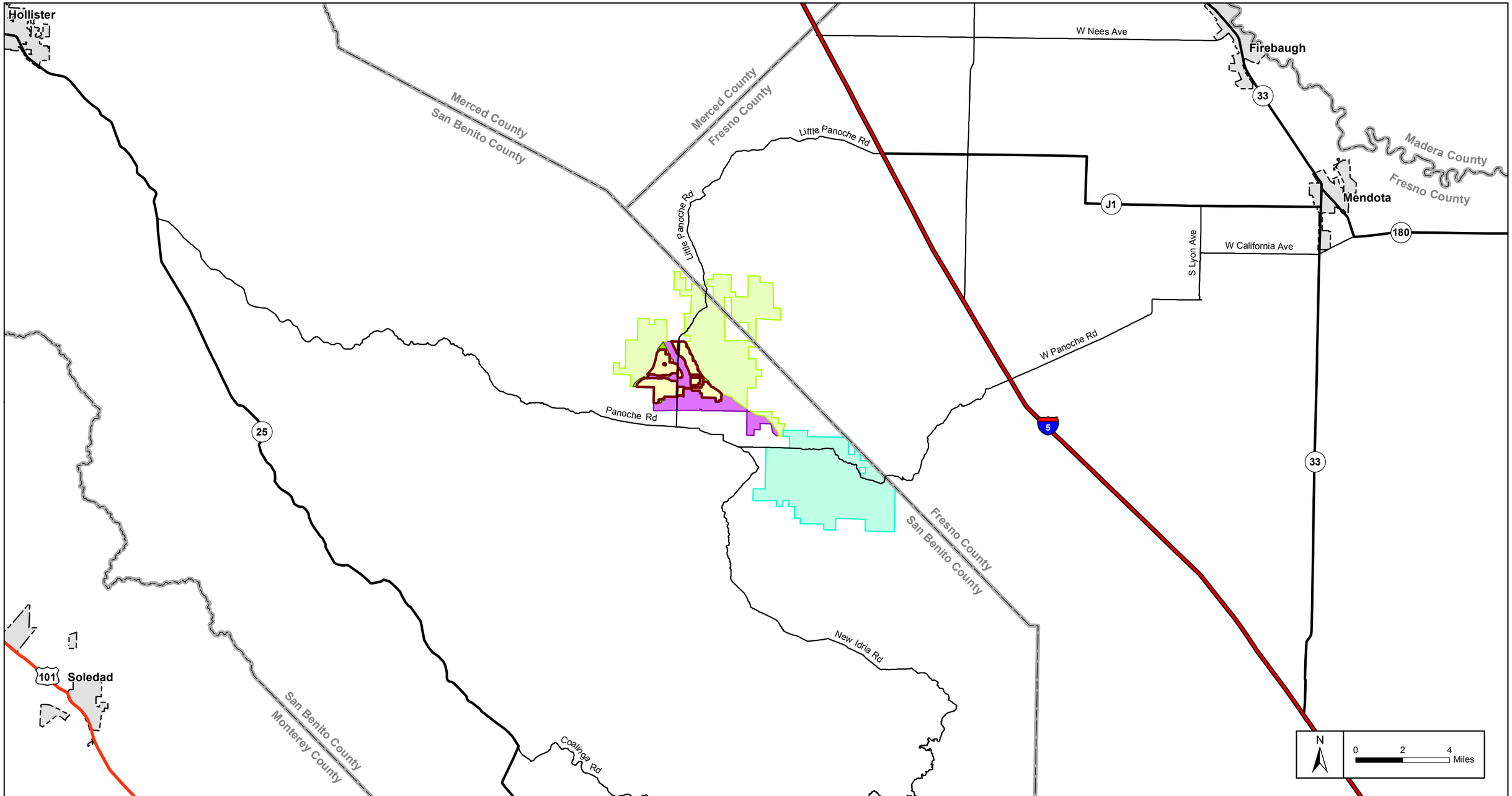
APPENDIX A

Figures



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Legend

- Project Footprint
- On-site Conservation Lands
- Silver Creek Ranch Conservation Lands
- Valadeao Ranch Conservation Lands
- Valley Floor Conservation Lands
- City

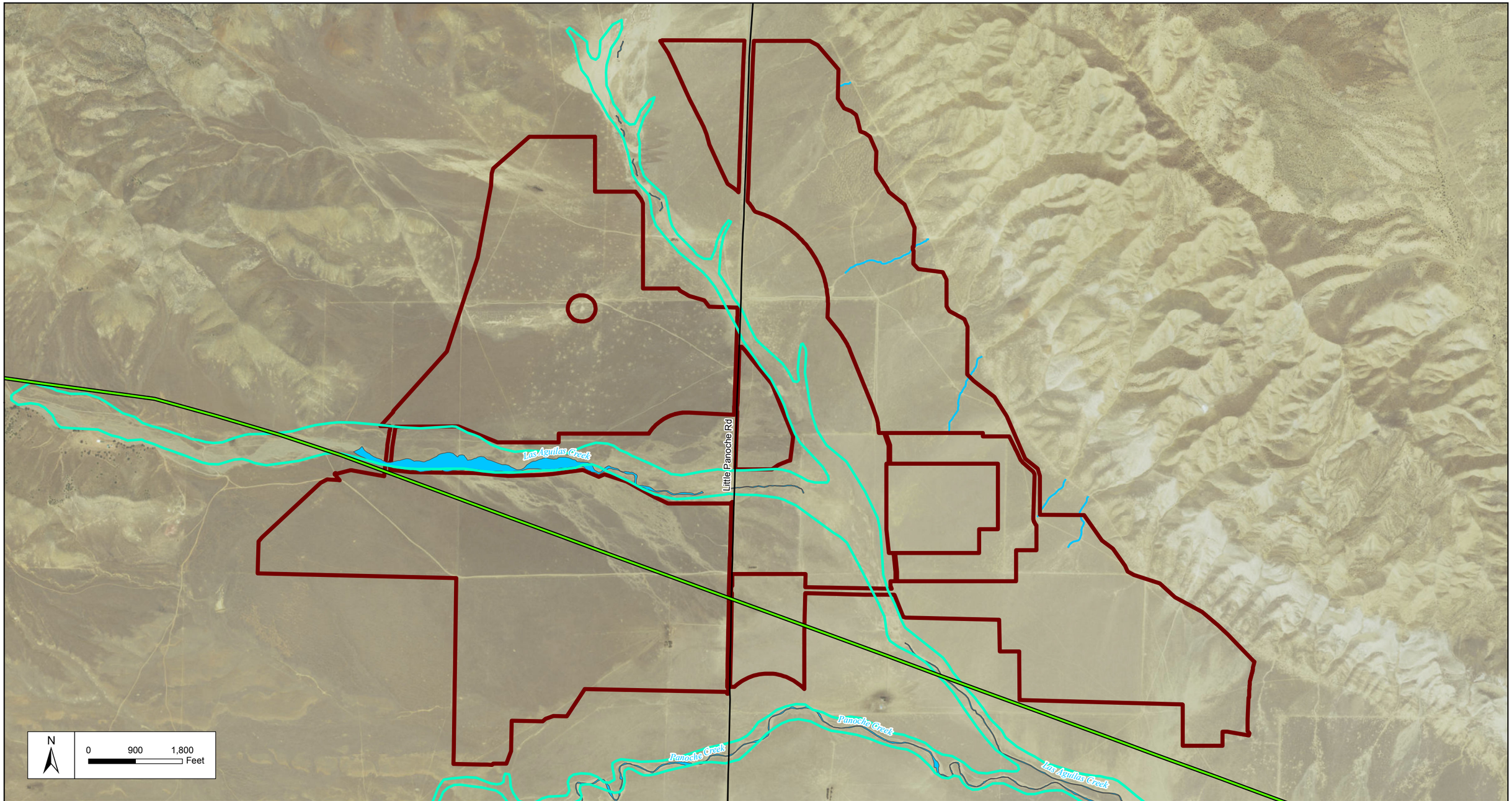
Panoche Valley Solar Project

Proposed Project Location

FIGURE

1

JH 2015-12-09



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Legend

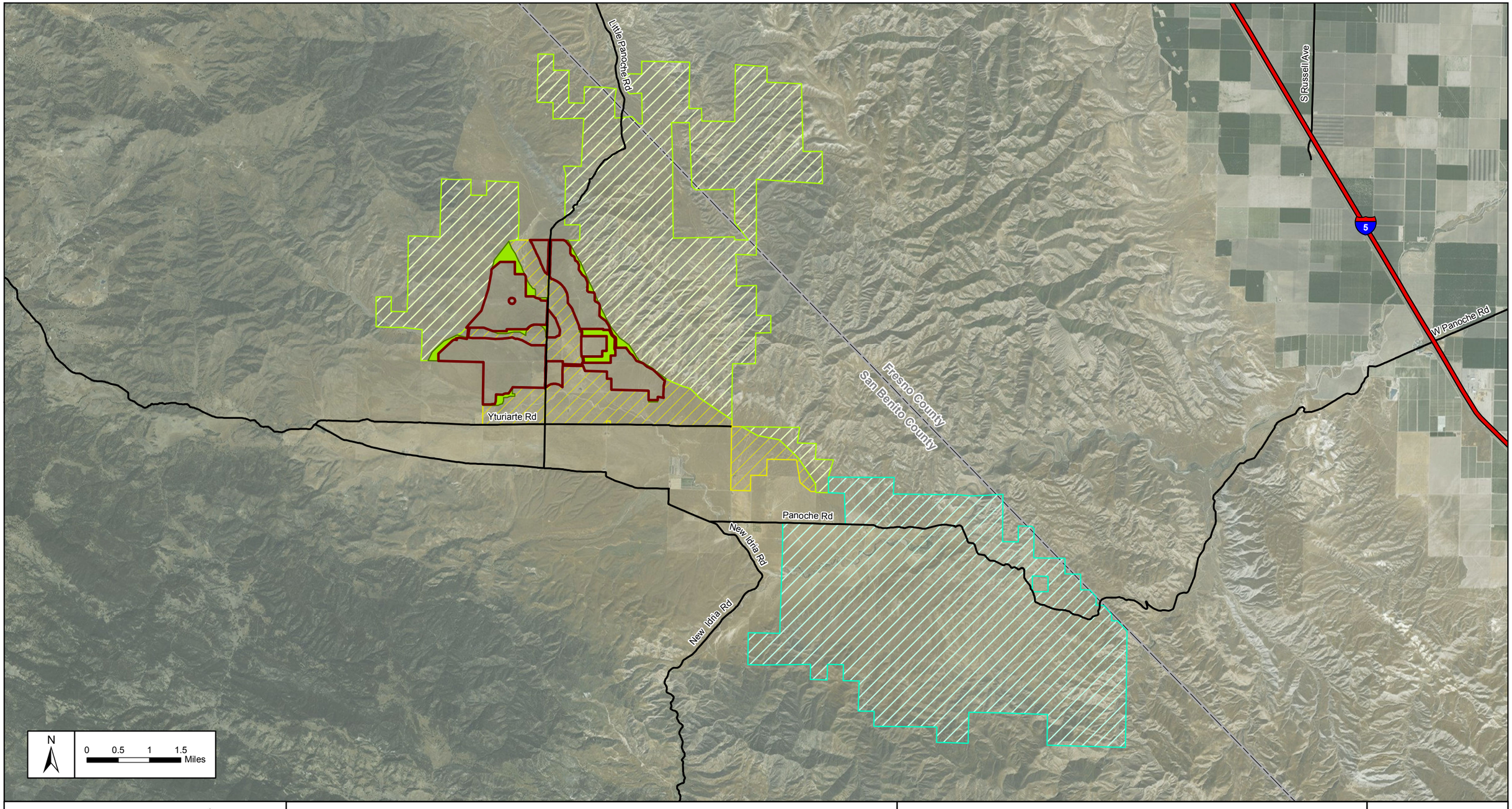
- Project Footprint
- Existing Transmission Line
- Ordinary High Water Mark
- Jurisdictional Drainage
- 100-year Floodplain

