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 16, 2023

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Sacramento District, **Neo Express Car Wash**, **SPK-2021-00514**

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: **California** County: **Sacramento County** City: **City of Sacramento**
Center coordinates of site (lat/long in degree decimal format): Lat. **38.64822**°, Long. **-121.42965**°
Universal Transverse Mercator: **10**N **63665 427891**
Name of nearest waterbody: **Natomas East Main Drainage Canal (aka Steelhead Creek)**
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Sacramento River**
Name of watershed or Hydrologic Unit Code (HUC): **Lower American, 18020111**
☒ 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): **May 18, 2022; December 12, 2022; December 20, 2022; January 25, 2023; February 28, 2023; March 3, 2023.**

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 "*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: **0.043 acre (279 linear feet)**
      Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: OHWM.
      Elevation of established OHWM (if known): Established by OHWM

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:

[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.

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 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: **5,010 ac. (Steelhead Creek watershed HUC1802011103)**
Drainage area: **58 ac.**
Average annual rainfall: **18-20 inches**
Average annual snowfall: **0 inches**

(ii) Physical Characteristics:
(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☒ Tributary flows through **7** tributaries before entering TNW.

Project waters are **approximately 7.5 river miles from a TNW, Sacramento River.**
Project waters are **1.7 river miles from an RPW, Magpie Creek.**
Project waters are **5.3 aerial (straight) miles from a TNW, Sacramento River.**
Project waters are **2.1 aerial (straight) miles from an RPW, Magpie Creek.**

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

Project waters cross or serve as state boundaries. Explain: N/A

Identify flow route to TNW[5]: **Water from the project area RPW flows sequentially through the following before entering a TNW, the Sacramento River west of the project area.**

- **Approximately 725 linear feet of intermittent drainage with abutting wetlands on the inaccessible adjacent parcel west of the project area (aerial interpretation of wetland/drainage signatures present on geo-rectified aerial photo provided by Maxar and dated April 12, 2022).**
- **Approximately 200 linear feet of culvert on an inaccessible parcel to the west of the project area.**
- **Approximately 794 feet of ephemeral drainage (NRPW) on a partially accessible parcel west of the project area. Further details are provided below in Section 2(i)b.**
- **Approximately 5,019 linear feet of piped ephemeral drainage (NRPW) heads-up digitized on Figure 1 based on information about the City of Sacramento storm drain system provided by Mark Mitchell of the City of Sacramento Department of Utilities during a September 28, 2022, phone conversation.**
- **Approximately 3,204 linear feet of off-site ephemeral concrete canal ditch (NRPW), AKA the I-80 North Ditch, located west of the project area.**
- **Approximately 4,884 linear of Magpie Creek (non-navigable, RPW) located west of the project area.**
- **Approximately 27,246 linear feet of Steelhead Creek AKA Natomas East Main Drainage Canal (non-navigable, RPW) west of the project area.**

Tributary stream order, if known: **See Figure 1 – Relevant Reach**

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

Tributary is: ☒ Natural – within the project area
☐ Artificial (man-made). Explain:
☒ Manipulated (man-altered). Explain: **Portions of the tributary outside of the project area have been culverted and piped. See Figure 1 for specific details.**

Tributary properties with respect to top of bank (estimate):
Average width: **6.5 ft.**
Average depth: **<1 ft.**
Average side slopes: **1:1 (rise: run)**

Primary tributary substrate composition within the project area (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: **Minimal erosion noted as flow velocities are low.**
Presence of run/riffle/pool complexes. Explain:
Tributary geometry: **Straight**
Tributary gradient (approximate average slope): **2-3%**

(c) Flow:
Tributary provides for: **Seasonal flow**
Estimate average number of flow events in review area/year: One seasonal flood event.
Describe flow regime: **(RPW). Feature ponds/drains during the wet-season. 1st order tributary; see Figure 1.**

Other information on duration and volume:

Surface flow is: **Discrete and confined** Characteristics: **Though no water was present duing the site visit of May 18, 2022, several inches of ponding were noted on December 12, 2022; December 20, 2022; January 25, 2023; February 28, 2023; and March 3, 2023.**

[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.

