

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): March 6, 2013

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Sacramento District, Trails of Manteca, SPK-2010-00901; ID-1 to ID-12

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: **California** County/parish/borough: **San Joaquin** City: **Manteca**
Center coordinates of site (lat/long in degree decimal format): Lat. **37.7722° North**, Long. **-121.26377° West**
Universal Transverse Mercator: **10 652912.23 4181963.08**

Name of nearest waterbody: **Walthall Slough**

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **San Joaquin River**

Name of watershed or Hydrologic Unit Code (HUC): **San Joaquin Delta, California., 18040003**

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:

Field Determination. Date(s): **January 14, 2013**

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 waters² (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, wide, and/or acres.

Wetlands: acres.

c. Limits (boundaries) of jurisdiction based on: Pick List

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: **ID-1 through ID-9, ID-11 and ID-12 consist of irrigation ditches that are fed by a pump station in the south-western portion of the site. The pump station conveys water from Walthall Slough north through an underground conveyance pipe, to ID-9 and ID-11, where water is then conveyed via additional underground pipes, to ID-5 and the remaining irrigation ditches. The water within the irrigation ditches is then used for farming, with the remaining water evaporating or draining into the ground. There is no hydrologic or surface connection to the irrigation ditches or Walthall Slough to the south, to the man-made lakes to the north (Oakdale Lake) and west (Weatherbee Lake), or to the San Joaquin River, located to the west of Walthall Slough and Weatherbee Lake. ID-12 is located along the southern boundary of the project site, and consists of an irrigation ditch that is fed by a pump east of the**

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).

³ Supporting documentation is presented in Section III.F.

project site. Based on our January 14, 2013 site visit, ID-10 ends approximately 50-feet east of Walthall Slough, and no culverts or other surface or subsurface connection was found to Walthall Slough.

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:

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 waterbody⁴ 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:

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW⁵:
Tributary stream order, if known:

(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
 OHWM⁶ (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:

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.

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.

⁷Ibid.

(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, wide, 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 wide.
- Other non-wetland waters: acres.
Identify type(s) of waters:

3. **Non-RPWs⁸ 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):

⁸See Footnote # 3.

- Tributary waters: linear feet, wide.
 - 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 jurisdictional. 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:

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet, wide.
 - 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).

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.

- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:
- Other: (explain, if not covered above):

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): **6.46 acres; 21,488** linear feet, **1-30** wide.
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: 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, wide.
- 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: **Sheet 1. Confirmed Wetland Delineation, Trails at Manteca, Revised February 22, 2013, prepared by Monk & Associates (Attachment A)**
- 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: **1:24K; CA-LATHROP (Attachment E)**
- 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 Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): **GoogleEarth Pro aerial photographs, dated 5/22/1993, 6/3/2003, 12/30/2005, 6/5/2009, 10/22/2011 and 8/23/2012 (Attachment C)**
 or Other (Name & Date): **Site Visit Photographs dated January 14, 2012 (Attachment B)**
- Previous determination(s). File no. and date of response letter:
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify): **Department of Water Resources LIDAR (Attachment D)**

B. ADDITIONAL COMMENTS TO SUPPORT JD:

ID-1 through ID-9, ID-11 and ID-12 consist of irrigation ditches that are fed by a pump station in the south-western portion of the site. The pump station conveys water from Walthall Slough north through an underground conveyance pipe, to ID-9 and ID-11, where water is then conveyed via additional underground pipes, to ID-5 and the remaining irrigation ditches. The water within the irrigation ditches is then used for farming, with the remaining water evaporating or draining into the ground. There is no hydrologic or surface connection to the irrigation ditches or Walthall Slough to the south, to the man-made lakes to the north (Oakdale Lake) and west (Weatherbee Lake), or to the San Joaquin River, located to the west of Walthall Slough and Weatherbee Lake. ID-12 is located along the southern boundary of the project site, and consists of an irrigation ditch that is fed by a pump east of the project site. Based on our January 14, 2013 site visit, ID-10 ends approximately 50-feet east of Walthall Slough, and no culverts or other surface or subsurface connection was found to Walthall Slough.

Attachment A

Sheet 1. Confirmed Wetland Delineation, Trails at Manteca Project, Manteca, California



Table A. Measurements of "Isolated" Irrigation Ditches.

| | Ditch ID | Width (Feet) | Length (Feet) | Area (Square Feet) | Area (Acres) |
|------------------|----------|--------------|---------------|--------------------|--------------|
| Northern Portion | ID-1 | 10 | 4,246 | 42,460 | 0.97 |
| | ID-2 | 8 | 1,547 | 12,376 | 0.28 |
| | ID-3 | 8 | 1,033 | 8,264 | 0.19 |
| | ID-4 | 5 | 391 | 1,955 | 0.04 |
| | ID-5 | 10 | 1,983 | 19,830 | 0.46 |
| | ID-6 | 4 | 877 | 3,508 | 0.08 |
| | ID-7 | 6 | 931 | 5,586 | 0.13 |
| | ID-8 | 6 | 1,674 | 10,044 | 0.23 |
| Southern Portion | ID-9 | 10-15 | 2,909 | 38,920 | 0.89 |
| | ID-10 | 30 | 2,819 | 84,570 | 1.94 |
| | ID-11 | 25 | 2,126 | 53,150 | 1.22 |
| | ID-12 | 1 | 952 | 952 | 0.02 |
| TOTALS | | | 21,488 | 281,615 | 6.46 |

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 Walnut Creek, California 94595
 (925) 947-4867

Sheet 1. Confirmed Wetland Delineation
 Trails at Manteca Project
 Manteca, California

Scale: 1 inch = 200 feet
 Aerial Photograph Source: Bing Maps
 Corps Confirmation Date: January 14, 2013
 Confirmed by: I. Gibson & W. Guthrie (Corps); H. Kingma & C. Owens (M&A)
 Map Revision Date: February 22, 2013

Attachment B

**January 14, 2013 Site Visit
Photographs**

January 14, 2012 Site Visit Photo Points





Photo 1

Date Taken: January 14, 2012

Project: SPK-2010-00901, Trails at Manteca

Taken By: Lisa M. Gibson, Senior Project Manager, California Delta Branch

Description: View looking east at ID-5. See January 14, 2012 Site Visit Photo Points drawing for location.



Photo 2

Date Taken: January 14, 2012

Project: SPK-2010-00901, Trails at Manteca

Taken By: Lisa M. Gibson, Senior Project Manager, California Delta Branch

Description: View looking north-west at ID-5. See January 14, 2012 Site Visit Photo Points drawing for location.



Photo 3

Date Taken: January 14, 2012

Project: SPK-2010-00901, Trails at Manteca

Taken By: Lisa M. Gibson, Senior Project Manager, California Delta Branch

Description: View looking south at ID-7. See January 14, 2012 Site Visit Photo Points drawing for location.



Photo 4

Date Taken: January 14, 2012

Project: SPK-2010-00901, Trails at Manteca

Taken By: Lisa M. Gibson, Senior Project Manager, California Delta Branch

Description: View looking east at ID-8. See January 14, 2012 Site Visit Photo Points drawing for location.



Photo 5

Date Taken: January 14, 2012

Taken By: Lisa M. Gibson, Senior Project Manager, California Delta Branch

Project: SPK-2010-00901, Trails at Manteca

Description: View looking north-west at culvert in ID-8. ID-1 is located east of the road seen in the background. See January 14, 2012 Site Visit Photo Points drawing for location.



Photo 6

Date Taken: January 14, 2012

Taken By: Lisa M. Gibson, Senior Project Manager, California Delta Branch

Project: SPK-2010-00901, Trails at Manteca

Description: View looking north-west at ID-1 along the north-western property boundary. The structure appears to have once contained a valve, although based on observation; the valve has been removed, with only a buried PVC pipe remaining, which appears to bring water to the site. See January 14, 2012 Site Visit Photo Points drawing for location.



Photo 7

Date Taken: January 14, 2012

Taken By: Lisa M. Gibson, Senior Project Manager, California Delta Branch

Project: SPK-2010-00901, Trails at Manteca

Description: View of PVC pipe located in the structure within the irrigation ditch located on the north-western property boundary. The PVC pipe contained water approximately 1-foot down. See January 14, 2012 Site Visit Photo Points drawing for location.