Panoche Valley Solar Project

Proposed Project Site

FIGURE
2

JH 2015-12-09



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Legend

- Project Footprint
- On-site Conservation Lands
- Silver Creek Ranch Conservation Lands
- Valadeao Ranch Conservation Lands
- Valley Floor Conservation Lands

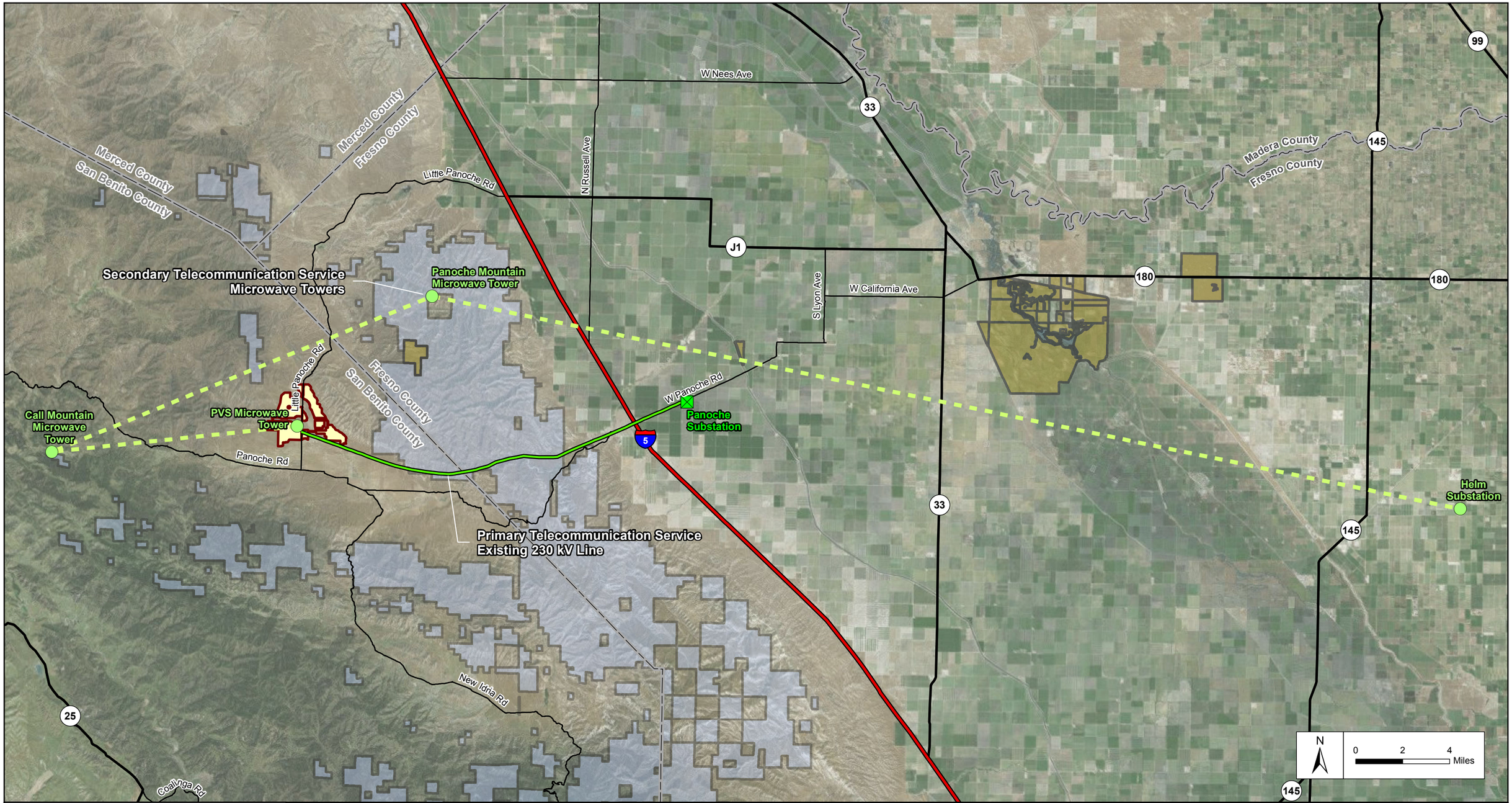
Panoche Valley Solar Project

Proposed Project Site and Conservation Lands

FIGURE

3

JH 2015-12-09



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Legend

- Project Footprint
- BLM Land
- State Land
- Proposed Microwave Repeater Site
- Microwave Line of Sight
- Existing 230 kV Transmission Line

Panoche Valley Solar Project

Proposed Telecommunication Upgrade

FIGURE

4

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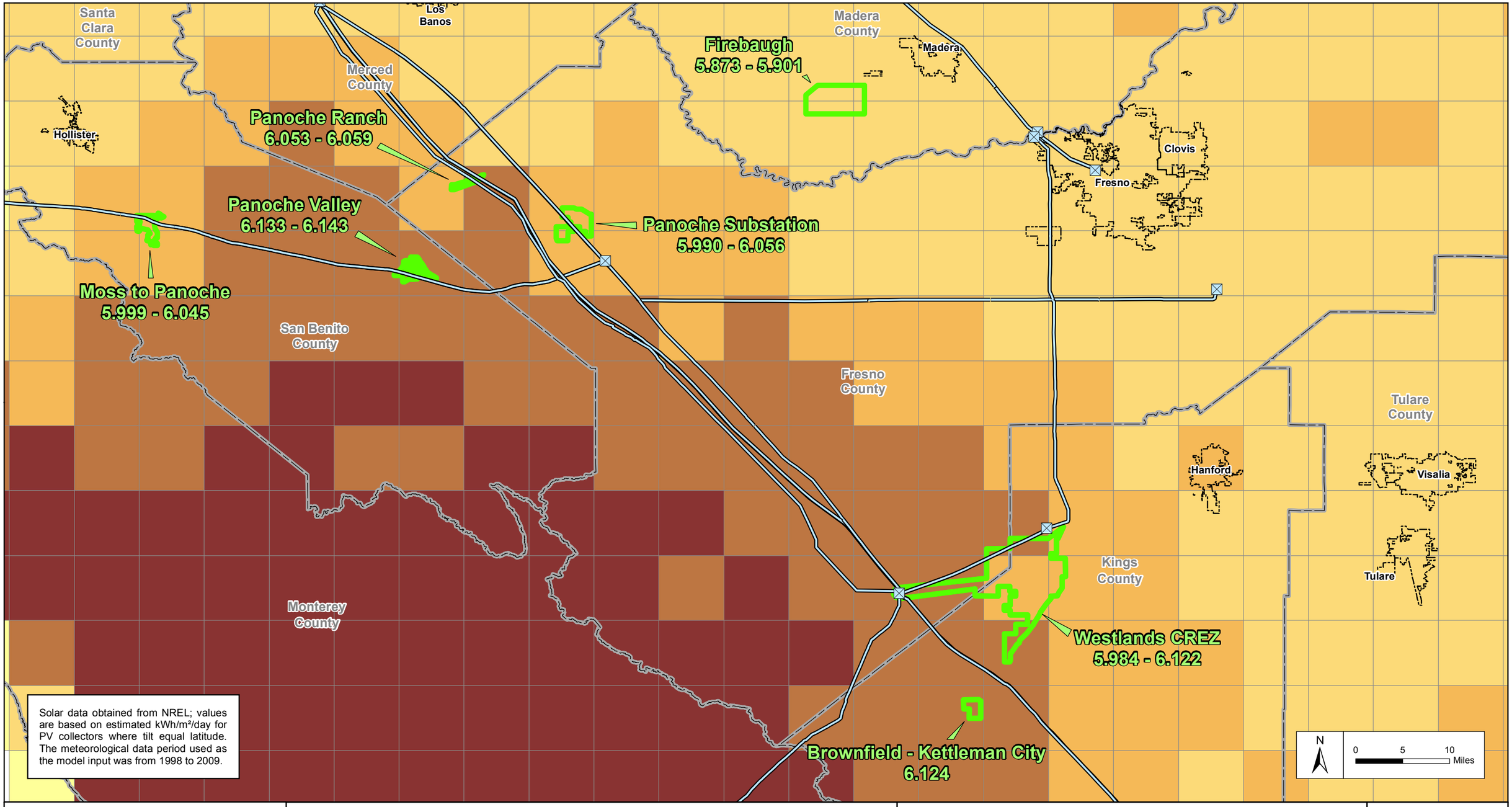

Solar data obtained from NREL; values are based on estimated kWh/m²/day for PV collectors where tilt equal latitude. The meteorological data period used as the model input was from 1998 to 2009.

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Legend

- Site
- Electric Substation
- Electric Transmission

Solar Resource (kWh/m²/day)

- 5.58 - 5.77
- 5.78 - 5.96
- 5.97 - 6.06
- 6.07 - 6.18
- 6.19 - 6.33

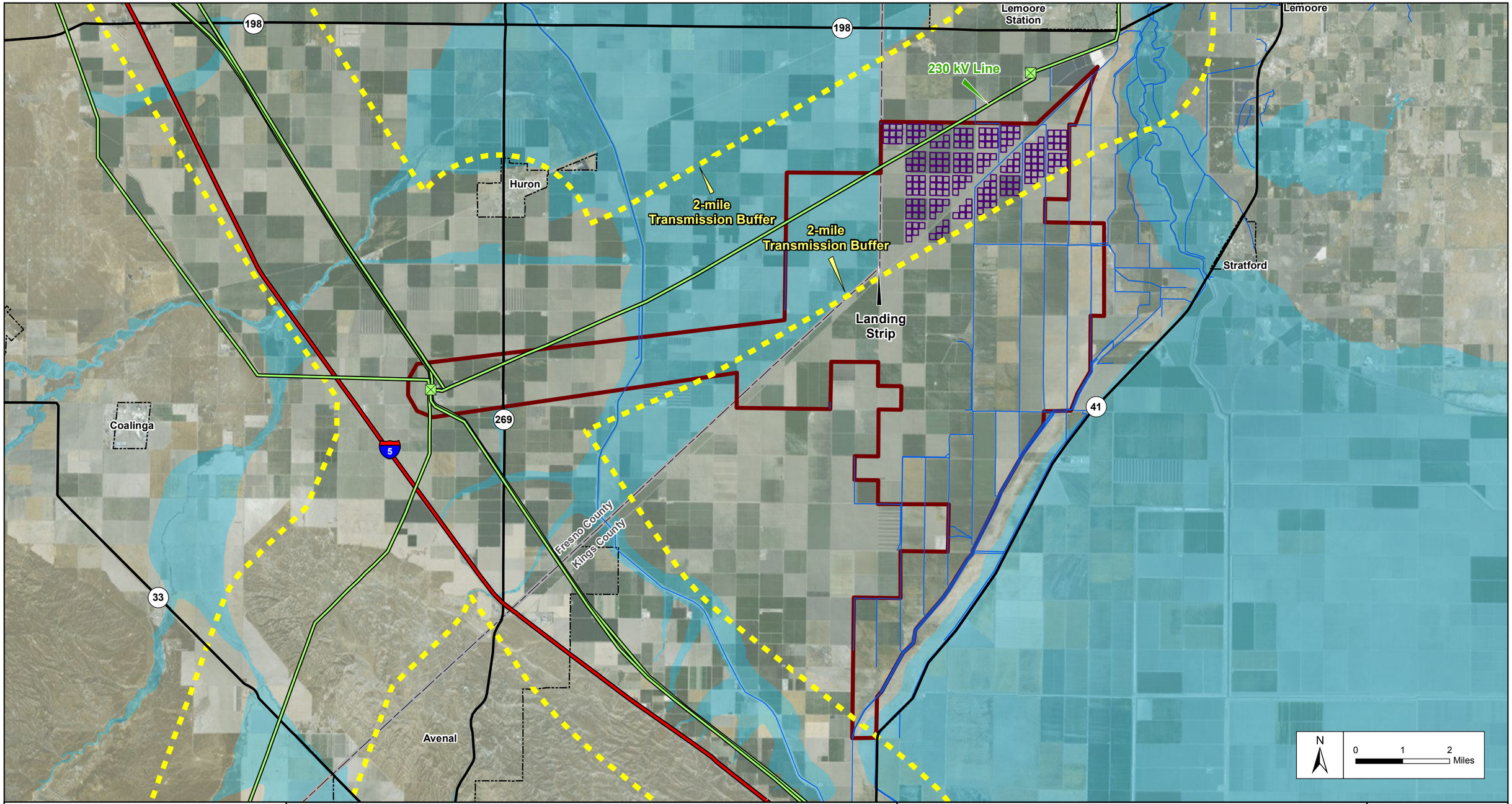
Panoche Valley Solar Project

Regional Solar

FIGURE

5

JH 2015-12-09



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Legend

- Site
- City Limit
- 2 MW Array Block (200)
- Electric Substation
- Electric Transmission
- Canal, Drainage
- FEMA 100-year Floodplain

