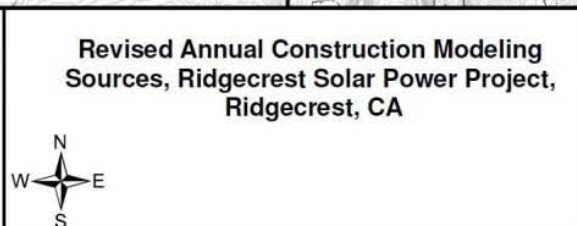
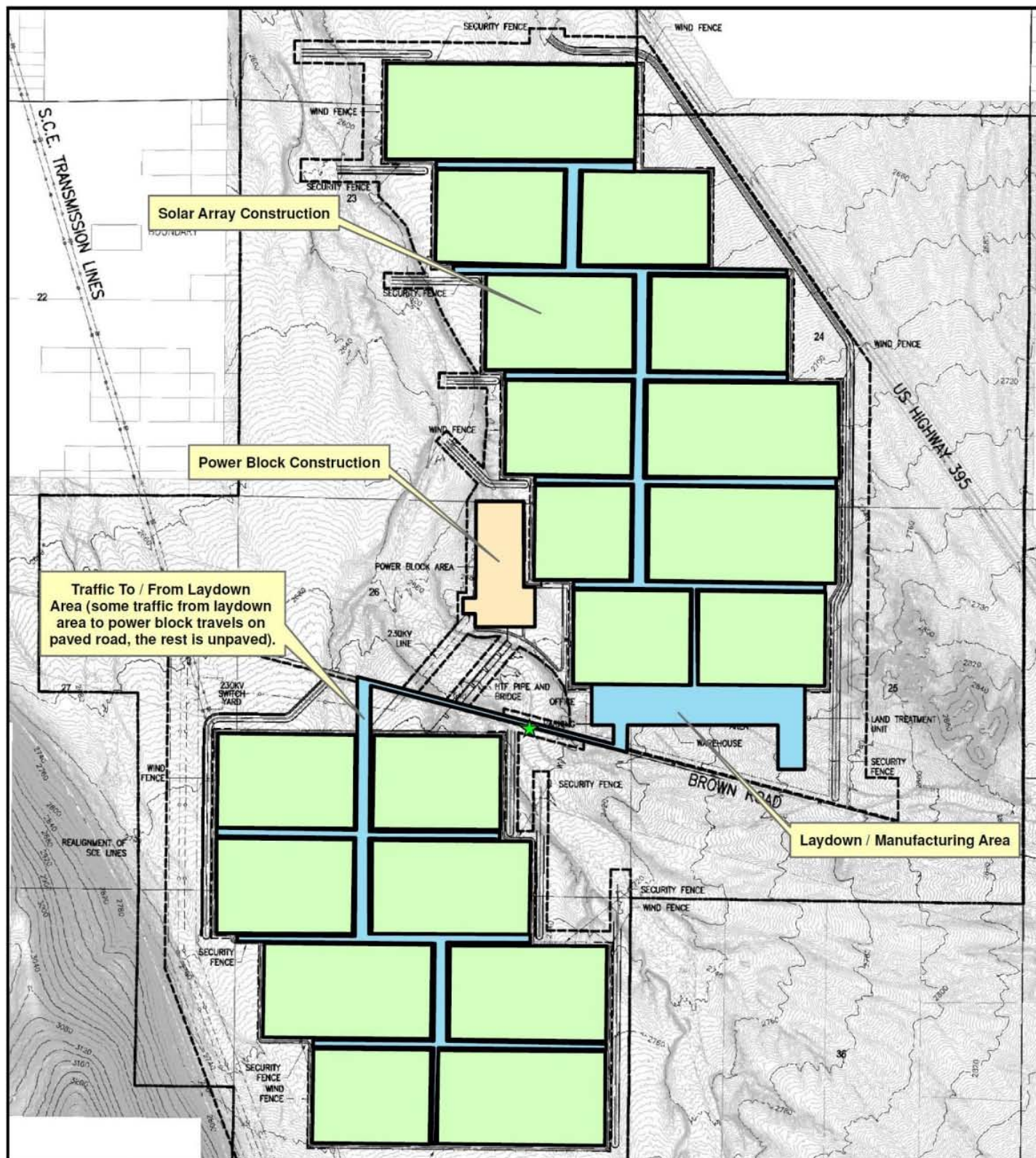


Figure DR-AIR-6-2 Revised Area Sources Used in Short Term Construction Modeling

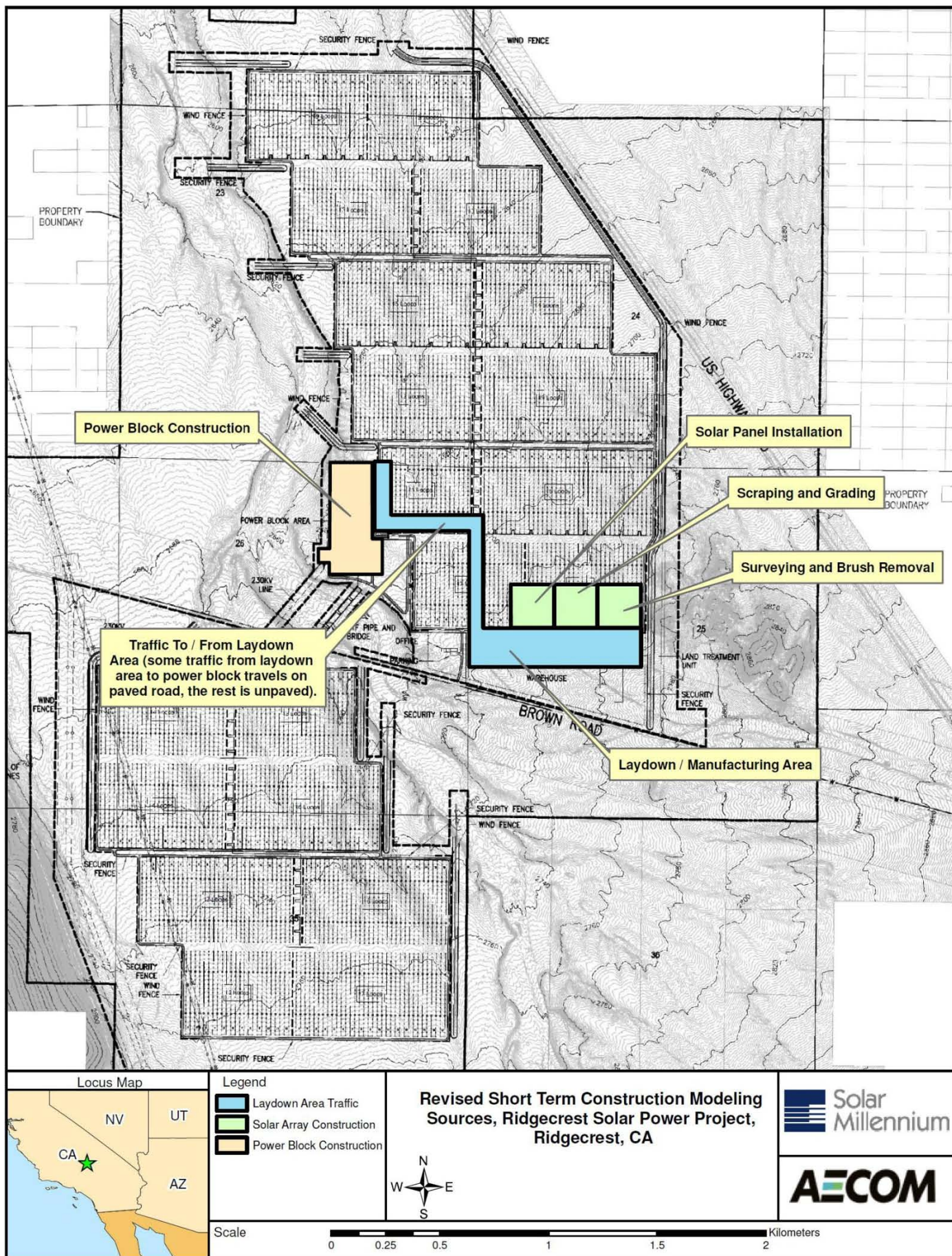
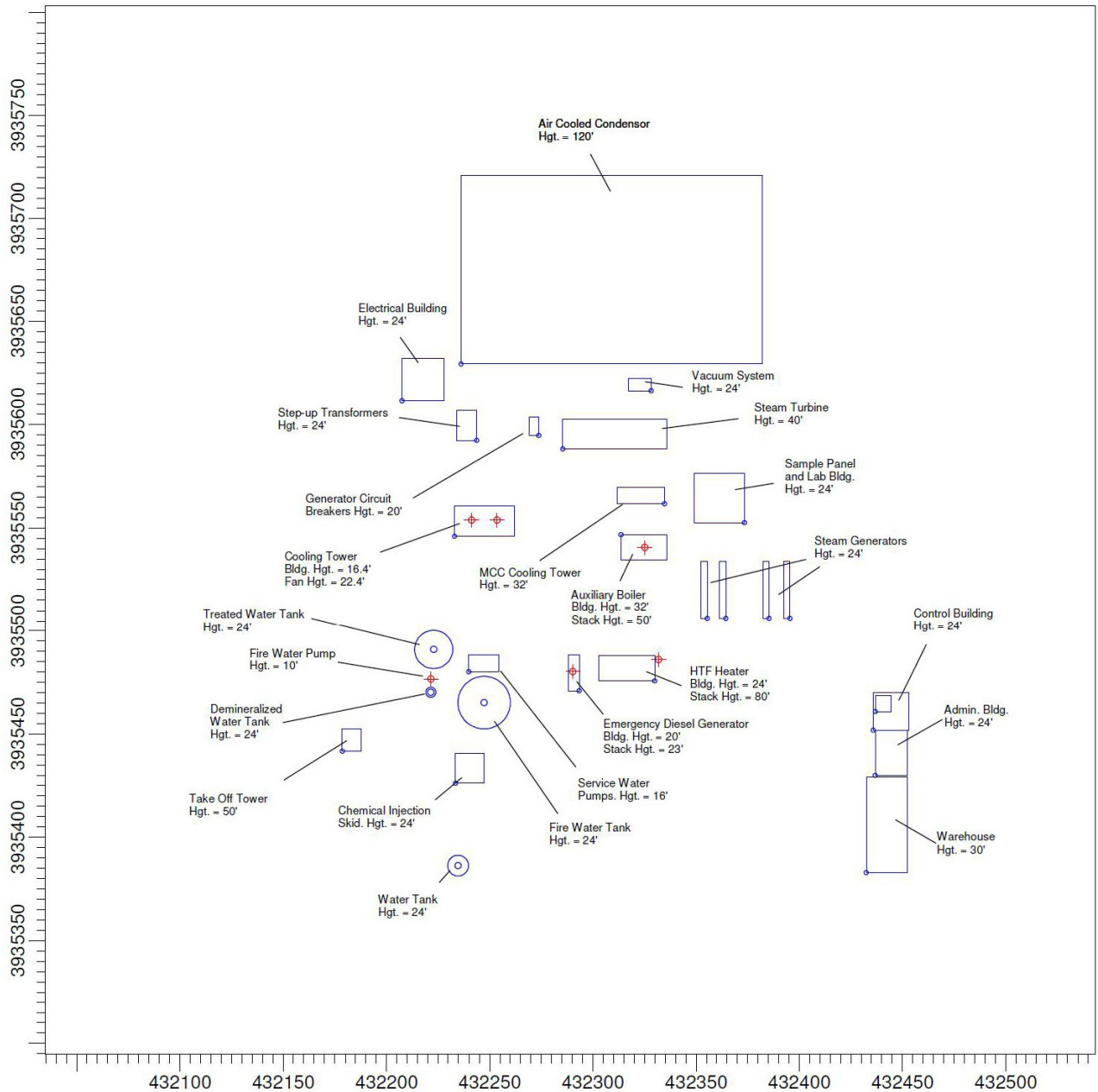


Figure DR-AIR-6-3 Revised Buildings Structures Included in GEP Analysis

PROJECT TITLE:

Structures Evaluated in GEP Analysis Ridgecrest Solar Power Project



COMMENTS:

SOURCES:

16

COMPANY NAME:

RECEPTORS:

6382

MODELER:

SCALE:

1:3,104

0



0.1 km

DATE:

1/19/2010

PROJECT NO.:

Figure DR-AIR-6-4 Revised Near Field Receptors used in RSPM Modeling Analysis

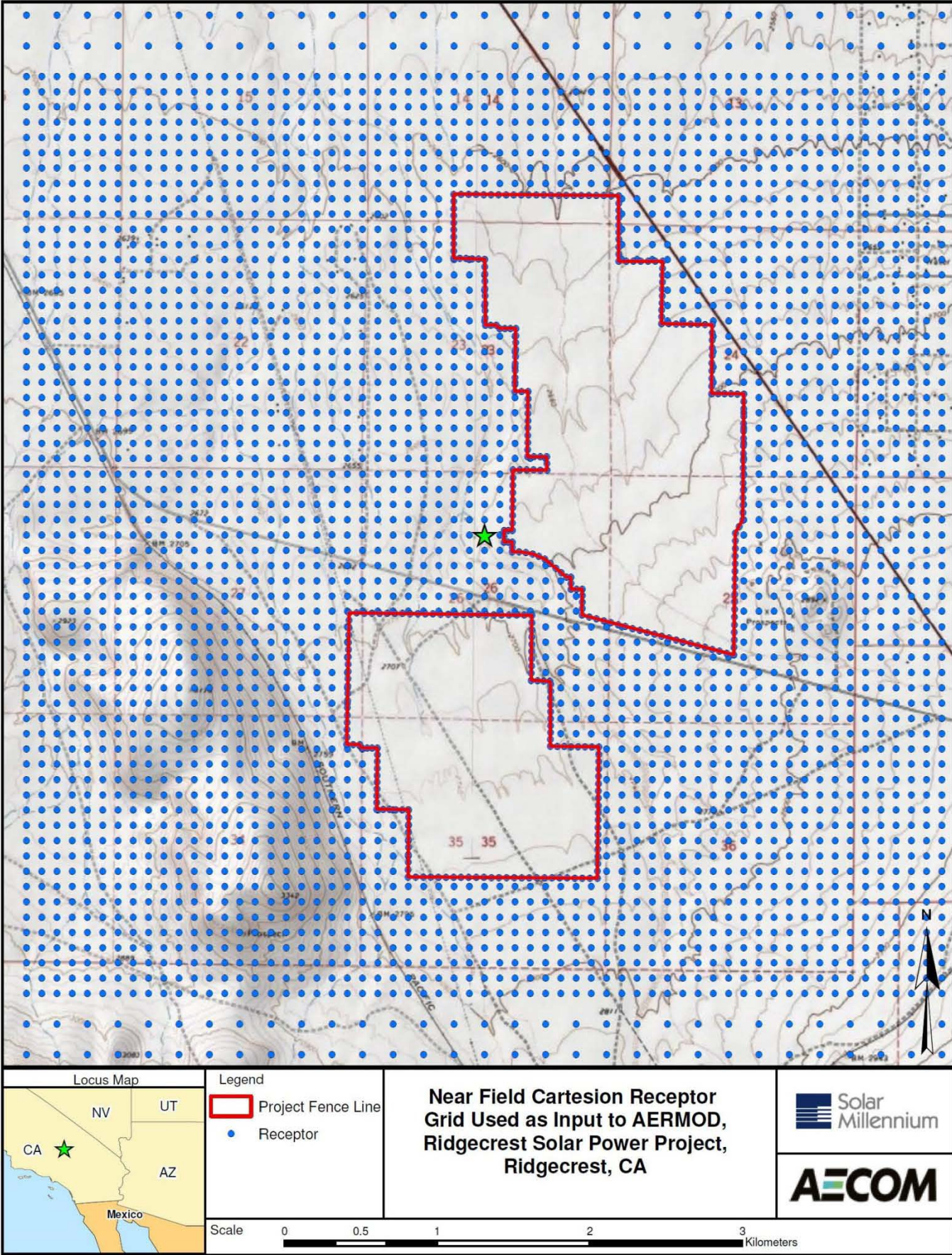


Figure DR-AIR-6-5 Revised Far Field Receptors used in RSPP Modeling Analysis

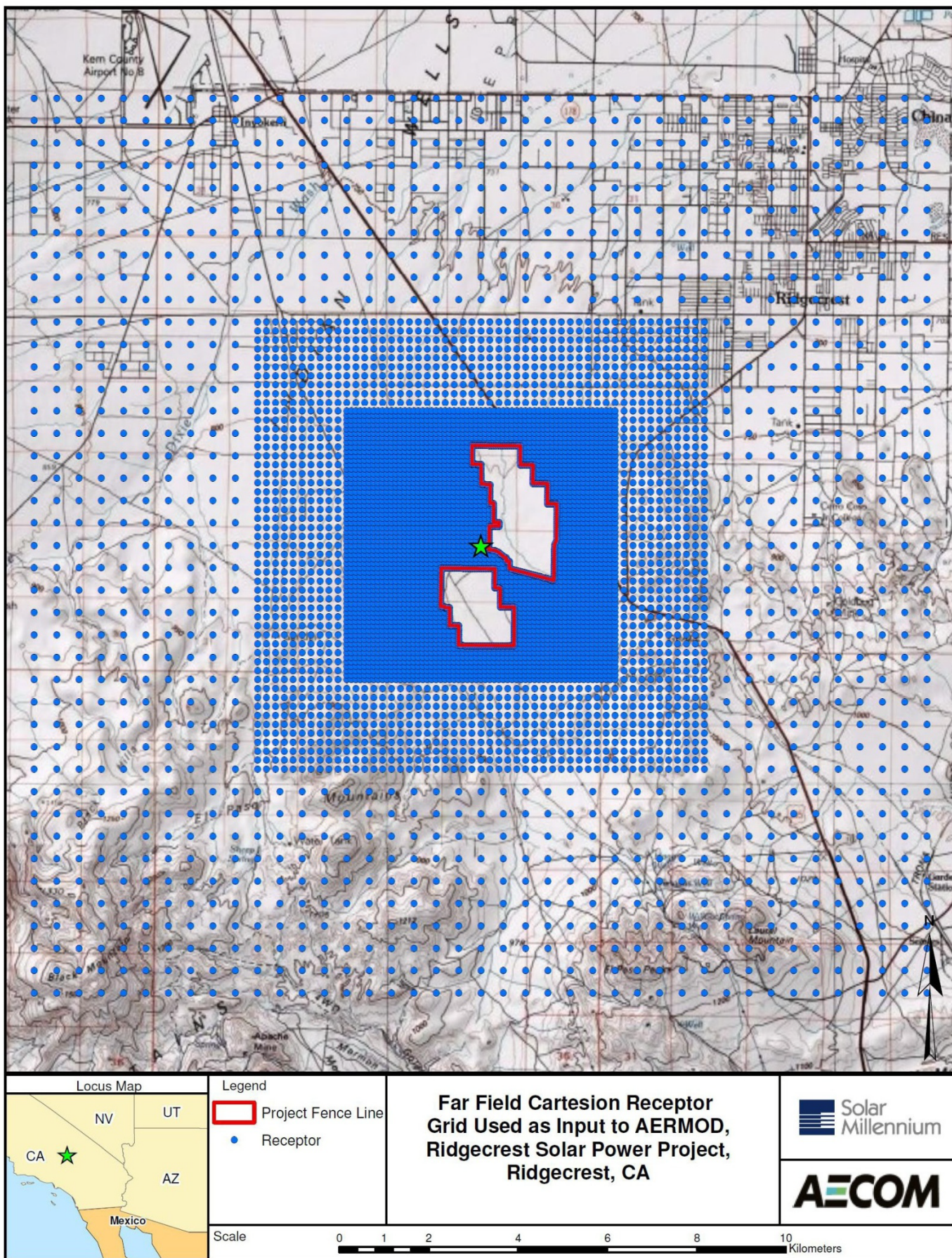
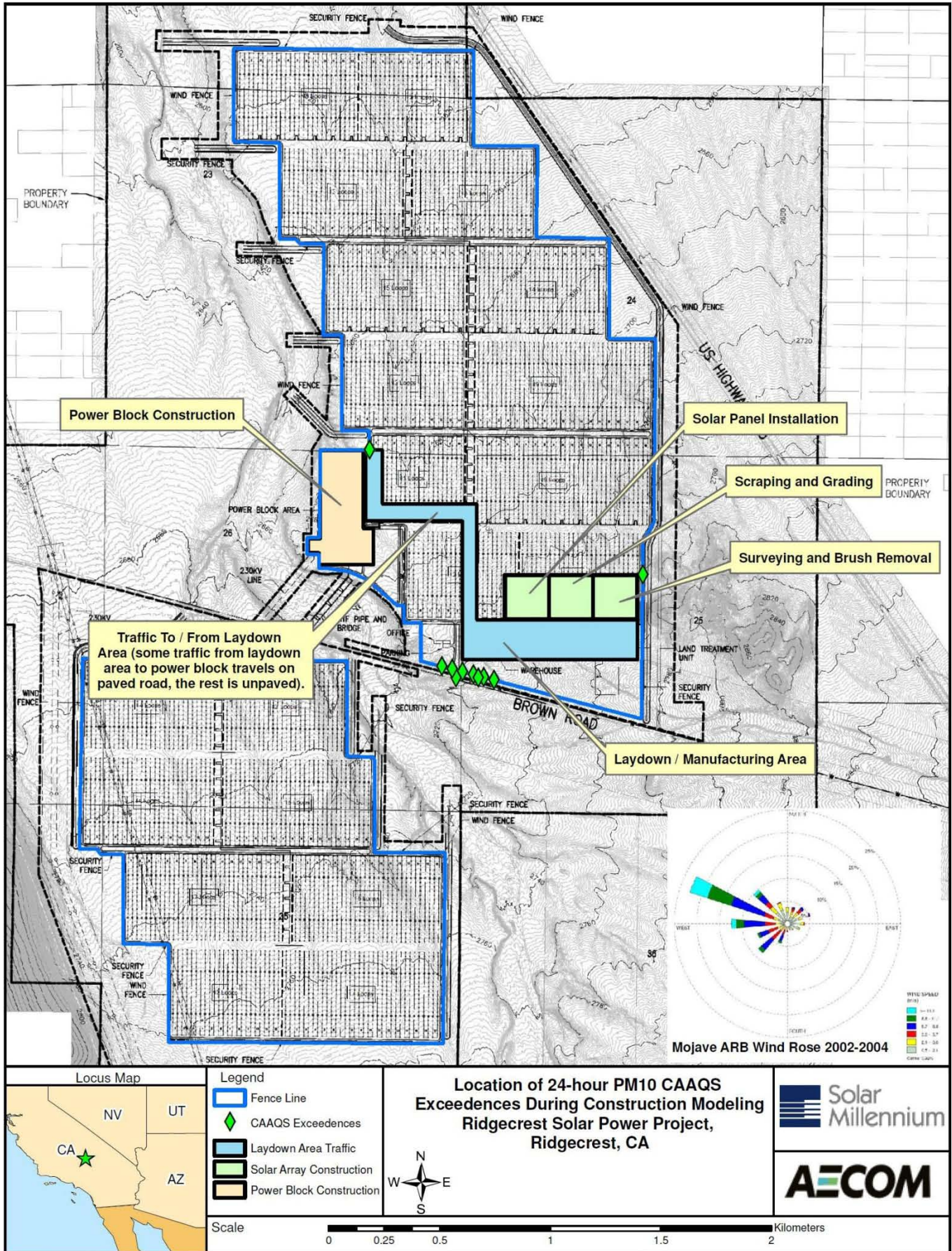


