Appendix 5.2E
Wetlands and Waters Documentation

SYCAMORE ENVIRONMENTAL CONSULTANTS, INC.
6355 Riverside Blvd., Suite C, Sacramento, CA 95831
916/ 427-0703 Fax 916/ 427-2175

14 October 2009

Mr. Forrest Vanderbilt
Regulatory Division
U.S. Army Corps of Engineers
Los Angeles District
915 Wilshire Boulevard
Los Angeles, California 90017-3401
P.O. Box 532711
Los Angeles, California 90053-2325

Re: Request for an Approved Jurisdictional Determination
Isolated Waters Determination for Rice Solar Energy Project
Rice Solar Energy, LLC

Dear Mr. Vanderbilt:

Rice Solar Energy, LLC is proposing to construct the Rice Solar Energy Project (RSEP), a solar electrical generation facility, in Rice Valley, eastern Riverside County, CA. The project includes a solar energy collector facility and approximately 10 miles of transmission line (Attachment A). The solar collector site would be located in portions of Sections 19, 20, 29, and 30, in Township 1 South, Range 21 East (T1S, R21E), San Bernardino Base and Meridian. State Route 62 is immediately north of the project site (Attachment A). The new transmission line would be located in portions of T1S R21E Sections 28, 33, 34, and 35; T2S R21E, Sections 1 and 2; T1S R22E, Sections 6, 7, 8, 17, 18, 21 and 22.

The transmission line would extend toward the east from the south central portion of the project area along a new access road for approximately 4.6 miles to where it intercepts Rice Valley Road (a dirt road) and would parallel Rice Valley Road for 5.4 miles to the Western Area Power Administration, Parker-Blythe 161 kV transmission line. A new substation (300 ft x 400 ft) would be located where the new transmission line connects with the Parker-Blythe transmission line.

Rice Solar Energy, LLC asked Sycamore Environmental to assess the jurisdictional status of desert washes in the project area. Rice Valley is a drainage sink with no broader hydrological connectivity. Streams, washes, and playas are dry most of the year with surface water present only after storm events. There are no perennial surface water sources and there is no evidence that a lake ever formed in the valley during wetter climatic periods. All channels observed in the RSEP site and crossed by the new transmission line are ephemeral.

U.S. Geological Survey (USGS) maps of the project area (Attachment A) show four intermittent, blue-line channels in the project area. The USGS mapping also shows that Rice Valley is an isolated drainage basin, with no outlet to adjacent drainage basins.

Two blue line channels enter the property from north of the RSEP site, one at the northwest corner and one near the northeast corner. A portion of these drainages were straightened and rerouted when the Army built berms to keep surface flows from these channels off the airfield. (The project is located on the former Rice Army Airfield, used as a desert warfare training facility during World War II.) Each drainage was rerouted behind a berm. The locations of the straightened drainages are visible on the USGS quad map in Attachment A. The location of the Drainage Control Berms are not visible on the quad map, but occur adjacent to the straightened section of the channels. These berms are now breached allowing water during storm events to flow across the property. As seen on color aerial photographs, numerous small, multi-branching drainage features (desert washes) extend southward across the RSEP site.

Two blue-line ephemeral channels originate in the RSEP facility boundary that flow south towards the bottom of Rice Valley. In addition to the four ephemeral, blue-line channels there are numerous other ephemeral desert washes that flow through the RSEP site. All channels that flow through or originate on-site are ephemeral and lose definition south of the RSEP site.

The transmission line corridor crosses two intermittent blue-line channels within the RSEP facility boundary and seven between the boundary and where the line intersects Rice Valley Road (Attachment A). These channels flow in south-southwest direction until they loose definition near the bottom of Rice Valley.

In 2001, the U.S. Supreme Court ruled in the Solid Waste Agency of Northern Cook County (SWANCC) case that the Corps cannot invoke migratory bird use as the sole basis to establish jurisdiction over certain isolated waters of the U.S., including isolated wetlands. Prior to the ruling, the Corps considered migratory bird use of isolated wetlands to be a tie to interstate or foreign commerce and thus claimed jurisdiction of isolated waterbodies and wetlands. The SWANCC determination found that wetlands that are not adjacent to and do not share a physical connection to, an otherwise jurisdictional waterbody, could be considered isolated. Likewise, drainages that do not have a tributary connection to a jurisdictional waterbody would also be considered isolated and not subject to jurisdiction.

Our field studies found that the USGS mapping accurately reflects conditions on the ground. None of the drainage features are tributary to a traditionally navigable water. They do not cross state lines or Tribal lands. We have concluded that the drainage features that cross through and originate on the RSEP project site as well as those crossed by the transmission line route are isolated intrastate waters with no apparent interstate or foreign commerce connection. As such, these features would not be subject to jurisdiction under the Clean Water Act.

A draft Jurisdictional Determination form is included as Attachment B. Sycamore Environmental is requesting your review and concurrence with this determination. If you have any questions or need additional information regarding this request, please do not hesitate to call me at 916-427-0703.