Photo 8

Date Taken: January 14, 2012

Taken By: Lisa M. Gibson, Senior Project Manager, California Delta Branch

Project: SPK-2010-00901, Trails at Manteca

Description: View looking south from the irrigation ditch located on the north-western property boundary. This area appears to have once contained an irrigation pipe, but the area has collapsed. See January 14, 2012 Site Visit Photo Points drawing for location.



Photo 9

Date Taken: January 14, 2012

Project: SPK-2010-00901, Trails at Manteca

Taken By: Lisa M. Gibson, Senior Project Manager, California Delta Branch

Description: View looking east from the north-western property boundary, at the irrigation ditch that runs along the northern property boundary. See January 14, 2012 Site Visit Photo Points drawing for location.



Photo 10

Date Taken: January 14, 2012

Taken By: Lisa M. Gibson, Senior Project Manager, California Delta Branch

Project: SPK-2010-00901, Trails at Manteca

Description: View looking south-east from the levee road located along the west-central portion of the site, at the western end of the irrigation ditch located south of the levee road. See January 14, 2012 Site Visit Photo Points drawing for location.



Photo 11

Date Taken: January 14, 2012

Project: SPK-2010-00901, Trails at Manteca

Taken By: Lisa M. Gibson, Senior Project Manager, California Delta Branch

Description: View looking south-east from the levee road at the irrigation ditch that runs along the southern portion of the levee road. See January 14, 2012 Site Visit Photo Points drawing for location.



Photo 12

Date Taken: January 14, 2012

Taken By: Lisa M. Gibson, Senior Project Manager, California Delta Branch

Project: SPK-2010-00901, Trails at Manteca

Description: View looking north-west from the irrigation ditch located in the center of the site. There were several ponded area located in the field seen in the background. When soil pits were dug within the ponded areas, the soils consisted of sandy soils with no hydric soil indicators. Therefore, these areas were not mapped. See January 14, 2012 Site Visit Photo Points drawing for location.



Photo 13

Date Taken: January 14, 2012

Taken By: Lisa M. Gibson, Senior Project Manager, California Delta Branch

Project: SPK-2010-00901, Trails at Manteca

Description: View looking north-east at irrigation ditch that runs along the levee road. Several culverts connect this ditch along the entire length of the levee road. Water is supplied to the ditch through a pump adjacent to Walthall Slough. However, no outlets were found. See January 14, 2012 Site Visit Photo Points drawing for location.



Photo 14

Date Taken: January 14, 2012

Project: SPK-2010-00901, Trails at Manteca

Taken By: Lisa M. Gibson, Senior Project Manager, California Delta Branch

Description: View looking east from the levee road at the irrigation ditch that runs along the southern portion of the levee road. See January 14, 2012 Site Visit Photo Points drawing for location.



Photo 15

Date Taken: January 14, 2012

Project: SPK-2010-00901, Trails at Manteca

Taken By: Lisa M. Gibson, Senior Project Manager, California Delta Branch

Description: View looking east at the irrigation ditch that runs along the southern portion of the site. See January 14, 2012 Site Visit Photo Points drawing for location.



Photo 16

Date Taken: January 14, 2012

Project: SPK-2010-00901, Trails at Manteca

Taken By: Lisa M. Gibson, Senior Project Manager, California Delta Branch

Description: View looking west at the irrigation ditch that runs along the southern property boundary. See January 14, 2012 Site Visit Photo Points drawing for location.



Photo 17

Project: SPK-2010-00901, Trails at Manteca

Date Taken: January 14, 2012

Taken By: Lisa M. Gibson, Senior Project Manager, California Delta Branch

Description: View looking south-west at the end of the irrigation ditch that runs along the southern property boundary. Based on topographic maps from 1952, 1968 and 1976 provided by the consultant, the ditch appears to have been a stream which was previously manipulated and re-routed to its current location between 1952 and 1968, and connected to Walthall Slough. In addition, it appears as though a man-made barrier was constructed, which prevented the ditch from connecting to Walthall Slough at some time between 1968 and 196, and pumps were installed which pumped water from the ditch into the slough. During the site visit, no pumps were observed, and it does not appear as though water from the ditch is pumped into the slough. See January 14, 2012 Site Visit Photo Points drawing for location.



Photo 18

Project: SPK-2010-00901, Trails at Manteca

Date Taken: January 14, 2012

Taken By: Lisa M. Gibson, Senior Project Manager, California Delta Branch

Description: View looking north-west at the pump along Walthall Slough. The pump delivers waters to ID1 through ID-9, ID-11 and ID-12.



Photo 19

Project: SPK-2010-00901, Trails at Manteca

Date Taken: January 14, 2012

Taken By: Lisa M. Gibson, Senior Project Manager, California Delta Branch

Description: View looking east from the north side of Woodward Avenue. To the south of Woodward Avenue is the irrigation ditch that runs along the northern boundary of the project site. There are no culverts or connections from the irrigation ditch on the south side of Woodward Avenue to the northern ditch. See January 14, 2012 Site Visit Photo Points drawing for location.



Photo 20

Project: SPK-2010-00901, Trails at Manteca

Date Taken: January 14, 2012

Taken By: Lisa M. Gibson, Senior Project Manager, California Delta Branch

Description: View looking east from the south side of Woodward Avenue, at the irrigation ditch running along the northern property boundary. To the north of Woodward Avenue is an irrigation ditch that runs along the north side of Woodward Avenue. There are no culverts or connections from the irrigation ditch on the northern property boundary on the south side of Woodward Avenue to the northern ditch. See January 14, 2012 Site Visit Photo Points drawing for location.

Attachment C

Google Earth Aerial Photographs



May 22, 1993 Aerial Photograph, obtained from GoogleEarth Pro



June 3, 2003 Aerial Photograph, obtained from GoogleEarth Pro



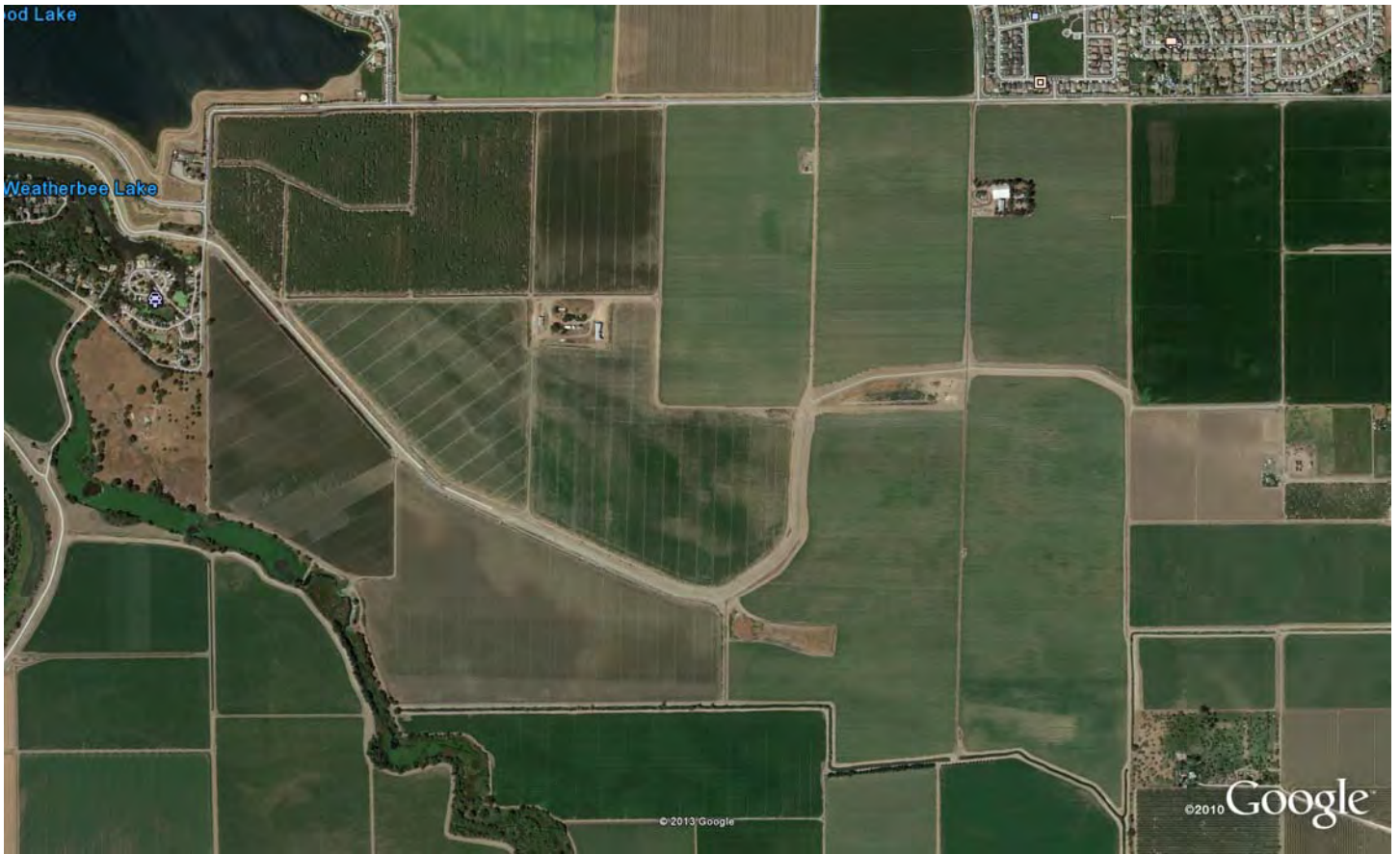
December 30, 2005 Aerial Photograph, obtained from GoogleEarth Pro