Figure DR-AIR-6-6 Location of Construction Modeling PM10 24-Hour CAAQS Exceedences

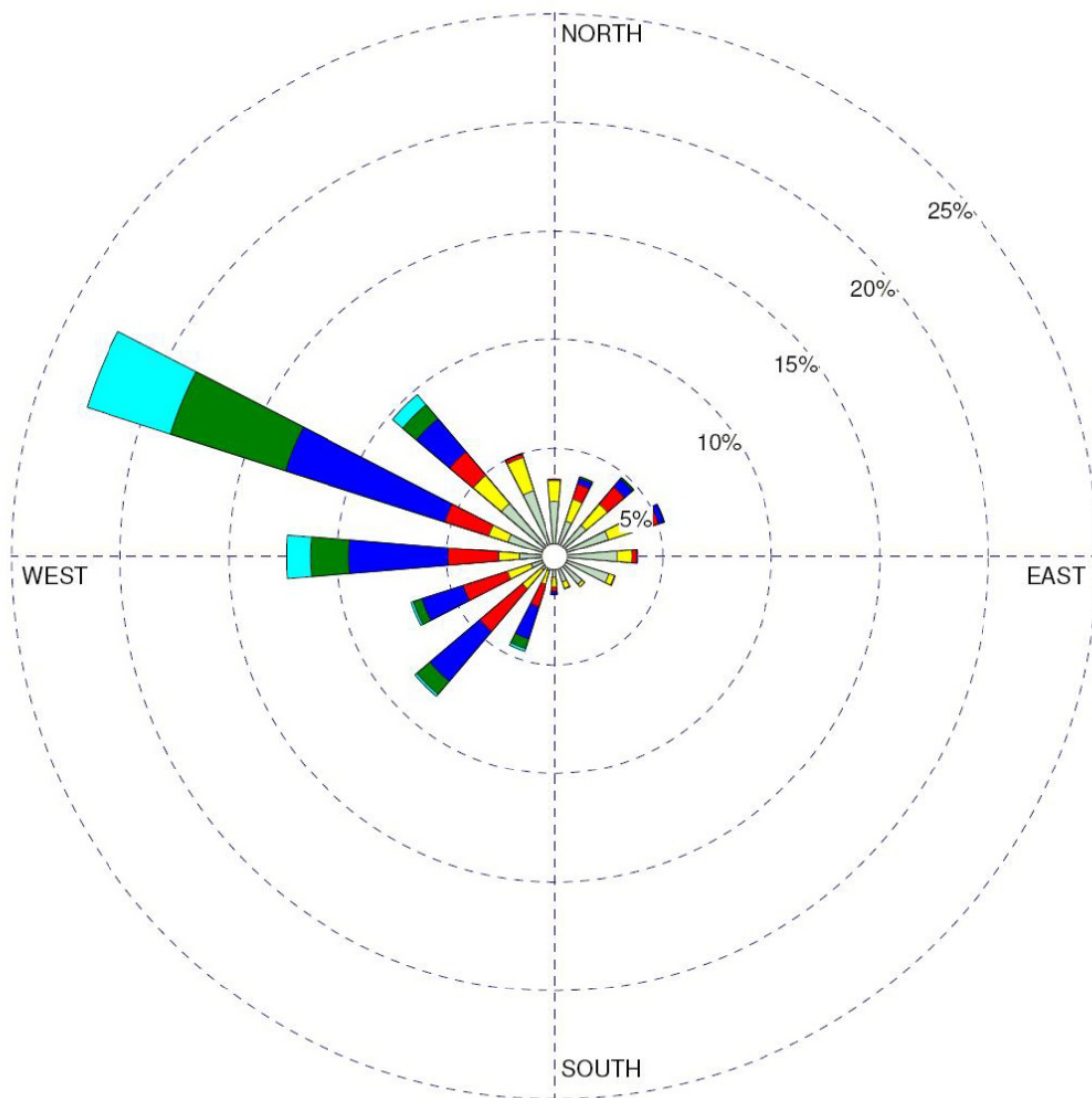


WIND ROSE PLOT:

Mojave ARB Monitoring Station, Mojave, CA
2002-2004 Wind Rose

DISPLAY:

Wind Speed
Direction (blowing from)



DATA PERIOD:

2002 2003 2004
Jan 1 - Dec 31
00:00 - 23:00

CALM WINDS:

0.92%

TOTAL COUNT:

26304 hrs.

AVG. WIND SPEED:

5.03 m/s

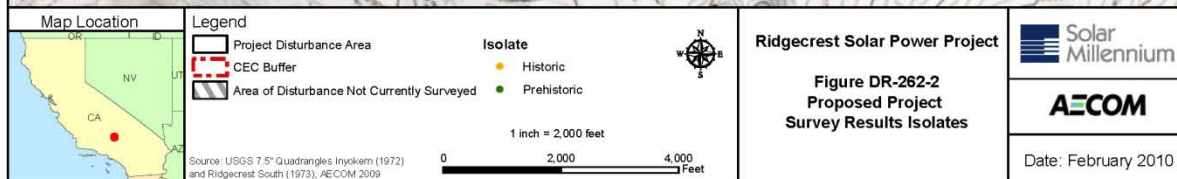
DATE:

8/24/2009

Cultural Resources

Ridgecrest Solar Power Project





Floodplain

Ridgecrest Solar Power Project



NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **floodway** data have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Floodway Data tables contained within the Flood Insurance Study (FIS) report that accompanies the FIRMs. Users should be aware that BFEs shown on the FIRMs represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIS for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only to the extent of 0.0 North American Vertical Datum of 1988 (NAVD 88). Users of the FIRMs should be aware that coastal flood elevations are also provided in the Summary of Floodway Data tables in the Flood Insurance Study report for the jurisdiction. Elevations of floodway data are provided in the Flood Insurance Study report for the jurisdiction. Floodway data are provided in the Flood Insurance Study report for the jurisdiction. Floodway data are provided in the Flood Insurance Study report for the jurisdiction.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1988 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

National Geodetic Survey
NCEA, NCEC-2
National Geodetic Survey
5500 S. 2602
1315 East-West Highway
Silver Spring, MD 20910-2602

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (202) 713-3242, or visit its website at <http://www.ngs.noaa.gov>.

Base map information shown on this FIRM was derived from USGS - Farm Service Agency - Aerial Photography Field Office dated 2000 and from US Geological Survey Digital Orthophoto Quadrangles produced at a scale of 1:12,500 from photography dated 1980 or later.

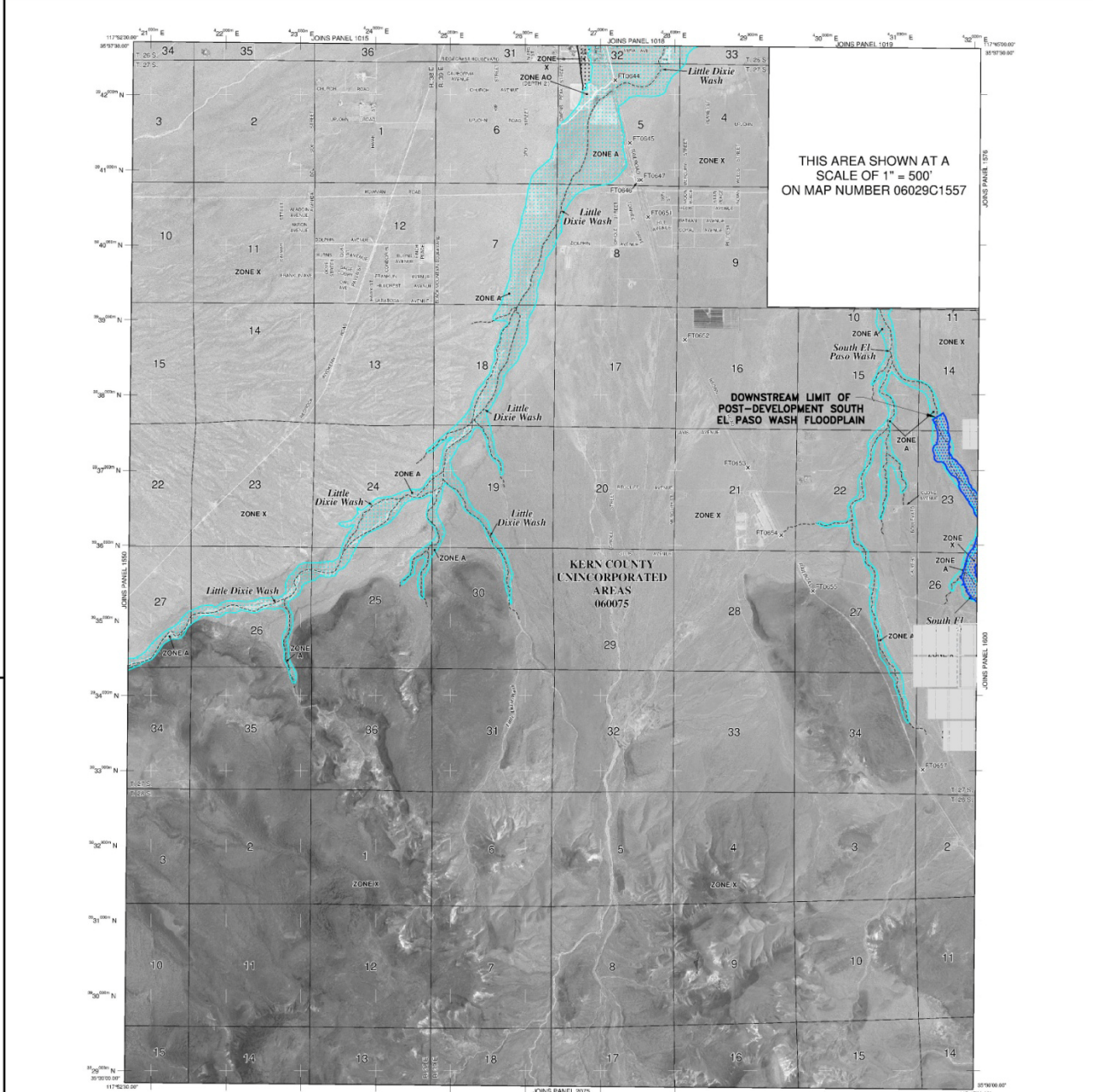
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodway and floodway data were transferred from the previous FIRM and have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contain authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify correct corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program data for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-368-5646 for information on available products associated with the FIRMs. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by fax at 1-800-368-5620 and by website at <http://www.fema.gov>.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov>.



LEGEND

- SPECIAL FLOOD HAZARD AREAS (SFHA) SUBJECT TO FLOODATION BY THE 1% ANNUAL CHANCE FLOOD**
- The 1% annual chance flood (often referred to as the **base flood**) is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, A1, A2, V, and VE. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.
- ZONE A** Area with flood elevations determined.
- ZONE AE** Area with flood elevations determined.
- ZONE AH** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently abandoned. Zone AE indicates that the former flood control system is being retained to provide protection from the 1% annual chance or greater flood.
- ZONE A1** Area protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevation determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevation determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevation determined.
- FLOODWAY AREAS IN ZONE AE**
- The floodway is the channel of a stream plus the adjacent floodplain area that must be kept free of encroachment to so that the 1% annual chance flood can be carried without excessive increases in flood heights.
- OTHER FLOOD AREAS**
- ZONE X** Areas of 1% annual chance flood; areas of 2% annual chance flood with average depths of less than 1 foot; or with average areas less than average width, and areas protected by levees from 2% annual chance flood.
- OTHER AREAS**
- ZONE X** Areas determined to be outside the 0.2% annual chance floodplain. Areas in which flood hazards are undetermined, but possible.
- COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**
- CBRS** Areas and CBRS are normally located within or adjacent to Special Flood Hazard Areas.
- OTHERWISE PROTECTED AREAS (OPA)**
- OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- BOUNDARY**
- 1% annual chance flood boundary
2% annual chance flood boundary
Floodway boundary
Zone A boundary
CBRS and OPA boundary
- BOUNDARY**
- Boundary showing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
Base Flood Elevation line and value; elevation in feet
(FT. 10.0)
Base Flood Elevation value where uniform within zone; elevation in feet
Cross section line
Truncated line
- Geographic coordinates** referenced to the North American Datum of 1983 (NAD 83)
3000-meter Universal Transverse Mercator grid, zone 11
5000-foot grid scale; California State Plane coordinate system, NAD 83 (NAD 83)
Bench mark (see explanation in Notes to Users section of this FIRM map)
Rural Mile
Mile
- MAP REPOSITORIES**
- Refer to Map Repository list on Map Index
- EFFECTIVE DATE OF COURTHOUSE FLOOD INSURANCE RATE MAP**
- September 26, 2008
- EFFECTIVE DATE OF REVISIONS TO THIS PANEL**
- September 26, 2008
- For community map revision history prior to complete mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.
- To determine if flood insurance is available in this community, contact your insurance agent or visit the National Flood Insurance Program at 1-800-685-6268.

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1575E

FIRM FLOOD INSURANCE RATE MAP

KERN COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 1575 OF 4125
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:
COMMUNITY MAP INDEX PANEL INDEX
KERN COUNTY 1575 2

NOTES TO USER: The Map Number shown below should be used when ordering maps. The Community Number shown above should be used for insurance applications for the subject community.

MAP NUMBER 06029C155E
EFFECTIVE DATE SEPTEMBER 26, 2008

Federal Emergency Management Agency

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map publisher should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **Floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Salinarius Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies the FIRM. Users should be aware that BFEs shown on the FIRM represent reported, whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only to landward of 0.6' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Salinarius Elevations table in the Flood Insurance Study report for the jurisdiction. Elevations shown in the Summary of Salinarius Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **Floodways** were compiled at some locations and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program, and the other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The projection used in the preparation of this map was Universal Transverse Mercator (UTM) zone 11. The horizontal datum was NAD83. (GCS 1983) spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRM for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations should be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov>, or contact the National Geodetic Survey at the following address:

NGS Information Services
NGA, NGS-12
National Geodetic Survey
6505 N. 17th Ave.
1315 East-West Highway
Silver Spring, MD 20910-3032

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (202) 73-3242, or visit its website at <http://www.ngs.noaa.gov>.

Base map information shown on this FIRM was derived from USGS - Farm Service Agency - Aerial Photography Field Office dated 2003 and from U.S. Geological Survey Digital Orthophoto Quadrangles produced at a scale of 1:12,000 from photography dated 1995 or later.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report which contain authoritative hydraulic data may reflect stream channel dimensions that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or dis-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

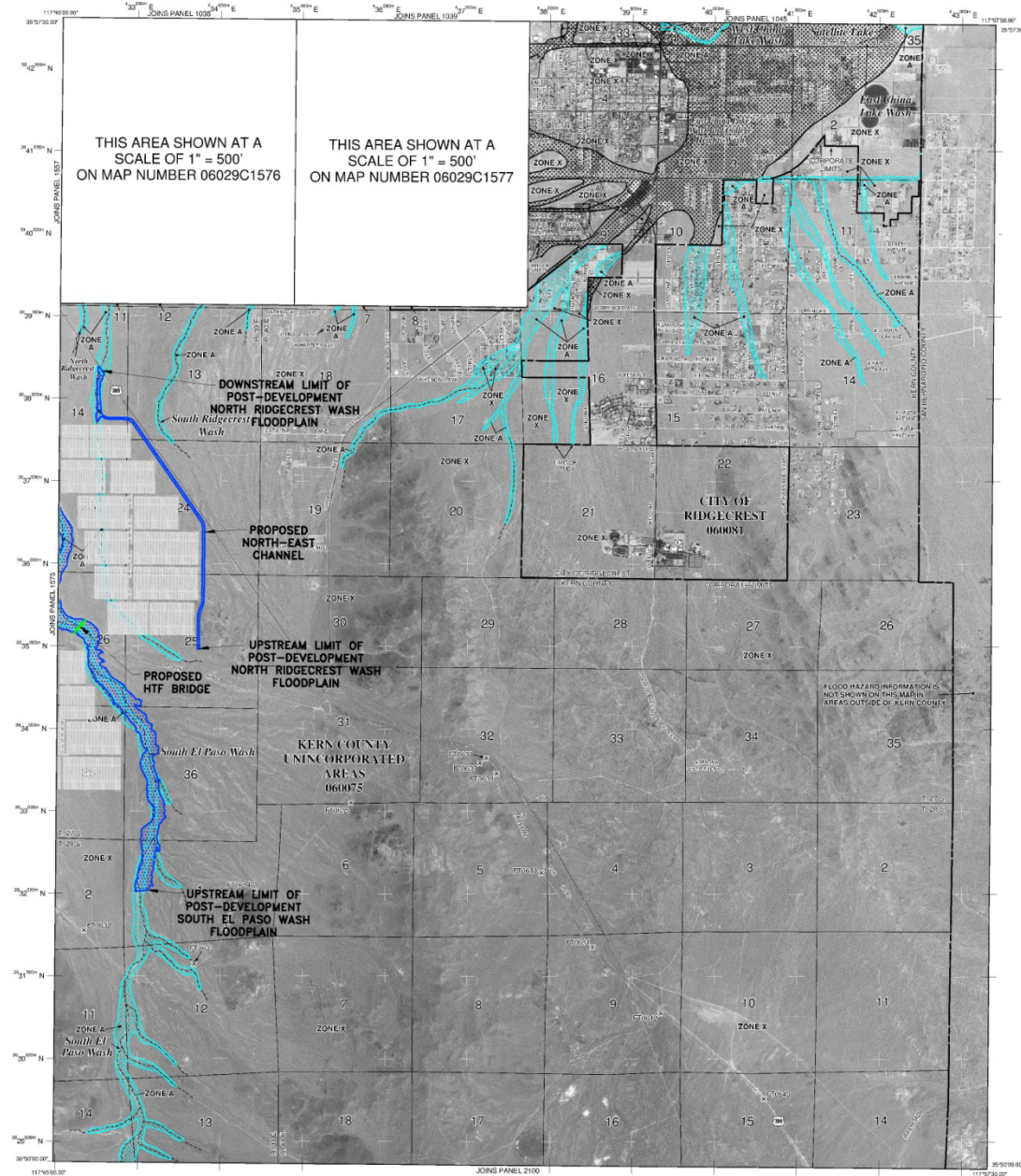
Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels, community map registry, addresses, and a listing of communities with National Flood Insurance Program data for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with the FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9630 and its website at <http://www.fema.gov>.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-MAP (1-877-362-6227) or visit the FEMA website at <http://www.fema.gov>.