Subsurface flow: **Unknown**. 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
☒ changes in the character of soil
☒ shelving
☐ vegetation matted down, bent, or absent
☐ leaf litter disturbed or washed away
☐ sediment deposition
☐ water staining
☐ other (list):
☒ the presence of litter and debris
☒ destruction of terrestrial vegetation
☐ the presence of wrack line
☐ sediment sorting
☒ scour
☐ multiple observed or predicted flow events
☐ abrupt change in plant community
☐ 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:
☐ oil or scum line along shore objects
☐ fine shell or debris deposits (foreshore)
☐ physical markings/characteristics
☐ tidal gauges
☐ other (list):
☐ Mean High Water Mark indicated by:
☐ survey to available datum;
☐ physical markings;
☐ vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: **Water was clear. The majority of the watershed is comprised of altered lands occupied by residential, industrial, or commercial developments. Many of the drainages have been manipulated or captured for flood control. The project area RPW is not on the current Clean Water Act Section 303(d) list, and is not listed as a Clean Water Act Section 319 Grant Program project.**

Identify specific pollutants, if known: N/A

(iv) Biological Characteristics. Channel supports (check all that apply):
☐ Riparian corridor. Characteristics (type, average width):
☒ Wetland fringe. Characteristics: **The intermittent drainage supports small patches of wetland plant species including water plantain (*Alisma lanceolatum*), spike rush (*Eleocharis macrostachya*), tall flatsedge (*Cyperus eragrostis*), and creeping bentgrass *(Agrostis stolonifera*).**

☒ Habitat for:
☐ Federally Listed species. Explain findings:
☐ Fish/spawn areas. Explain findings:
☐ Other environmentally-sensitive species. Explain findings:
☒ Aquatic/wildlife diversity. Explain findings**: provides foraging habitat for birds; provides seasonal habitat for amphibians and aquatic macro-invertebrates.**

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: **Approximately 1.8-acre seasonal wetland are located on the adjacent parcel west of the project area (aerial interpretation of wetland signatures)**
Wetland type. Explain: **Appears to be seasonal palustrine emergent marsh – access unavaiblable.**
Wetland quality. Explain: **Unknown – site unaccessible however, the abutting tributary is not on the current Clean Water Act Section 303(d) list, and is not listed as a Clean Water Act Section 319 Grant Program project.**

[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.

Project wetlands cross or serve as state boundaries. Explain: **N/A**

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**

Explain: **Historically in 1951, the project area RPW, the sole aquatic resource within the project area, flowed west, merged with waters from Magpie Creek, and entered the Natomas East Main Drainage Canal (also known as Steelhead Creek), which is tributary to the Sacramento River, a TNW. However, in 1911, the drainage flowed through the project area to the west and disappeared somewhere south of Magpie Creek. A second intermittent drainage (northern drainage) merged with the subject drainage from the north within the enclave west of the project area.**

Based on a review of historic aerial photography (1966), it appears the drainage was crossed by a new access road associated with the drive-in theater or the ranchette. Additionally, after reviewing a LiDAR analysis of the enclave, it appears that original meanders of the subject drainage and northern drainage were modified to accommodate the expansion of the drive-in theater, which was first opened in 1950 and subsequently expanded in the 1960s and 1970s. These activities along with potential grading associated with the ranchette appears to have hindered the original flow of the drainage downstream off-site from the project area resulting in the formation of the seasonal wetland.

Surface flow is**: discrete and confined**
Characteristics: No site access was granted. All observations were from publicly-accessible areas, mostly from along Bell Avenue which is south of the seasonal wetland.

- **May 18, 2022 – irrigation water was observed flowing north towards the wetland by way of a culvert under the Bell Avenue south of this feature. No ponding was noted, though the areas directly north of the culvert appeared saturated and supported perennial rye (*Lolium perenne*) and curly dock (*Rumex crispus*).**
- **December 12, 2022 – several inches of ponding were present.**
- **December 20, 2022 – several inches of ponding were present.**
- **January 25, 2023 – several inches of ponding were present.**
- **February 28, 2023 – several inches of ponding were present.**
- **March 3, 2023. – several inches of ponding were present**.