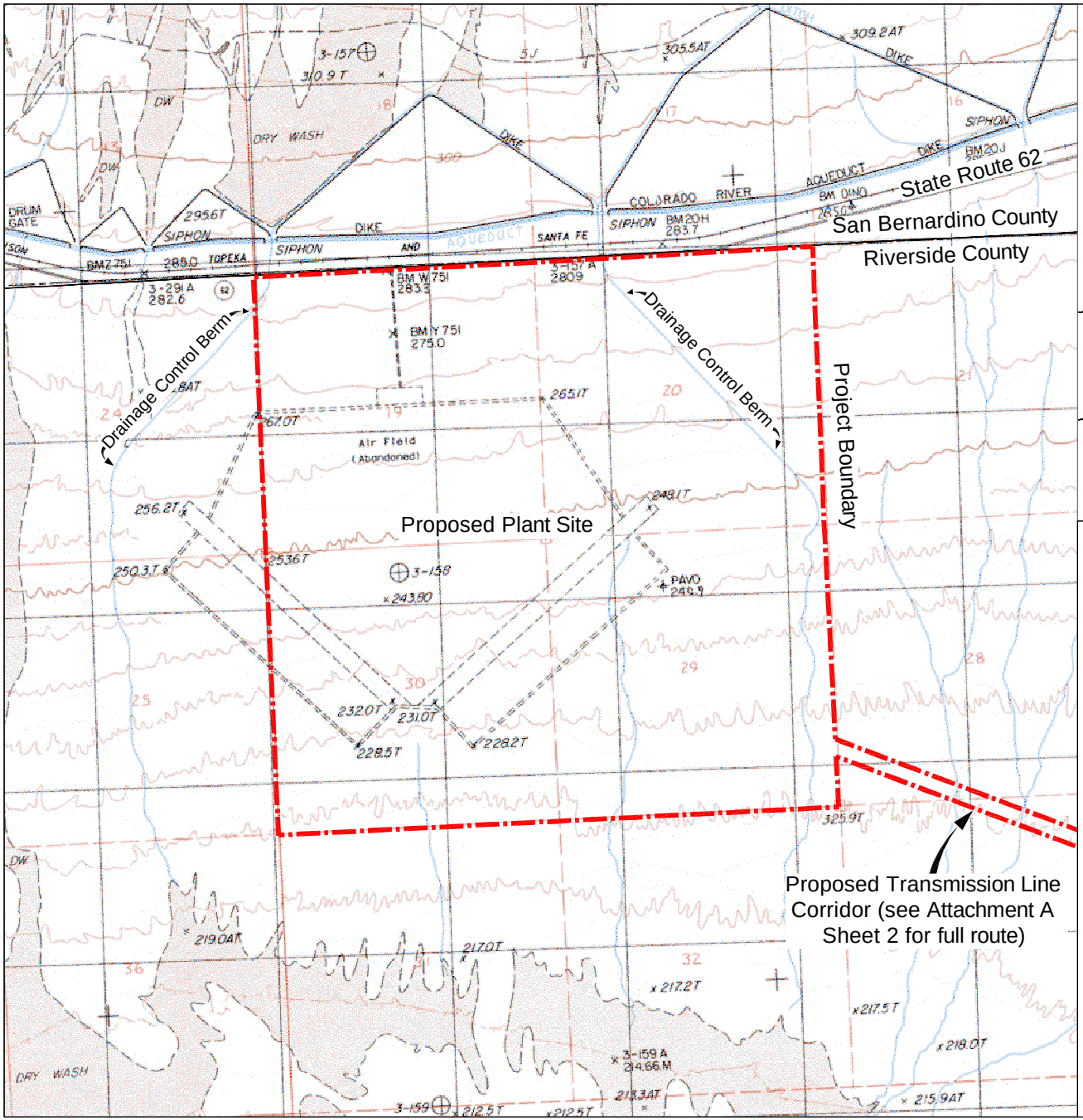
Yours truly,

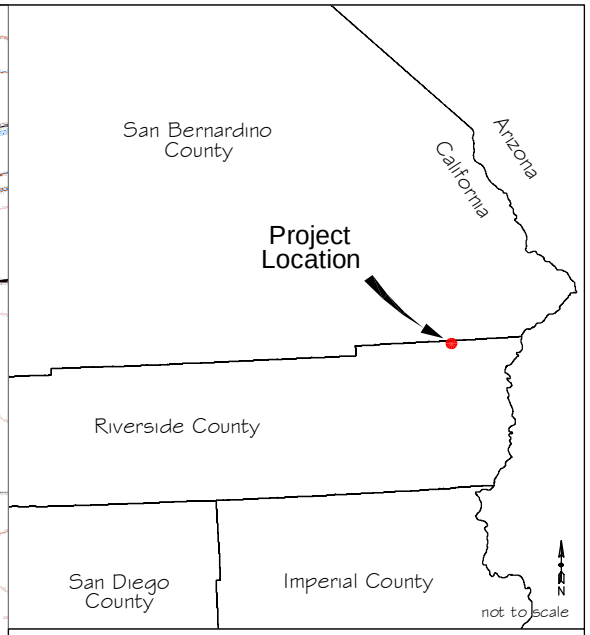
R. John Little, Ph.D.
President

Attachments
c: Douglas Davy, Ph.D., CH2M HILL

Attachment A.