THIS AREA SHOWN AT A
SCALE OF 1" = 500'
ON MAP NUMBER 06029C1576

THIS AREA SHOWN AT A
SCALE OF 1" = 500'
ON MAP NUMBER 06029C1577



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHA) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Areas (SFHA) are shown on this map. The SFHA are divided into three zones: Zone A, Zone X, and Zone B. Zone A is the area of the 1% annual chance flood. Zone X is the area of the 1% annual chance flood with a base flood elevation of 1 foot or less. Zone B is the area of the 1% annual chance flood with a base flood elevation of more than 1 foot.

ZONE A No Sea Flood Elevations determined.
ZONE AE Sea Flood Elevations determined.
ZONE A1 Flood depths of 1 to 3 feet (usually show as stippled). Base Flood Elevation determined.
ZONE A0 Flood depths of 1 to 3 feet (usually show as stippled). Base Flood Elevation determined. For areas of shallow fan flooding, water depths determined.

ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that has since been removed or is no longer operational. Zone AR indicates that the former flood control system is no longer operational and the area is now subject to the 1% annual chance flood or greater flood.
ZONE AR1 Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that has since been removed or is no longer operational. Zone AR1 indicates that the former flood control system is no longer operational and the area is now subject to the 1% annual chance flood or greater flood.

ZONE V Coastal flood zone with velocity hazard (wave action). No Base Flood Elevation determined.
ZONE VE Coastal flood zone with velocity hazard (wave action). Base Flood Elevation determined.

FLOODWAY AREAS IN ZONE AE
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachments to maintain the 1% annual chance flood level for the entire floodway. Floodway areas are shown with a wavy line and the word "FLOODWAY" in the center.

OTHER FLOOD AREAS
ZONE X Areas of 0.2% annual chance flood. Areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 1% annual chance flood.

OTHER AREAS
ZONE X Areas determined to be outside the 0.2% annual chance floodplain. Areas in which flood hazards are undetermined, but possible.
ZONE D Areas determined to be outside the 0.2% annual chance floodplain. Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
OTHERWISE PROTECTED AREAS (OPA)
CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

BOUNDARY Boundary of Special Flood Hazard Area of different Base Flood Elevation. Flood depth or flood velocity.
BOUNDARY Boundary of Special Flood Hazard Area of different Base Flood Elevation. Flood depth or flood velocity.

BOUNDARY Boundary of Special Flood Hazard Area of different Base Flood Elevation. Flood depth or flood velocity.
BOUNDARY Boundary of Special Flood Hazard Area of different Base Flood Elevation. Flood depth or flood velocity.

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NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1600E

FIRM
FLOOD INSURANCE RATE MAP
KERN COUNTY,
CALIFORNIA
AND INCORPORATED AREAS

PANEL 1600 OF 4125
SEE MAP INDEX FOR FIRM PANEL LAYOUT

COMMUNITY	NUMBER	PANEL SUFFIX
KERN COUNTY	060075	060075
INCORPORATED CITY OF	060081	060081

Refer to User's Map Number shown below should be used on insurance applications for the subject community.

MAP NUMBER
06029C1600E

EFFECTIVE DATE
SEPTEMBER 26, 2008

Federal Emergency Management Agency

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies the FIRF. Users should be aware that BFEs shown on the FIRF represent detailed whole-flood elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRF for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The projection used in the preparation of this map was Universal Transverse Mercator (UTM) zone 11. The horizontal datum was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1985. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1985, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov/> or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSMC-3, #5202
1315 East-West Highway
Silver Spring, MD 20910, 3063

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov/>.

Base map information shown on this FPM was derived from USDA—Farm Service Agency—Aerial Photography Field Office dated 2005 and from U.S. Geological Survey Digital Orthophoto Quadrangles produced at a scale of 1:12,000 from photography dated 1992 or later.

This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodpains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

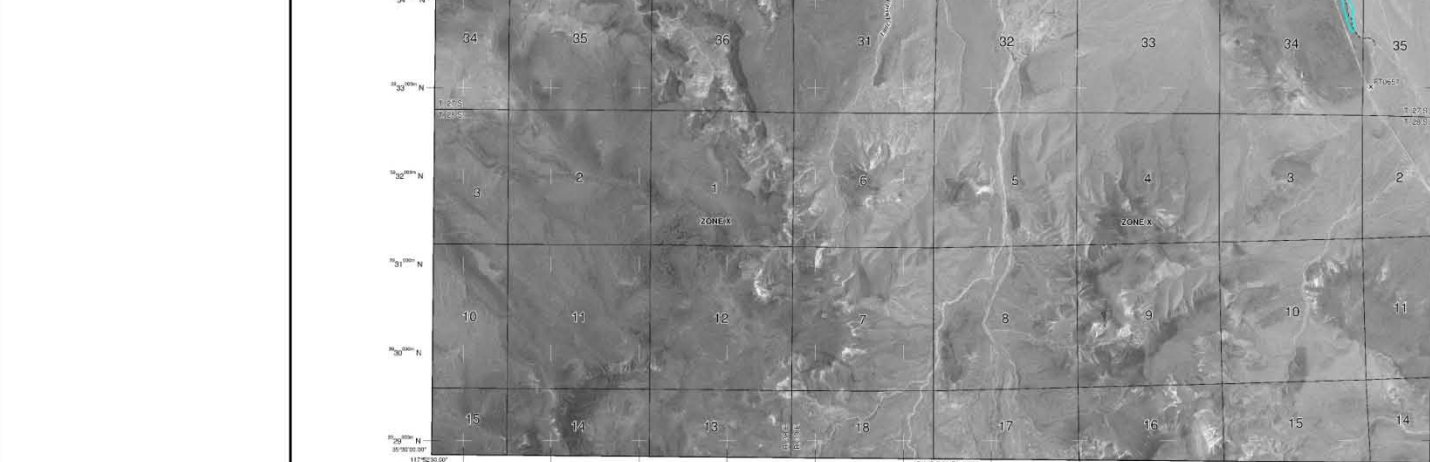
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Contact the **FEMA Map Service Center** at 1-800-358-9516 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-368-9620 and its website at <http://www.msc.fema.gov>.

If you have questions about this map or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/>.

100



THIS AREA SHOWN AT A
SCALE OF 1" = 500'
ON MAP NUMBER 06029C1557

SPECIAL FLOOD HAZARD AREAS (SPHAs) SUBJECT TO THE 1% ANNUAL CHANCE FLOOD (1% ANNUAL CHANCE FLOOD is the 1% annual chance flood (100-year flood), also known as the base flood, is the flood stage of a chance of being inundated or overtopped in any given year. The Special Flood Hazard Areas (SFHAs) are the areas subject to the annual chance flood. The base flood elevation is the water surface elevation of the 1% annual chance flood.

ZONE A No Flood Diversion determined.

ZONE AE Flood Diversion determined.
Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevation (BFE) is indicated.

ZONE AO Flood depths of 1 to 3 feet (usually shore or seeping waters; average depths indicated). For areas of shallow but flooding, velocities are indicated.

ZONE AH Special Flood Hazard Area, partially protected from the 1% annual chance flood by a flood control system that was adequate to determine Zone A, and areas protected from Zone AO flood control systems by levees intended to provide protection from the 1% annual chance or greater.

ZONE ADV Areas to be protected from 1% annual chance flood by a Federal Agency, levee, flood control system, or other flood control system.

ZONE AV Coastal flood zone with velocity hazard (wave action); see Base Flood Elevation determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); see Base Flood Elevation determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the area adjacent to the flood hazard area that must be kept free of obstructions to allow the 1% annual chance flood to be carried without overtopping the floodway protection.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood, areas of 1% annual chance flood with average depths of less than 1 foot or with drainage rates less than 0.06 in./hr, and areas protected by structures from 1% annual chance flood.

OTHER AREAS

ZONE D Areas determined to be outside the 0.2% annual chance flood.

ZONE D Areas in which flood hazards are undetermined, but possible.

CONSTANT BARRIER PROTECTED SYSTEMS (CBPS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBPS areas and OPAs are normally located on or adjacent to Special Flood Hazard Areas.

1% annual chance floodway boundary
0.2% annual chance floodway boundary
Floodway boundary
Zone 3 boundary
Zone 2 boundary
Zone 1 boundary and Zone 0 boundary

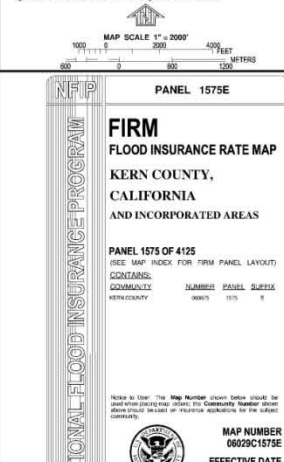
— Boundary between Special Flood Hazard Areas of different base flood elevations
— Boundary between Special Flood Hazard Areas of the same base flood elevation but of different return periods
— Base Flood Elevation line and water, elevation in feet
— Base Flood Elevation value which uniform with water, elevation indicated

© USFWS

* Referenced to the North American Vertical Datum of 1988 (NAVD83)

— Cross section line
— Cross section line

40°10'N 120°30'W
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Federal Emergency Management Agency

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources or small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **Roadways** have been determined, users are encouraged to consult the Flood Profiles and Roadway Data and/or Summary of Damaged Elevations (SDEs) contained within the Flood Insurance Study (FIS) report that accompanies the FIRM. Users should be aware that BFEs shown on the FIRM represent estimated water surface elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only to landward of 0.0 North American Vertical Datum of 1988 (NAVD 88). Users of the FIRM should be aware that coastal flood elevations are also provided in the Summary of Damaged Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Damaged Elevations table should be used for construction and/or floodplain management purposes where they are higher than the elevations shown on the FIRM.

Boundaries of the **Roadways** were computed at cross sections and interpolated between cross sections. The Roadways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Roadway widths and other pertinent boundary data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The projection used in the preparation of this map was Universal Transverse Mercator (UTM) zone 11. The horizontal datum was NAD83, GRS1980. Differences in datum, spheroid, projection or UTM zones used in the production of FIRM for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structures and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov/> or contact the National Geodetic Survey at the following address:

NGS Information Services
NIMA, NIMS-12
National Geodetic Survey
55AC-3, #202
1215 East-West Highway
Silver Spring, MD 20910-3082

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3240, or visit its website at <http://www.ngs.noaa.gov/>.

Base map information shown on this FIRM was derived from USGS - Farm Service Agency - Aerial Photography Field Office dated 2005 and from U.S. Geological Survey Digital Orthophoto Quarterframes produced at a scale of 1:15,000 from photography dated 1992 or later.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The Roadways and boundaries that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Roadway Data tables in the Flood Insurance Study report which contain authoritative hydraulic data may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to incorporations or de-incorporations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

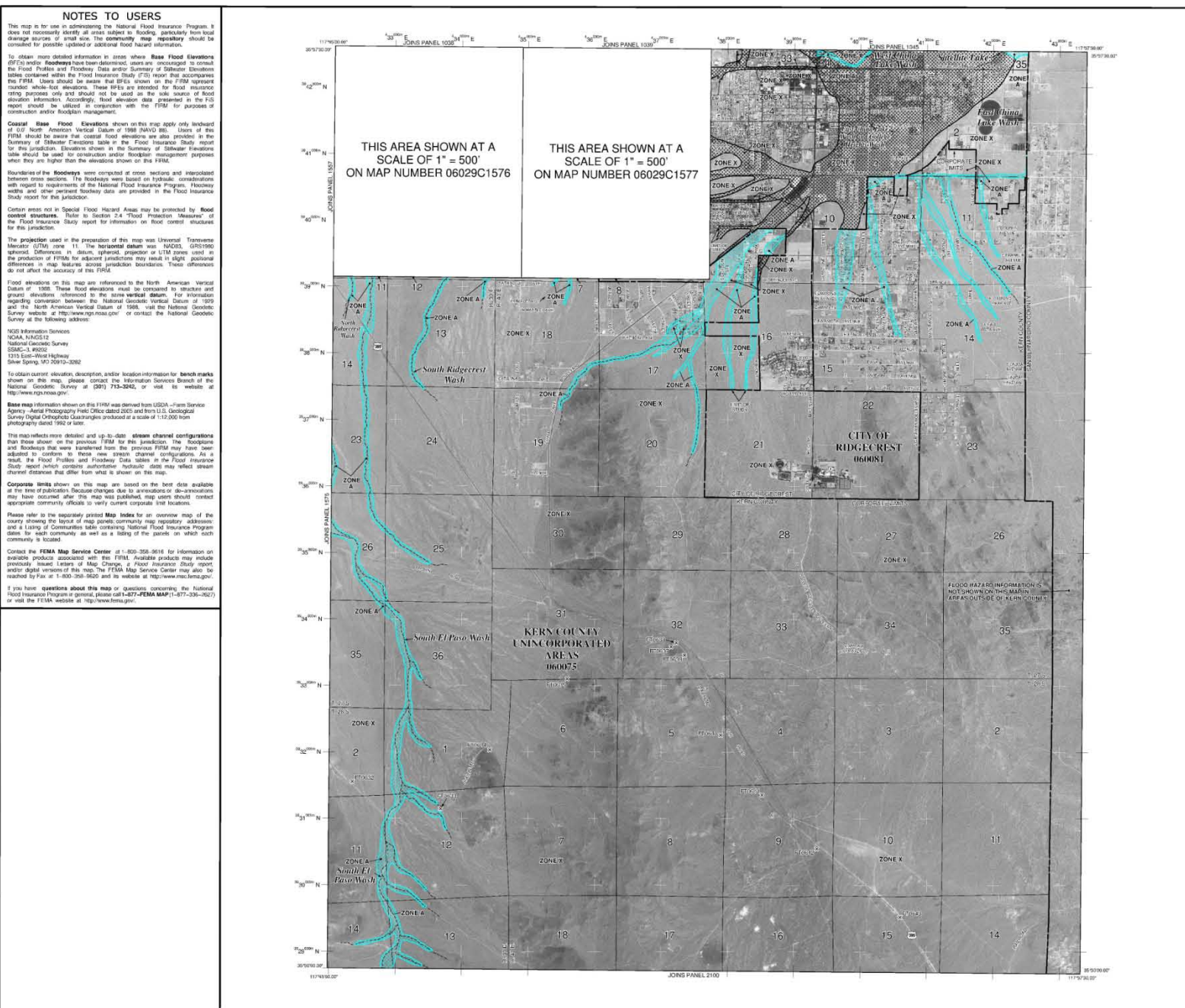
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THIS AREA SHOWN AT A
SCALE OF 1" = 500'
ON MAP NUMBER 06029C1576

THIS AREA SHOWN AT A
SCALE OF 1" = 500'
ON MAP NUMBER 06029C1577



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHA) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood is the flood that has a 1% chance of being equalled or exceeded in any given year. The Special Flood Hazard Area is a zone subject to flooding by the 1% annual chance flood. Zone of Special Flood Hazard includes Zones A, AE, AH, AO, AL, AR, V, and VE. The Base Flood Elevation is the elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevation determined.

ZONE AE Base Flood Elevation determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding). Base Flood Elevation determined.

ZONE AO Flood depths of 1 to 3 feet (usually areas of ponding). Base Flood Elevation determined. For areas of about 100 ft. long, widths also determined.

ZONE AR Special Flood Hazard Area boundary protected from the 1% annual chance flood by a flood control system that was subsequently described. Zone AR indicates that the former flood control system is being retained to provide protection from the 1% annual chance flood.

ZONE AV Also to be retained from 1% annual chance flood by a flood control system under construction, no base flood Elevation determined.

ZONE VE Coastal flood zone with velocity hazard (wave action). Base Flood Elevation determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increase in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood. Areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE D Areas determined to be outside the 0.2% annual chance floodplain. Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPM)

CBRS areas and OPMs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary

0.2% annual chance floodplain boundary

Channel boundary

Zone A boundary

Zone AE boundary

Boundary dividing Special Flood Hazard Areas of different base flood Elevation, flood depths or flood velocities

Base Flood Elevation line and area elevation in feet

Base Flood Elevation value where uniform within same elevation in feet

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

Cross section line

Truncated line

Geographic coordinates referenced to the North American Vertical Datum of 1988 (NAVD 88)

1983-meter Universal Transverse Mercator (UTM) zone 11

5000-foot grid scale, California State Plane coordinate system, N zone (NAD83 datum), Lambert Conformal Conic

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NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1600E

FIRM FLOOD INSURANCE RATE MAP

KERN COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 1600 OF 4125

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY

COMMUNITY	NUMBER	PANEL	SUFFIX
KERN COUNTY	060075	1600	E
INCORPORATED AREAS	060075	1600	E

Effective Date of Coverage:
FLOOD INSURANCE RATE MAP
EFFECTIVE DATE: SEPTEMBER 26, 2008
EFFECTIVE DATES OF REVISIONS TO THIS PANEL:

Refer to the "Map Number" sheet before use. The "Map Number" sheet should be used as an essential guide for the proper use of this map.

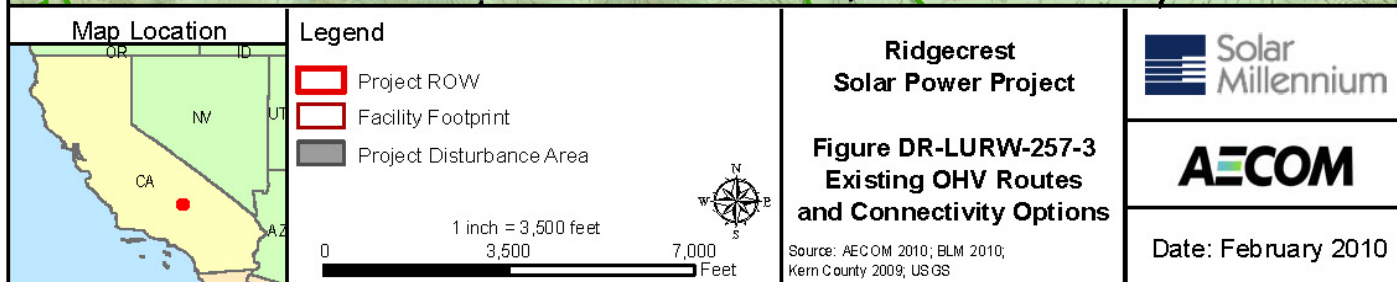
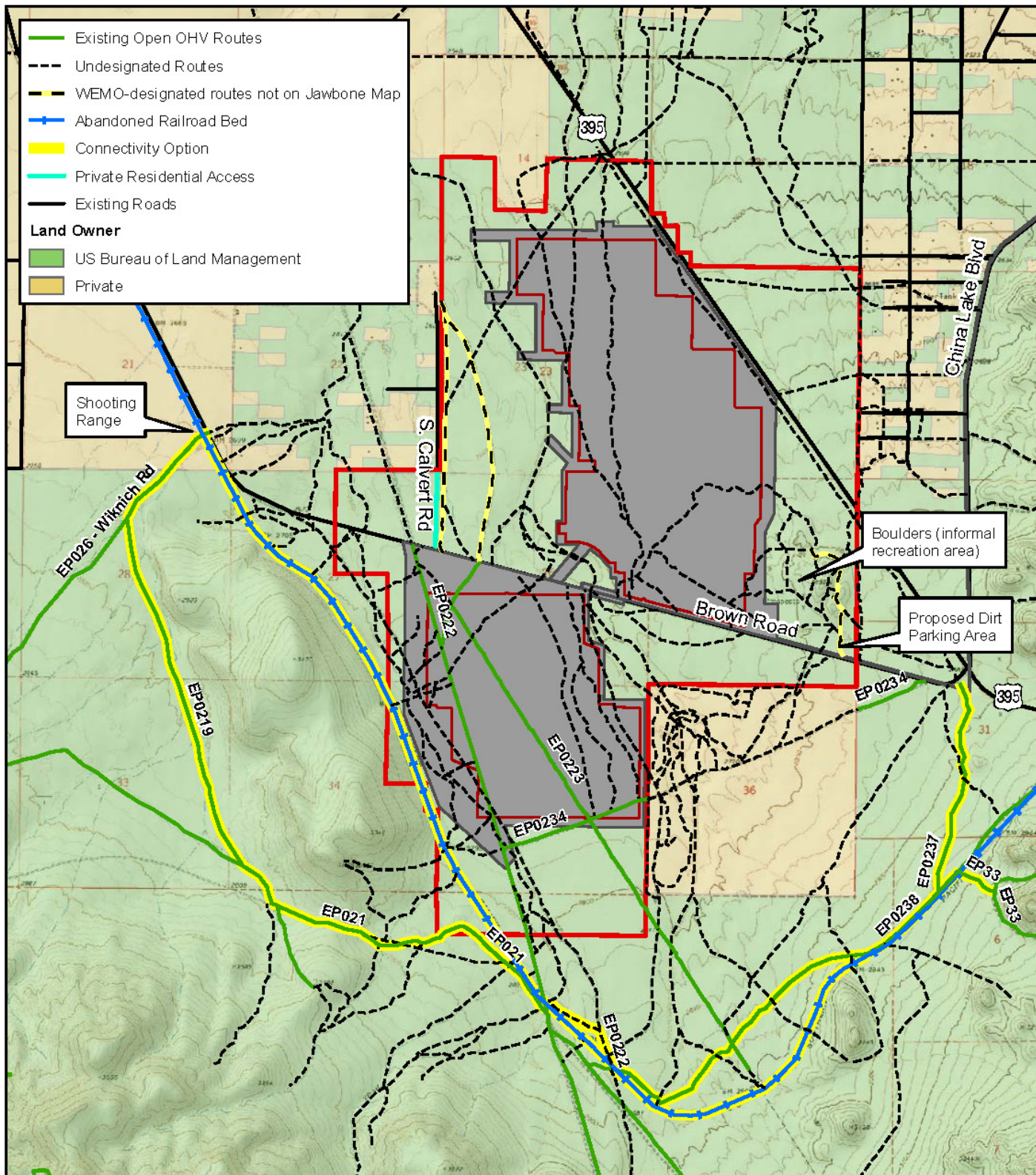
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06029C1600E
EFFECTIVE DATE
SEPTEMBER 26, 2008