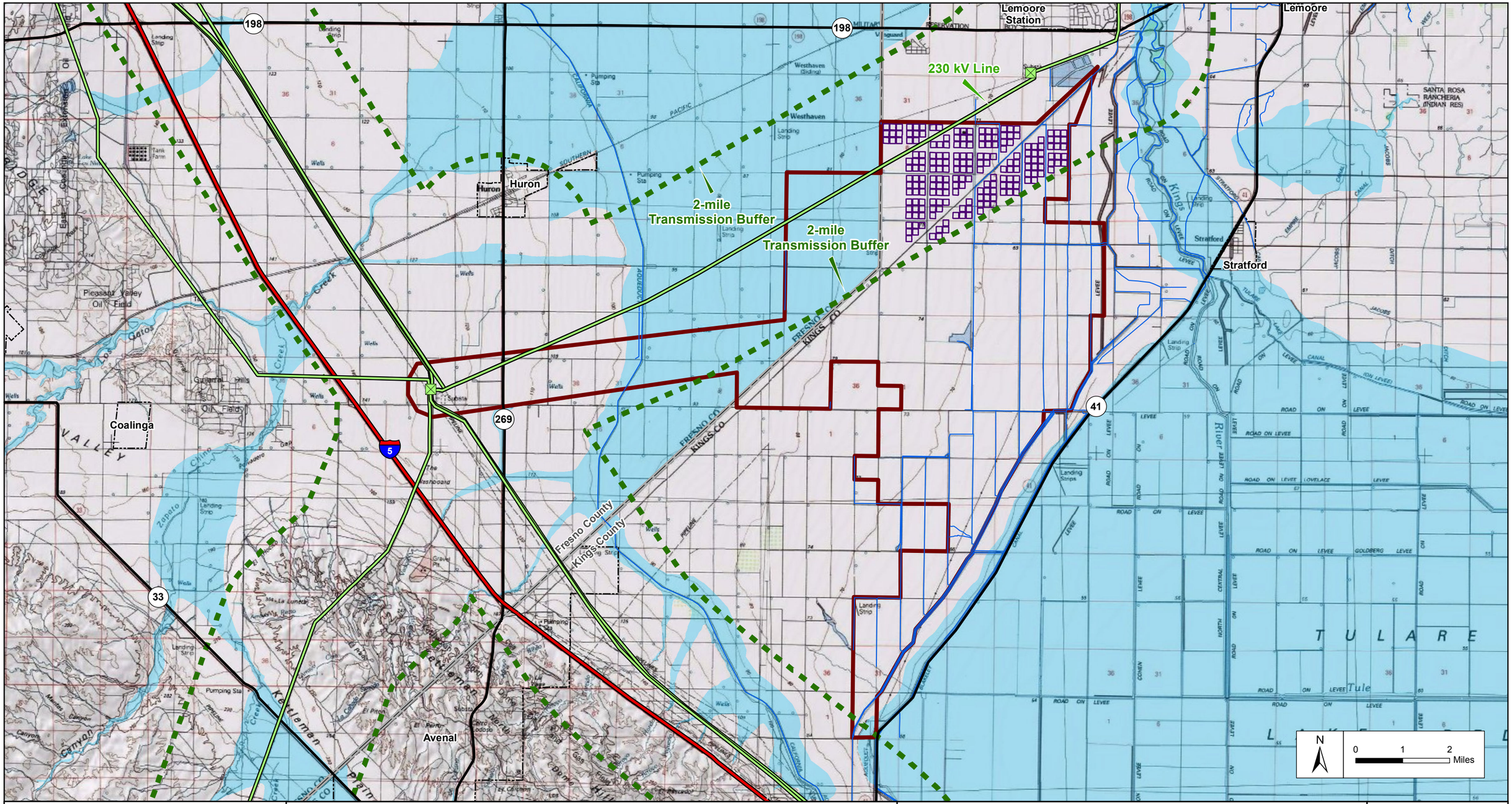
Panoche Valley Solar Project

Westlands CREZ Alternative Site

FIGURE

6A

JH 2015-08-26



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Legend

- Site
- City Limit
- 2 MW Array Block (200)
- Electric Substation
- Electric Transmission
- Canal, Drainage
- FEMA 100-year Floodplain

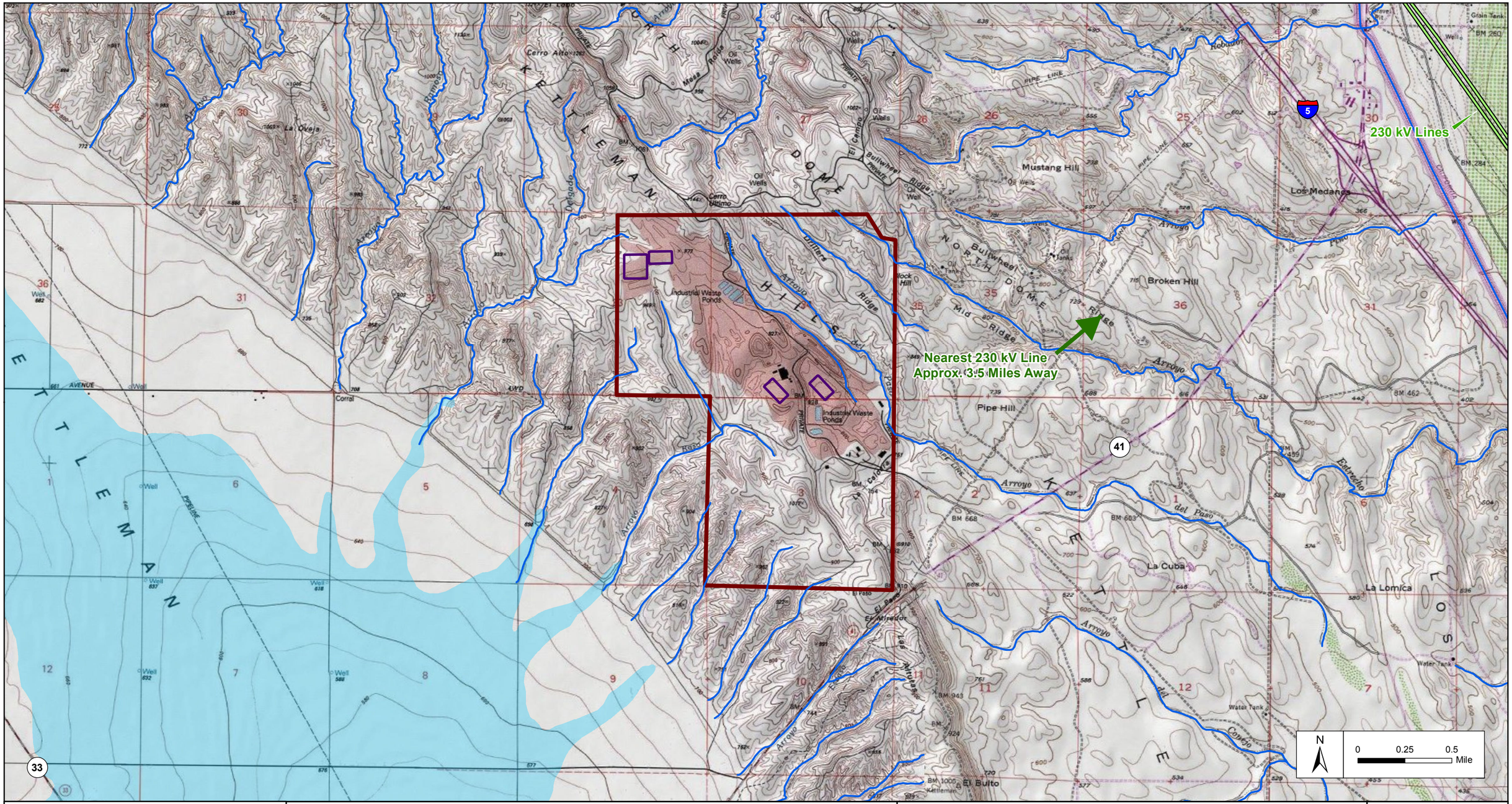
Panoche Valley Solar Project

Westlands CREZ Alternative Site

FIGURE

6B

JH 2015-08-26



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Legend

- Site
- Solar Array Block
- Electric Transmission
- Arroyo, Drainage (NHD)
- FEMA 100-year Floodplain

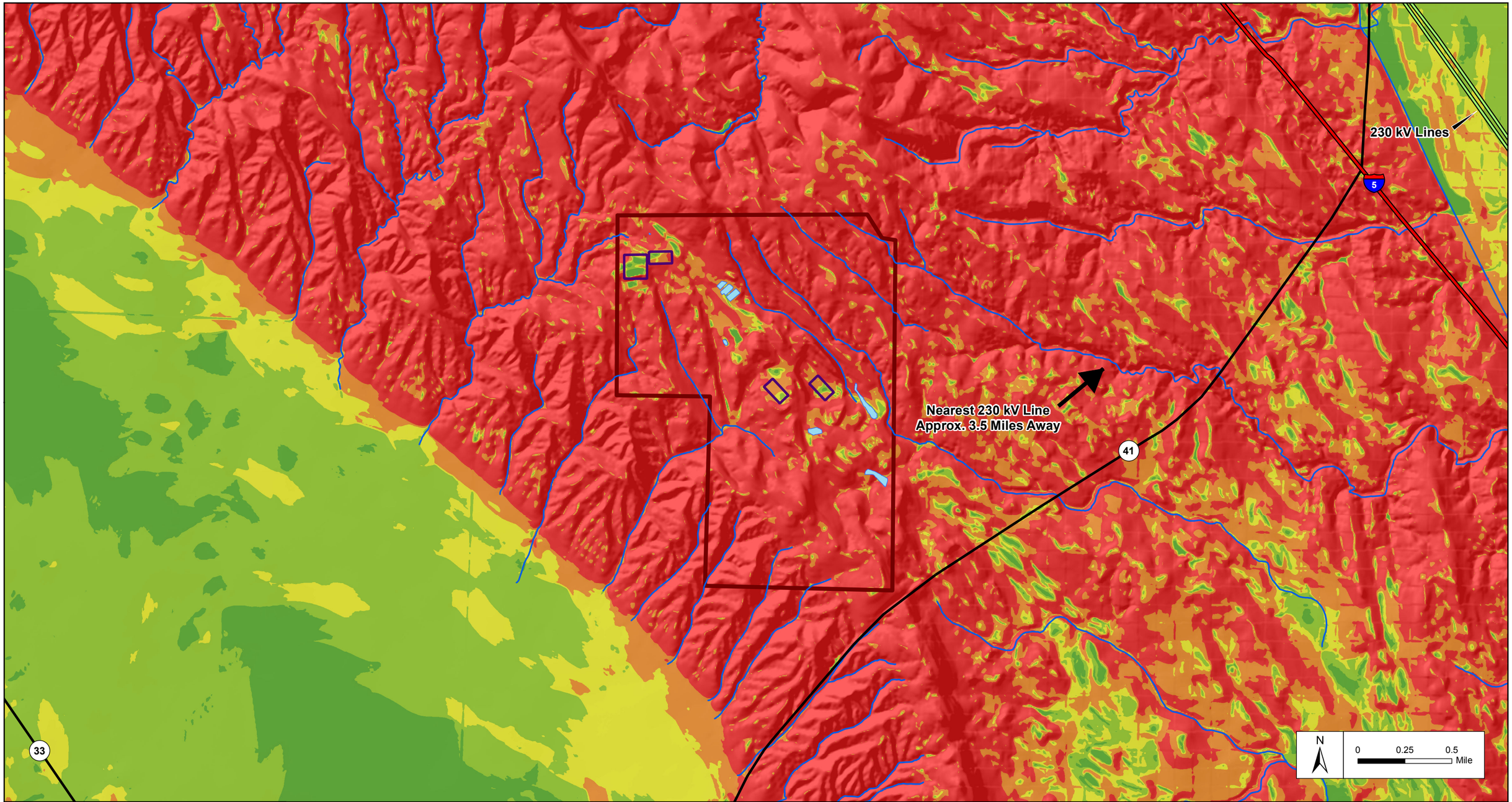
Panoche Valley Solar Project

Brownfield-Kettleman City Alternative Site

FIGURE

7A

JH 2015-08-26



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Legend

- Site
- Solar Array Block
- Electric Transmission
- Arroyo, Drainage (NHD)
- Water Body (NHD)