June 5, 2009 Aerial Photograph, obtained from GoogleEarth Pro



October 22, 2011 Aerial Photograph, obtained from GoogleEarth Pro

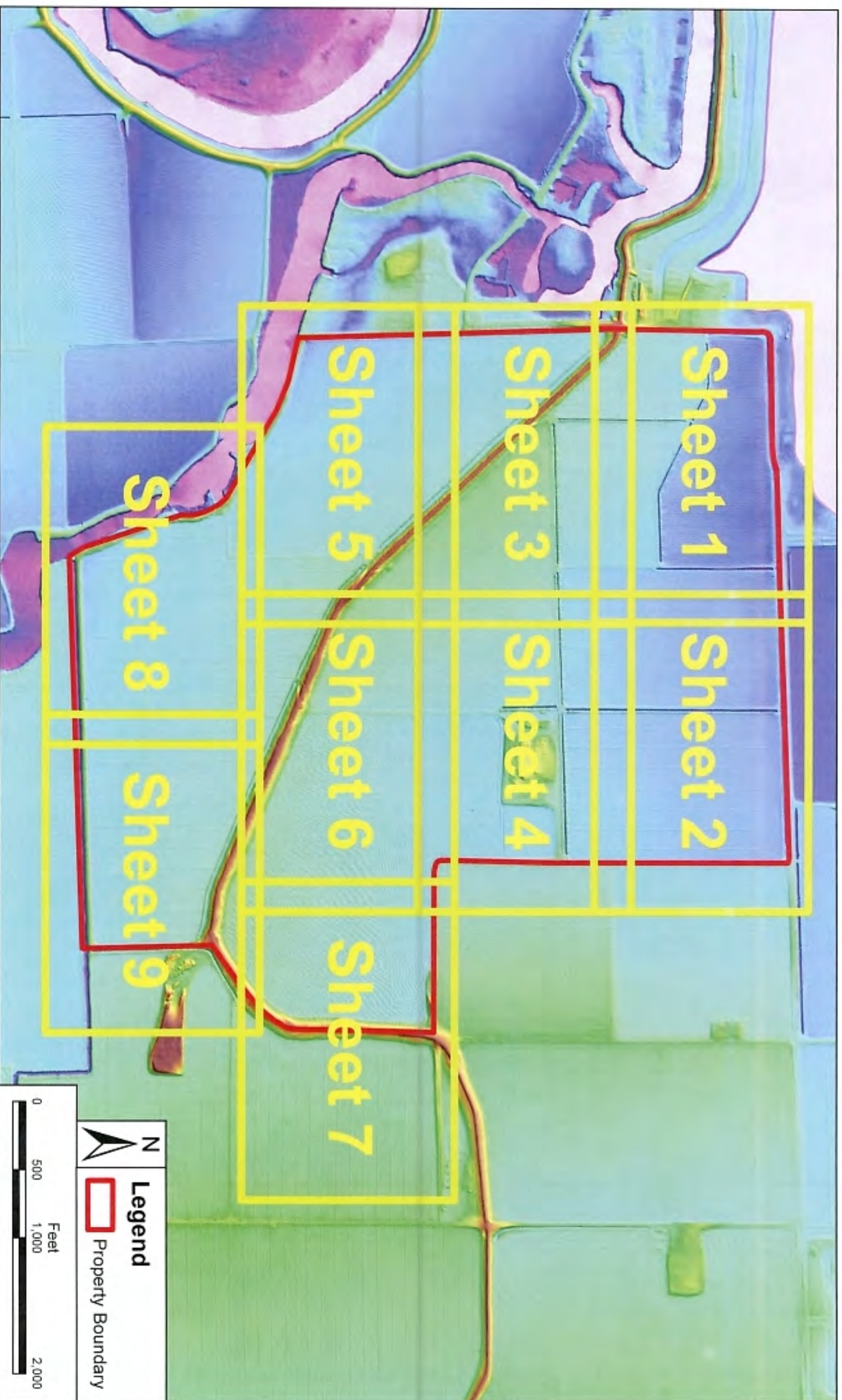


August 23, 2012 Aerial Photograph, obtained from GoogleEarth Pro

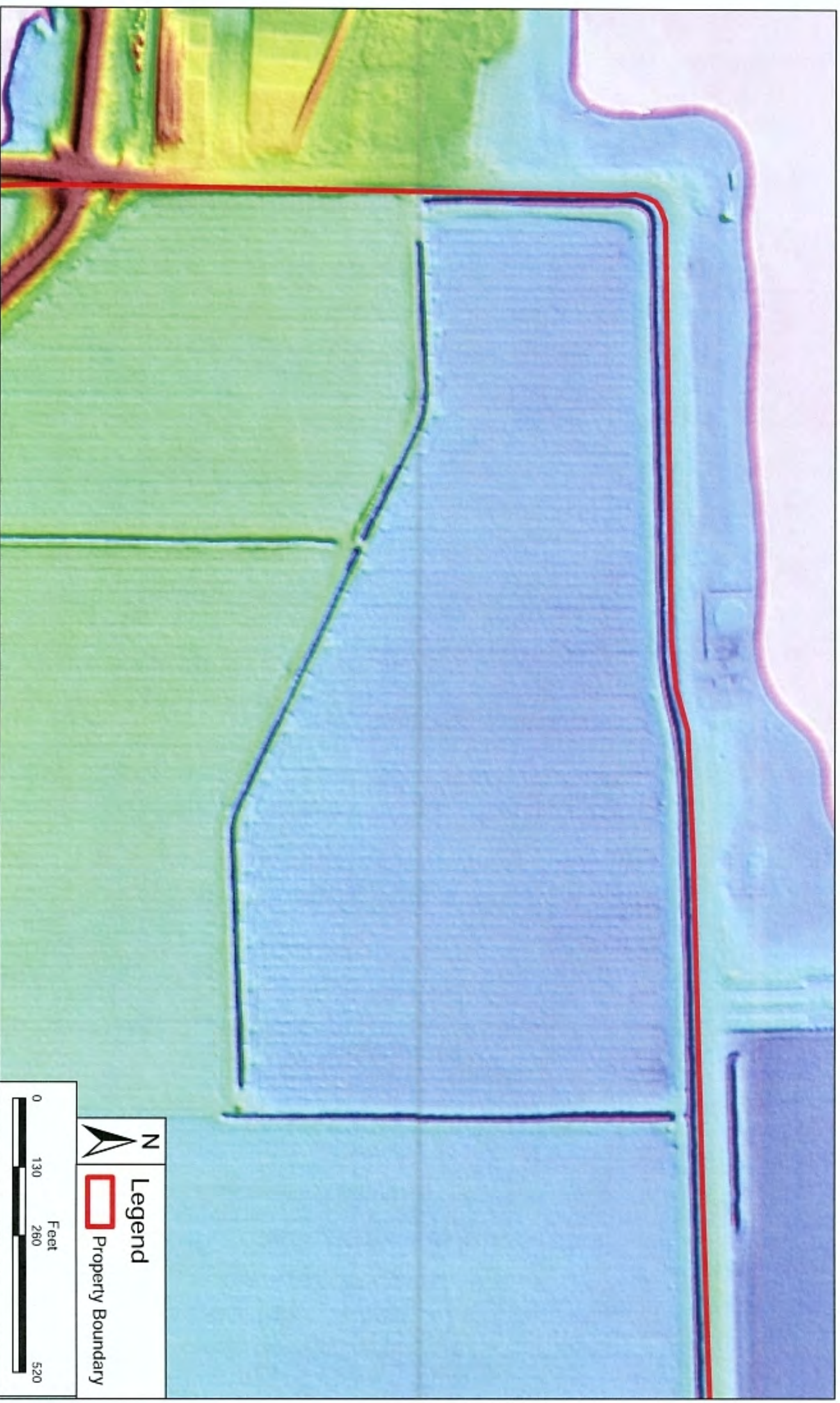
Attachment D

DWR LiDAR

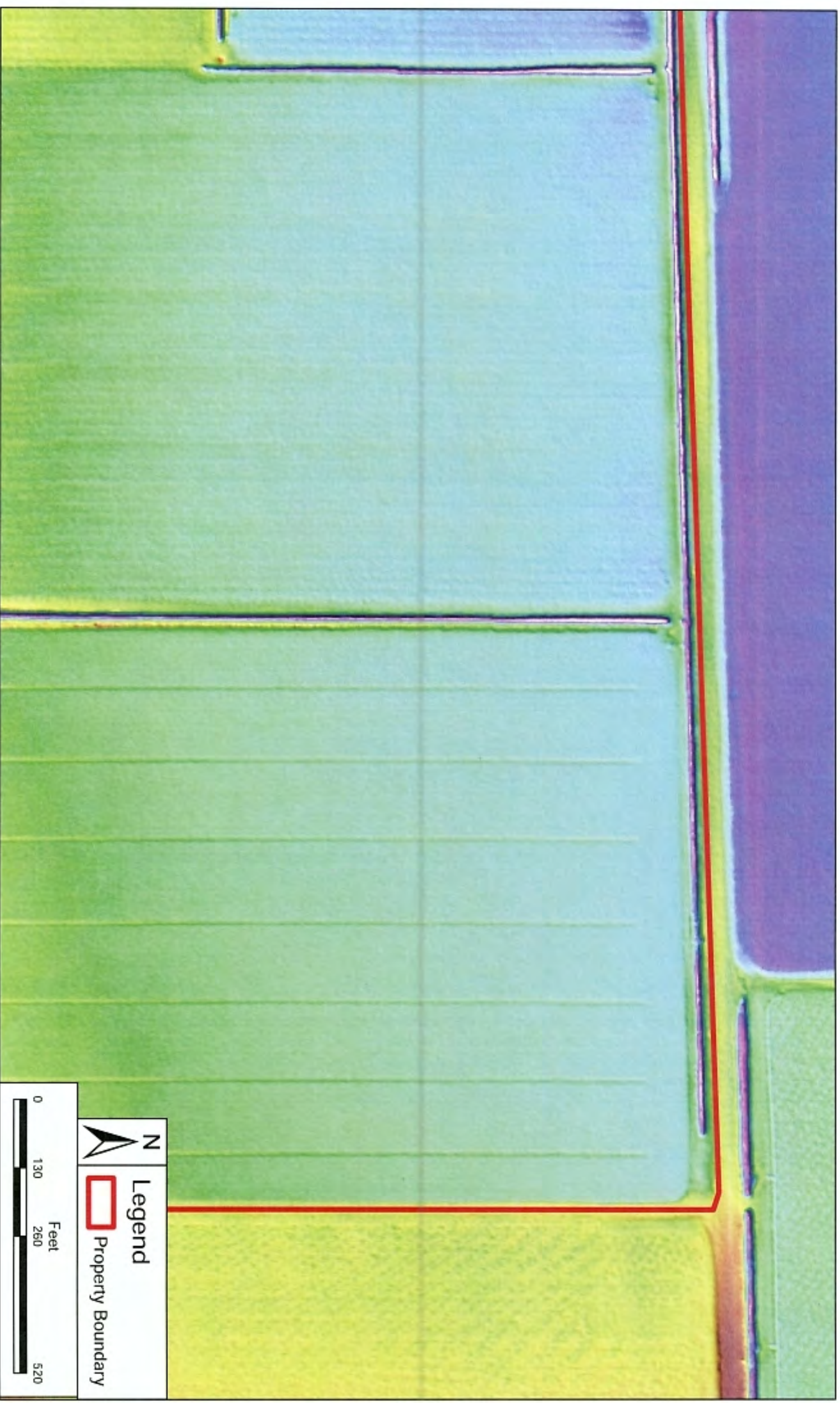
Trails at Manteca - DWR LiDAR Master Sheet