Subsurface flow: **Unknown**. 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 **7.5** river miles from the Sacramento River, a TNW.
Project waters are **5.3** aerial (straight) miles from TNW.
Flow is from: **the project site to the east**
Estimate approximate location of wetland as within the **2 year or less** 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: **N/A.**

Identify specific pollutants, if known: **N/A.**

(iii) Biological Characteristics. Wetland supports (check all that apply):
☐ Riparian buffer. Characteristics (type, average width):
☒ Vegetation type/percent cover. **Appears to be close to 100%**

☒ Habitat for:
☐ Federally Listed species. Explain findings:
☐ Fish/spawn areas. Explain findings:
☐ Other environmentally-sensitive species. Explain findings:

☒ Aquatic/wildlife diversity. Explain findings: **provides foraging habitat for birds; provides habitat for macro-invertebrates.**

3. **Characteristics of all wetlands adjacent to the tributary (if any)**
   All wetland(s) being considered in the cumulative analysis: **1.8 acres.**

   For each wetland, specify the following:

   Directly abuts? (Y/N) Y

   Size (in acres) 1.8 acres

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:

   The project area supports an intermittent drainage (RPW). The project area is located within an approximately 58-acre undeveloped enclave (enclave) primarily surrounded by residential and commercial development. The enclave is bracketed by Grace Avenue on the north, Raley Boulevard on the east, Bell Avenue on the south, and Marysville Boulevard on the west. The enclave includes ruderal lands that formerly supported a small ranchette along Bell Avenue and the Bell Drive-In Movie Theater located along Grace Avenue; all structures within these two areas have been demolished and removed. Agricultural lands occupy the northeastern areas, and an Arco service station is situated on the southeast corner by the intersection of Raley Boulevard and Bell Avenue.

   Historically in 1951, the project area RPW, the sole aquatic resource within the project area, flowed west, merged with waters from Magpie Creek, and entered the Natomas East Main Drainage Canal (also known as Steelhead Creek), which is tributary to the Sacramento River, a Section 10 TNW (Figure 2). However, in 1911, the drainage flowed through the project area to the west and disappeared somewhere south of Magpie Creek (Figure 3). A second intermittent drainage (northern drainage) merged with the subject drainage from the north within the enclave west of the project area.

   Currently, the drainage departs the project area, flows westward, and exits the enclave via an underground storm drain located on the east side of Marysville Boulevard (at 4498 Marysville Boulevard) (Figure 4). A separate roadside ditch follows the east side of Marysville Boulevard and also exits the enclave through this storm drain.

According to a representative of the City of Sacramento Department of Utilities, water from this storm drain enters into a series of underground pipes that flow generally to the southwest before being pumped into the I-80 North Ditch. Water from the I-80 North Ditch flows west in a concrete-lined channelized reach of Magpie Creek before entering "Sump 157" where it is pumped into the Natomas East Main Drainage Canal (AKA Steelhead Creek). The Natomas East Main Drainage Canal (NEMDC), which drains southward, is a perennial tributary to the Sacramento River, a Section 10 TNW. The majority of the storm drainage system in the areas south of Magpie Creek and east of the NEMDC drains to "Sump 147" and is also pumped into the NEMDC. Refer to Figure 1 for additional details.

Identifying the Reach Relevant to the Significant Nexus Determination of Non-RPW

For the sake of this determination, the project area RPW drains sequentially into the following features after exiting the project area:

1. **Approximately 725 linear feet of intermittent drainage with abutting wetlands (RPW).**
2. **Approximately 200 linear feet of culvert.**
3. **Approximately 794 feet of ephemeral drainage (NRPW).**
4. **Approximately 5,019 linear feet of piped ephemeral drainage (NRPW).**
5. **Approximately 3,204 linear feet of the I-80 North Ditch (NRPW).**
6. **Approximately 4,884 linear feet of Magpie Creek (Non-navigable relatively permanent tributary to a TNW).**
7. **Approximately 27,246 linear feet of NEMDC (Non-navigable relatively permanent tributary to a TNW).**

The relevant reach consists of the features listed in #1 through #6 above and as portrayed on Figure 1.