USGS Map Showing Project Features and Blue Lines





Rice Solar Energy Project
Riverside County, CA
13 October 2009

Attachment A
Sheet 1. Location Map

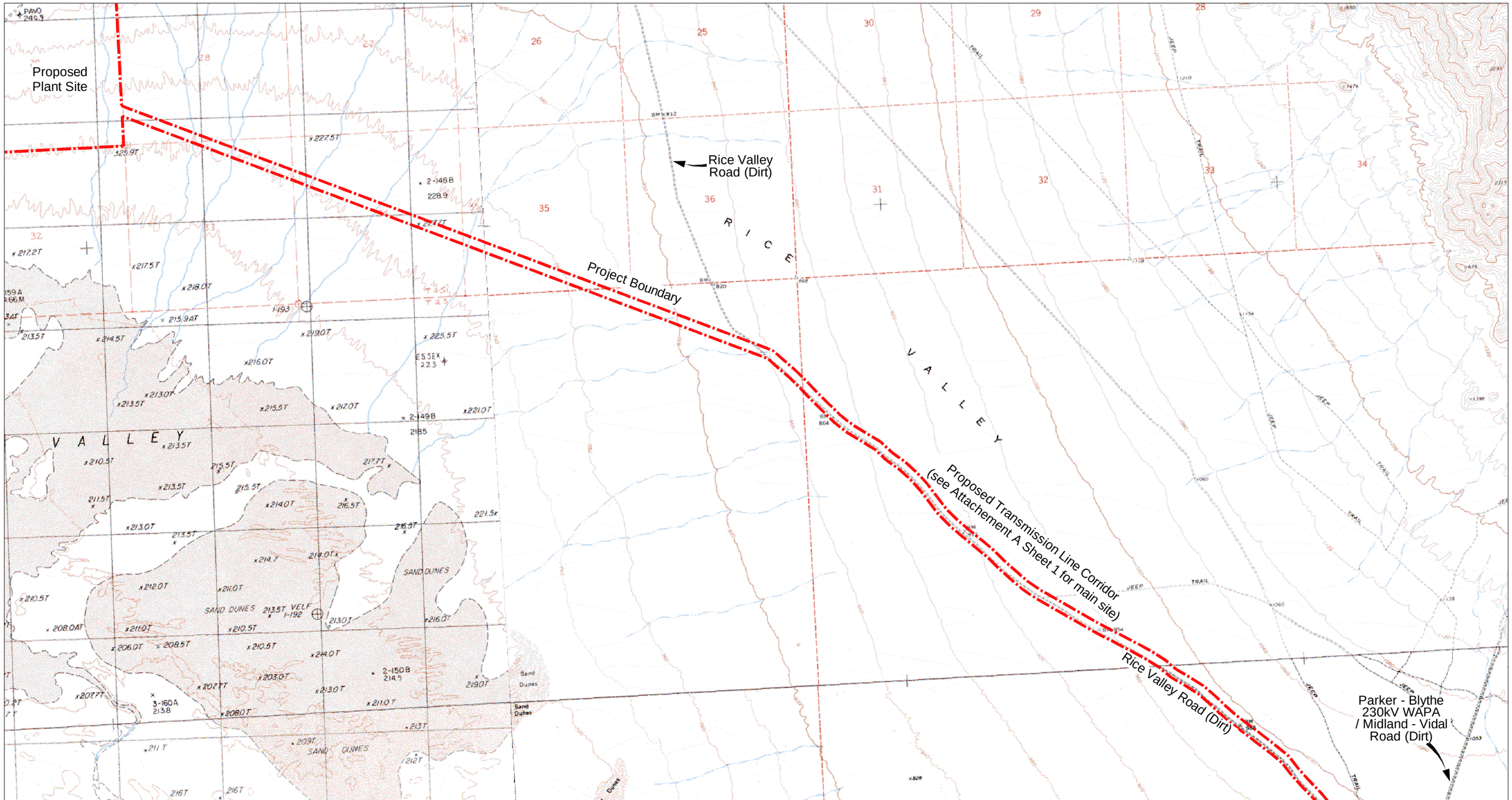
= Project Location

0 1500 3000 ft
Scale: 1" = 3000'
N

SYCAMORE Environmental Consultants, Inc.

Basemap:
Rice, CA, (Provisional Edition 1983),
USGS 7.5-minute Topographic Quadrangle
Teale Data Center DRG

08099_RiceSolar-SPG-AttachA-v13.dwg



Rice Solar Energy Project
Riverside County, CA
13 October 2009

Attachment A
Sheet 2. Location Map

= Project Location

0 1500 3000 ft
Scale: 1" = 3000'
N

SYCAMORE Environmental Consultants, Inc.