Federal Emergency Management Agency

LURW

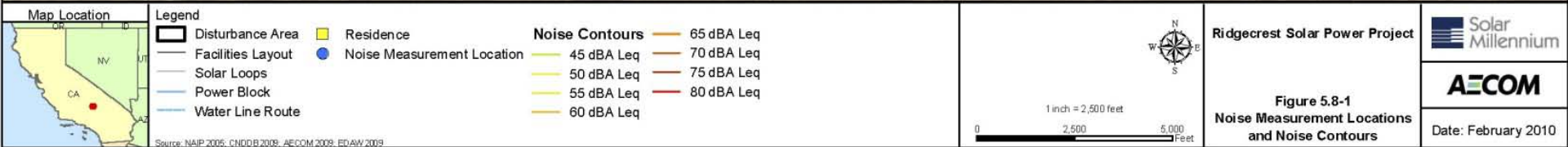
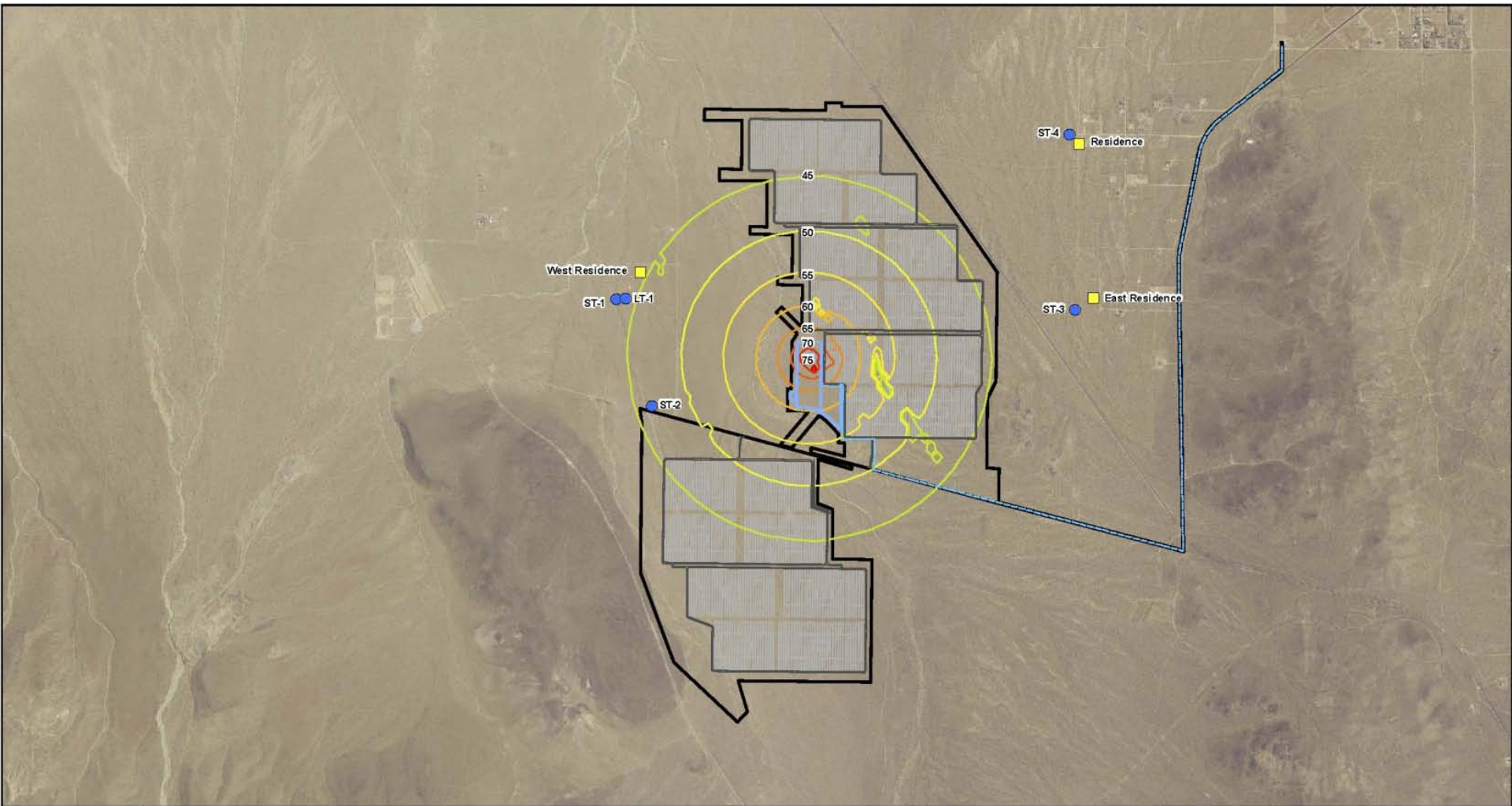
Ridgecrest Solar Power Project





Noise

Ridgecrest Solar Power Project



Site & Grading Plan

Ridgecrest Solar Power Project





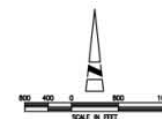
Designed: W. BLACK
Checked: W. BLACK
Drawn: K. S. BEDFORD
Revised Drawing Number:
A. SITE DESCRIPTION

Prepared for:

Solar
Millennium LLC

LEGEND:

- SOLAR FIELD PARABOLIC TROUGH
- BALANCE OF PLANT FACILITIES
- PROPOSED ACCESS ROAD (PAVED)
- PROPOSED ACCESS ROAD (GRAVEL)
- RAILROAD
- PROPOSED GAS
- PROPOSED TELEPHONE
- PROPOSED ELECTRIC
- EXISTING ELECTRIC
- PROPOSED SECURITY FENCE
- PROPOSED WIND FENCE
- EXISTING CONTOURS (10 FOOT INTERVALS)
- PROPOSED DRAINAGE CHANNEL/FLOW DIRECTION
- EXISTING INTERMITTENT DRAINAGE CHANNEL
- SITE BOUNDARY
- HEADPIPE PIPING
- ACCELERATION LANE



NOTES:

1. SEE GRADING SHEETS 4-7 FOR DETAILED INFORMATION.
2. DETENTION BASIN IS PROVIDED AT POWER BLOCK ONLY. DETENTION BASIN IS PROVIDED FOR WATER QUALITY PURPOSES.

30% Conceptual Engineering Plans
NOT FOR CONSTRUCTION
DATED: February 10, 2010

Ridgecrest Solar Power Project

Kern County,
California

Preliminary
Site Plan

Date: 02/10/10
Sheet: 03 of 34



Designed: W. BLACK
Checked: W. BLACK
Drawn: K. S. BEDFORD

Revised (Drawing to date):

1. 11/11/10 J. S. BEDFORD

Prepared for:



LEGEND:

- SOLAR FIELD
- PARABOLIC TROUGH
- BALANCE OF PLANT FACILITIES
- PROPOSED ACCESS ROAD (PAVED)
- PROPOSED ACCESS ROAD (GRAVEL)
- RAILROAD
- PROPOSED GAS
- PROPOSED WATER
- PROPOSED TELEPHONE
- PROPOSED ELECTRIC
- EXISTING ELECTRIC
- PROPOSED SECURITY FENCE
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- PROPOSED DRAINAGE CHANNEL/FLOW DIRECTION
- EXISTING INTERMITTENT DRAINAGE CHANNEL
- SITE BOUNDARY
- HEADER PIPING
- ACCELERATION LAKE



TOTAL PROJECT GRADING QUANTITIES		
CUT (CY)	FILL (CY)	NET CUT (CY)
7,500,000	7,500,000	0

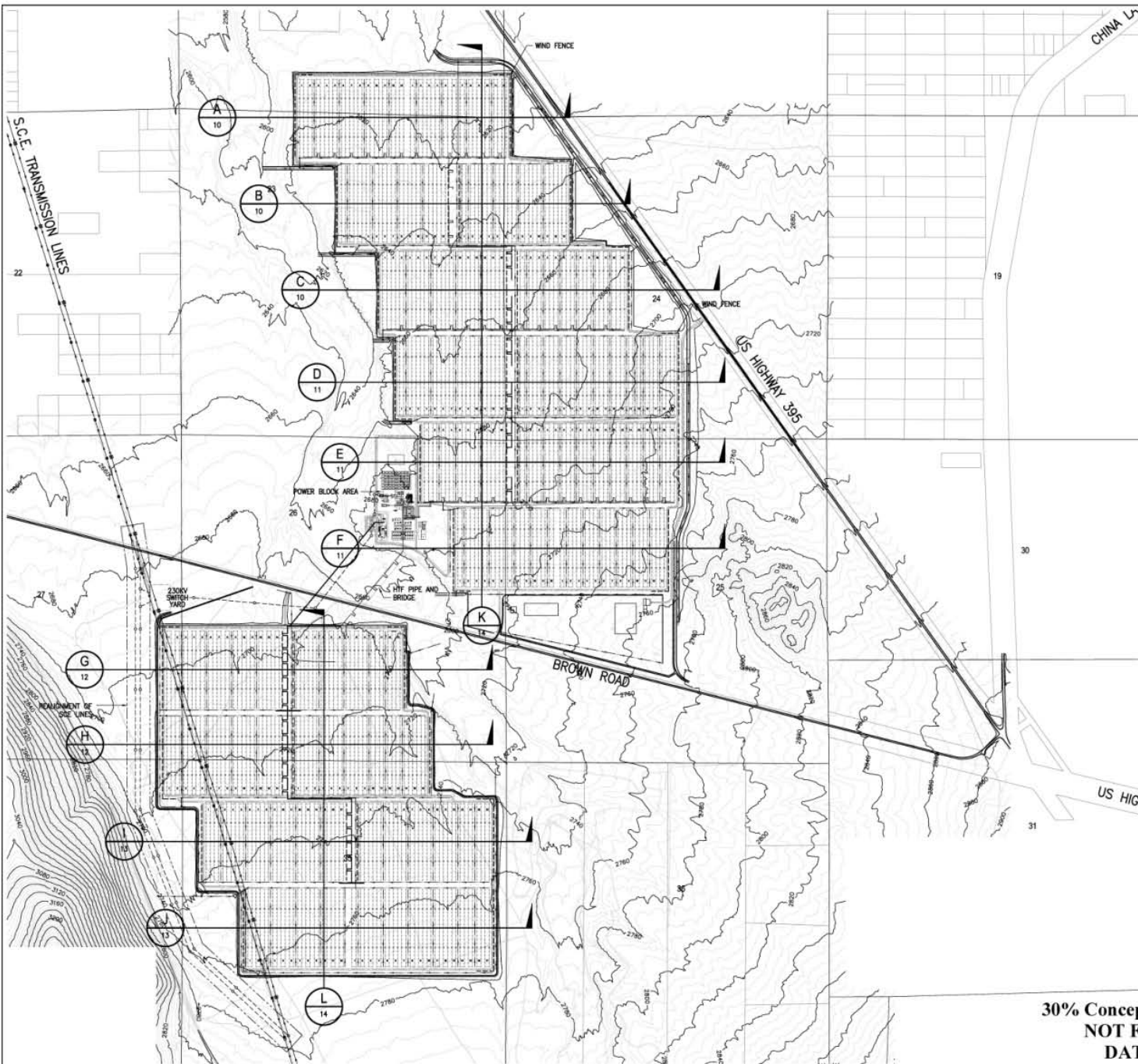
30% Conceptual Engineering Plans
NOT FOR CONSTRUCTION
DATED: February 10, 2010