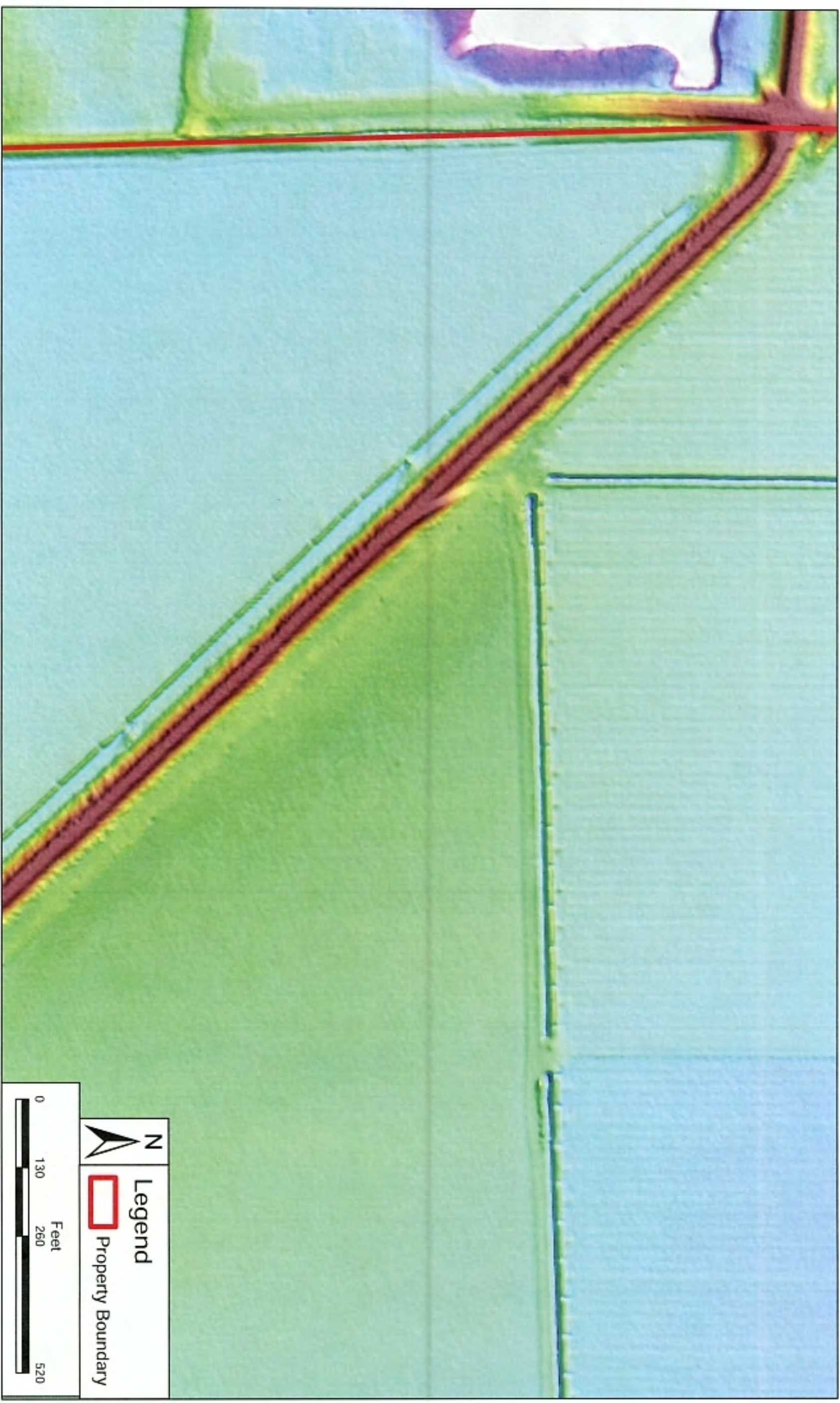
Trails at Manteca - DWR LiDAR Sheet 1



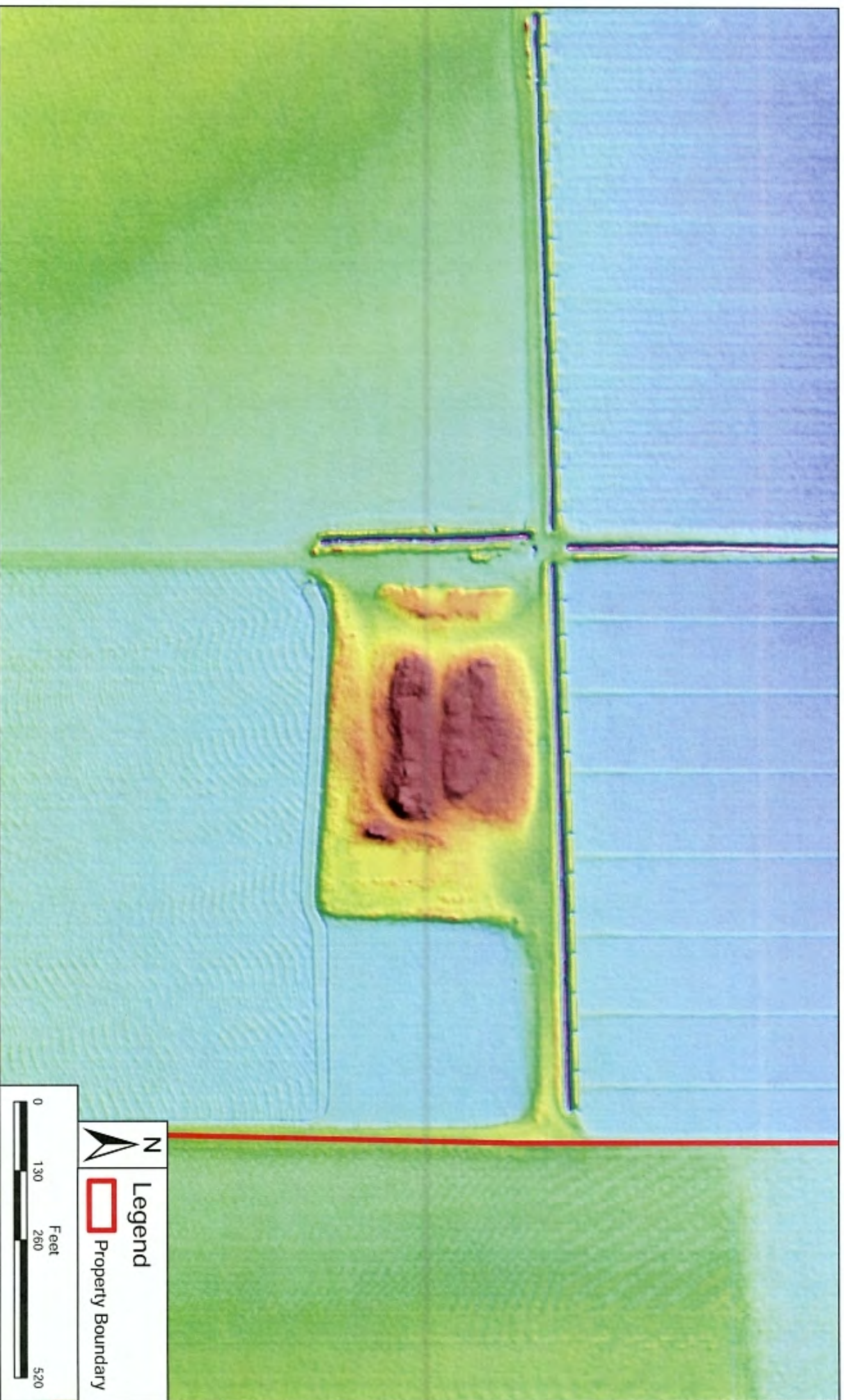
Trails at Manteca - DWR LIDAR Sheet 2



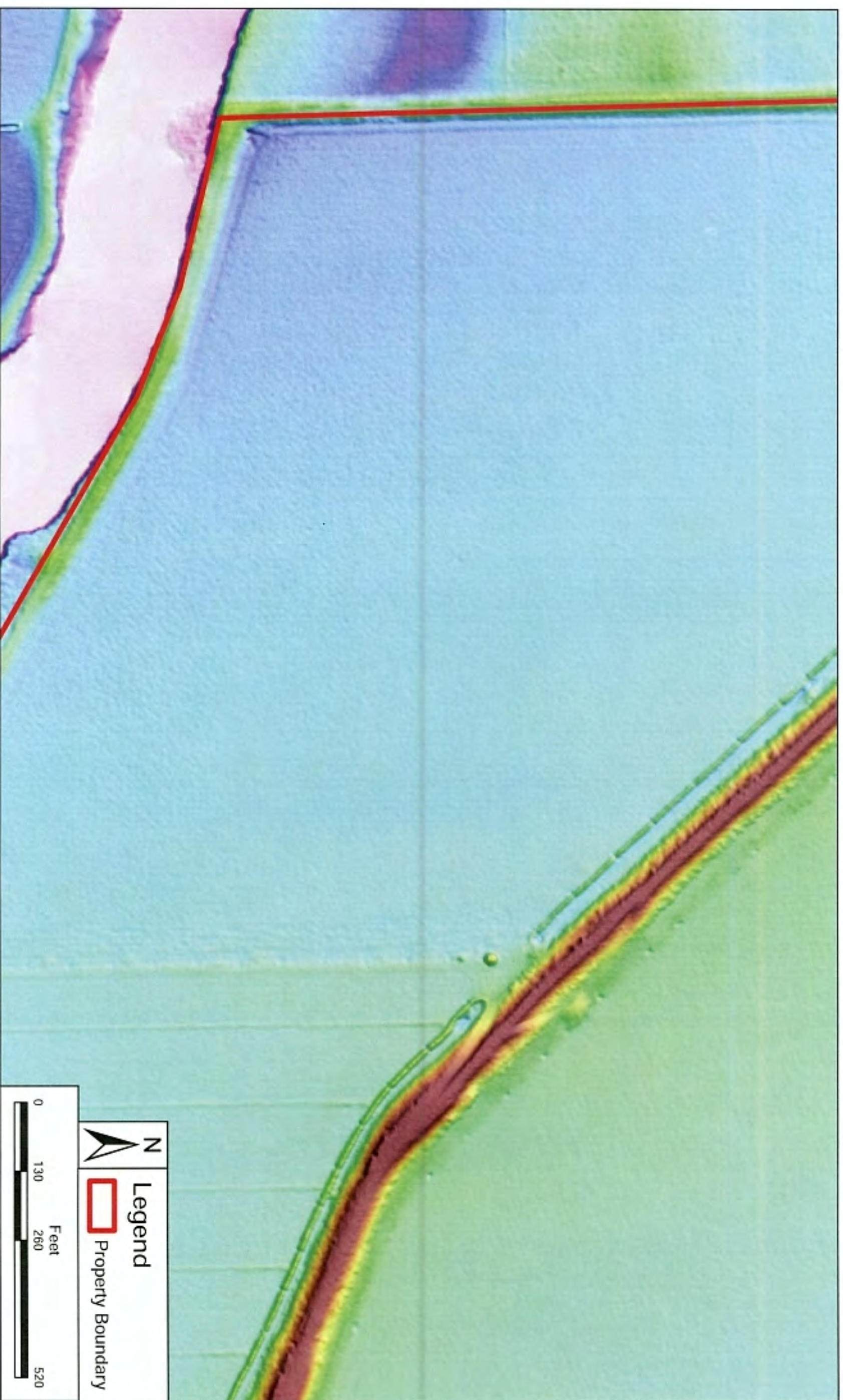
Trails at Manteca - DWR LIDAR Sheet 3



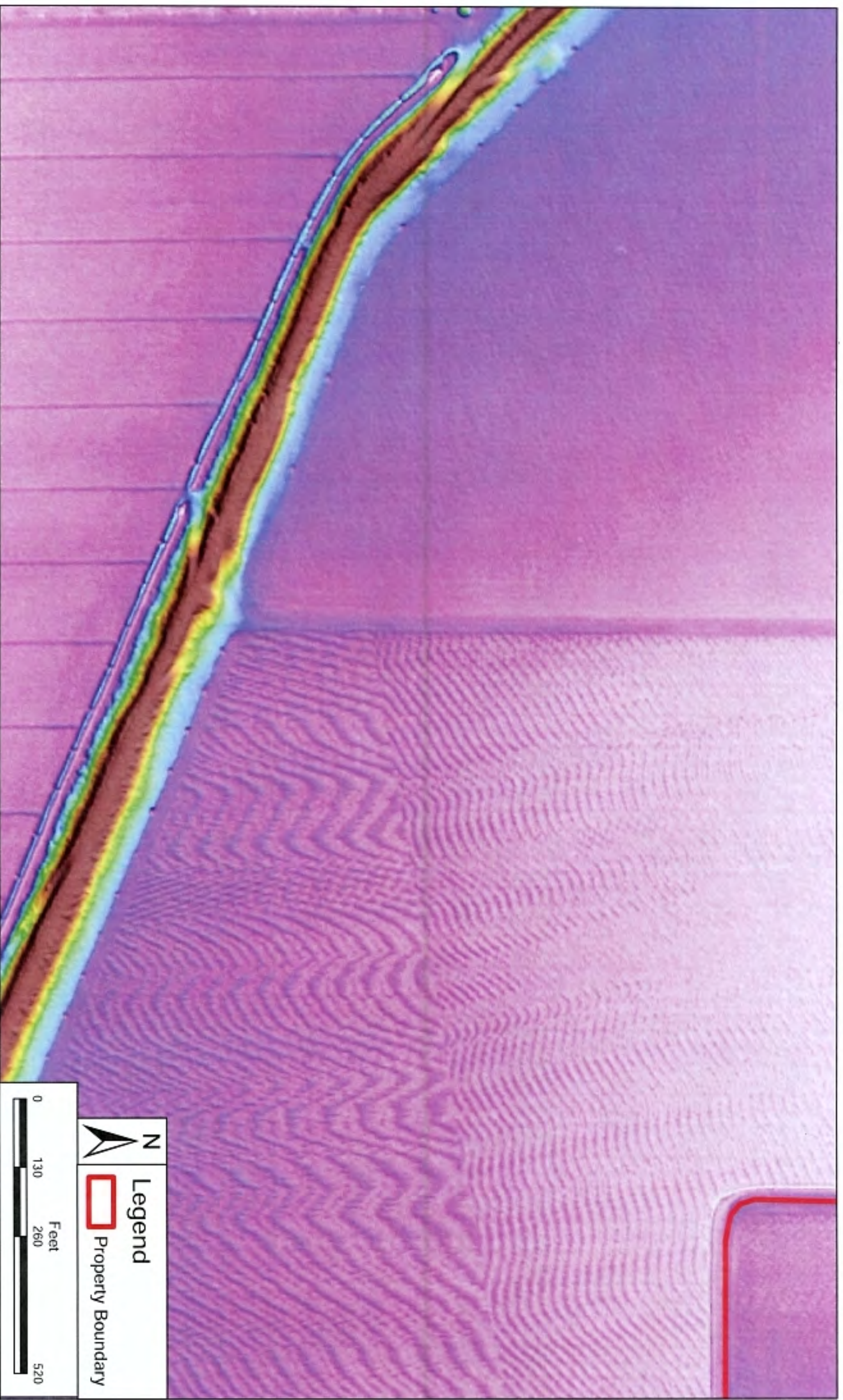
Trails at Manteca - DWR LIDAR Sheet 4



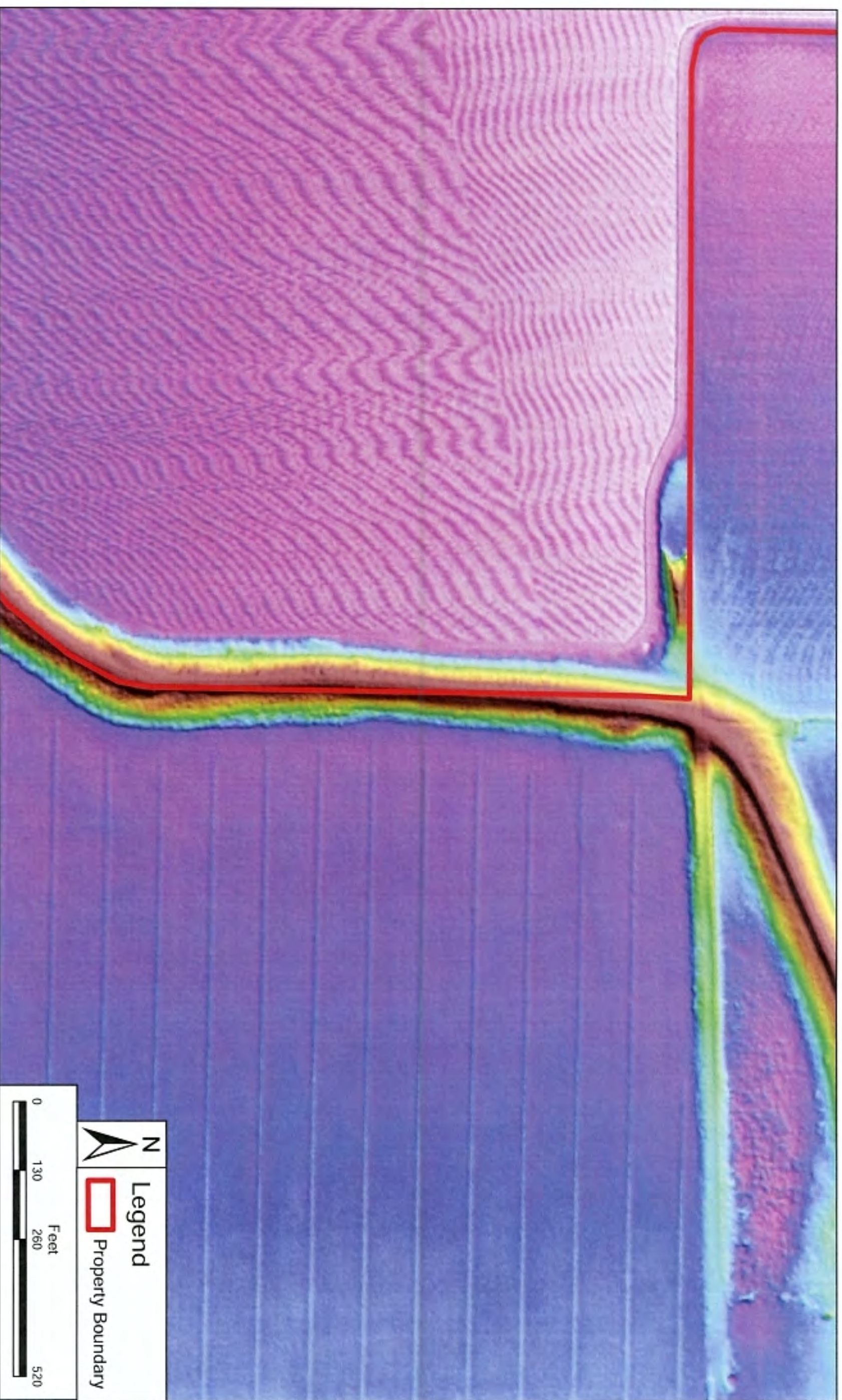
Trails at Manteca - DWR LIDAR Sheet 5



Trails at Manteca - DWR LIDAR Sheet 6