Basemap:
Rice and Styx, CA, (Provisional Edition 1983),
Big mana Mts. NW & Grommet, CA (1971)
USGS 7.5-minute Topographic Quadrangles
Teale Data Center DRG

08099_RiceSolar-SPG-AttachA-v13.dwg

Attachment B

Jurisdictional Determination Form

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 13 October 2009

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Los Angeles District, Regulatory Division

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

Rice Solar Energy, LLC is proposing to construct the Rice Solar Energy Project (RSEP), a solar electrical generation facility, in Rice Valley, eastern Riverside County, CA. The project includes a solar energy collector facility and approximately 10 miles of transmission line. The solar collector site would be located in portions of Sections 19, 20, 29, and 30, in Township 1 South, Range 21 East (T1S, R21E), San Bernardino Base and Meridian. State Route 62 is immediately north of the project site . The new transmission line would be located in portions of T1S R21E Sections 28, 33, 34, and 35; T2S R21E, Sections 1 and 2; T1S R22E, Sections 6, 7, 8, 17, 18, 21 and 22.

The transmission line would extend toward the east from the south central portion of the project area along a new access road for approximately 4.6 miles to where it intercepts Rice Valley Road (a dirt road) and would parallel Rice Valley Road for 5.4 miles to the Western Area Power Administration, Parker-Blythe 161 kV transmission line. A new substation (300 ft x 400 ft) would be located where the new transmission line connects with the Parker-Blythe transmission line.

State: CA County/parish/borough: Riverside County City: N/A
Center coordinates of site (lat/long in degree decimal format): Lat. 35.0201° **N**, Long. 118.1260° **W**.
Universal Transverse Mercator: UTM: Zone 11 S, 702,759 m E, 3,771,557 m W
Name of nearest waterbody: Colorado River
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: N/A
Name of watershed or Hydrologic Unit Code (HUC): Southern Mojave (hydrologic unit code 18100100)

- ☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
- ☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- ☒ Office (Desk) Determination. Date: 13 October 2009
- ☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]

- ☐ Waters subject to the ebb and flow of the tide.
- ☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are no** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
   - ☐ TNWs, including territorial seas
   - ☐ Wetlands adjacent to TNWs
   - ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
   - ☐ Non-RPWs that flow directly or indirectly into TNWs
   - ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
   - ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
   - ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
   - ☐ Impoundments of jurisdictional waters
   - ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
   Non-wetland waters: linear feet: width (ft) and/or acres.
   Wetlands: acres.

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

c. Limits (boundaries) of jurisdiction based on: **Not Applicable.**
Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if applicable):[3]

☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: **Rice Valley is a drainage sink within no broader hydrological connectivity. Streams, washes, and playas are dry most of the year with surface water present only after storm events. There are no perennial surface water sources and there is no evidence that a lake ever formed in the valley during wetter climatic periods. All channels observed in the RSEP site and crossed by the new transmission line are ephemeral. None of the drainage features are tributary to a traditionally navigable water. They do not cross state lines or Tribal lands. We have concluded that the drainage features that cross through and originate on the RSEP project site as well as those crossed by the transmission line route are isolated intrastate waters with no apparent interstate or foreign commerce connection. As such, these features would not be subject to jurisdiction under the Clean Water Act**.

[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW
Identify TNW: **N/A**.

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW
Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:
Watershed size: **Pick List**
Drainage area: **Pick List**
Average annual rainfall: inches
Average annual snowfall: inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.
Project waters are **Pick List** river miles from RPW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Project waters are **Pick List** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: .

Identify flow route to TNW[5]: .
Tributary stream order, if known: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: feet
Average depth: feet
Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):

☐ Silts	☐ Sands	☐ Concrete
☐ Cobbles	☐ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: **Pick List.** Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☐ Bed and banks
☐ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

☐ Riparian corridor. Characteristics (type, average width): .
☐ Wetland fringe. Characteristics: .
☐ Habitat for:
  ☐ Federally Listed species. Explain findings: .
  ☐ Fish/spawn areas. Explain findings: .
  ☐ Other environmentally-sensitive species. Explain findings: .
  ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:
Properties:
  Wetland size: acres
  Wetland type. Explain: .
  Wetland quality. Explain: .
Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:
Flow is: **Pick List**. Explain: .

Surface flow is**: Pick List**
  Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
  ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:
☐ Directly abutting
☐ Not directly abutting
  ☐ Discrete wetland hydrologic connection. Explain: .
  ☐ Ecological connection. Explain: .
  ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW
Project wetlands are **Pick List** river miles from TNW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Flow is from: **Pick List.**
Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .
Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

☐ Riparian buffer. Characteristics (type, average width): .
☐ Vegetation type/percent cover. Explain: .
☐ Habitat for:
  ☐ Federally Listed species. Explain findings: .
  ☐ Fish/spawn areas. Explain findings: .
  ☐ Other environmentally-sensitive species. Explain findings: .
  ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**
Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: **.**

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **.**

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

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[8] See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☒ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above):

Rice Valley is a drainage sink within no broader hydrological connectivity. Streams, washes, and playas are dry most of the year with surface water present only after storm events. There are no perennial surface water sources and there is no evidence that a lake ever formed in the valley during wetter climatic periods. All channels observed in the RSEP site and crossed by the new transmission line are ephemeral.