Ridgecrest Solar Power Project

Kern County,
California

Preliminary Overall
Grading Plan

Date: 02/10/10
Sheet: 04 of 34



Traffic

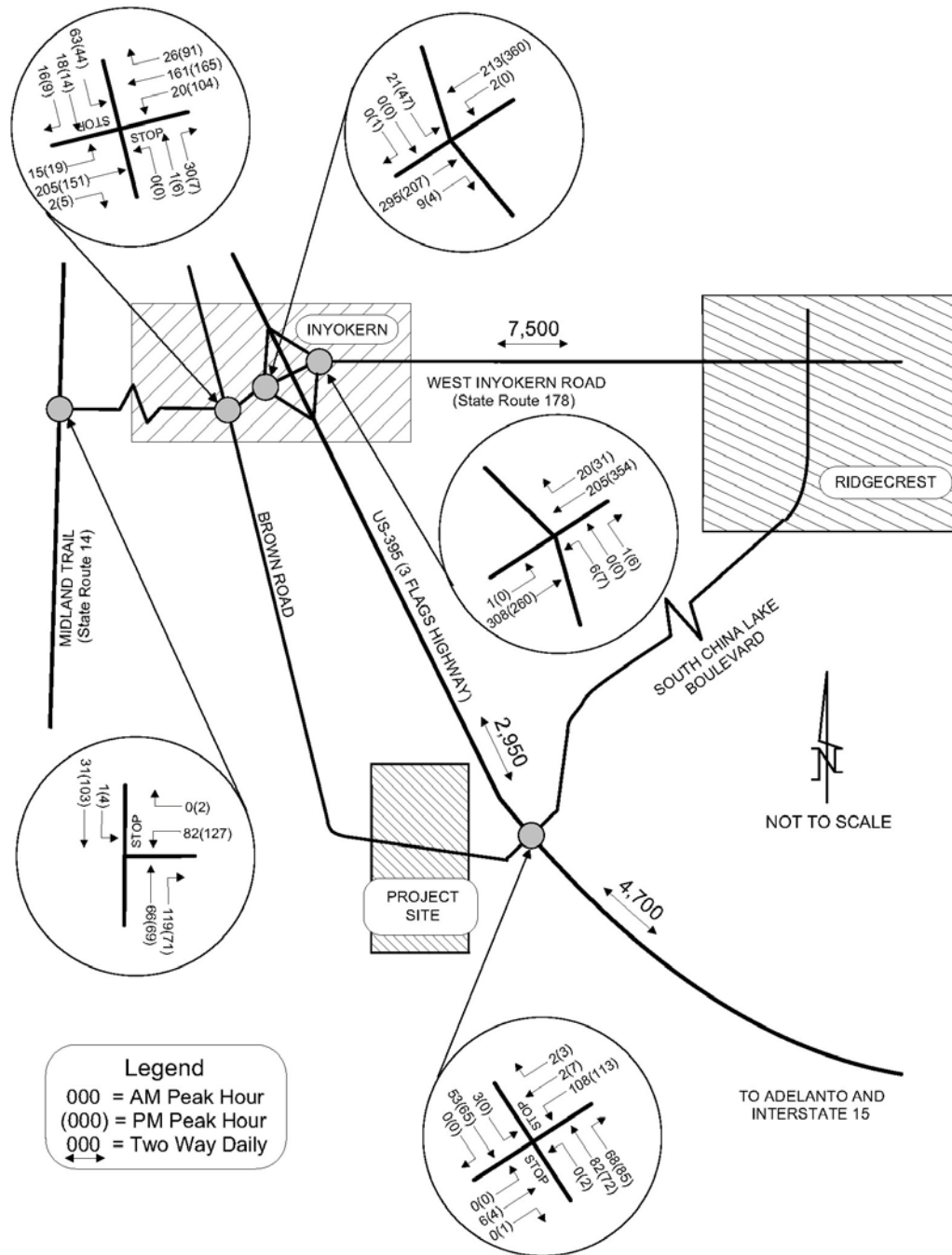
Ridgecrest Solar Power Project

Proposed Site

**Kern County,
California**

U.S. 995 INTERSECTION REDESIGN

DATE 04/12/00
PAGE 02-00



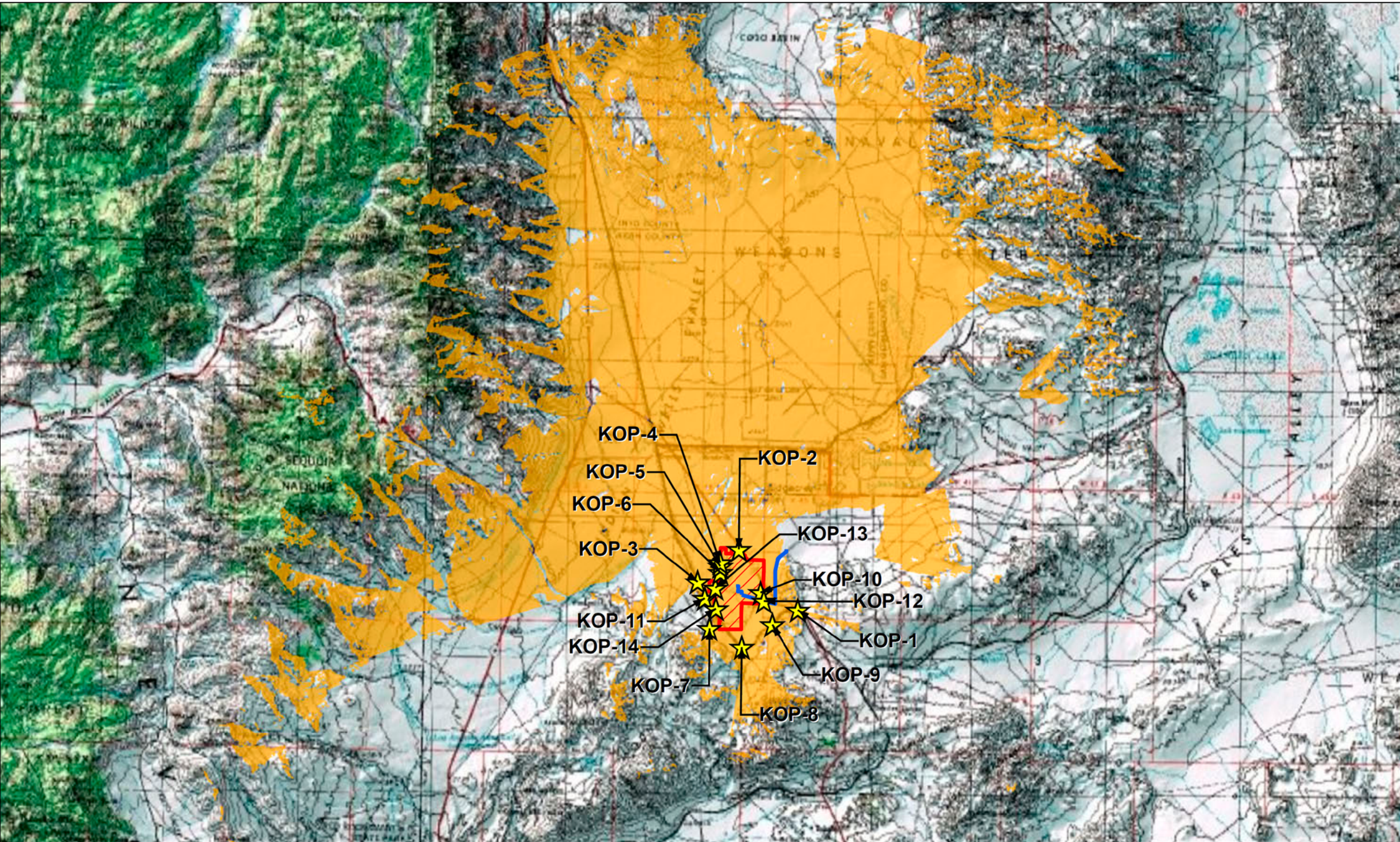
Visual Resources

Ridgecrest Solar Power Project



KOP Simulations

Ridgecrest Solar Power Project



Legend

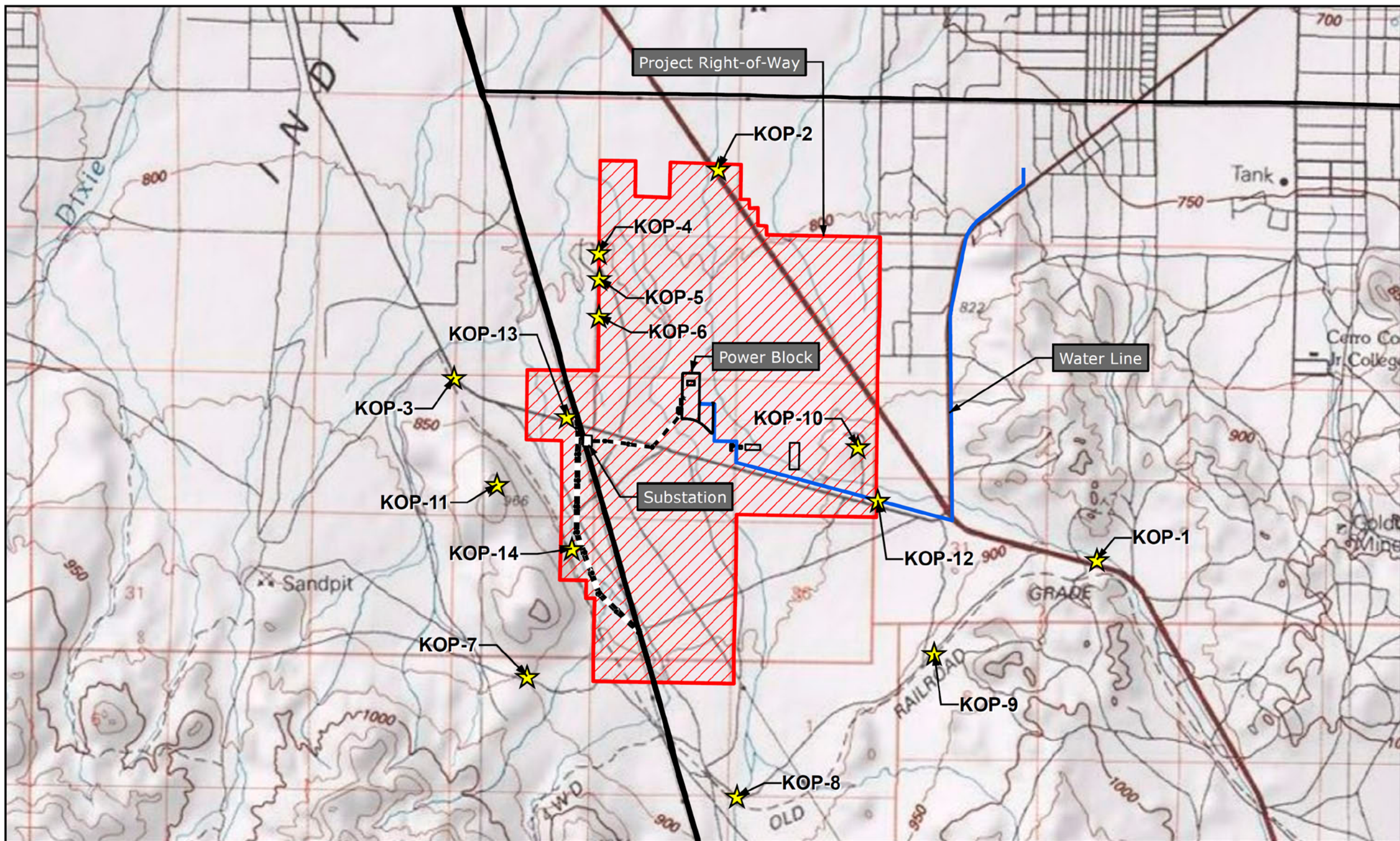
- Project Right-of-Way
- Water Line
- Project Visible

0 3.25 6.5 13 Miles

1 inch equals 6.5 miles

Ridgecrest Solar Power Project
Figure 5.15-1
Regional Visibility of
the Plant Site

Date: January 2010



Legend

- ★ Key Observation Points
- ▨ Project Right-of-Way
- Existing Transmission Lines
- - - Proposed Transmission Lines
- Water Line



1 inch equals 1 miles 0 0.5 1 2 Mile

Ridgecrest Solar Power Project Figure 5.15-2 Project Site and Key Observation Points



Date: January 2010

Figure 5.15-5a – View from KOP-1 U.S. Highway 395 Northbound of RSPP Site-Existing Condition



Figure 5.15-5b – View from KOP-1 U.S. Highway 395 Northbound of RSPP Site-Simulated Condition



Figure 5.15-6a – View from KOP-2 U.S. Highway 395 Southbound of RSPP Site-Existing Condition



Figure 5.15-6b – View from KOP-2 U.S. Highway 395 Southbound of RSPP Site-Simulated Condition



Figure 5.15-7a – View from KOP-3 Brown Road of RSPP Site-Existing Condition



Figure 5.15-7b – View from KOP-3 Brown Road of RSPP Site-Simulated Condition



Figure 5.15-8a – View from KOP-4 Northern Residence on Calvert Blvd of RSPP Site-Existing Condition



Figure 5.15-8b – View from KOP-4 Northern Residence on Calvert Blvd of RSPP Site-Simulated Condition



Figure 5.15-9a – View from KOP-5 Middle Residence on Calvert Blvd of RSPP Site-Existing Condition



Figure 5.15-9b – View from KOP-5 Middle Residence on Calvert Blvd of RSPP Site-Simulated Condition



Figure 5.15-10a – View from KOP-6 Residence on Clone Avenue of RSPP Site-Existing Condition



Figure 5.15-10b – View from KOP-6 Residence on Clone Avenue of RSPP Site-Simulated Condition



Figure 5.15-11a – View from KOP-7 BLM Recreation Road of RSPP Site-Existing Condition



Figure 5.15-11b – View from KOP-7 BLM Recreation Road of RSPP Site-Simulated Condition



Figure 5.15-12a – View from KOP-8 Railroad Bed Bike Trail (South) of RSPP Site-Existing Condition



Figure 5.15-12b – View from KOP-8 Railroad Bed Bike Trail (South) of RSPP Site-Simulated Condition



Figure 5.15-13a – View from KOP-9 Railroad Bed Bike Trail (Southeast) of RSPP Site-Existing Condition



Figure 5.15-13b – View from KOP-9 Railroad Bed Bike Trail (Southeast) of RSPP Site-Simulated Condition



Figure 5.15-14a – View from KOP-10 BLM Recreation Area of RSPP Site-Existing Condition



Figure 5.15-14b – View from KOP-10 BLM Recreation Area of RSPP Site-Simulated Condition



Figure 5.15-15a – View from KOP-11 BLM Ridgeline (West) of RSPP Site-Existing Condition



Figure 5.15-15b – View from KOP-11 BLM Ridgeline (West) of RSPP Site-Simulated Condition



Figure 5.15-16a – View from KOP-12 Brown Road Westbound of RSPP Site-Existing Condition



Figure 5.15-16b – View from KOP-12 Brown Road Westbound of RSPP Site-Simulated Condition



Figure 5.15-17a – View from KOP-13 Brown Road Eastbound of RSPP Site-Existing Condition



Figure 5.15-17b – View from KOP-13 Brown Road Eastbound of RSPP Site-Simulated Condition



Figure 5.15-18a – View from KOP-14 Railroad Bed Bike Trail (West) of RSPP Site-Existing Condition

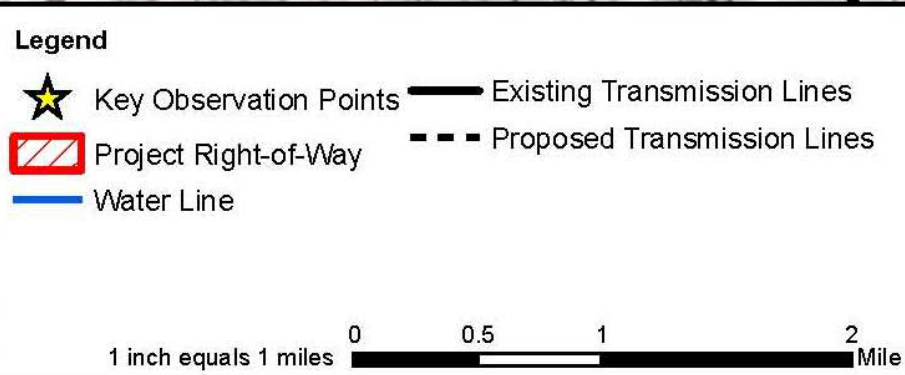
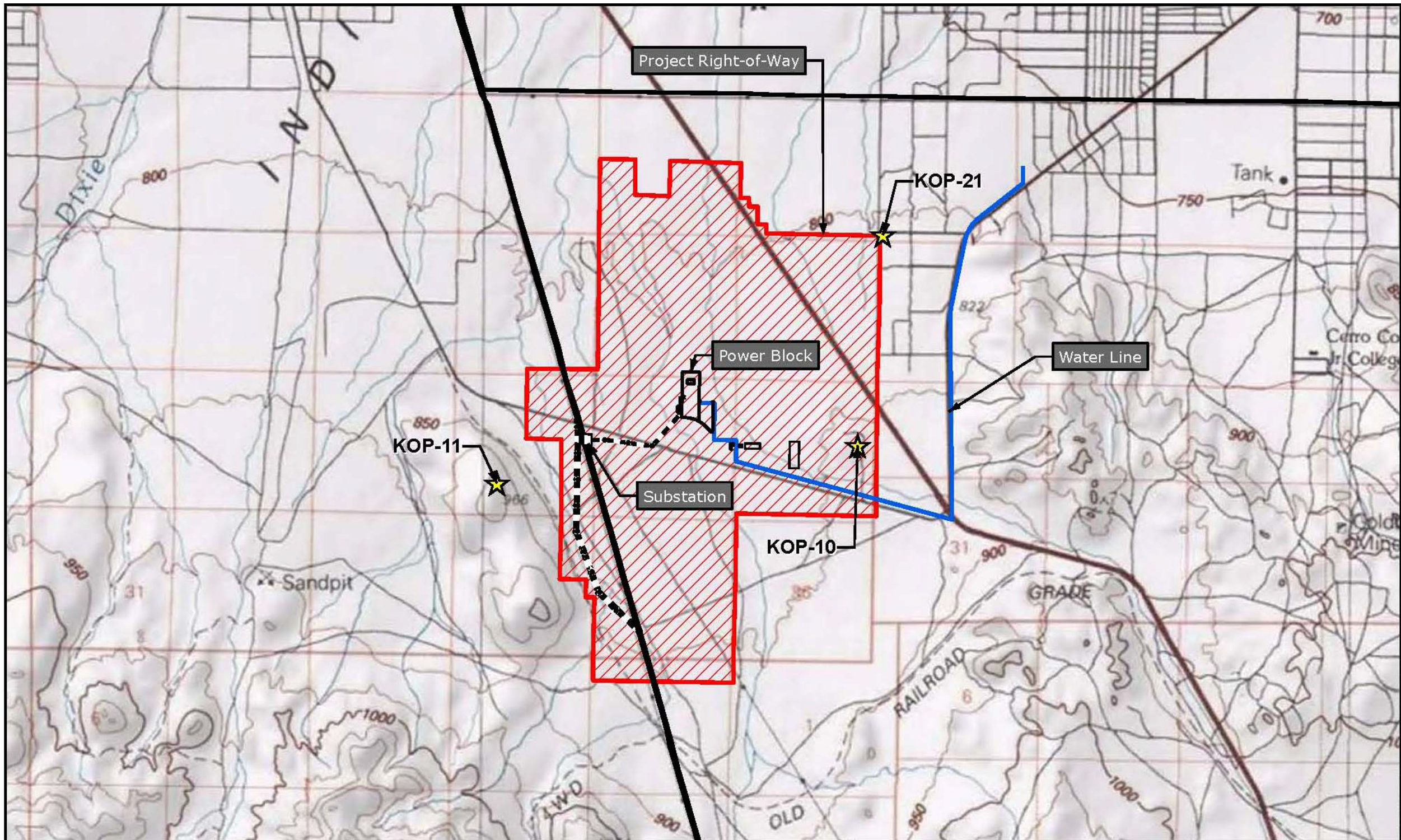


Figure 5.15-18b – View from KOP-14 Railroad Bed Bike Trail (West) of RSPP Site-Simulated Condition



Night Simulations

Ridgecrest Solar Power Project



Ridgecrest Solar Power Project
Figure B&R DR-1j
Project Site and
Key Observation Points



Date: April 2010

Figure B&R No.2 DR-1a View from KOP-10 Rocky Recreational Site near Intersection of 395 and Brown Road Night Site-Existing Condition



Figure B&R No.2 DR-1b View from KOP-10 Rocky Recreational Site near Intersection of 395 and Brown Road Night Simulated Condition



Figure B&R No.2 DR-1c View from KOP-10 Rocky Recreational Site near Intersection of 395 and Brown Road Night Simulated Condition



Figure B&R No.2 DR-1d View from KOP-11 Elevated Ridgeline on BLM land west of RSPP Site-Existing Condition

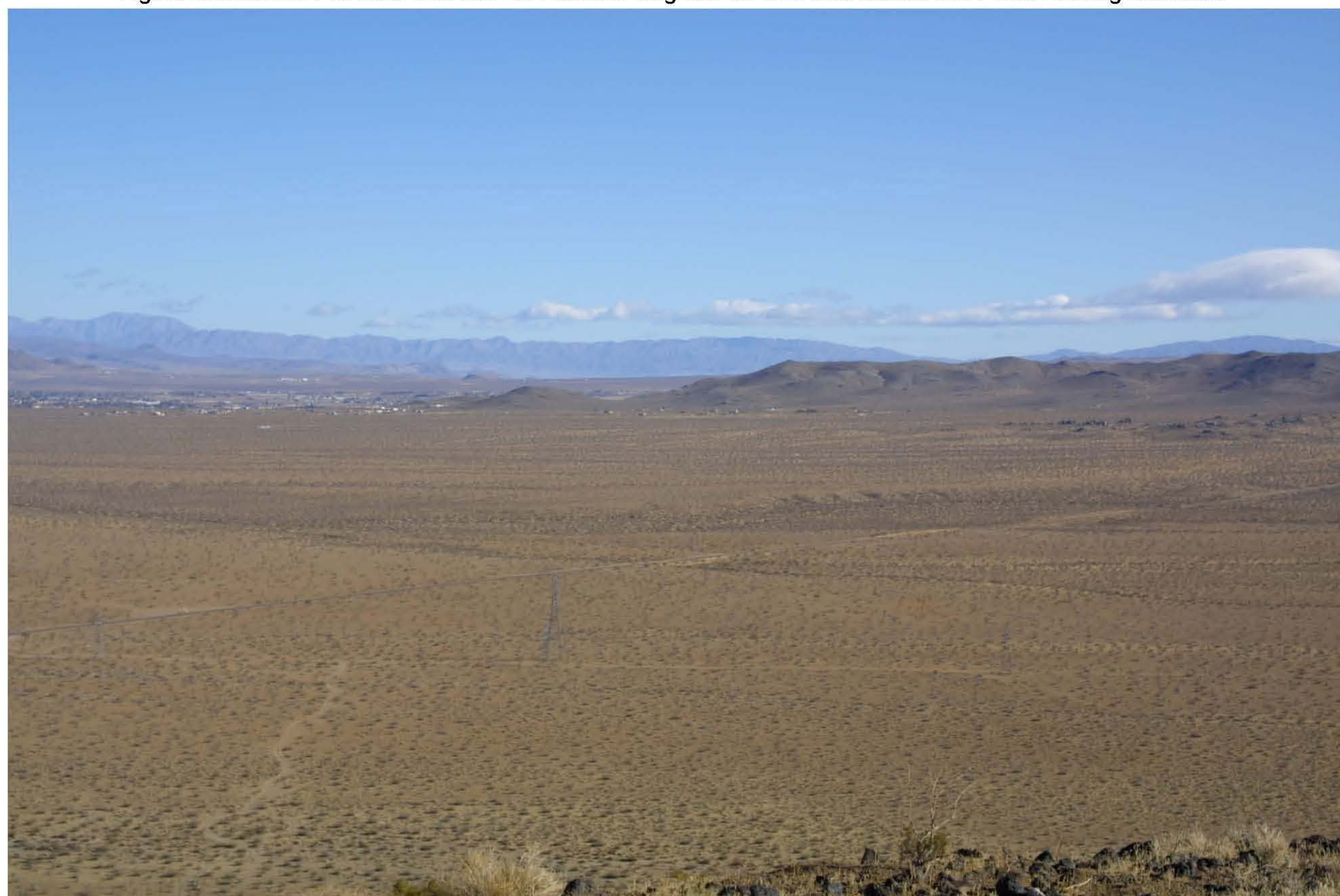


Figure B&R No.2 DR-1e View from KOP-11 Elevated Ridgeline on BLM land west of RSPP Simulated Condition



Figure B&R No.2 DR-1f View from KOP-11 Elevated Ridgeline on BLM land west of RSPP Simulated Condition



Figure B&R No.2 DR-1g View from KOP-21 Residential Location on the Elevated Ridge Northeast of RSPP Site-Existing Condition

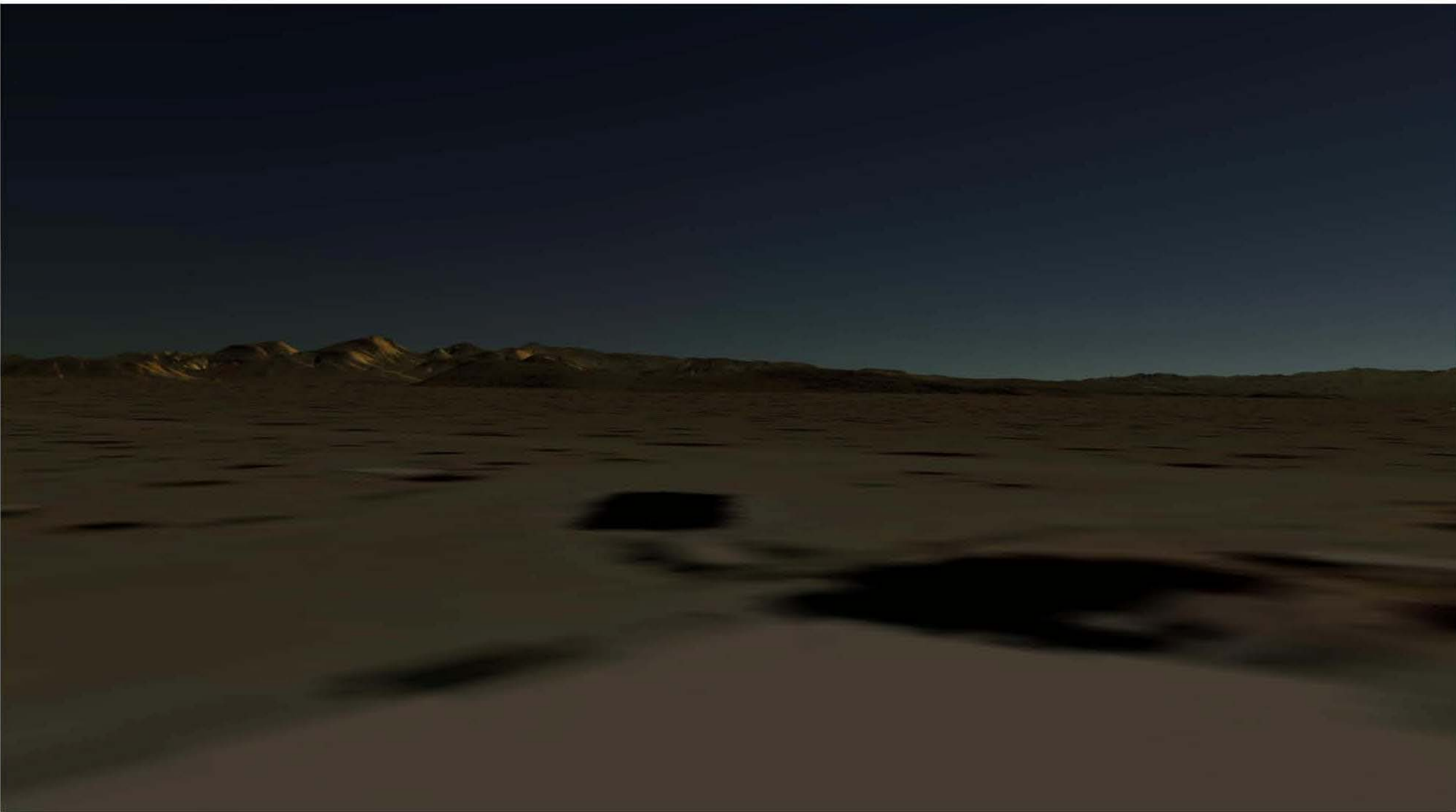


Figure B&R No.2 DR-1h View from KOP-21 Residential Location on the Elevated Ridge Northeast of RSPP Night Existing Condition