Slope

- 0% - 1.0%
- 1.1% - 2.0%
- 2.1% - 3.0%
- 3.1% - 6.0%
- > 6.0%

Panoche Valley Solar Project

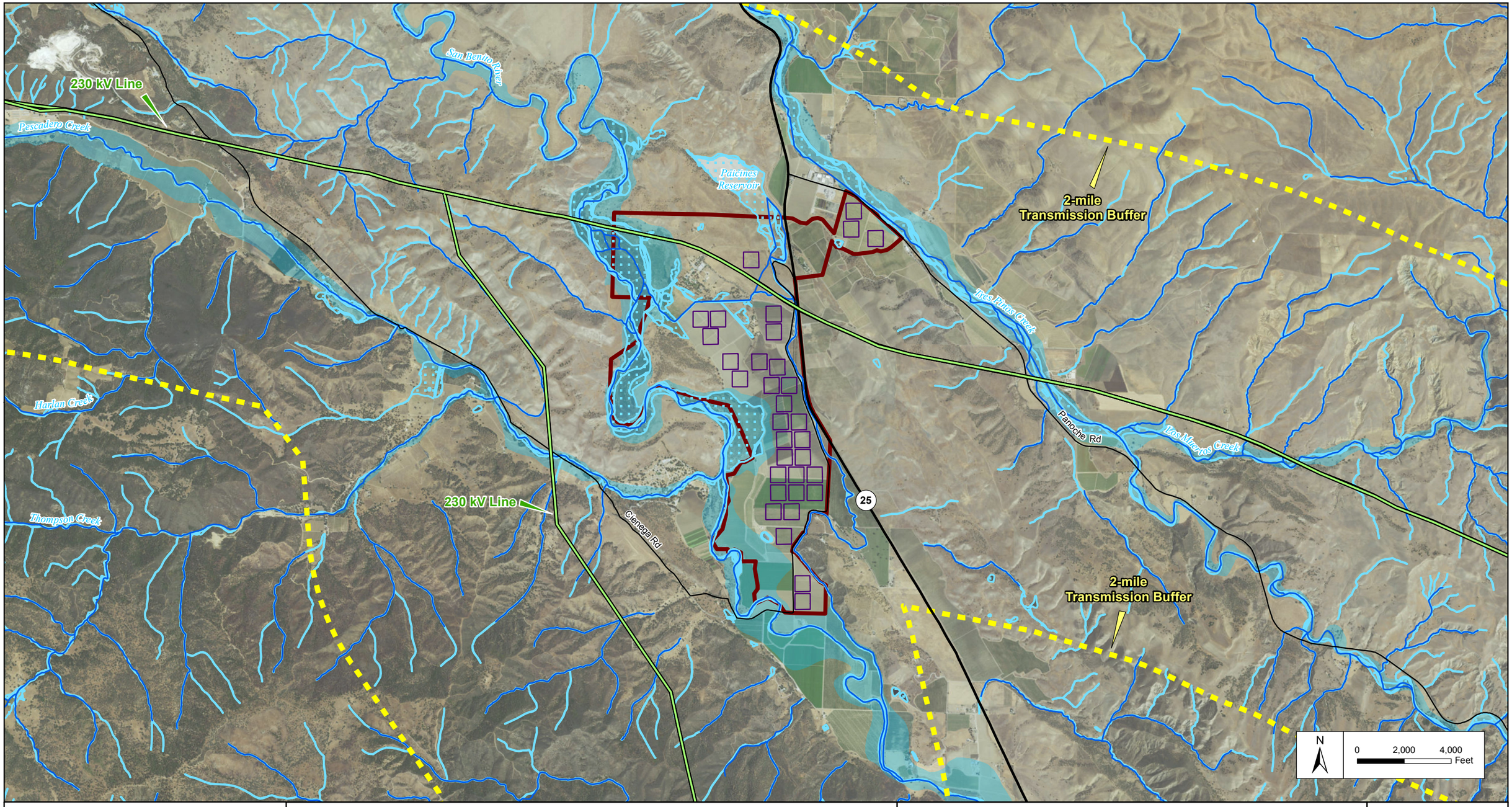
Brownfield-Kettleman City Alternative Site

Slope based on USGS 10m NED

FIGURE

7B

JH 2015-08-26



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Legend

- Site
- 2 MW Array Block (33)
- Electric Transmission
- Canal, Drainage (NHD)
- Wetland (NWI)
- FEMA 100-year Floodplain

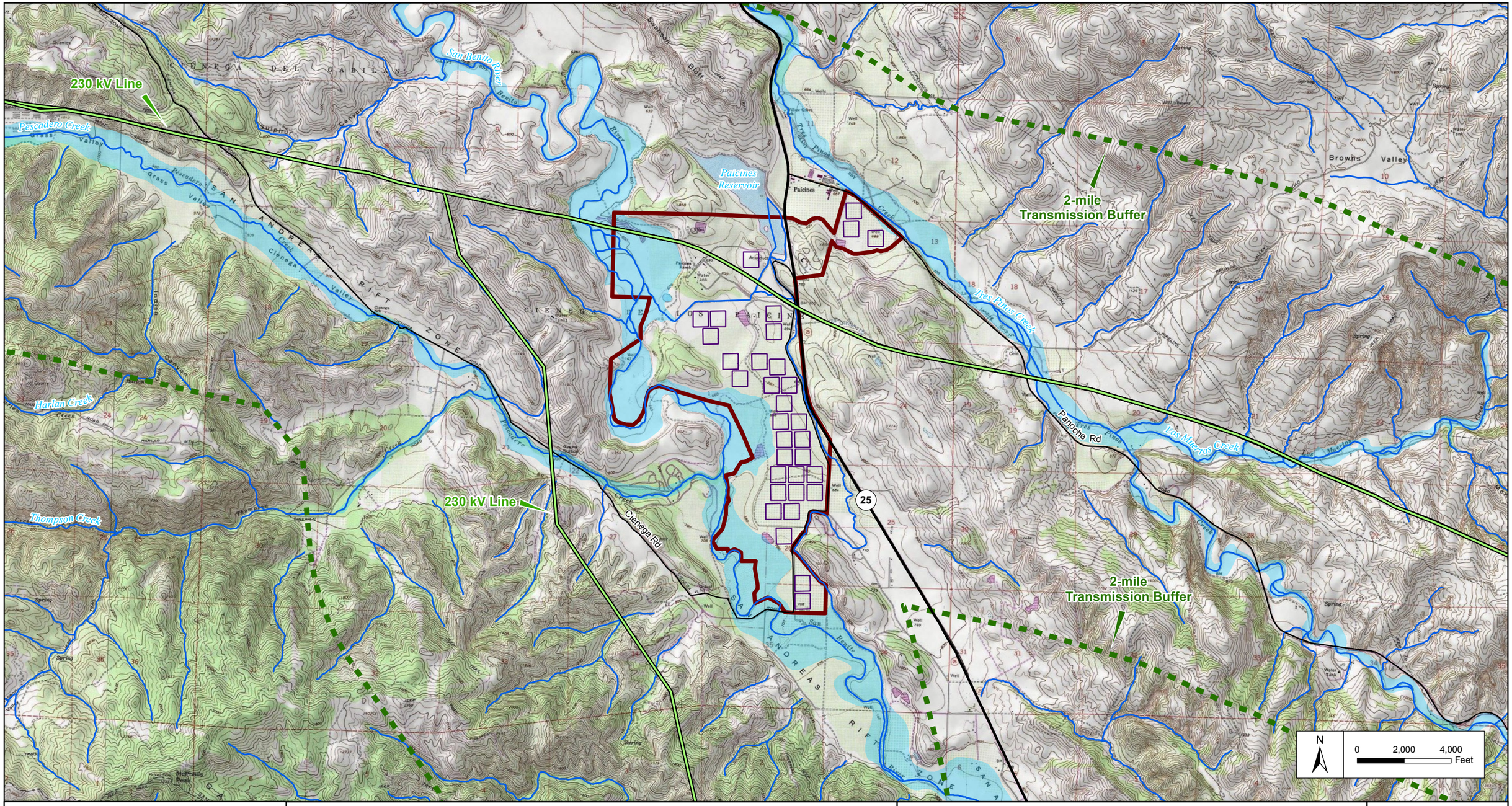
Panoche Valley Solar Project

Moss Landing-Panoche Alternative Site

FIGURE

8A

JH 2015-08-26



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Legend

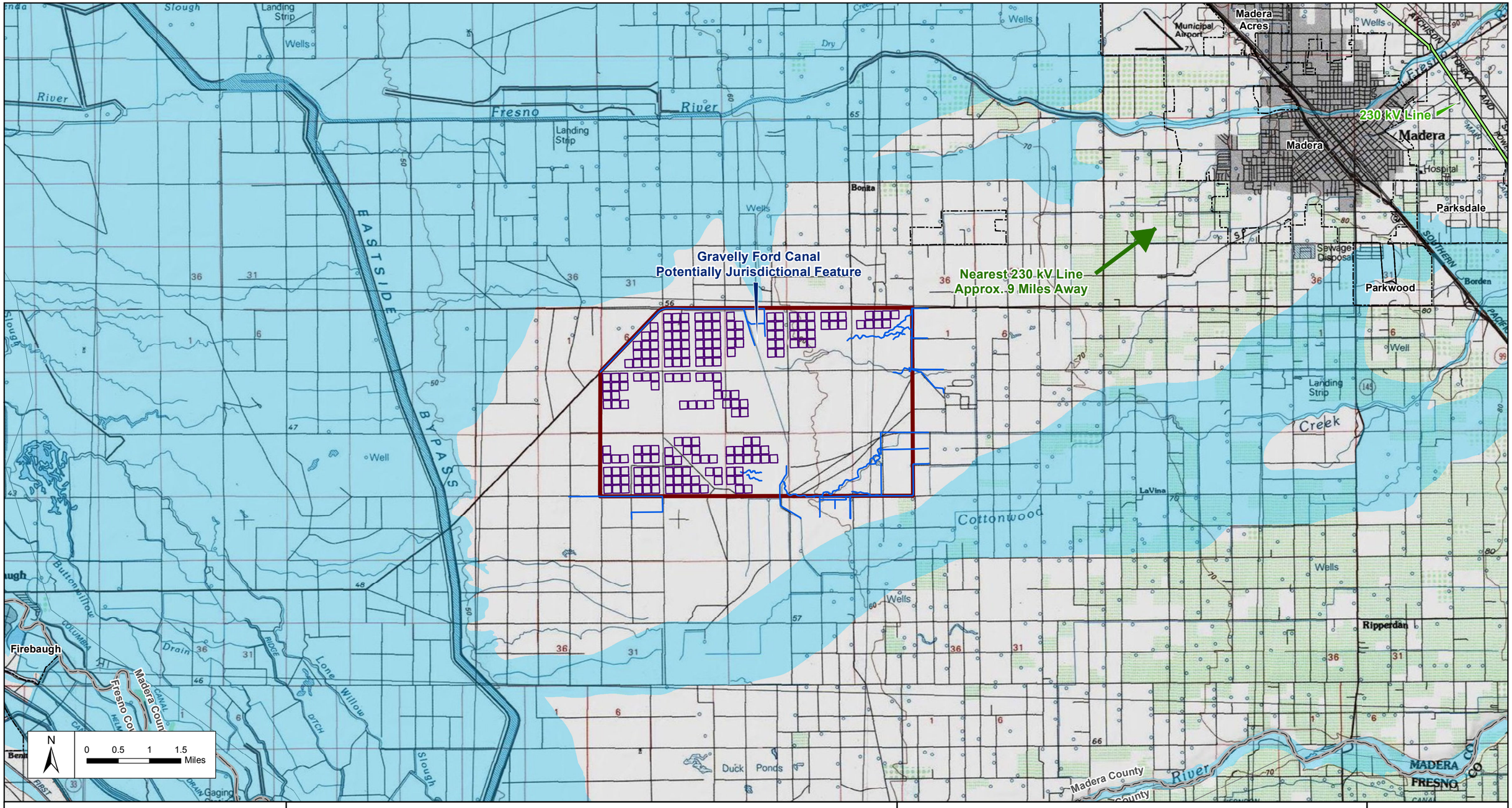
- Site
- 2 MW Array Block (33)
- Canal, Drainage (NHD)
- Electric Transmission
- FEMA 100-year Floodplain