U.S. Geological Survey (USGS) maps of the project area show four unnamed blue-line channels in the project area. The USGS mapping also shows that Rice Valley is an isolated drainage basin, with no outlet to adjacent drainage basins.

Two unnamed blue line channels enter the property from north of the RSEP site, one at the northwest corner and the other near the northeast corner. A straightened segment of these drainages resulted when the Army built a berm to keep surface flows off the airfield and rerouted the drainages behind them. (The project is located on the former Rice Army Airfield, used as a desert warfare training facility during World War II.) These berms are now breached and numerous small, multi-branching drainage features that form an anastomosing pattern on aerial photographs, and extend southward across the RSEP site.

The transmission line crosses two unnamed intermittent blue-line channels within the RSEP facility boundary and seven between the boundary and where the line intersects Rice Valley Road. These channels flow in south-southwest direction until they loose definition near the bottom of Rice Valley. Numerous small ephemeral drainages occur in the project area in addition to the mapped unnamed, intermittent blue-line channels.

None of the drainage features are tributary to a traditionally navigable water. They do not cross state lines or Tribal lands. The drainage features that cross through and originate on the RSEP project site as well as those crossed by the transmission line route are isolated intrastate waters with no apparent interstate or foreign commerce connection. As such, these features would not be subject to jurisdiction under the Clean Water Act.

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☒ Non-wetland waters (i.e., rivers, streams): **1,043,054** linear feet **3ft average** width (ft).
☐ Lakes/ponds: 0 acres.
☐ Other non-wetland waters: 0 acres. List type of aquatic resource: .
☐ Wetlands: 0 acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
☐ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☐ Office concurs with data sheets/delineation report.

☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☒ U.S. Geological Survey Hydrologic Atlas: .
☒ USGS NHD data.
☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name: 7.5 ' Rice, Grommet, and Big Maria Mountains Northwest.
☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
☒ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): 4 April 2005, ©2009 Tele Atlas Image © DigitalGlobe, Google Earth Pro.
or ☐ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD:

There are no 303d listed waters by state or by waterbody name, no reported causses for impairment, and no approved TMDLs reported by the EPA for the Southern Mojave (hydrologic unit code 18100100) watershed (http://iaspub.epa.gov/tmdl_waters10/huc_rept.control?p_huc=18100100&p_huc_desc=SOUTHERN).

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Evaluation of Wetlands and Waters
and Impact Estimates
for the
Rice Solar Energy Project

Riverside County, CA
October 2009

Introduction

As requested by Rice Solar Energy, LLC, Sycamore Environmental Consultants, Inc. has prepared an evaluation of potential waters and wetlands in the Rice Solar Energy Project (RSEP) area. The evaluation included mapping potential waters and wetlands, estimating the total area of these features in the project area, and estimating potential project impacts.

The RSEP consists of two components: the proposed plant site project parcel area[1] (2,560 ac) and a generator tie-line (T-line) corridor (338 ac). This evaluation of wetlands and waters was based on a 25 percent sample of the project parcel (640 ac) and a 4.6-mi portion (13.38 ac) of the T-line corridor. The 4.6-mi portion of the T-line corridor was evaluated because a new access road will need to be constructed to install and service the transmission line towers. (This evaluation does not include the portion of the T-line corridor from its intersection with Rice Valley Road to its eastern terminus at the Parker-Blythe 161 kV transmission line, because a new access road is not required in this area and it is assumed that the new transmission towers will avoid desert drainage channels.)

No wetlands, permanent water bodies such as ponds, lakes, perennial streams, etc., occur in the study area.

Methods

To estimate the acreage of waters (ephemeral drainages; desert washes) in the RSEP area, from which estimates of impact acreages could be made, color aerial photographs (4 April 2005, ©2009 Tele Atlas Image © DigitalGlobe, Google Earth Pro) were reviewed. After closely reviewing aerials of the entire site, it was determined that by digitizing the desert washes in a subset of the project parcel, a reasonable estimate could be made of the total acreage of ephemeral channels present.

A decision was therefore made to digitize 25 percent (640 ac) of the project area. The southwest (SW) quarter of the project area was selected at random (referred to as the 'SW study area'). Based on aerial photographs and from field observations made during botanical surveys in March 2009, the density of ephemeral drainage features in the other three-quarters of the proposed plant site could be assumed to be similar to the SW study area.

[1] The final, fenced, project area for construction and operation will be 1,504 ac, sited within this 2,560 ac project parcel.

Using a 4 April 2005 aerial image of the 640 ac SW study area, ephemeral drainage features were digitized (Attachment A). The total length of the digitized features in the SW study area was calculated using AutoCad® functions. An average channel width of 3 ft was assumed based on field observations made during the March 2009 botanical surveys.

The total area of ephemeral drainages present in the SW study area was calculated by multiplying the total length of drainage features by an assumed average width of 3 ft. An estimate of the area of ephemeral drainages per acre for the entire proposed plant site was calculated by dividing the total acres of ephemeral drainages by the total area of the SW study area (640 ac).