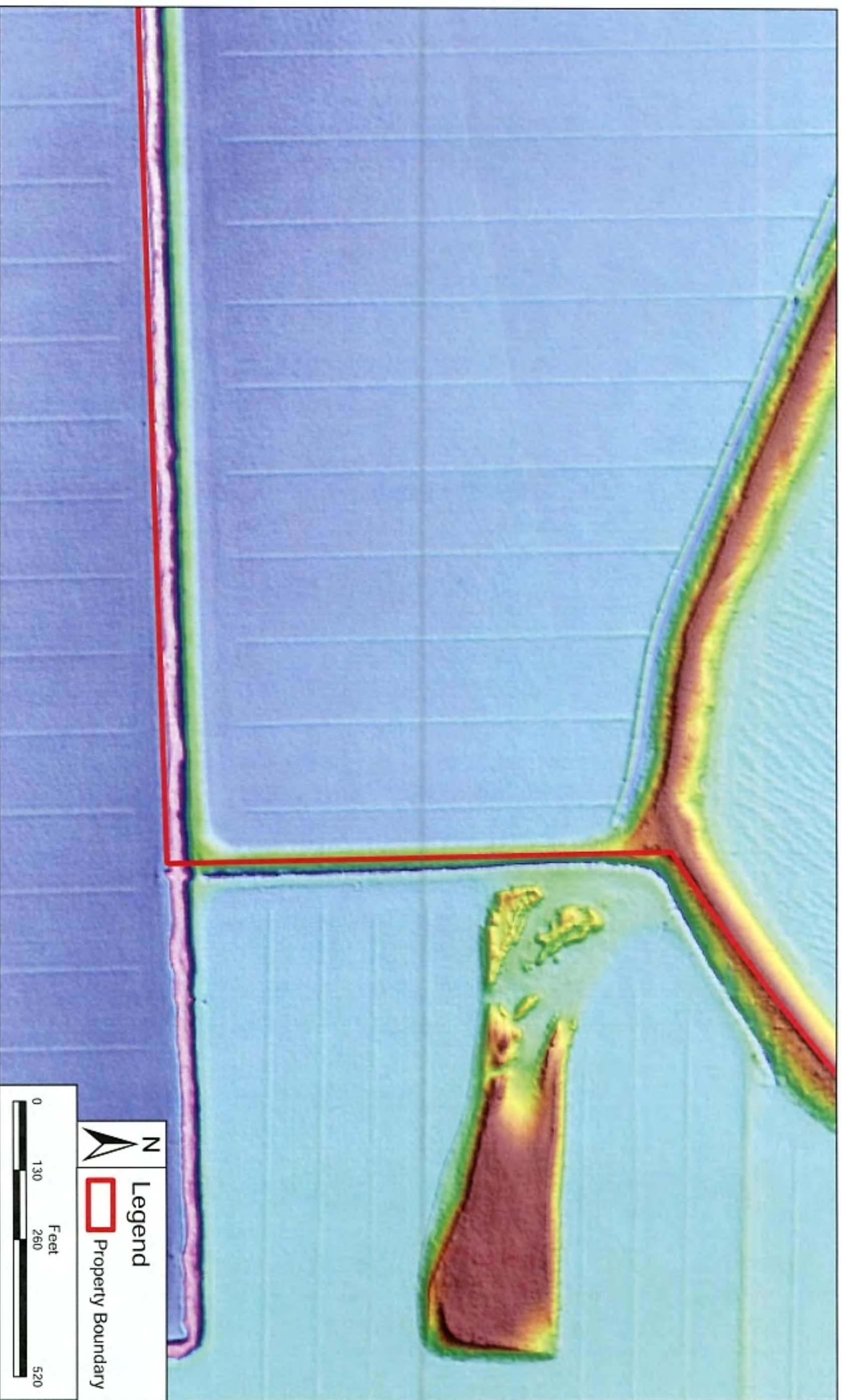
Trails at Manteca - DWR LIDAR Sheet 7



Trails at Manteca - DWR LIDAR Sheet 8



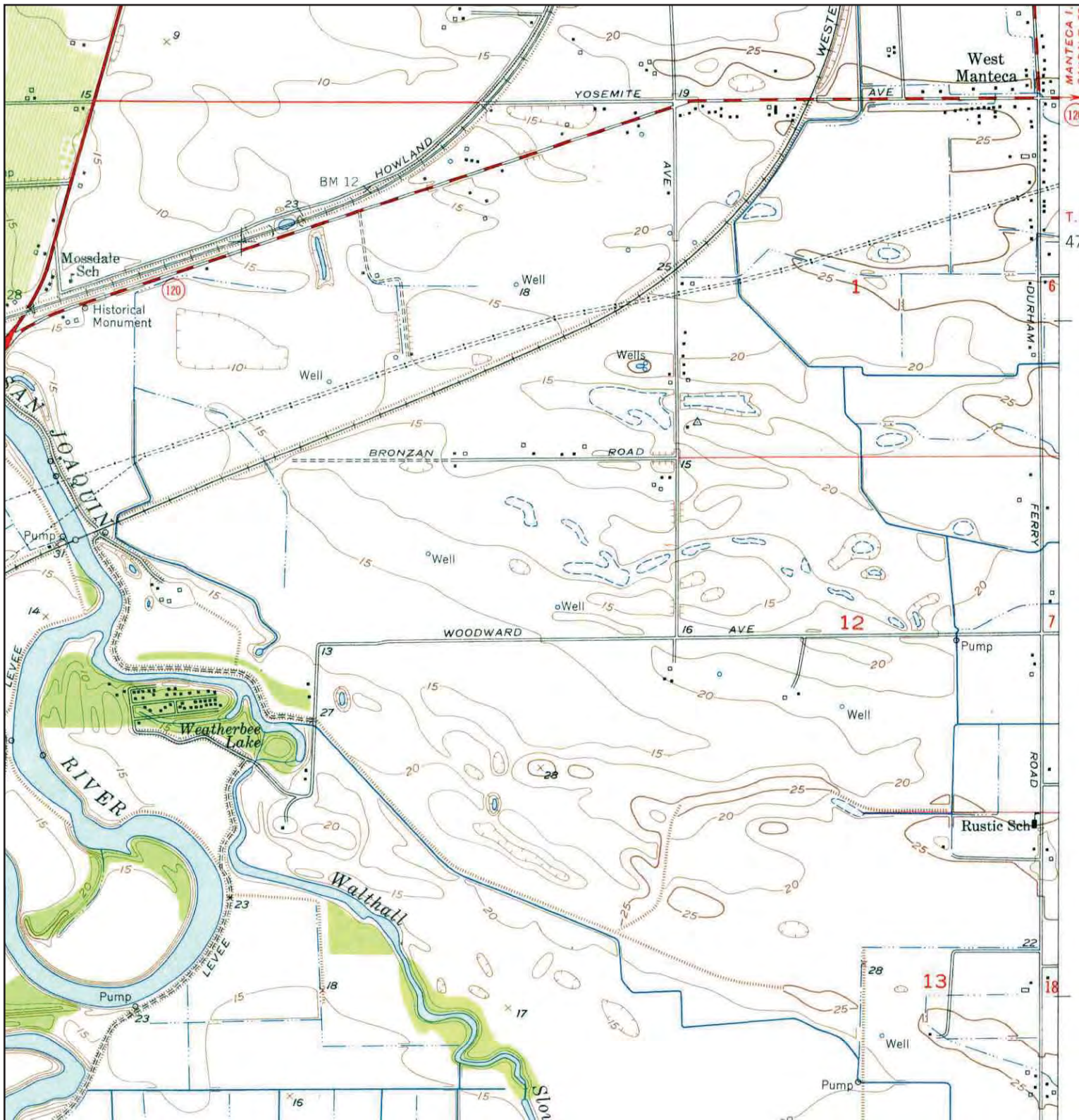
Trails at Manteca - DWR LIDAR Sheet 9



Attachment E

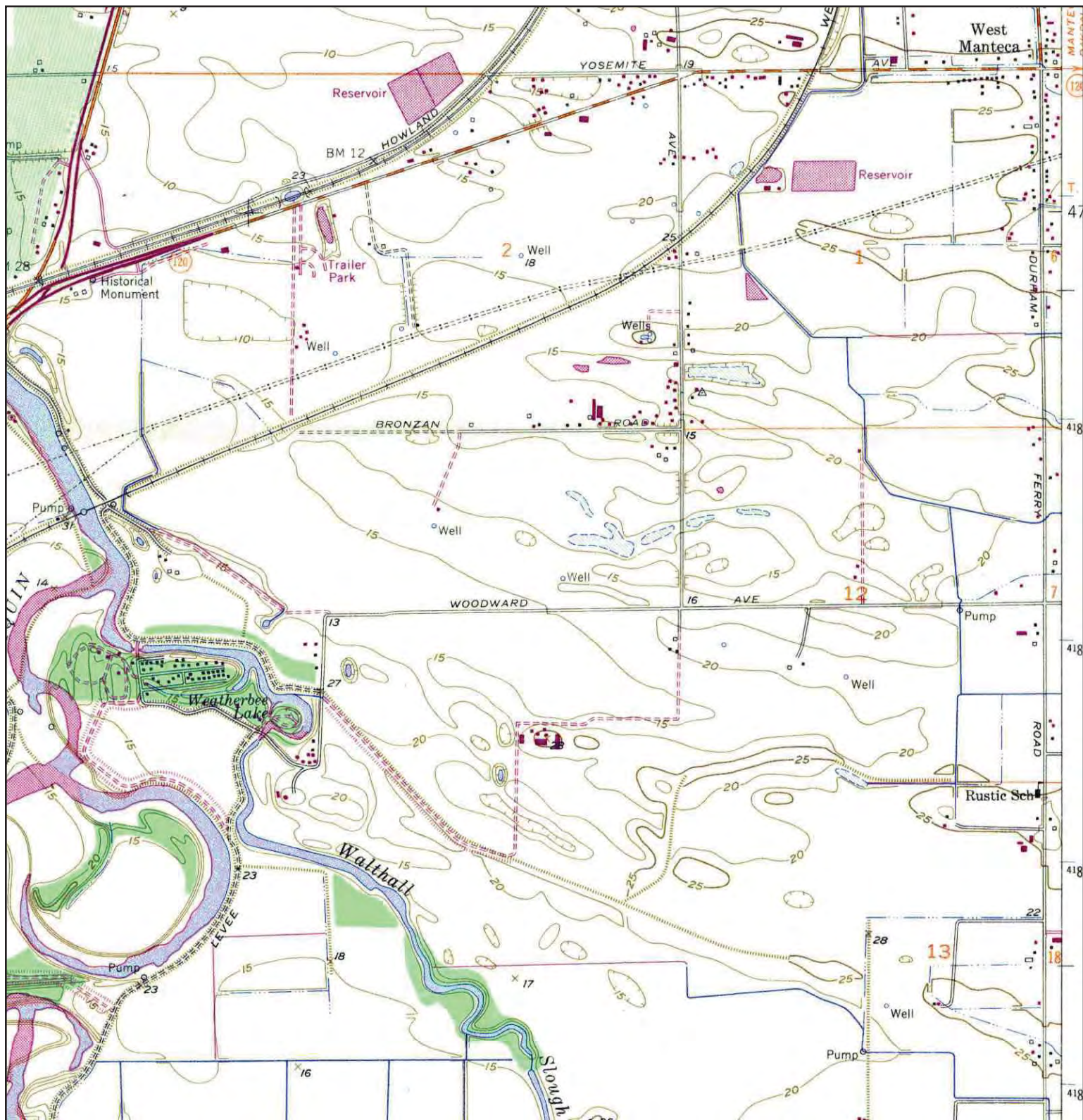
Topographic Maps

Historical Topographic Map



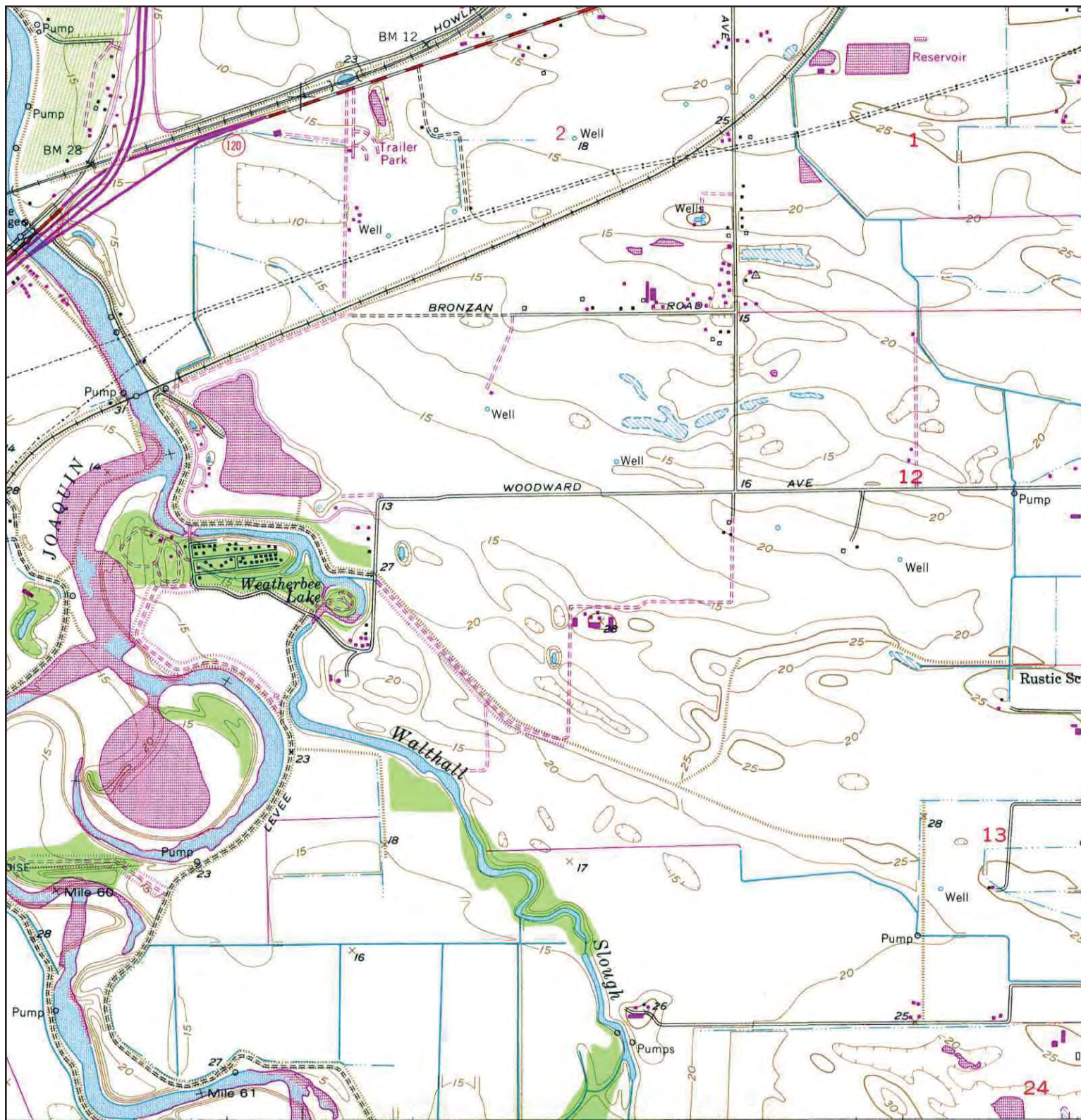
| | | | | | |
|--|----------------|------------|---------------------------|----------------|------------------|