Panoche Valley Solar Project

Moss Landing-Panoche Alternative Site

FIGURE
8B

JH 2015-08-26



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Legend

- Site
- City Limit
- 2 MW Array Block (200)
- Electric Transmission
- Canal, Drainage
- FEMA 100-year Floodplain

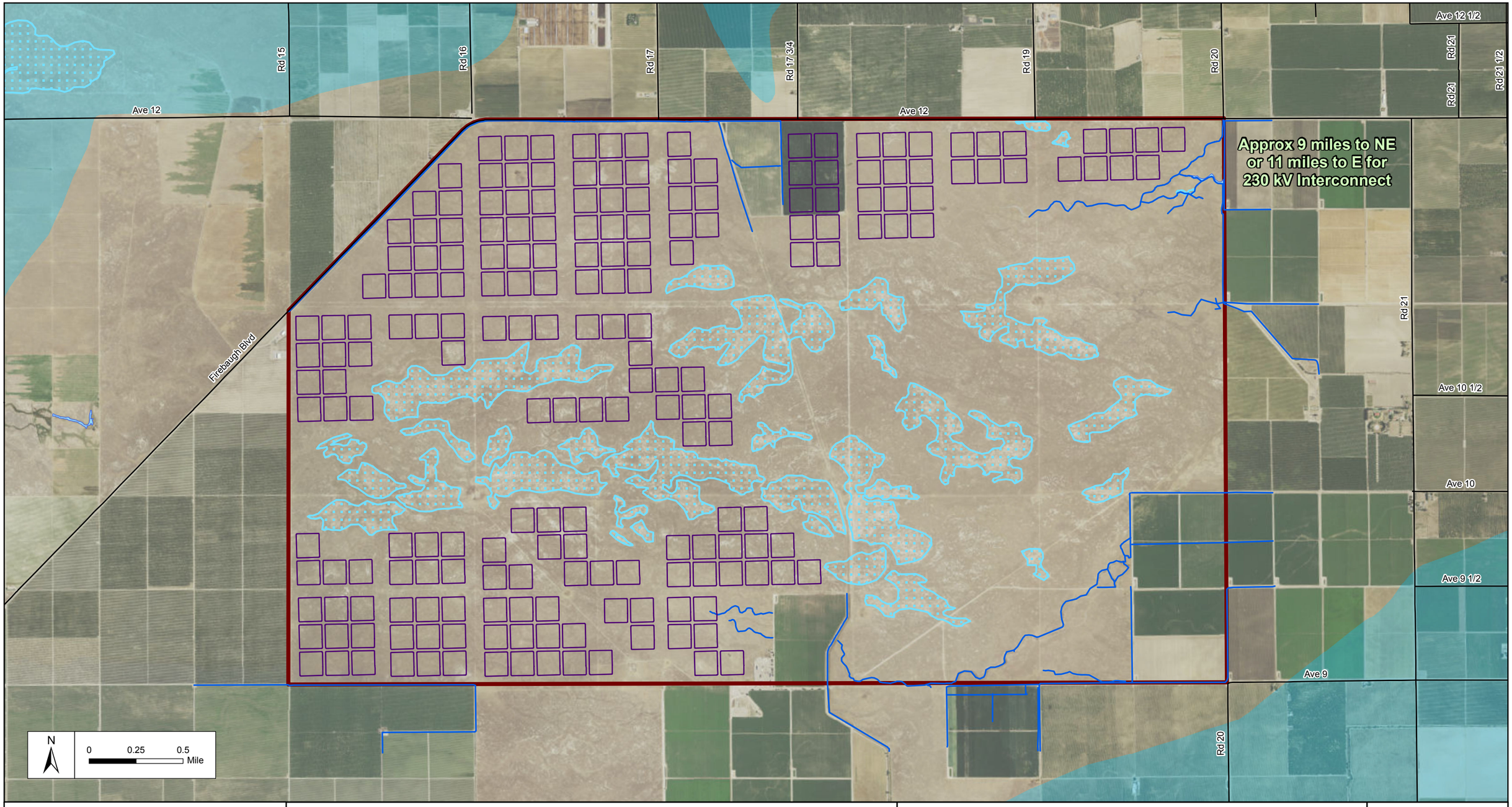
Panoche Valley Solar Project

Firebaugh Alternative Site

FIGURE

9A

JH 2015-08-26



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Legend

- Site
- 2 MW Array Block (200)
- Canal, Drainage
- FEMA 100-year Floodplain
- Potential Emergent Wetland
- Riverine

Panoche Valley Solar Project

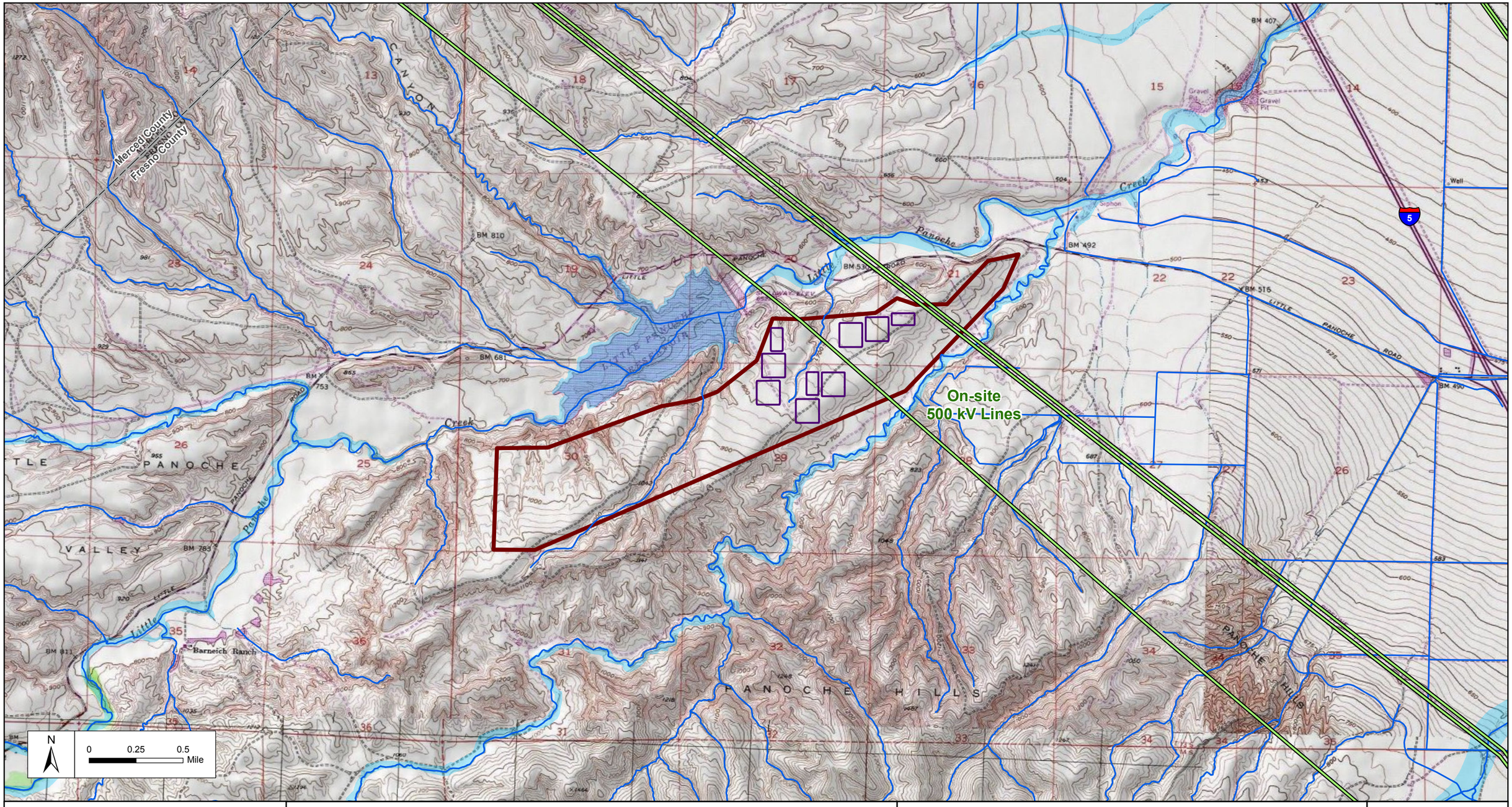
Firebaugh Alternative Site

Wetland data obtained from California Department of Water Resources;
Produced by California State University, Chico, Geographic Information Center

FIGURE

9B

JH 2015-08-26



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Legend

- Site
- Solar Array Block
- Arroyo, Drainage (NHD)
- Electric Transmission
- FEMA 100-year Floodplain