Figure B&R No.2 DR-1i View from KOP-21 Residential Location on the Elevated Ridge Northeast of RSPP Simulated Condition



Kramer Junction

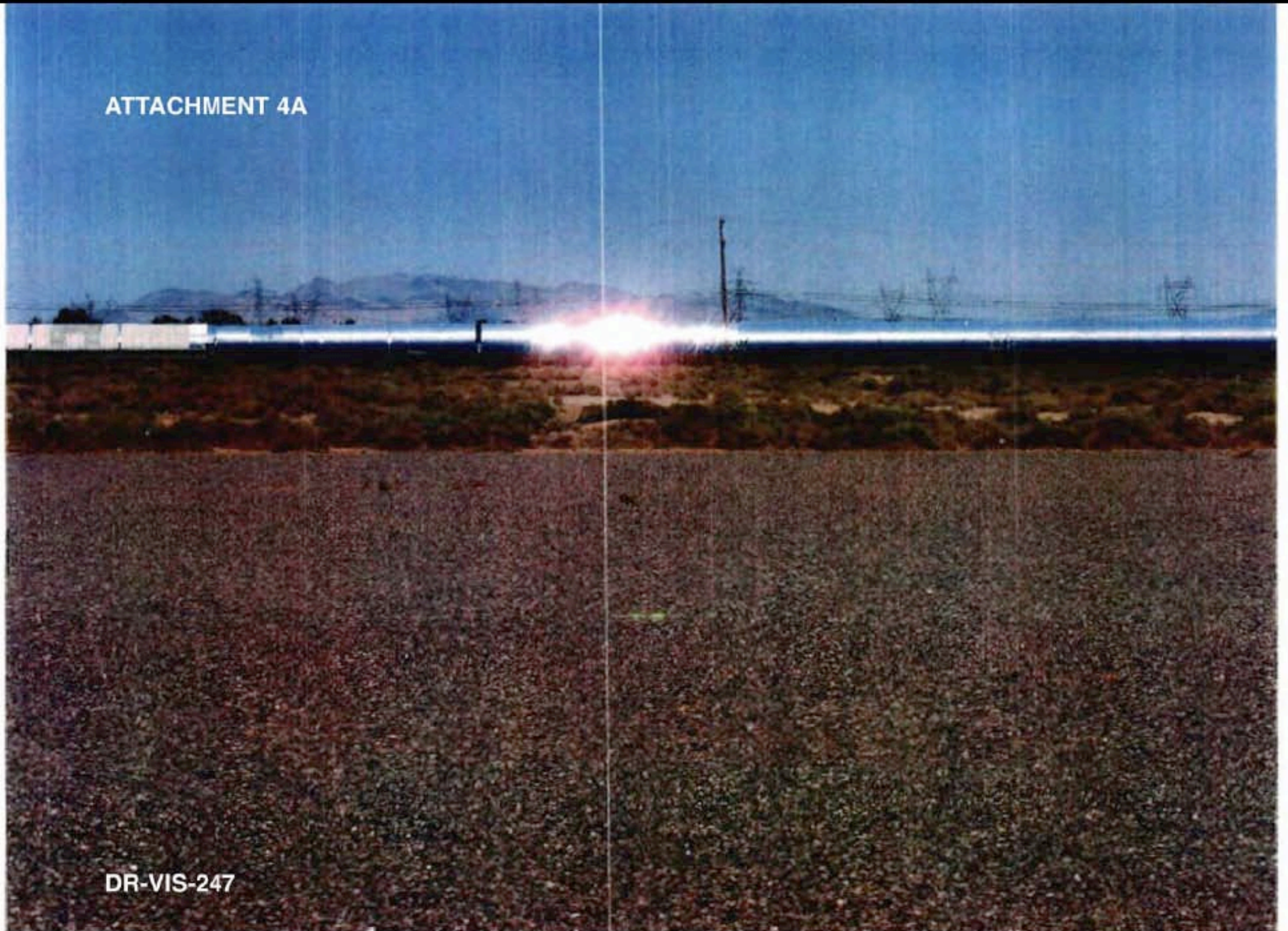
Ridgecrest Solar Power Project

ATTACHMENT 4A

Blythe Solar Power Project - Example of Glint off of the Kramer Junction SEGS Project (Ground Level View)

MARCH 2010

ATTACHMENT 4A



VISUAL RESOURCES

CALIFORNIA ENERGY COMMISSION - SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION, MARCH 2010

SOURCE: Michael Clayton & Associates

Kramer Junction



Black Mountain View





California Energy Commission Workshop

Water Offset Mitigation Plan

Ridgecrest Solar Power Project

April 23, 2009



Project Description

Proposed Water Use

- Construction – 1,500 af over construction period
 - ✦ Construction period: 2.33 years (28 months)
 - ✦ 450 acre-feet (af) of groundwater per year
- Operational – 150 af per year (afy)
 - ✦ Project Life: 30 years
 - ✦ Total volume of 4,500 af over 30 year life of project.
- Indian Wells Valley Water District (IWWVD) will supply water service to the Project.

Proposed Water Mitigation Plan

*** Offset Volume Required Per Year**

- 215 afy
- Based on amortization of construction water volume over the 30 year life of Project

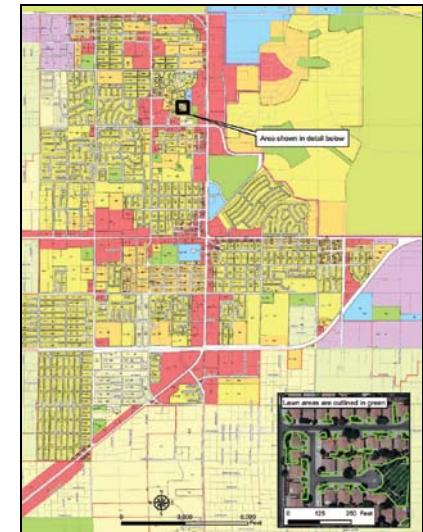
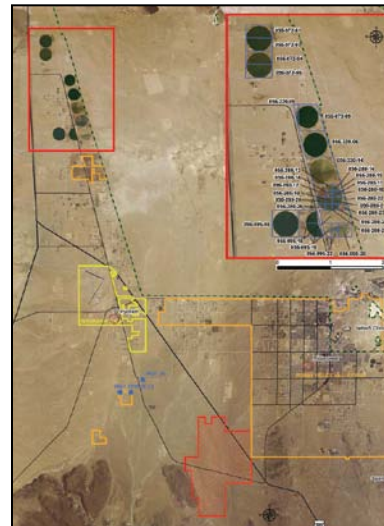
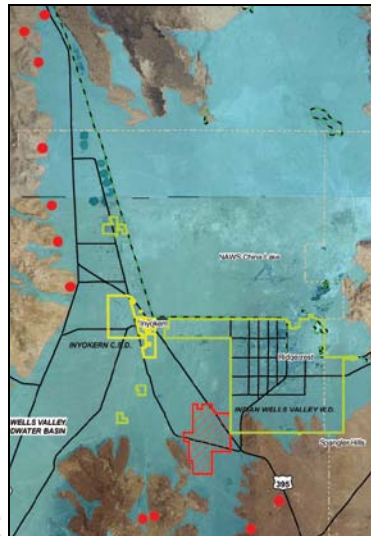
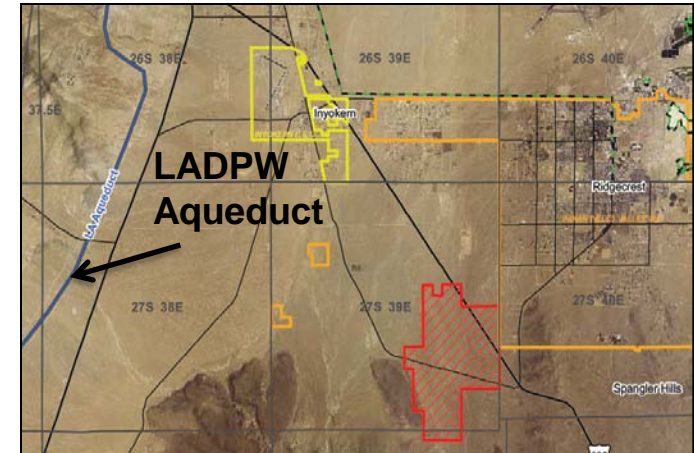
*** Approach to Identification of Feasible Options**

- Identification of Potential Options
- Feasibility Assessment
- Implementability



Potential Options Considered

- ✧ Low-Flow Irrigation
- ✧ Artificial Turf Replacement
- ✧ Tamarisk Removal
- ✧ Agricultural Land Fallowing
- ✧ Xeriscaping (Cash for Grass)
- ✧ Construction Water from LADPW Aqueduct



Feasibility of Water Mitigation Options

*** Criteria Used in the Feasibility Study**

- Could the option provide the full offset volume of water?
- Could the option be implemented at the start of construction?
- Could the option upon implementation offset the full volume of Project water use or would there be a phase-in period such that only after a period of time the full offset volume would be realized?

Summary of Feasibility Study

Offset Option	Potential Water Savings	Capable of Fully Meeting Project Water Supply (215 afy)	Option Implementable at the Start of Construction	Potential Offset Option
Low-Flow Irrigation	Minimal	No	Yes	Option retained for future consideration. Possibly implemented through “cash for grass”, as it is a subset of that program.
Artificial Turf	~12.5 afy	No	No	Option <u>not</u> being retained for consideration.
Tamarisk Removal	0.28 afy per tree	No	Yes	Option retained for future consideration as needed to supplement primary options.
LADPW Aqueduct	1,500 afy	Yes	Uncertain	LADPW will <u>not</u> allow.
Fallowing of Ag Land	215 afy	Yes	Yes	Option included in Plan as a primary option
Xeriscaping (Cash for Grass)	215 afy	Yes	Yes	Option included in Plan as a primary option.

Feasibility Study

*** Options for Further Evaluation**

- Agricultural Land Fallowing
- Xeriscaping (Cash for Grass)

*** Conclusions**

- Options being carried forward have the potential to completely offset the water supply needed by the Project.
- Feasible options can be implemented in a reasonable timeframe following initiation of construction activities.
- Low-flow irrigation, and tamarisk removal suitable for only a portion of the required offset. (These options may be considered in the future to supplement primary options.)
- LADPW will not allow diversion from the aqueduct for construction water.
- Artificial turf not considered feasible.

Agricultural Fallowing Option

*** Available Agricultural Land for Potential Fallowing**

- More than 970 acres of farmland north of Inyokern (12 to 16 miles north of Project)
- Program would focus on alfalfa crops grown by Brown Road Farming

*** Acreage Need to Meet Offset Volume**

- 42 acres
 - Assumes water rate of 5.1 afy/acre to cultivate alfalfa.
 - 42 acres = 4% of the more than 970 acres of alfalfa grown in Basin.

*** Approach to Implementation**

- Meet with landowner(s) to determine willingness to participate in program.
- Establish “water factor per acre” to determine acreage of land need to obtain offset volume.
- Develop contracts/lease agreements with property owner.
- IWWVD would administer the program.

Xeriscaping

* Approach to Estimating Volume

- Assuming 56 gallons per square foot can be saved by conversion (SNWA, 2005).
- An estimated 29 acres of turf will need to be converted to obtain 215 afy of water offsets.
- Assuming 2,000 square feet per residence, about 625 homes would need to participate in program.
- Digital aerial photos used to estimate natural turf lawns within the City of Ridgecrest.

* Available Residential Acreage – 347 acres

* Potential Commercial Acreage – 138 acres

* Approach to Implementation

- Program will be modeled after the AWAC Cash for Grass Program.
- Project would offer financial incentives to the property owners within the City to convert their landscape.
- The administration and monitoring of the implementation would be performed by the IWV Water District.
- Schedule for implementation is planned following receipt of license from the CEC and coincident with the initiation of Project construction.

Conclusions

✧ Options Being Pursued

- Agricultural Land Fallowing
- Xeriscaping (Cash for Grass)

✧ Options Being Retained for Future Consideration or to Supplement

- Low-Flow Irrigation
- Tamarisk Removal

DESERT TORTOISE

RIDGECREST SOLAR POWER PROJECT



Available Desert Tortoise Density Estimates on Localized Sites in The Western Mojave Desert

Sites were generally small, 1 km² or 1 mi², unless noted. All sites were expected to be occupied by desert tortoises based on habitat

Site		#Adults/km ²		Time or Time Span for Estimates ¹	Reference
		Time 1	Time 2		
USGS Plots	DTNA Interior Plot	92.0	5.0	1979, 1982 , 1988, 1992 1996 , 2002	BLM (2005), Berry (2003)
	DTNA Interpretive Center	69.9	18.1	1979 , 1985, 1989, 1993 , 2002	BLM (2005), Berry (2003)
	Fremont Valley	44.8	12.7	1981 , 1987, 1991 , 2001, 2007	BLM (2005), Jones (2008)
	Fremont Peak	27.0	1.9	1980 , 1985, 1989, 1993 , 2001, 2007	BLM (2005), Jones (2008)
	Kramer Hills	44.0	13.1	1980, 1982 , 1987, 1991, 1995 , 2007	BLM (2005), Jones (2008)
	Lucerne Valley	35.9	25.1	1980 , 1986, 1990, 1994 , 2005	BLM (2005), Jones (2008)
	Johnson Valley	26.6	6.2	1980 , 1986, 1990, 1994 , 2008	BLM (2005)
	Stoddard Valley	47.9		1981, 1987 , 1991	BLM (2005)
Fort Irwin Expansion Project	MT-1	28.0		1999	Karl (1999)
	NL-1	10.0		1999	Karl (1999)
	Plot 1	14.0		2001	Karl (2002a)
	Plot 2	5.0		2001	Karl (2002a)
	Plot 3	0+		2001	Karl (2002a)
	Plot 4	7.7		2001	Karl (2002a)
	Plot 5	7.0		2001	Karl (2002a)
	Plot 6	5.0		2001	Karl (2002a)
	Plot 8	10.8-12.0		2001, 2002	Karl (2002a, b)
	Plot 9	13.2-13.9		2002	Karl (2002b) (continued)

1. The years listed are all the years that each site was studied. The years in **bold** type are those presented in the previous columns of tortoise density, with the (a) first bold-font year in the list representing the year with the highest historic density and the second bold-font year representing the most recent available data. Note that while the sites may have been surveyed in years subsequent to the most recent year in bold type, density data for adult tortoises are not available.

Available Desert Tortoise Density Estimates on Localized Sites in The Western Mojave Desert

(continued)

Sites were generally small, 1 km ² or 1 mi ² , unless noted. All sites were expected to be occupied by desert tortoises based on habitat					
Site		#Adults/km ²		Time or Time Span for Estimates ¹	Reference
		Time 1	Time 2		
MCAGCC Land Acquisition Project	Johnson Valley Plot 1	7.8		2009	B. Henen, NREA, pers. comm.
	Johnson Valley Plot 2	6.0		2009	B. Henen, NREA, pers. comm.
	Johnson Valley Plot 3	12.5		2009	B. Henen, NREA, pers. comm.
	Twentynine Palms Plot 4	10.6		2009	B. Henen, NREA, pers. comm.
	Cadiz Valley Plot 5	5.0		2009	B. Henen, NREA, pers. comm.
	Cadiz Valley Plot 6	0.0		2009	B. Henen, NREA, pers. comm.
	Johnson Valley Plot 7	4.0		2009	B. Henen, NREA, pers. comm.
	Emerson Lake	3.0		2009	B. Henen, NREA, pers. comm.
	Acorn	10.6		2009	B. Henen, NREA, pers. comm.
Larger Sites	Fort Irwin: Southern Expansion Area Clearance – 32 km ²	7.2		2006-7	A. Walde, pers. comm.
	Hyundai Motor America Mojave Test Track – 18.3 km ²	1.5		2004	Karl (2004b)
1. The years listed are all the years that each site was studied. The years in bold type are those presented in the previous columns of tortoise density, with the (a) first bold-font year in the list representing the year with the highest historic density and the second bold-font year representing the most recent available data. Note that while the sites may have been surveyed in years subsequent to the most recent year in bold type, density data for adult tortoises are not available.					

Broad sampling strata used to estimate tortoise density in the federally listed portion of the species range

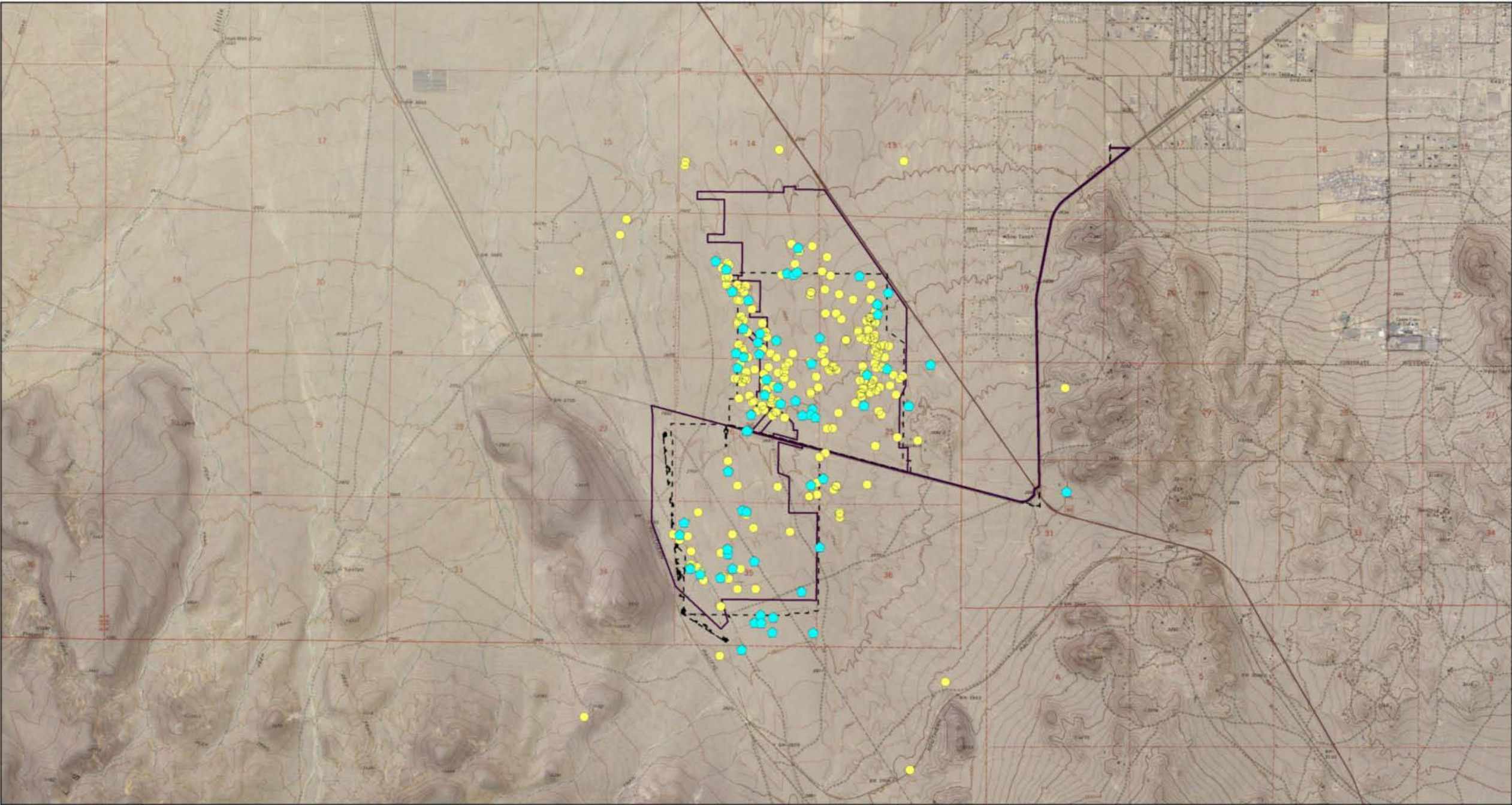
All but the last sampling stratum are USFWS LDS sampling strata.

Major strata are in bold font, followed by monitoring strata within each major stratum.

Size of each stratum is shown.