Relevant Reach Segment #1 - Approximately 725 linear feet of intermittent drainage with abutting wetland (RPW): This represents an extension of the RPW within the project area and appears to share similar characteristics described above. No access was permitted to this parcel. This reach of RPW outside directly abuts wetlands the characteristics of which are described in Section 2 above.

Relevant Reach Segment #2 - Approximately 200 linear feet of culvert: No access was permitted to this parcel. No direct observation of the culvert/s occurred. Their presence is inferred based on observations of aerial photography.

Relevant Reach Segment #3 - Approximately 794 feet of ephemeral drainage (NRPW):

Tributary properties with respect to top of bank (estimate):
Average width: **3 ft.**
Average depth: **<1 ft.**
Average side slopes: **1:1 (rise: run)**

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: **Bed and bank present with minimal erosion.**
Presence of run/riffle/pool complexes. Explain: **N/A**
Tributary geometry: **straight**
Tributary gradient (approximate average slope): **1-3%**

Flow:
Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: Appears to flow for short duration after storm events.

Describe flow regime: **Ephemeral (NRPW**).

Other information on duration and volume:

- **May 18, 2022 – no water was present.**

- **December 12, 2022 – several inches of flowing water were present in the deeper portions of the channel; however, site access was limited. No site access was granted. All observations were from publicly-accessible areas, mostly along the east side of Marysville Boulevard near the 36-inch culvert that defines the start of the storm water system in which this NRPW drains. Several items of trash were flattened against the debris grate covering the culvert inferring that a higher volume of flow occurred.**
- **December 20, 2022 – several inches of flowing water were present in the deeper portions of the channel. The depth of water entering the storm drain was only a few inches.**
- **January 25, 2023 – ponding was present in the lowest portions of the channel, but water was not flowing into the storm drain.**
- **February 28, 2023 – several inches of flowing water were present in the deeper portions of the channel. The depth of water entering the storm drain was only a few inches.**
- **March 3, 2023. – several inches of flowing water were present in the deeper portions of the channel. The depth of water entering the storm drain was approximately 1 inch.**

No historic Google Earth aerial photography between 1985 and 2022 definitively displayed surface water within this feature even when water was present within the project area RPW.

Surface flow is: **Ephemeral (NRPW).** Characteristics: **See above.**

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

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[8] (check all indicators that apply):
☐ clear, natural line impressed on the bank
☒ changes in the character of soil
☒ shelving
☒ vegetation matted down, bent, or absent
☐ leaf litter disturbed or washed away
☐ sediment deposition
☐ water staining
☐ other (list):
☒ the presence of litter and debris
☒ destruction of terrestrial vegetation
☒ the presence of wrack line
☐ sediment sorting
☒ scour
☒ multiple observed or predicted flow events
☐ abrupt change in plant community
☒ Discontinuous OHWM.[9] Explain: Facultative vegetation (*Lolium perenne*) was present in portions of the channel including on the bed and bank.

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
☐ High Tide Line indicated by:
☐ oil or scum line along shore objects
☐ fine shell or debris deposits (foreshore)
☐ physical markings/characteristics
☐ tidal gauges
☐ other (list):
☐ Mean High Water Mark indicated by:
☐ survey to available datum;
☐ physical markings;
☐ vegetation lines/changes in vegetation types.

Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: Water was clear, though several items of trash were noted including plastic bags and food wrappings or containers. The majority of the watershed is comprised of altered lands occupied by residential, industrial, or commercial developments. Many of the drainages have been manipulated for flood control.

Identify specific pollutants, if known: N/A

Biological Characteristics. Channel supports (check all that apply):
☐ Riparian corridor. Characteristics (type, average width):
☒ Wetland fringe. Characteristics: **Predominantly perennia rye (*Lolium perenne*).**

[8]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.
[9]Ibid.