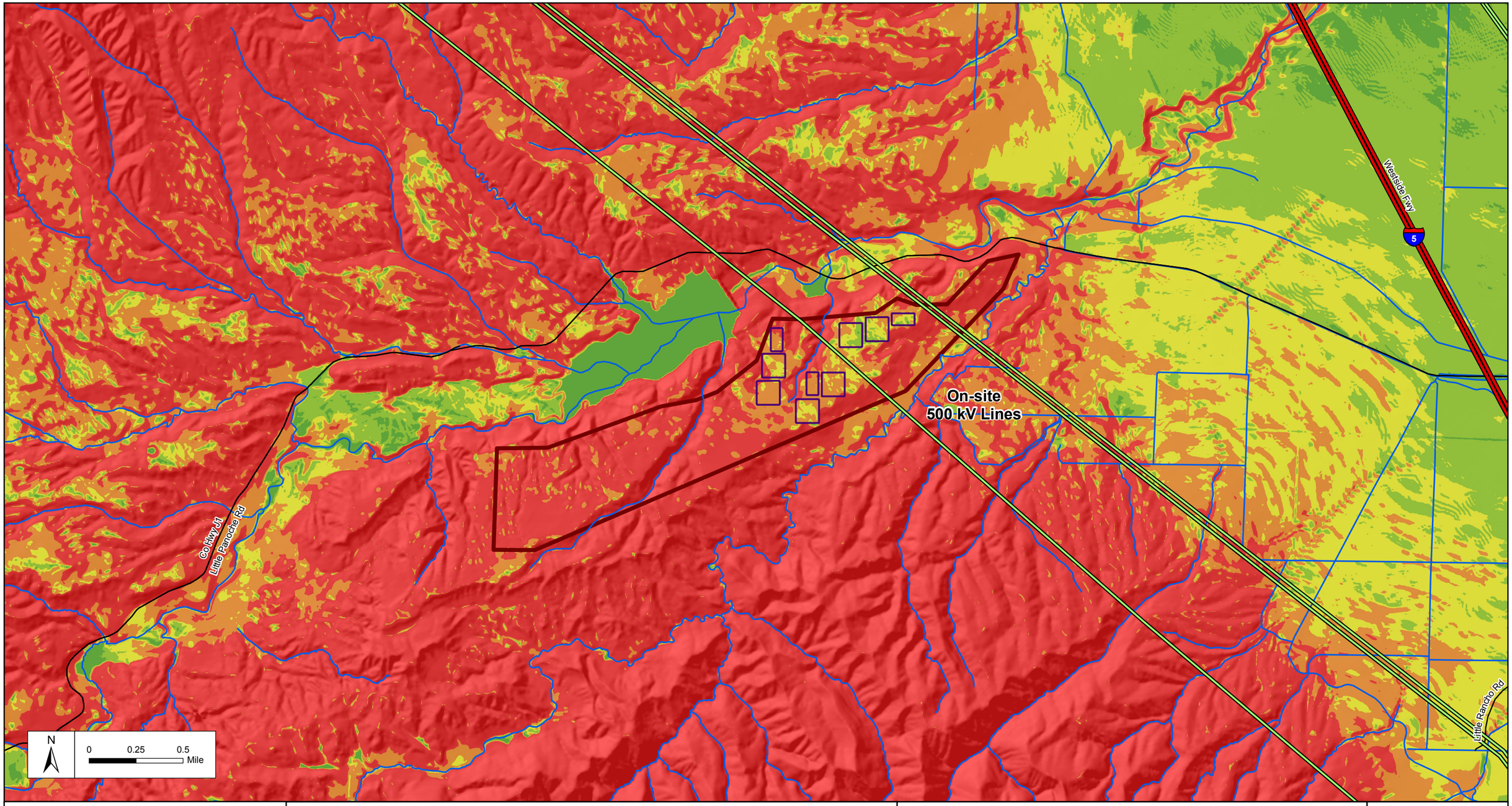
Panoche Valley Solar Project

Panoche Ranch Alternative Site

FIGURE

10A

JH 2015-08-26



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Legend

- Site
- Arroyo, Drainage (NHD)
- Solar Array Block
- Electric Transmission

Slope

- 0% - 1.0%
- 1.1% - 2.0%
- 2.1% - 3.0%
- 3.1% - 6.0%
- > 6.0%

Panoche Valley Solar Project

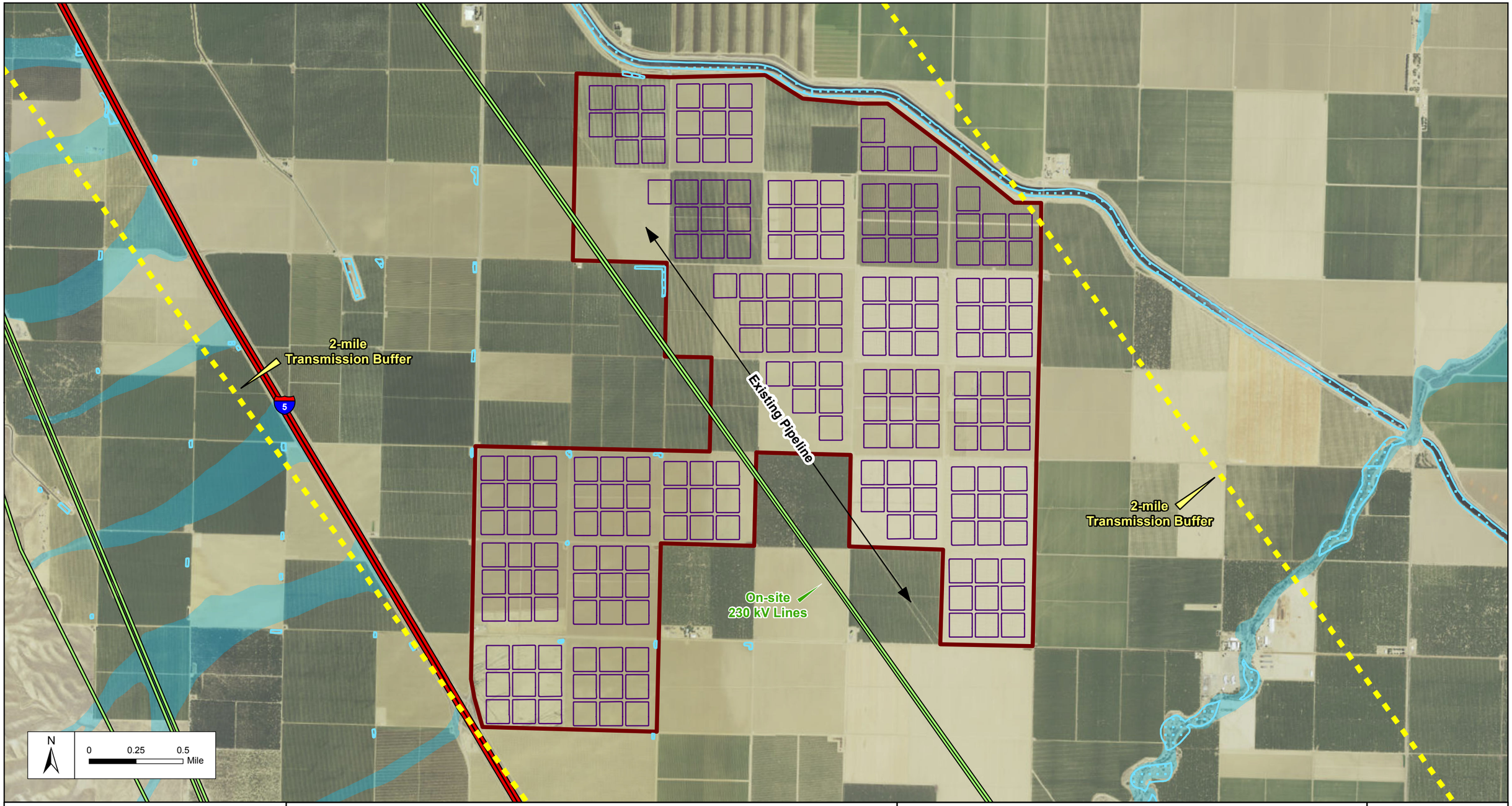
Panoche Ranch Alternative Site

Slope based on USGS 10m NED

FIGURE

10B

JH 2015-08-26



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Legend

- Site
- 2 MW Array Block (200)
- Electric Transmission
- Wetland (NWI)
- FEMA 100-year Floodplain

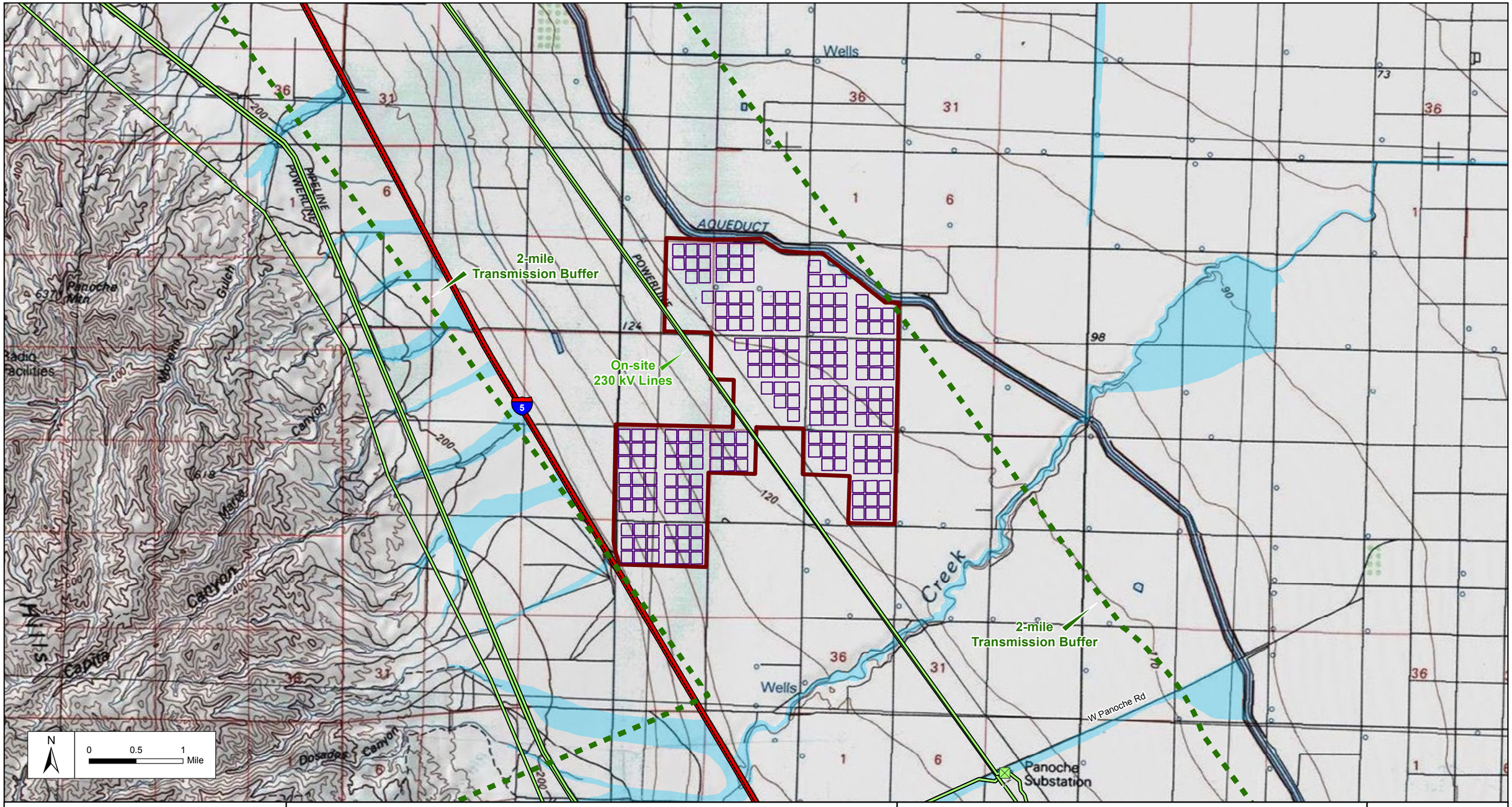
Panoche Valley Solar Project

Panoche Substation Alternative Site

FIGURE

11A

JH 2015-08-26



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Legend

- Site
- 2 MW Array Block (200)
- Electric Substation
- Electric Transmission
- FEMA 100-year Floodplain