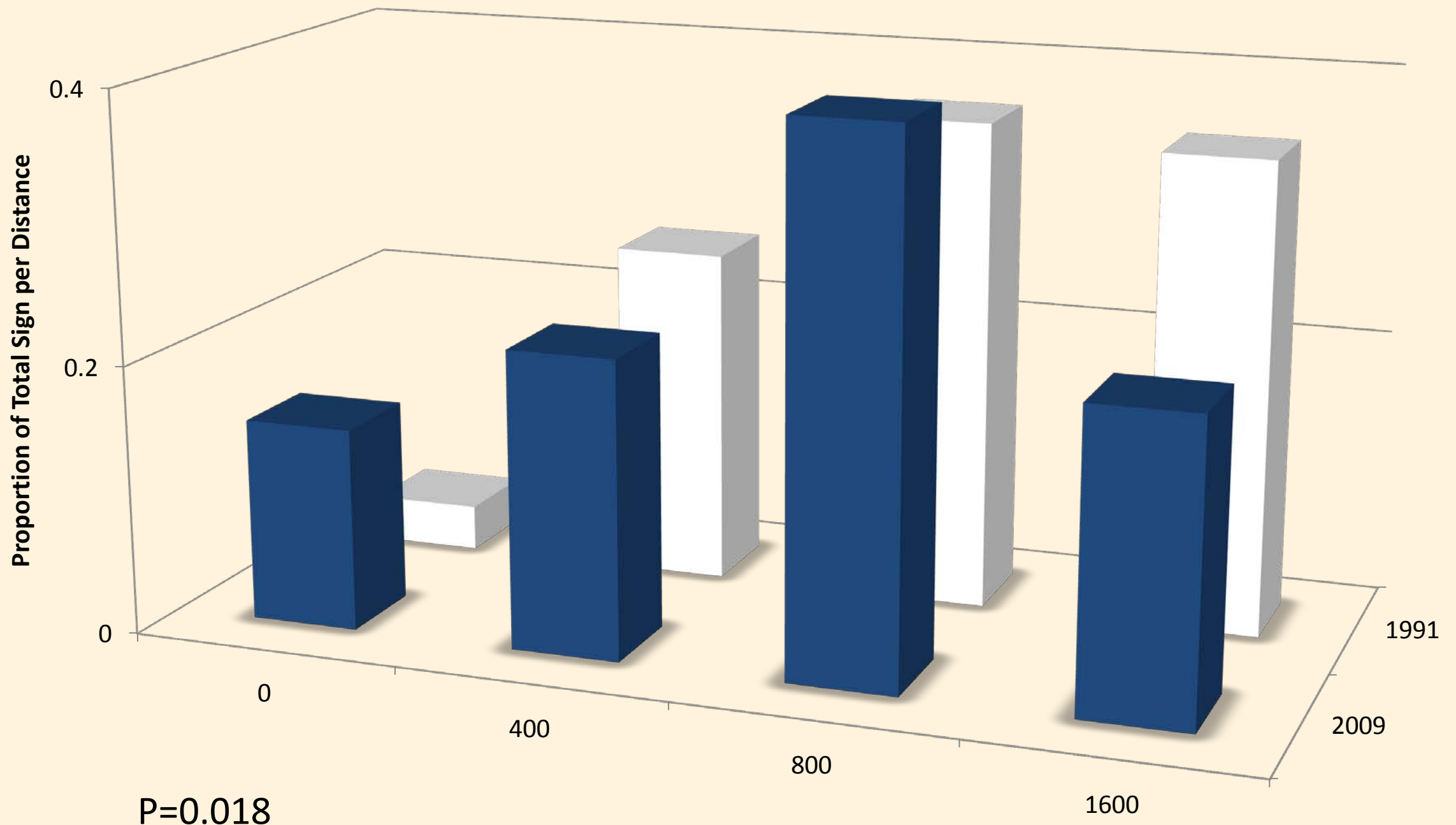
Sampling Stratum	#Adults/ km ²	Sampling Unit Size (km ²)	Date	Source
West Mojave RU¹	4.7	9298.0	2007	USFWS (2009b)
5 sampling strata within the RU used for calculating RU values	2.4-8.2	608-3447	2007	USFWS (2009b)
Eastern Mojave RU	5.8	6681.0	2007	USFWS (2009b)
3 sampling strata within the RU used for calculating RU values	4.2-6.6	1862-2567		
Northeastern RU	1.7	4917.0	2007	USFWS (2009b)
4 sampling strata within the RU used for calculating RU values	1.2-3.3	968.0		
Eastern Colorado RU	5.0	4263.0	2007	USFWS (2009b)
3 sampling strata within the RU used for calculating RU values	4.5-7.1	755-3509		
Northern Colorado	4.6	4038.0	2007	USFWS (2009b)
Upper Virgin River	14.9	114.0	2007	McLuckie et al (2008) in USFWS (2009)
Fort Irwin: Southern Expansion Area	6.8	32	2001-2	(Karl 2002)
32, one km ² sampling units	>0-25.1	1		

1. RU = Recovery Unit



<p>Map Location</p> 	<p>Legend</p> <p>Reconfigured Project Disturbance Area Previous Site Configuration</p> <p>Desert Tortoise Observations</p> <p>Tortoise Burrow</p> <p>Source: NAIP 2005; AECOM 2010; CNDDB 2009</p>	<p>1 inch = 3,500 feet</p> <p>0 3,500 7,000 Feet</p> 	<p>Ridgecrest Solar Power Project</p> <p>2009 Desert Tortoise Observations</p>	<p>AECOM</p> <p>Date: May 2010</p>
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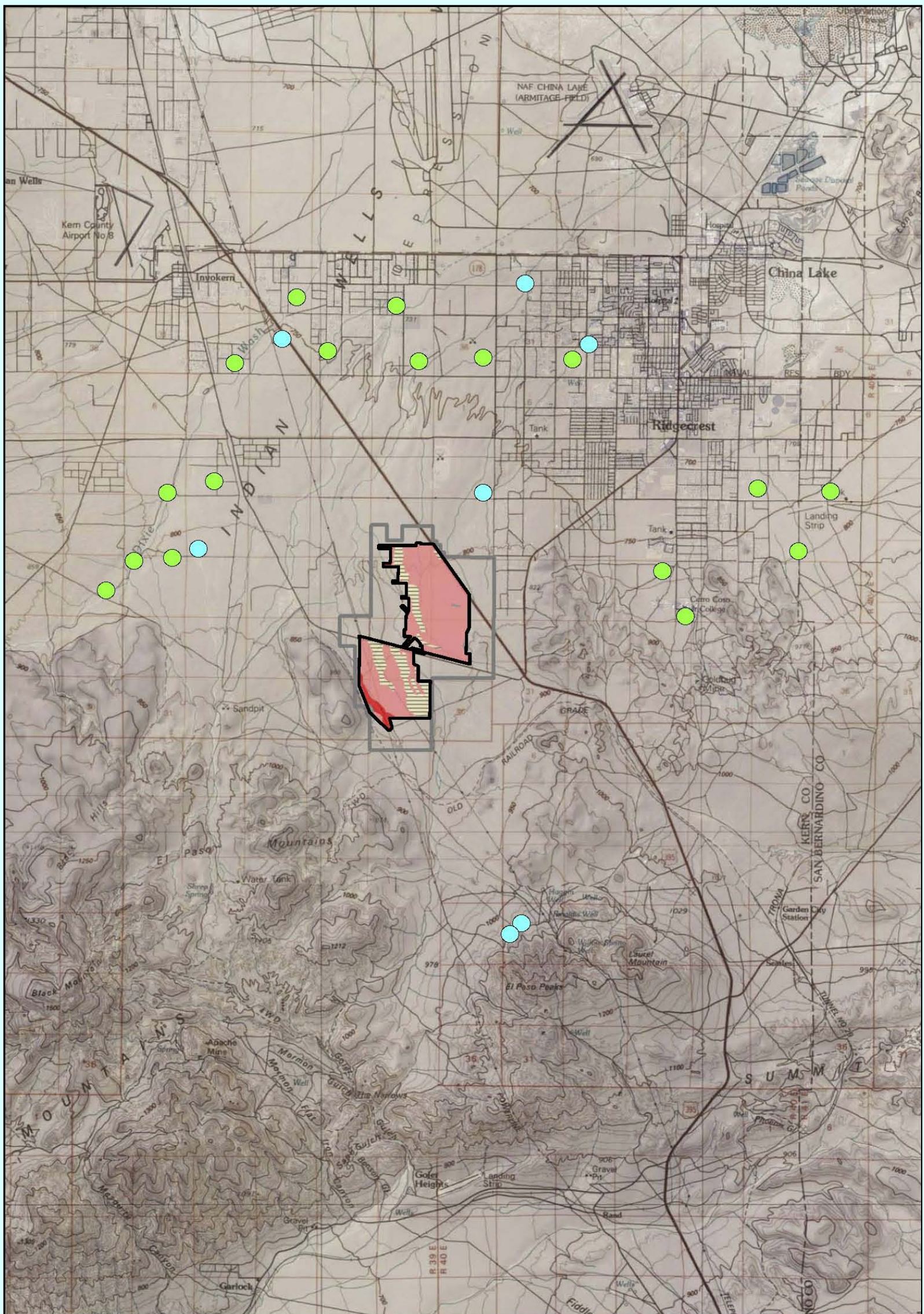
Proportion of Sign Increased Near Fenced Highway



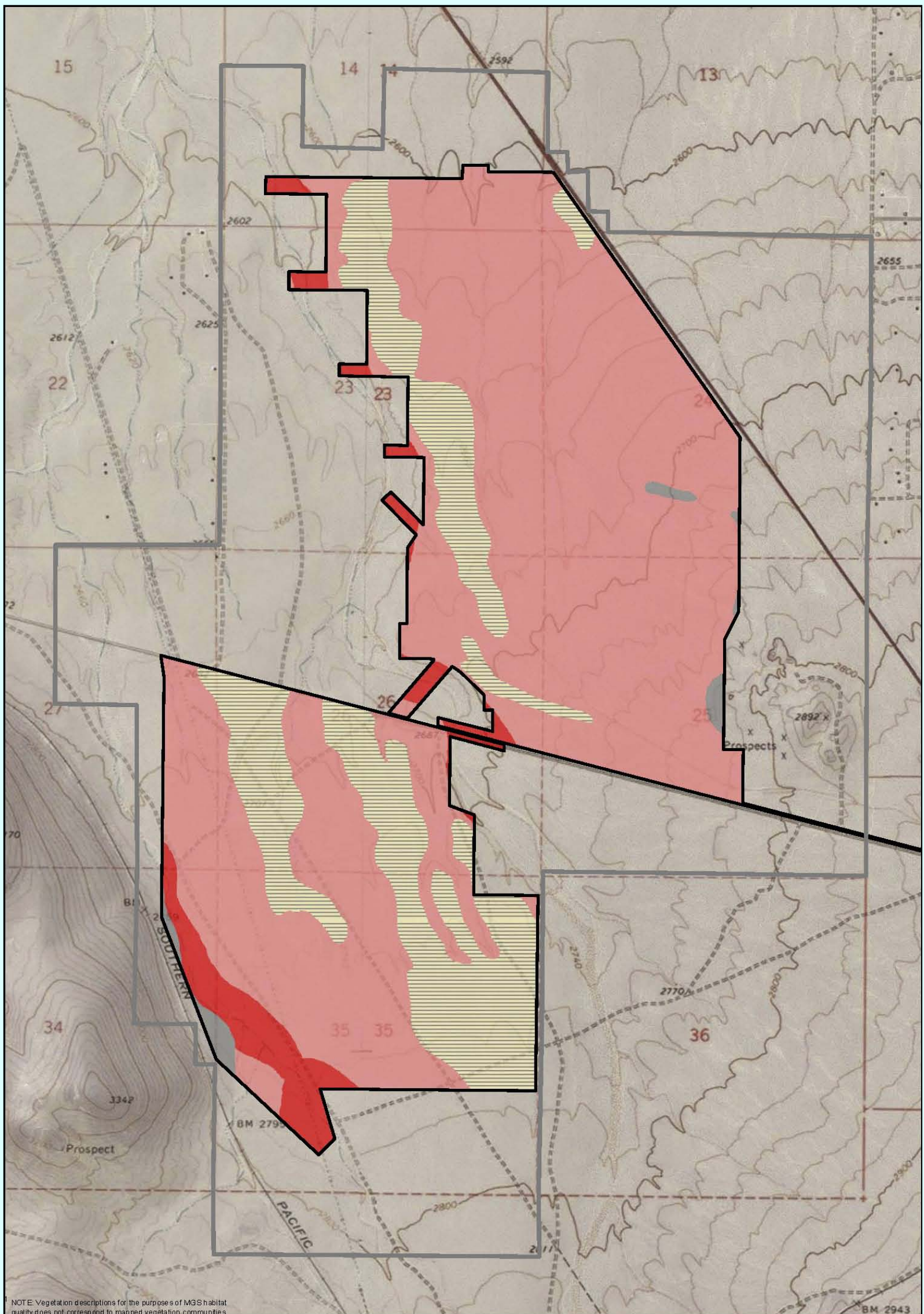
From Boarman 2009

MOHAVE GROUND SQUIRREL

RIDGECREST SOLAR POWER PROJECT



<p>Map Location</p>	<p>Legend</p> <p>MGS Occurrence</p> <ul style="list-style-type: none"> ● Prior to 1988 ● 1988 to Present Disturbance Area <p>Habitat Quality</p> <p>Mohave Ground Squirrel</p> <ul style="list-style-type: none"> High - Desert Washes and Adjacent High Diversity Creosote Bush Medium - Low Diversity Creosote Bush Low - Monotypic Creosote Bush Unsuitable - Rocky Terrain ROW <p>1 inch = 2 miles</p> <p>0 1.5 3 Miles</p>	<p>Ridgecrest Solar Power Project Responses to 12/22/09 Data Request</p> <p>Figure DR-BIO-58-1 Overview Mohave Ground Squirrel Records within 5 Miles of ROW</p> <p>Source: USGS; NAIP 2005; CNDD; Leitner 2009</p>	<p>Solar Millennium</p> <p>AECOM</p> <p>Date: January 2010</p>
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Legend

- ROW
- Disturbance Area

Habitat Quality
Mohave Ground Squirrel¹

- High - Desert Washes and Adjacent High Diversity Creosote Bush
- Medium - Low Diversity Creosote Bush
- Low - Monotypic Creosote Bush
- Unsuitable - Rocky Terrain

1 inch = 1,500 feet

0 1,500 3,000 Feet

Ridgecrest Solar Power Project
Responses to 12/22/09
Data Request

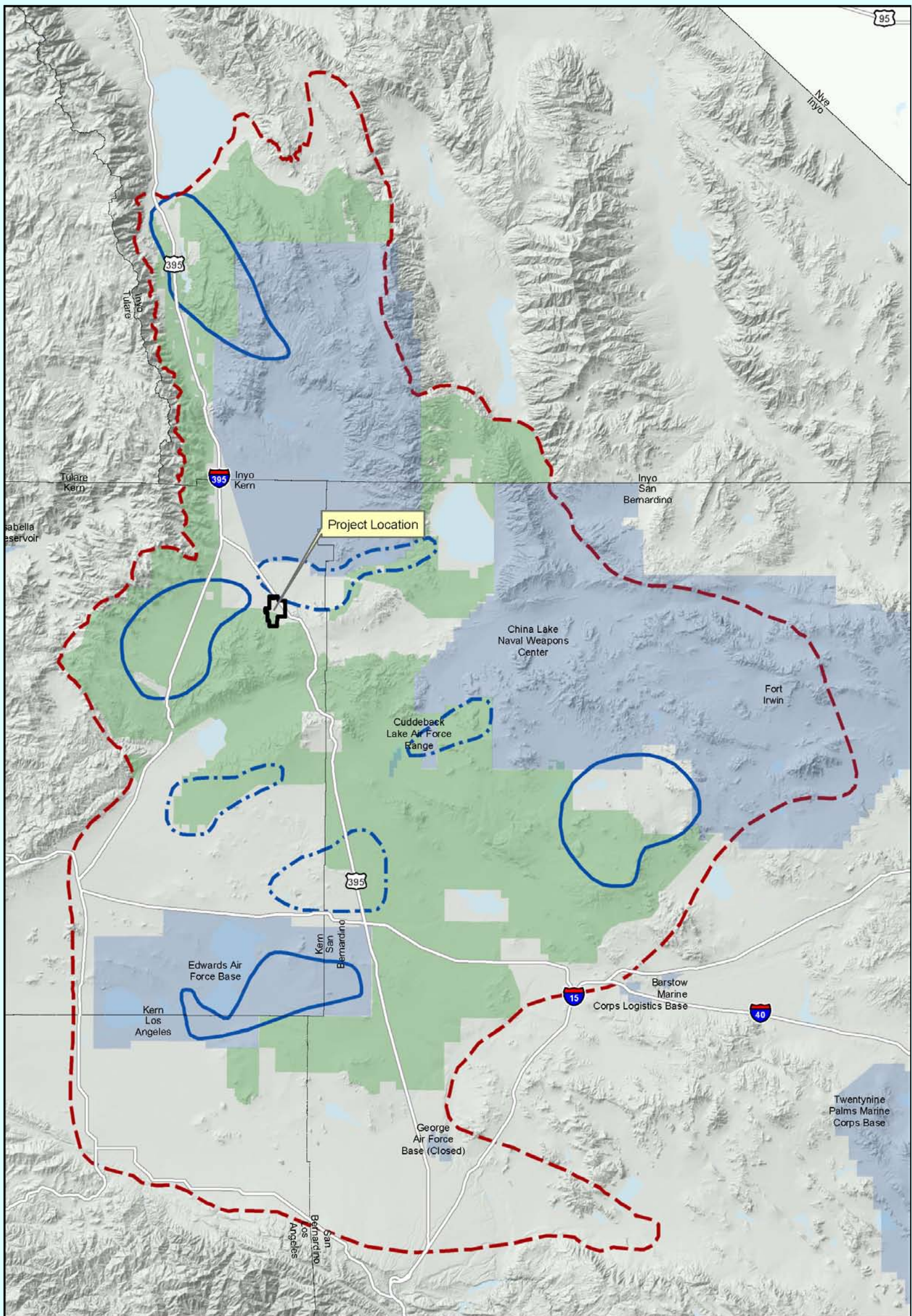
Figure DR-BIO-58-2
Habitat Quality
Mohave Ground Squirrel

Source: USGS, NAIP 2005; Leitner 2009

Solar Millennium

AECOM

Date: January 2010



Legend

- Mohave Ground Squirrel Range
- Identified Core Areas
- Other Known Populations
- West Mojave Plan MGS Conservation Area

1 inch = 60,000 feet

0 30,000 60,000 120,000 Feet

**Ridgecrest Solar Power Project
Responses to 12/22/09
Data Request**

**Figure DR-58-3
Mohave Ground Squirrel
Conservation**

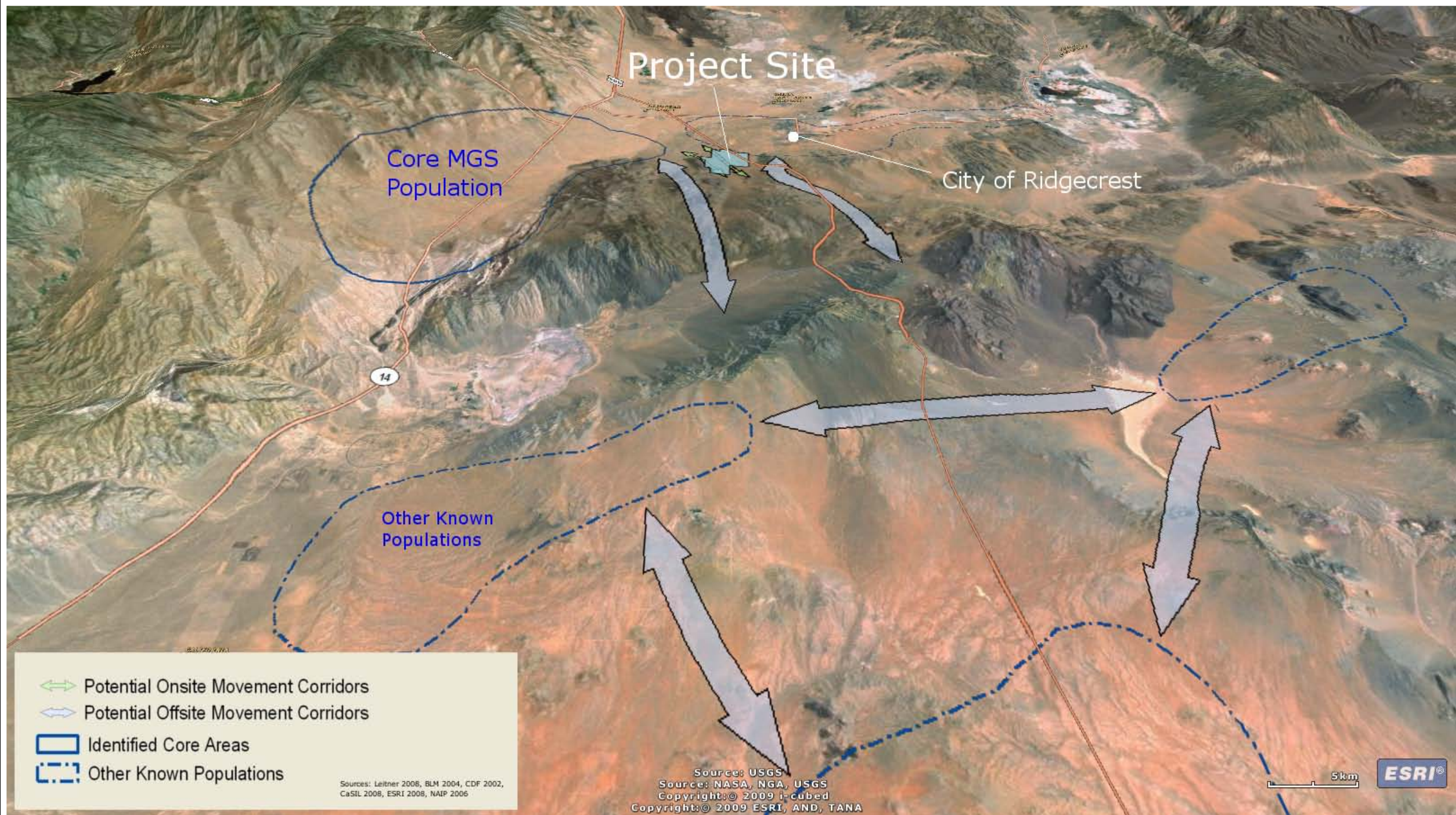
Source: Leitner 2008, BLM 2004, CaSIL 2008, ESRI 2008