☒ Habitat for:
- ☐ Federally Listed species. Explain findings:
- ☐ Fish/spawn areas. Explain findings:
- ☐ Other environmentally-sensitive species. Explain findings:
- ☒ Aquatic/wildlife diversity. Explain findings: **provides foraging habitat for birds; provides seasonal habitat for aquatic macro-invertebrates.**

Relevant Reach Segment #4 – Approximately, 5,019 linear feet of piped ephemeral drainage (NRPW): Other than the 36-inch cast concrete culvert that represents the entrance into the local storm drain system, no access was permitted to this feature. Water daylights from the north wall of I-80 North Ditch by way of an approximately 12-foot long rectangular-shaped outfall. This feature could only be observed from the I-80 freeway, where non-emergency stopping is illegal.

Relevant Reach Segment #5 – 3,204 linear feet of the I-80 North Ditch (NRPW):

Tributary properties with respect to top of bank (estimate):
Average width: **15 ft.**
Average depth: **<1 ft.**
Average side slopes: **6:1 (rise: run)**

Primary tributary substrate composition within the project area (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: **Concrete bed and bank present**
Presence of run/riffle/pool complexes. Explain:
Tributary geometry: **straight**
Tributary gradient (approximate average slope): **1-3%**

Flow:
Tributary provides for: **ephemeral flow**
Estimate average number of flow events in review area/year: **Appears to flow for short duration after storm events.**
Describe flow regime: **Ephemeral (NRPW).**
Other information on duration and volume:

- **December 12, 2022 – several inches of flowing water were present.**
- **December 20, 2022 – several inches of flowing water were present.**
- **January 25, 2023 – several inches of flowing water were present.**
- **February 28, 2023 – several inches of flowing water were present.**
- **March 3, 2023. – several inches of flowing water were present.**

Surface flow is: **Ephemeral (NRPW).** Characteristics: **Google Earth historic aerial photograpy dating back to April 2015 was reviewed. No flows of the magnitude observed during the above-listed site visits, which occurred after or during precipitation events, were noted. Minor discharges of water was noted during the dry-season and likely represents excess summer landscape water practices.**

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

Tributary has (check all that apply):
- ☒ Bed and banks
- ☒ OHWM[10] (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

[10]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.

☐ vegetation matted down, bent, or absent
☐ leaf litter disturbed or washed away
☐ sediment deposition
☒ water staining
☐ other (list):
☐ Discontinuous OHWM.[11] Explain:

☐ sediment sorting
☐ scour
☐ multiple observed or predicted flow events
☐ abrupt change in plant community

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

☐ High Tide Line indicated by:
☐ oil or scum line along shore objects
☐ fine shell or debris deposits (foreshore)
☐ physical markings/characteristics
☐ tidal gauges
☐ other (list):

☐ Mean High Water Mark indicated by:
☐ survey to available datum;
☐ physical markings;
☐ vegetation lines/changes in vegetation types.

Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: Water was clear. The majority of the watershed is comprised of altered lands occupied by residential, industrial, or commercial developments. Many of the drainages have been manipulated or captured for flood control.

Identify specific pollutants, if known:

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

☐ Riparian corridor. Characteristics (type, average width):
☐ Wetland fringe. Characteristics: None

☐ Habitat for:
☐ Federally Listed species. Explain findings:
☐ Fish/spawn areas. Explain findings:
☐ Other environmentally-sensitive species. Explain findings:
☐ Aquatic/wildlife diversity. Explain findings:

Relevant Reach Segment #6 – 4,884 linear feet of Magpie Creek (Non-navigable relatively permanent tributary to a TNW):

Tributary properties with respect to top of bank (estimate):
Average width: **15 ft.**
Average depth: **<1 ft.**
Average side slopes: **6:1 (rise: run)**

Primary tributary substrate composition within the project area (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: **Concrete bed and bank present**
Presence of run/riffle/pool complexes. Explain:
Tributary geometry: **trapezoidal-shaped**
Tributary gradient (approximate average slope): 1-3%

Flow:
Tributary provides for: **intermittent flow**
Estimate average number of flow events in review area/year: **Multiple flow events throughout the year.**
Describe flow regime: **Intermittent (RPW).**
Other information on duration and volume:

- **December 12, 2022 – several inches of flowing water were present.**
- **December 20, 2022 – several inches of flowing water were present.**
- **January 25, 2023 – several inches of flowing water were present.**

[11] Ibid.