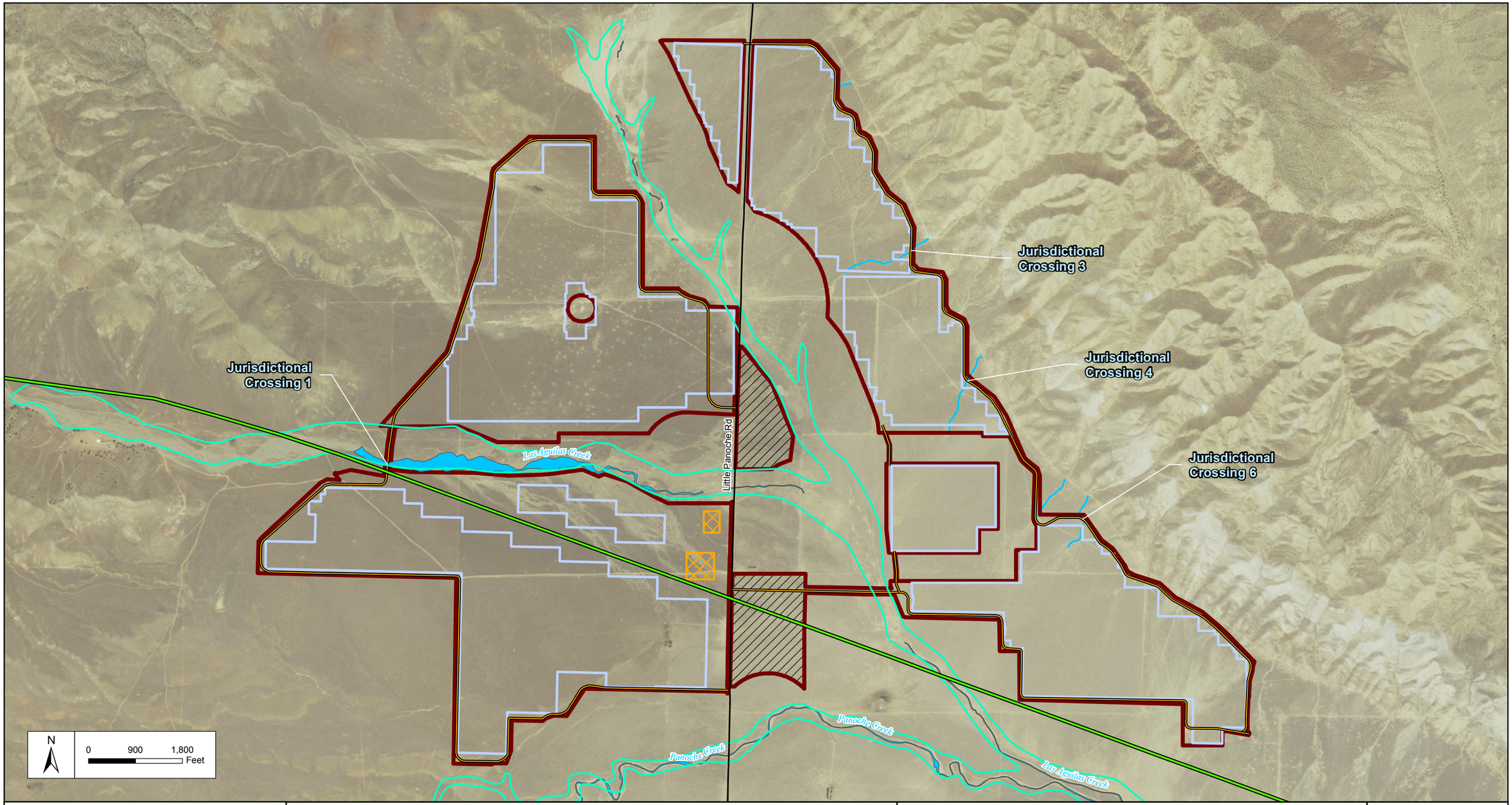
Panoche Valley Solar Project

Panoche Substation Alternative Site

FIGURE

11B

JH 2015-08-26



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Legend

- Project Footprint
- Proposed Panel Block
- Substation, Switchyard
- Existing Transmission Line
- Perimeter Road
- Temporary Laydown Yard
- Jurisdictional Drainage
- Ordinary High Water Mark
- 100-year Floodplain

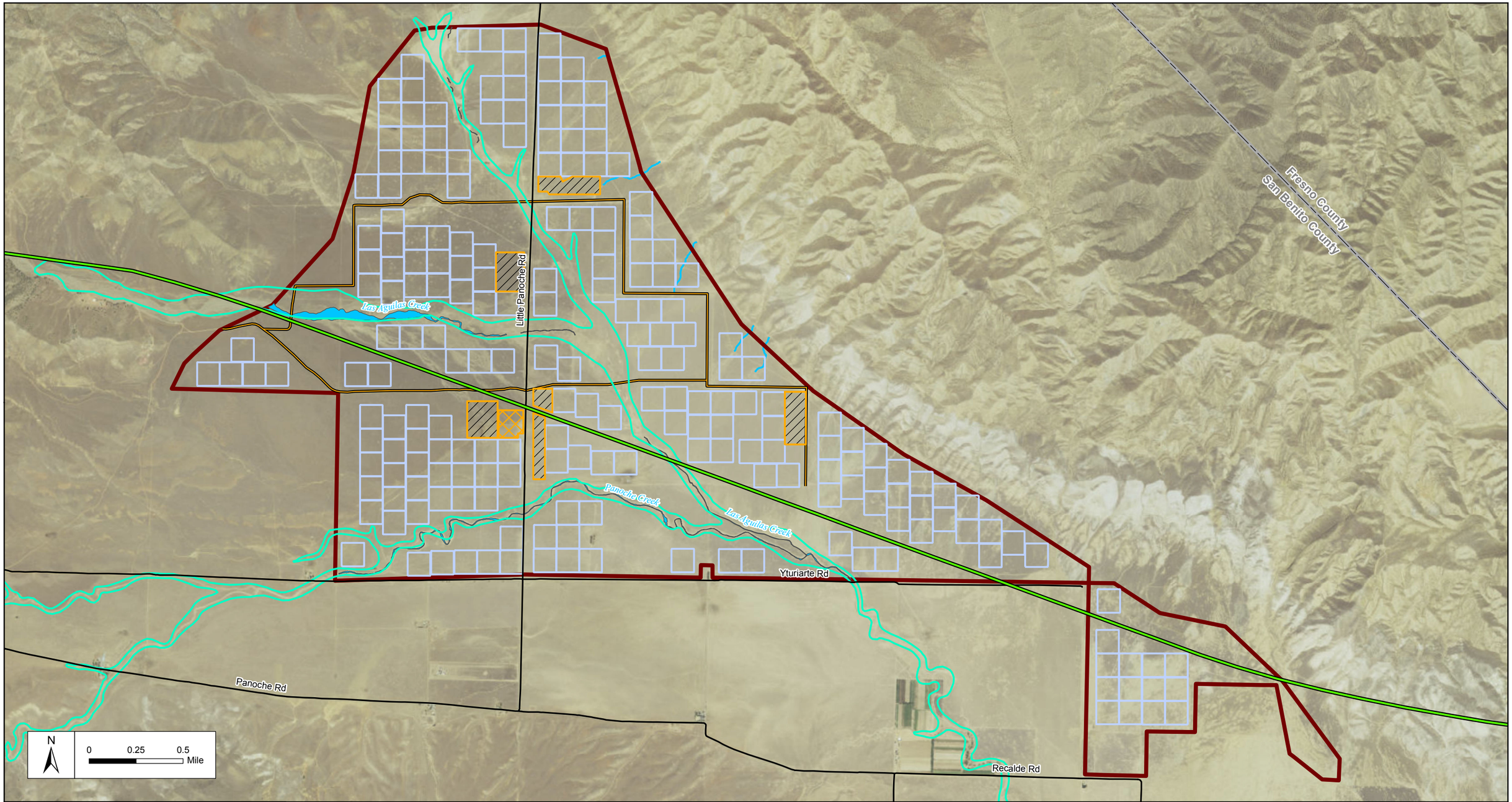
Panoche Valley Solar Project

Proposed Project Site (Preferred Alternative)

FIGURE

12

JH 2015-12-09



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Legend

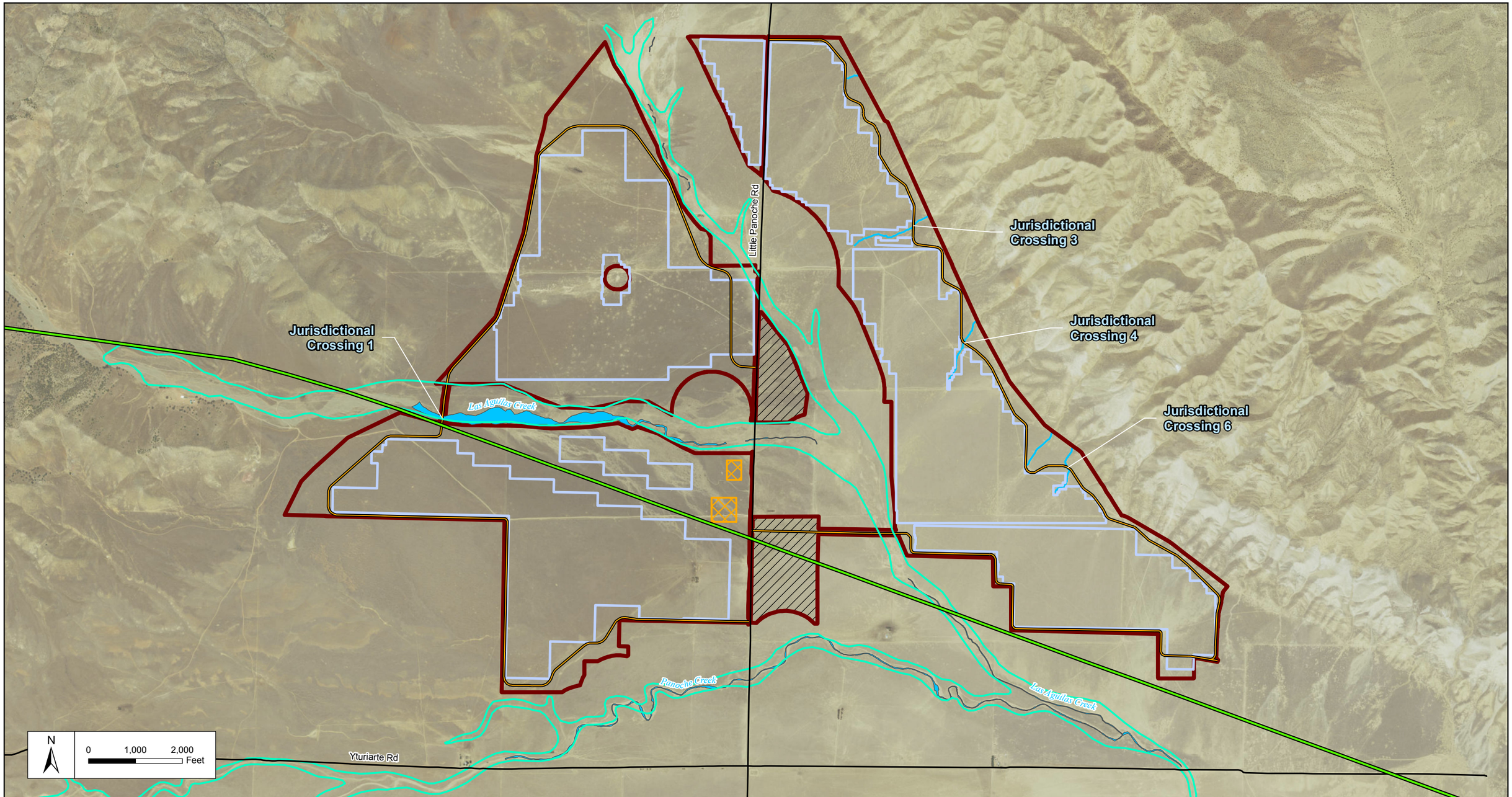
- Project Footprint
- Proposed Panel Block
- Project Substation
- Existing Transmission Line
- Project Road
- Laydown Yard
- Jurisdictional Drainage
- Ordinary High Water Mark
- 100-year Floodplain

Panoche Valley Solar Project

On-Site Alternative 1 (420 MW)

FIGURE
13

JH 2015-08-26



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Legend

- Project Footprint
- Proposed Panel Block
- Substation, Switchyard
- Existing Transmission Line
- Perimeter Road
- Temporary Laydown Yard
- Jurisdictional Drainage
- Ordinary High Water Mark
- 100-year Floodplain