Digitizing of ephemeral drainage features along the 4.6 mi portion the T-line corridor was conducted using the 4 April 2005 aerial image. The ephemeral drainages in this portion of the T-line corridor were digitized in AutoCad® and acreages were calculated using AutoCad® functions. The total acreage of ephemeral drainages in this portion of the T-line corridor was calculated by multiplying the total length of ephemeral features by an assumed average width of 3 ft.

The project footprint acreage (fenced area during construction and operation) of the proposed plant site within the 2,560 ac project area (Attachment A), is 1,504 ac. The estimated footprint of the T-line corridor is approximately 13.38 ac (4.6 mi long x 24 ft wide).

Results

Based on field observations made during botanical surveys in March 2009, no wetlands occur in the project area. U.S. Geological Survey (USGS) maps show four intermittent blue-line channels in the proposed plant site. The 4.6 mi long portion of the T-line corridor crosses seven intermittent blue-line channels. These intermittent channels are all ephemeral as are all the drainage features in the project area. A map in Attachment A shows locations of ephemeral drainage features in the SW study area and the 4.6 mi portion of the T-line corridor.

A summary of acreages of ephemeral drainages in the SW study area is in Table 1. These data were used to extrapolate the total length of ephemeral drainages and to estimate acreages of impacts to ephemeral drainages in the entire project area.

Table 1. Summary of ephemeral drainages evaluated in SW study area.

Project Area Location	Total ac	Length of Ephemeral Drainages (ft)	Total Acreage of Ephemeral Drainages (ac)	Acreage (ac) of Ephemeral Drainage per Acre
SW Quarter of Proposed Plant Site	640	259,356	17.86	0.028

A total of 17.86 ac of ephemeral drainages were mapped in the 640 ac SW quarter of the proposed plant site. By dividing the total acreage of ephemeral drainages by the total area it was determined that each acre contains approximately 0.028 ac of ephemeral drainage (17.86 ac/ 640 ac = 0.028 per ac).

Using the data obtained from the evaluation of ephemeral drainages in the SW quarter of the plant site (Table 1), the estimated acreage of ephemeral drainages and potential impacts was extrapolated for the entire 2,560 ac plant site (Table 2). The total estimated acreage of ephemeral drainages for the plant site is 71.68 ac (0.028 per ac x 2,560 ac = 71.68 ac). The footprint of the plant site's fenced area for construction and operation is 1,504 ac. Therefore the estimated acreage of impacts to ephemeral channels is 42.11 ac (0.028 ac x 1,504 ac = 42.11 ac).

The estimated footprint of the T-line corridor is 13.38 ac (Table 2). A total of 0.39 ac of ephemeral drainages were digitized in the 4.6 mi portion the T-line corridor (Table 2). Therefore, it is assumed that 0.39 ac of ephemeral drainage will be affected by construction of the access road along this 4.6 mi long T-line segment.

Table 2. Summary of potential project impacts to ephemeral drainage features in the entire project area (extrapolated from results of the SW study area).

Project Area Location	**Length of Ephemeral Drainages (ft)**	**Total Ephemeral Drainages (ac)** [1]	**Estimated Project Footprint (ac)**	**Estimated Ephemeral Drainage Impact (ac)**
Proposed Plant Site	1,037,424	71.68	1,504	42.11
T-line (4.6 mi portion)	5,630	0.39	13.38	0.39
Total:	**1,043,054**	**72.07**	**1,517.38**	**42.5**

[1] Assumed average channel width of 3 ft

An estimated total of 72.07 ac of ephemeral drainages occur in the proposed plant site and the T-line corridor.

Construction of the proposed plant site and the access road for the T-line corridor would affect an estimated 42.5 ac of ephemeral drainages.