- **February 28, 2023 – several inches of flowing water were present.**
- **March 3, 2023. – several inches of flowing water were present.**

Surface flow is: **Intermittent and sporadically occurs year-round (RPW).**
Characteristics: **Google Earth historic aerial photograpy dating back to 2018 was reviewed. Water was noted in the majority of the channel on September 6, 2021; August 28, 2019; October 31, 2018; and October 25, 2016. Water was noted during the dry-season and likely represents excess landscape water practices.**

Subsurface flow: **None**. Explain findings:
☐ Dye (or other) test performed:

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[12] (check all indicators that apply):
☐ clear, natural line impressed on the bank
☐ changes in the character of soil
☐ shelving
☐ vegetation matted down, bent, or absent
☐ leaf litter disturbed or washed away
☐ sediment deposition
☒ water staining
☐ other (list):
☐ the presence of litter and debris
☐ destruction of terrestrial vegetation
☐ the presence of wrack line
☐ sediment sorting
☐ scour
☐ multiple observed or predicted flow events
☐ abrupt change in plant community
☐ Discontinuous OHWM.[13] 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:
☐ oil or scum line along shore objects
☐ fine shell or debris deposits (foreshore)
☐ physical markings/characteristics
☐ tidal gauges
☐ other (list):
☐ Mean High Water Mark indicated by:
☐ survey to available datum;
☐ physical markings;
☐ vegetation lines/changes in vegetation types.

Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: Water was clear.

Identify specific pollutants, if known:

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:

Significant nexus discussion:

A significant nexus between the project area RPW and downstream a TWN (Sacramento River) has been established through the existence of a direct hydrological connection. The project area RPW that flows into an unnamed ephemeral drainage, Magpie Creek, and eventually into the Sacramento River, has a chemical, biological, and physical nexus that is more than speculative and imperceivable. This feature has a water connection to the Sacramento River downstream when it flows, conveying flood waters, organic materials and sediment flows necessary for proper health and maintenance of downstream RPWs/TNW, as well as providing habitat for birds, small mammals, and other wildlife. The Sacramento River is a TNW.

[12]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.
[13]Ibid.

Though no wetlands occur directly within the project area, approximately 1.8 acres of wetlands directly abut the portion of the relevant reach on the adjacent property to the west. Known functions of wetlands include retaining sediments, nutrients, and flood flows. Wetlands within the review receive and filter both agricultural and municipal runoff, allowing for the retention and conversion of nutrients and other pollutants prior to entering the Sacramento River and therefore function to meaningfully reduce transport of pollutants.

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: N/A

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: N/A

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: 0 linear feet, wide, Or **0** acres.
   ☐ Wetlands adjacent to TNWs: 0 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-RPWs[14] 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, wide.
   ☒ Other non-wetland waters: 0.043 acre (279 linear feet) .
   Identify type(s) of waters: RPW

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.

[14]See Footnote # 3.

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.**[15]
   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):[16]

☐ 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).
☐ 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):
☐ 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):
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource:
☐ Wetlands: acres.