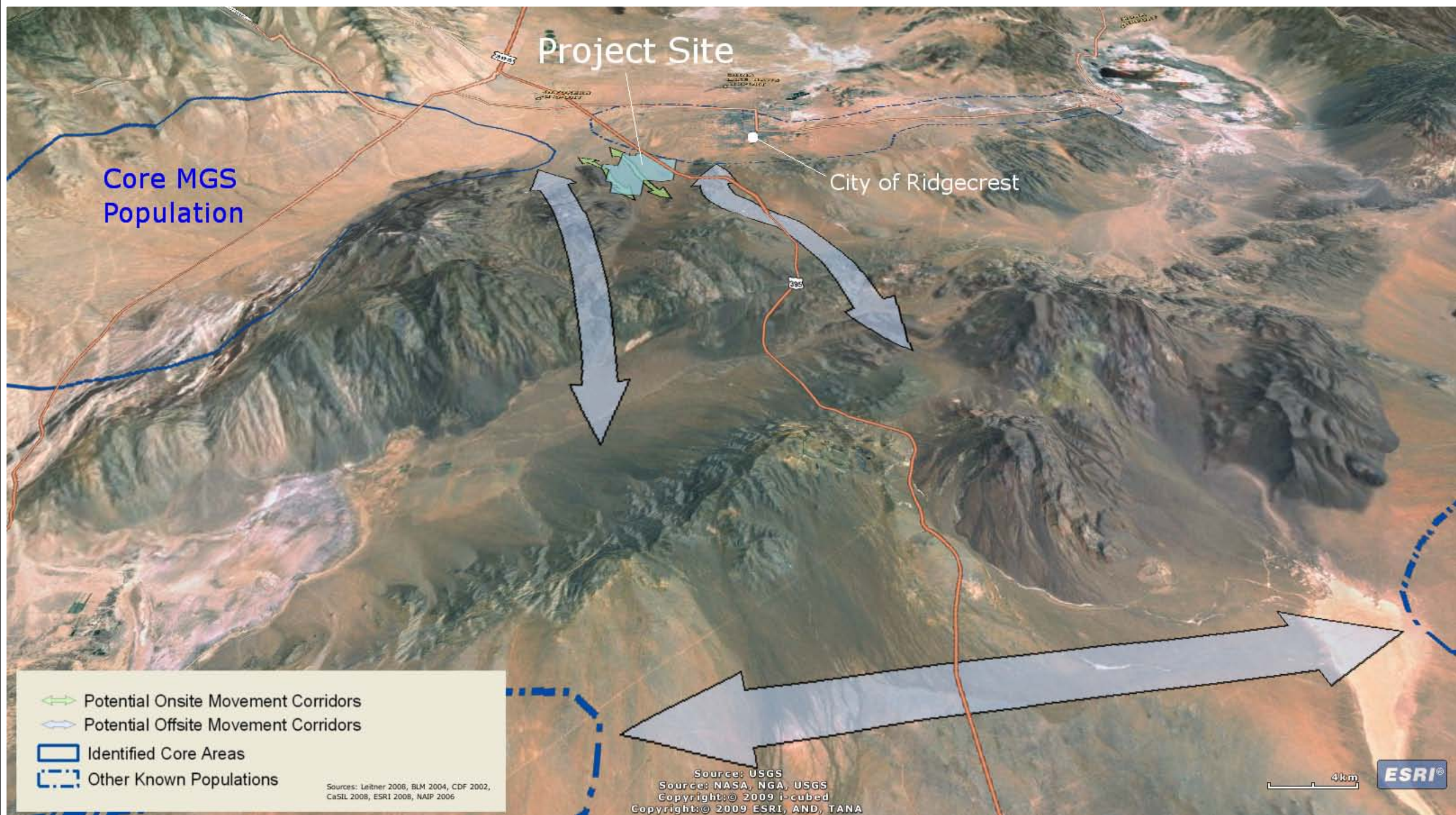
Date: January 2010

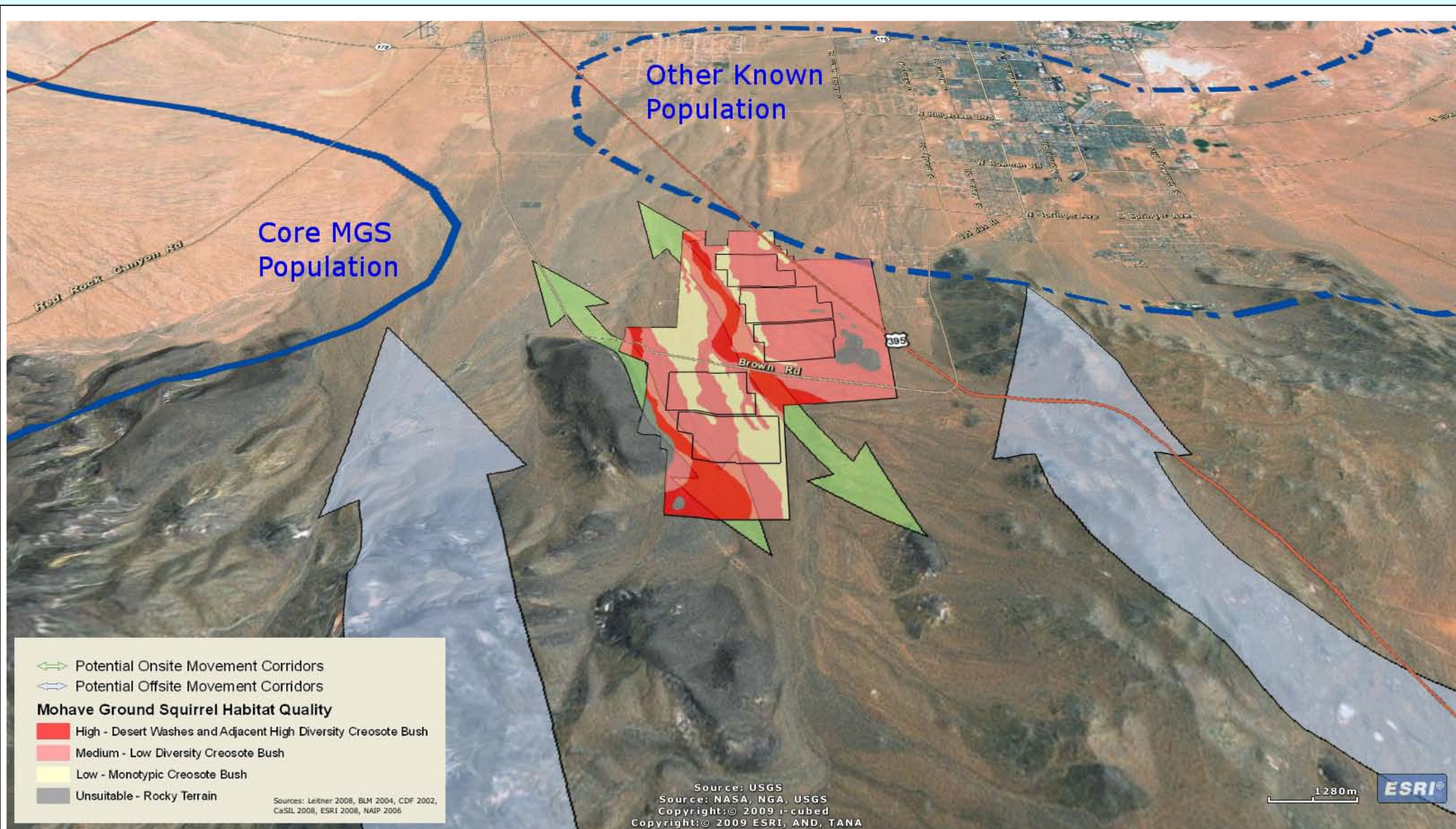
MOHAVE GROUND SQUIRREL

☐ Movement Corridors

RIDGECREST SOLAR POWER PROJECT



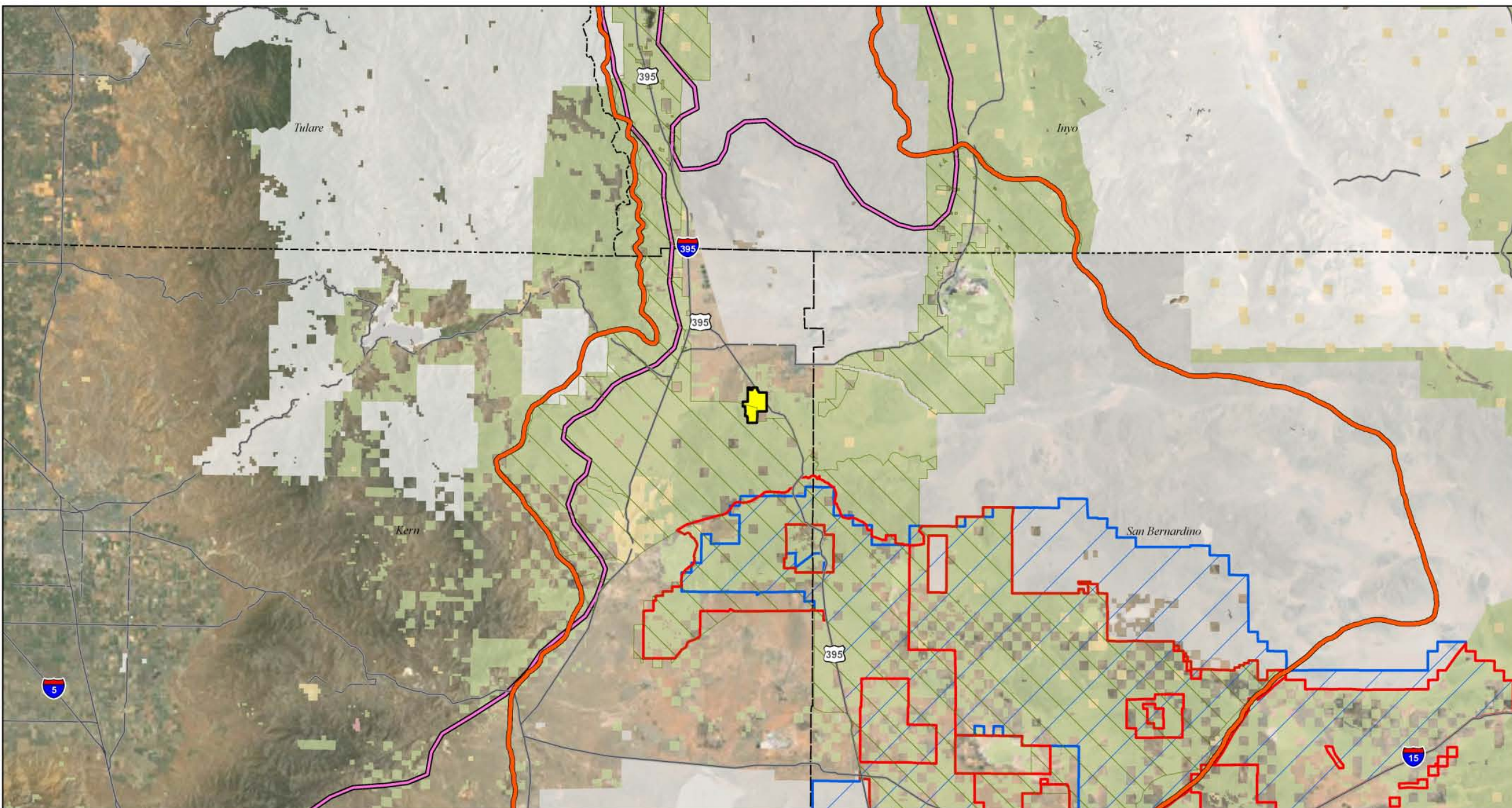




MITIGATION

- ❑ Measures
- ❑ Ratios
- ❑ Performance Criteria
- ❑ Net Effects to Functions and Values

RIDGECREST SOLAR POWER PROJECT



Map Location



Legend

- Ridgecrest Solar Power Plant
- Desert Tortoise Range (DFG)
- Desert Wildlife Management Area
- Tortoise Critical Habitat
- Mohave Ground Squirrel Range (BLM)
- Mohave Ground Squirrel Conservation Area (BLM)

Land Management Data (BLM)

- Bureau of Land Management
- Other Federal Agencies
- Local Government
- Military
- State
- Unclassified/Private (shown as open aerial)

Source: NAIP 2005; AECOM 2010



0 10 20 Miles

Ridgecrest Solar Power Project Habitat Mitigation and Monitoring Plan

Figure 7
**Regional Map of Conservation
Priorities**

AECOM

Date: February 2010

EVAPORATION PONDS

RIDGECREST SOLAR POWER PROJECT

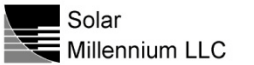




Designed: W. BLACK
Checked: W. BLACK
Drawn: K. S. BEDFORD
Record Drawing by date:

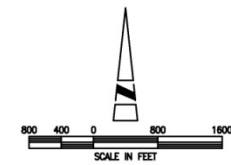
Revisions	DATE	DESCRIPTION

Prepared for:



LEGEND:

	SOLAR FIELD
	PARABOLIC TROUGH
	BALANCE OF PLANT FACILITIES
	PROPOSED ACCESS ROAD (PAVED)
	PROPOSED ACCESS ROAD (GRAVEL)
	RAILROAD
	PROPOSED GAS
	PROPOSED WATER
	PROPOSED TELEPHONE
	PROPOSED ELECTRIC
	EXISTING ELECTRIC
	PROPOSED ELECTRIC
	PROPOSED SECURITY FENCE
	EXISTING CONTOURS (10 FOOT INTERVALS)
	PROPOSED DRAINAGE CHANNEL/FLOW DIRECTION
	EXISTING INTERMITTENT DRAINAGE CHANNEL
	SITE BOUNDARY
	HEADER PIPING
	ACCELERATION LANE



NOTES:

1. SEE GRADING SHEETS 4-7 FOR DETAILED INFORMATION.
2. DETENTION BASIN IS PROVIDED AT POWER BLOCK ONLY. DETENTION BASIN IS PROVIDED FOR WATER QUALITY PURPOSES.

Ridgecrest Solar Power Project

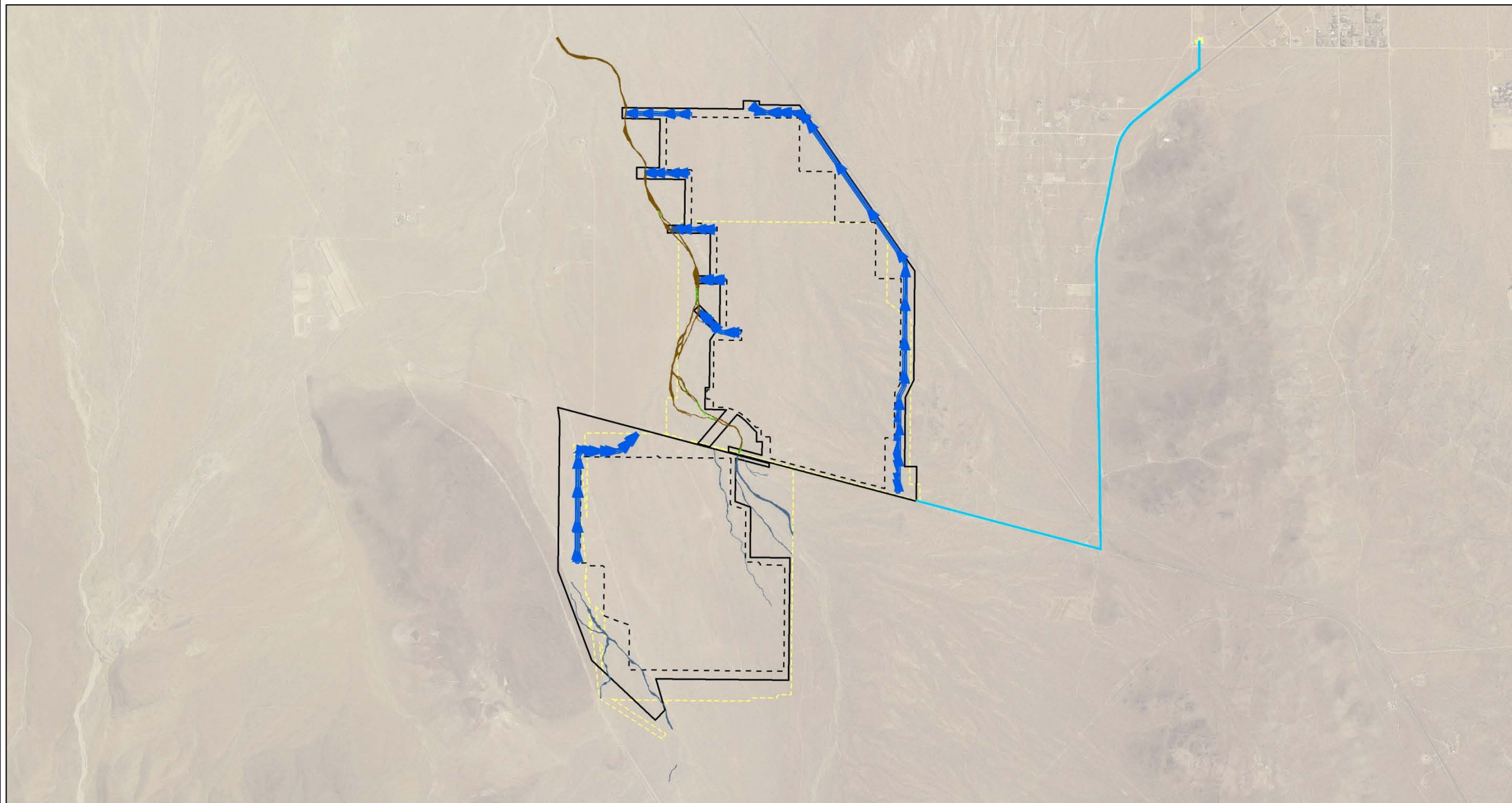
Kern County,
California

Preliminary
Site Plan

STREAMBED ALTERATION AGREEMENT

RIDGECREST SOLAR POWER PROJECT





Map Location



Legend

- Reconfigured Disturbance Area
- Facility Footprint
- Surveyed Disturbance Area
- ➔ Rerouted Drainages
- Mojave Desert Wash Scrub
- Unvegetated Ephemeral Dry Wash
- Wash Dependent Vegetation (Subsampled Areas)

Source: ESRI; USFWS; BLM; AECOM



1 inch = 2,500 feet

0 2,500 5,000 Feet

**Ridgecrest Solar Power Project
Responses to 12/22/09
Data Request**

**Figure DR-BIO-65-3
Jurisdictional Waters of the State
and Rerouted Drainages
Overview**

**Solar
Millennium**

AECOM

Date: January 2010



**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV**

**APPLICATION FOR CERTIFICATION
For the *RIDGECREST SOLAR
POWER PROJECT***

Docket No. 09-AFC-9

**PROOF OF SERVICE
(Revised 4/30/2010)**

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DECLARATION OF SERVICE

I, Elizabeth Copley, declare that on May 10, 2010, I served and filed copies of the attached Ridgecrest Solar Power Project (Docket No. 09-AFC-9) CEC Staff Workshop Solar Millennium PowerPoint Presentations. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at:

[\[http://www.energy.ca.gov/sitingcases/solar_millennium_ridgecrest\]](http://www.energy.ca.gov/sitingcases/solar_millennium_ridgecrest).

The documents have been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(Check all that Apply)

For service to all other parties:

- ☒ sent electronically to all email addresses on the Proof of Service list;
- ☐ by personal delivery;
- ☐ by delivering on this date, for mailing with the United States Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses **NOT** marked "email preferred."

AND

For filing with the Energy Commission:

- ☒ sending an original paper copy and one electronic copy, mailed and emailed Respectively, to the address below (preferred method);

OR

- ☐ depositing in the mail an original and 12 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION

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1516 Ninth Street, MS-4
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I declare under penalty of perjury that the foregoing is true and correct.