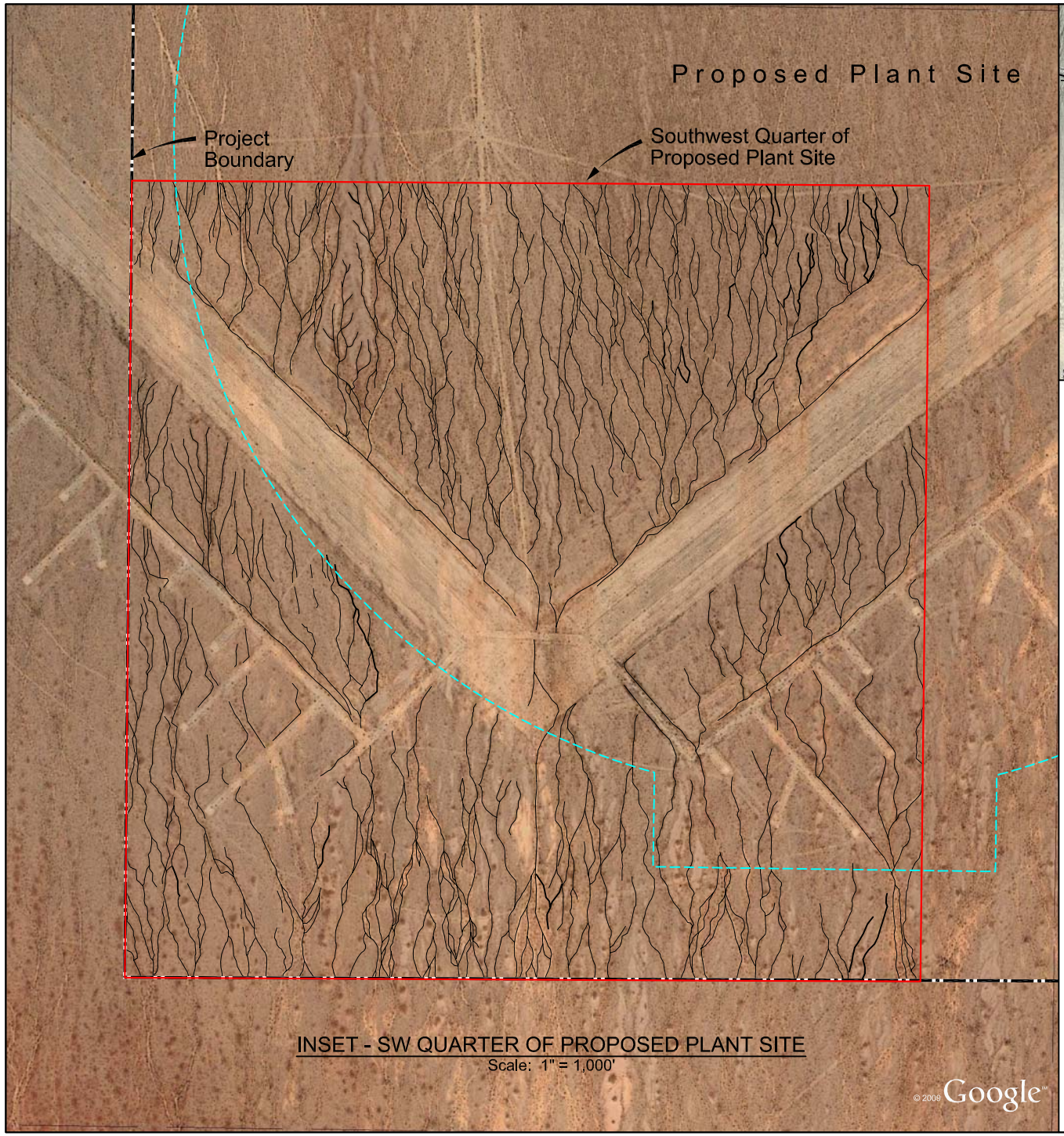
ATTACHMENT A.