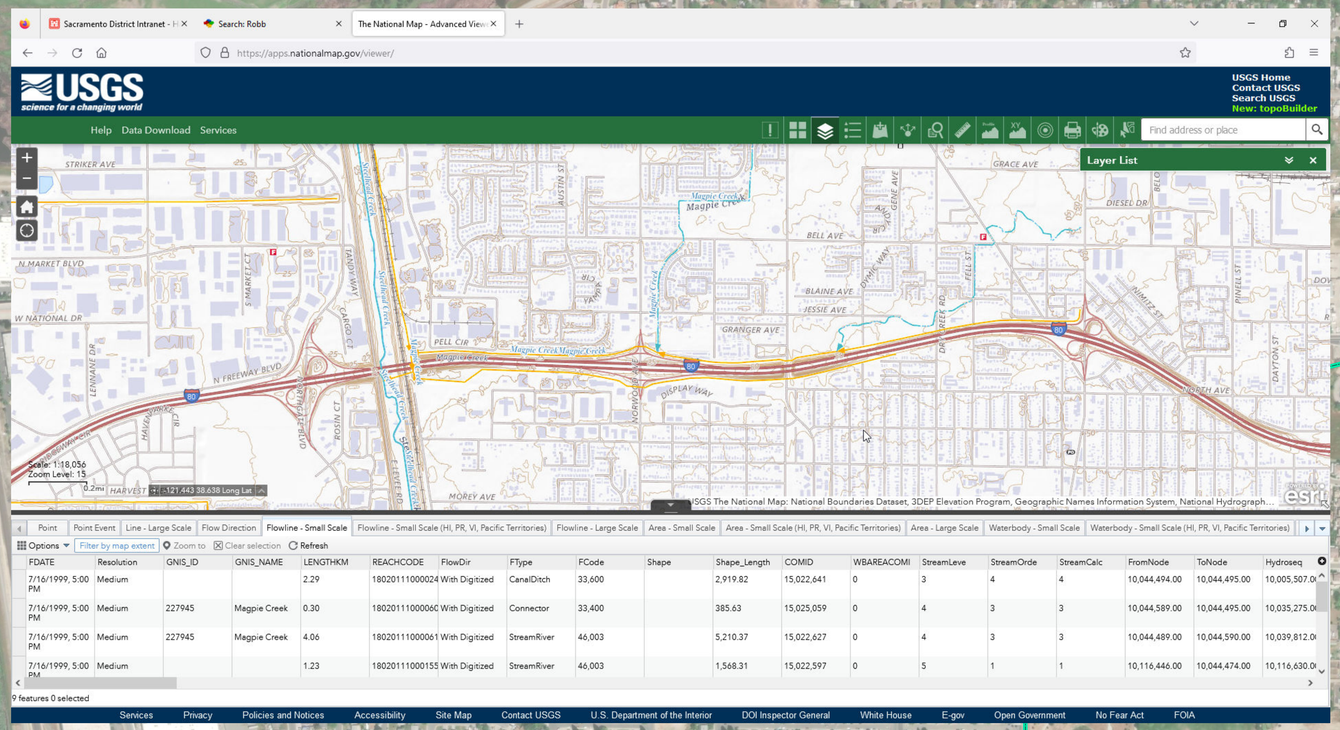
SECTION IV: DATA SOURCES.

[15] To complete the analysis, refer to the key in Section III.D.6 of the Instructional Guidebook.
[16] **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.***

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: *AQUATIC RESOURCES DELINEATION MAP City of Sacramento, Sacramento County* and prepared on June 16, 2021, by Helix Environmental Planning
- ☒ 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; Rio Linda**
- ☐ 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): **Sacramento County, March 18, 2018**
  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):
  - **Aerial photography of the project area, flown April 12, 2022, and provided by Maxar**
  - **USGS Rio Linda, CA 7.5-Minute topo, 1951**
  - **USGS California Arcade Quadrangle, 1911**
  - **USGS aerial photography of the project area, flown August 4, 1966**
  - **USGS National Map Viewer available at: https://apps.nationalmap.gov/viewer/**
  - **Google Earth aerial photography - from 1985 to 2022 including September 6, 2021; August 28, 2019; October 31, 2018; and October 25, 2016**

B. ADDITIONAL COMMENTS TO SUPPORT JD:



Stream order was provided by USGS National Mapper as displayed by the inset.
- scale - 1:18,056
- Zoom level 15
- Location: -121.443 / 38.638

Project Area Intermittent Drainage (RPW)

Off-site intermittent drainage with abutting wetlands (RPW)

Ephemeral Drainage (NRPW)
Stream order: 0

Culverts under this unaccessible property.
No visible surface connection.