| | TARGET QUAD | SITE NAME: | Trails of Manteca | CLIENT: | Terrasearch Inc. |
| | NAME: LATHROP | ADDRESS: | 2368 East Woodward Avenue | CONTACT: | Rob Campbell |
| | MAP YEAR: 1952 | LAT/LONG: | 37.773 / 121.2784 | INQUIRY#: | 1939860.4 |
| | SERIES: 7.5 | | | RESEARCH DATE: | 05/29/2007 |
| | SCALE: 1:24000 | | | | |

Historical Topographic Map



| | | | | | |
|--|-------------------------|------------|---------------------------|----------------|------------------|
| | TARGET QUAD | SITE NAME: | Trails of Manteca | CLIENT: | Terrasearch Inc. |
| | NAME: LATHROP | ADDRESS: | 2368 East Woodward Avenue | CONTACT: | Rob Campbell |
| | MAP YEAR: 1968 | | Manteca, CA 95337 | INQUIRY#: | 1939860.4 |
| | PHOTOREVISED FROM: 1952 | LAT/LONG: | 37.773 / 121.2784 | RESEARCH DATE: | 05/29/2007 |
| | SERIES: 7.5 | | | | |
| | SCALE: 1:24000 | | | | |
| | | | | | |

Historical Topographic Map



| | | | | | |
|--|-------------------------|------------|---------------------------|----------------|------------------|
| | TARGET QUAD | SITE NAME: | Trails of Manteca | CLIENT: | Terrasearch Inc. |
| | NAME: LATHROP | ADDRESS: | 2368 East Woodward Avenue | CONTACT: | Rob Campbell |
| | MAP YEAR: 1976 | | Manteca, CA 95337 | INQUIRY#: | 1939860.4 |
| | PHOTOREVISED FROM: 1952 | LAT/LONG: | 37.773 / 121.2784 | RESEARCH DATE: | 05/29/2007 |
| | SERIES: 7.5 | | | | |
| | SCALE: 1:24000 | | | | |
| | | | | | |