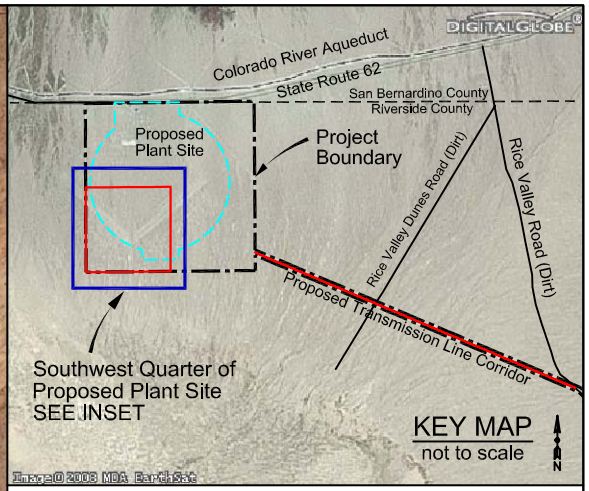
Ephemeral Drainage Maps

Rice Solar Energy Project
Riverside County, CA

Sheet 1 of 2

Sheet 2 of 2





Rice Solar Energy Project
Riverside County, CA
13 October 2009

Evaluation of Wetlands and Waters and Impact Estimates

Southwest quarter of Plant Site (643 ac)
Sheet 1 of 2

= Project Boundary

= Wetlands/ Waters Study Area

= Plant Site Impact Boundary

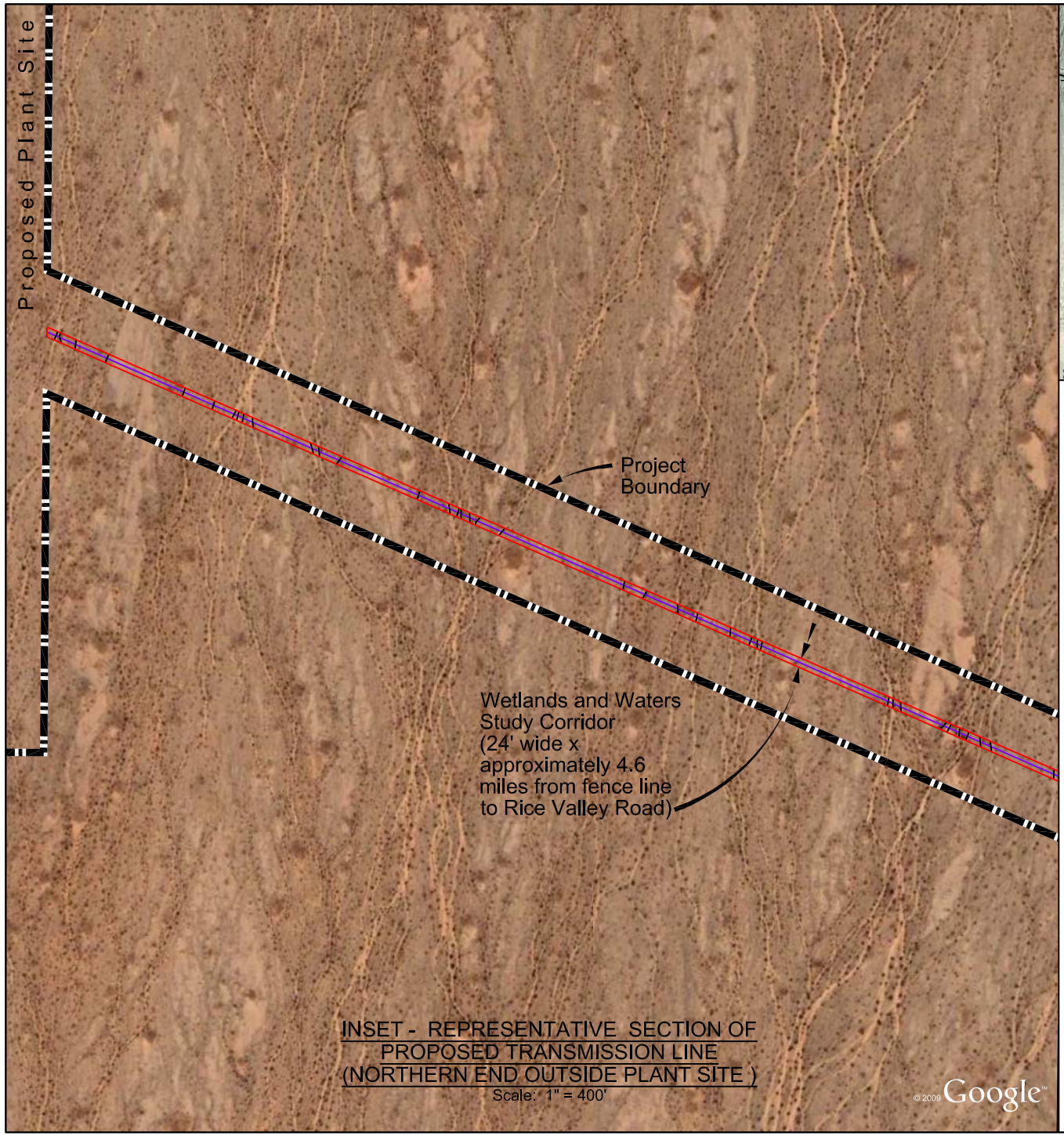
= Ephemeral Drainage

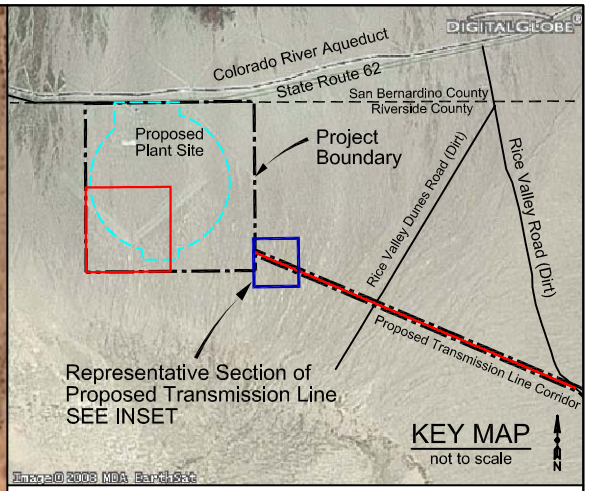
0 500 1,000 ft
Scale: 1" = 1,000'
N

SYCAMORE Environmental Consultants, Inc.

Aerial Photograph: 4 April 2005,
©2009 Tele Atlas Image © DigitalGlobe, Google Earth Pro
Google Earth ProBoundary: LAYOUT (1-19-09).dwg, from CH2M HILL

08099Rice_WatersMapping.dwg





Rice Solar Energy Project
Riverside County, CA
13 October 2009

Evaluation of Wetlands and Waters and Impact Estimates

Representative Section of Proposed Transmission Line
Sheet 2 of 2

= Project Boundary

= Proposed T-Line Wetlands/ Water Study Corridor

= Proposed Transmission Line

= Ephemeral Drainage

0 200 400 ft
Scale: 1" = 400'
N

SYCAMORE Environmental Consultants, Inc.

Aerial Photograph: 4 April 2005,
©2009 Tele Atlas Image © DigitalGlobe, Google Earth Pro
Google Earth ProBoundary: LAYOUT (1-19-09).dwg, from CH2M HILL

08099Rice_WatersMapping.dwg