Panoche Valley Solar Project

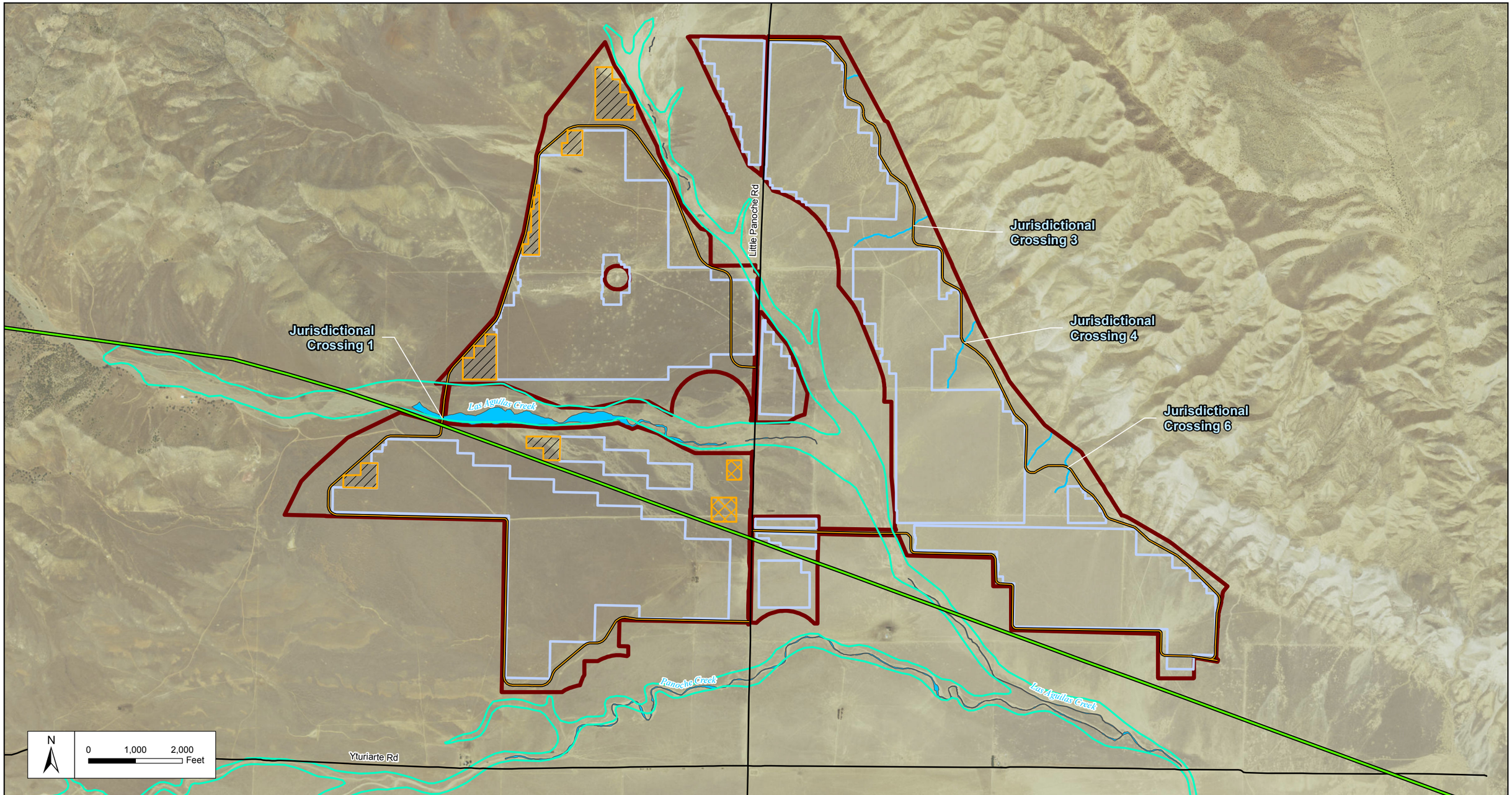
On-Site Alternative 3 (Alternative Layout)

Small Blocks Array Scenario 1

FIGURE

14

JH 2015-08-26



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Legend

- Project Footprint
- Proposed Panel Block
- Substation, Switchyard
- Existing Transmission Line
- Perimeter Road
- Laydown Yard
- Jurisdictional Drainage
- Ordinary High Water Mark
- 100-year Floodplain

Panoche Valley Solar Project

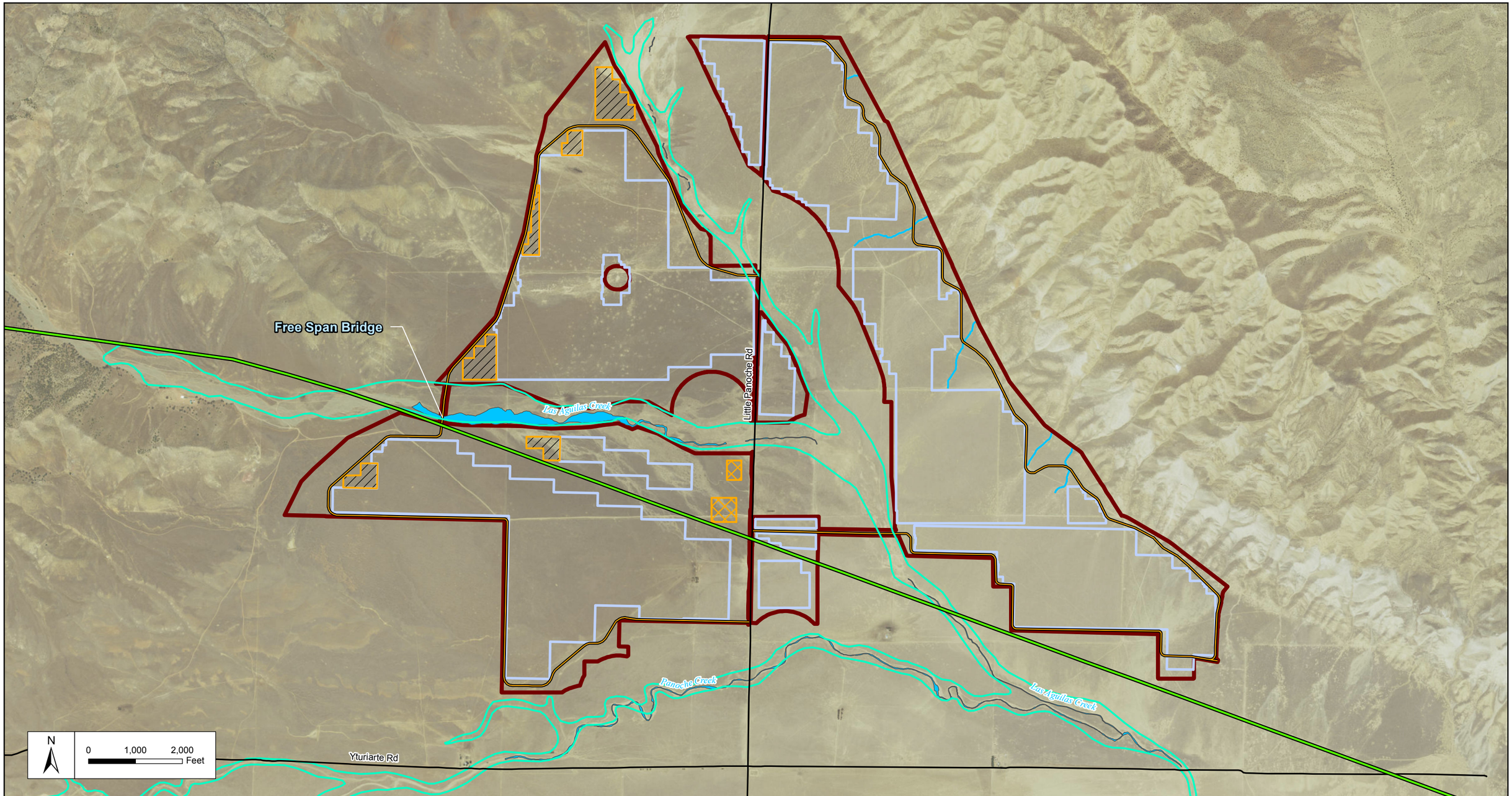
On-Site Alternative 3 (Alternative Layout)

Full Blocks Array Scenario 2

FIGURE

15

JH 2015-08-26



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Legend

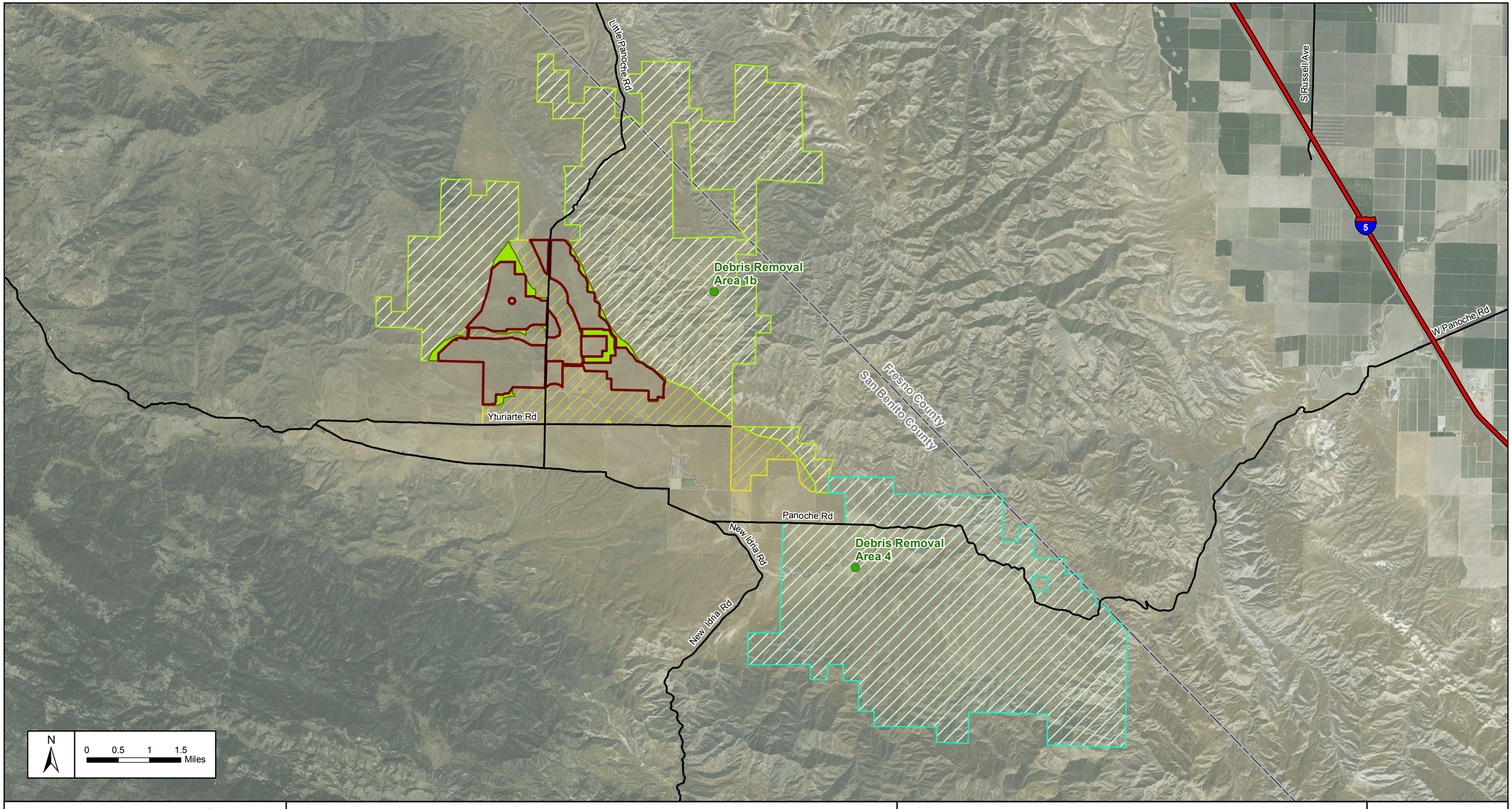
- Project Footprint
- Proposed Panel Block
- Substation, Switchyard
- Existing Transmission Line
- Perimeter Road
- Laydown Yard
- Jurisdictional Drainage
- Ordinary High Water Mark
- 100-year Floodplain

Panoche Valley Solar Project

On-Site Alternative 4 (No Action Alternative)

FIGURE
16

JH 2015-08-26



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Legend

- Project Footprint
- On-site Conservation Lands
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- Valadeao Ranch Conservation Lands
- Valley Floor Conservation Lands

Panoche Valley Solar Project

Proposed Mitigation with Potential Impacts to Waters of the U.S.

FIGURE

17

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Approximate Potential Impact to Waters from Debris Removal Area 1b	
Length	30 linear feet
Federal	134 ft²

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Legend

Debris Removal Area

Potential Impact to Federal Waters

Panoche Valley Solar Project

Potential Impacts to Waters of the U.S.

Debris Removal Area 1b

FIGURE

18A

JH 2015-12-09

Approximate Potential Impact to Waters from Debris Removal Area 4	
Length	323 linear feet
Federal	4038 ft²

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Legend

Debris Removal Area

Potential Impact to Federal Waters

Panoche Valley Solar Project

Potential Impacts to Waters of the U.S.

Debris Removal Area 4

FIGURE

18B

JH 2015-12-09