Ephemeral Drainage 1 (NRPW)
Stream order: 1

Ephemeral Drainage (NRPW)
Stream order: 0

Piped Ephemeral Drainage (NRPW) - Stream order: 1

705 feet

435 feet

794 feet

5,019 feet

Magpie Creek (Non-Navigable, RPW) - Stream order: 1

40,446 feet

4,884 feet

3,204 feet

Magpie Creek (Non-Navigable, RPW) - Stream order: 3

Ephemeral concrete canal ditch (NRPW)

Steelhead Creek
AKA Natomas East Main Drainage Canal
Non-Navigable, RPW
Stream order: 4

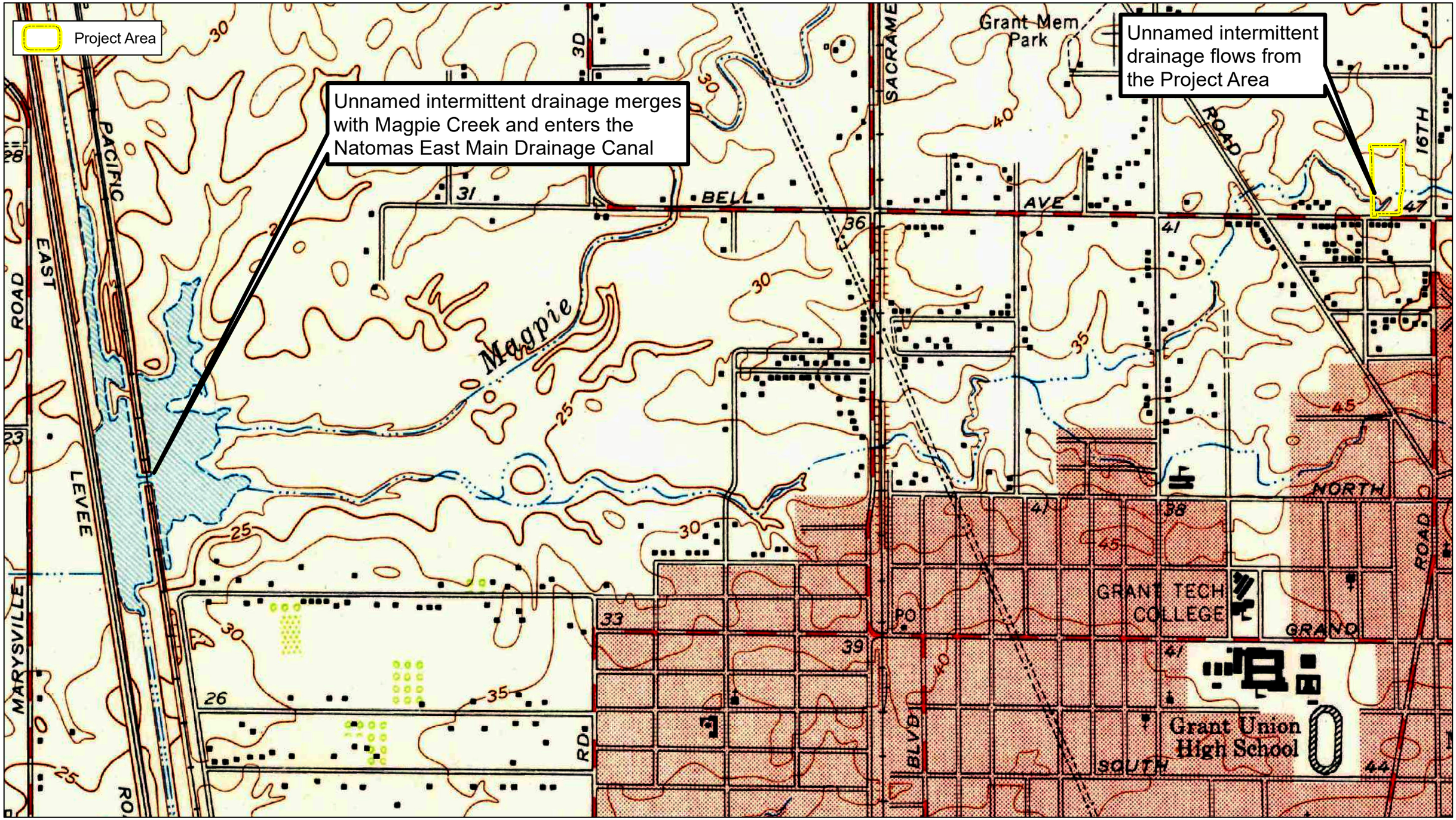
27,246 feet to the Sacramento River (TNW)

N

Feet
0 220 440

Source of Aerial Photo: *Maxar,* April 12, 2022

Figure 1 - Relevant Reach



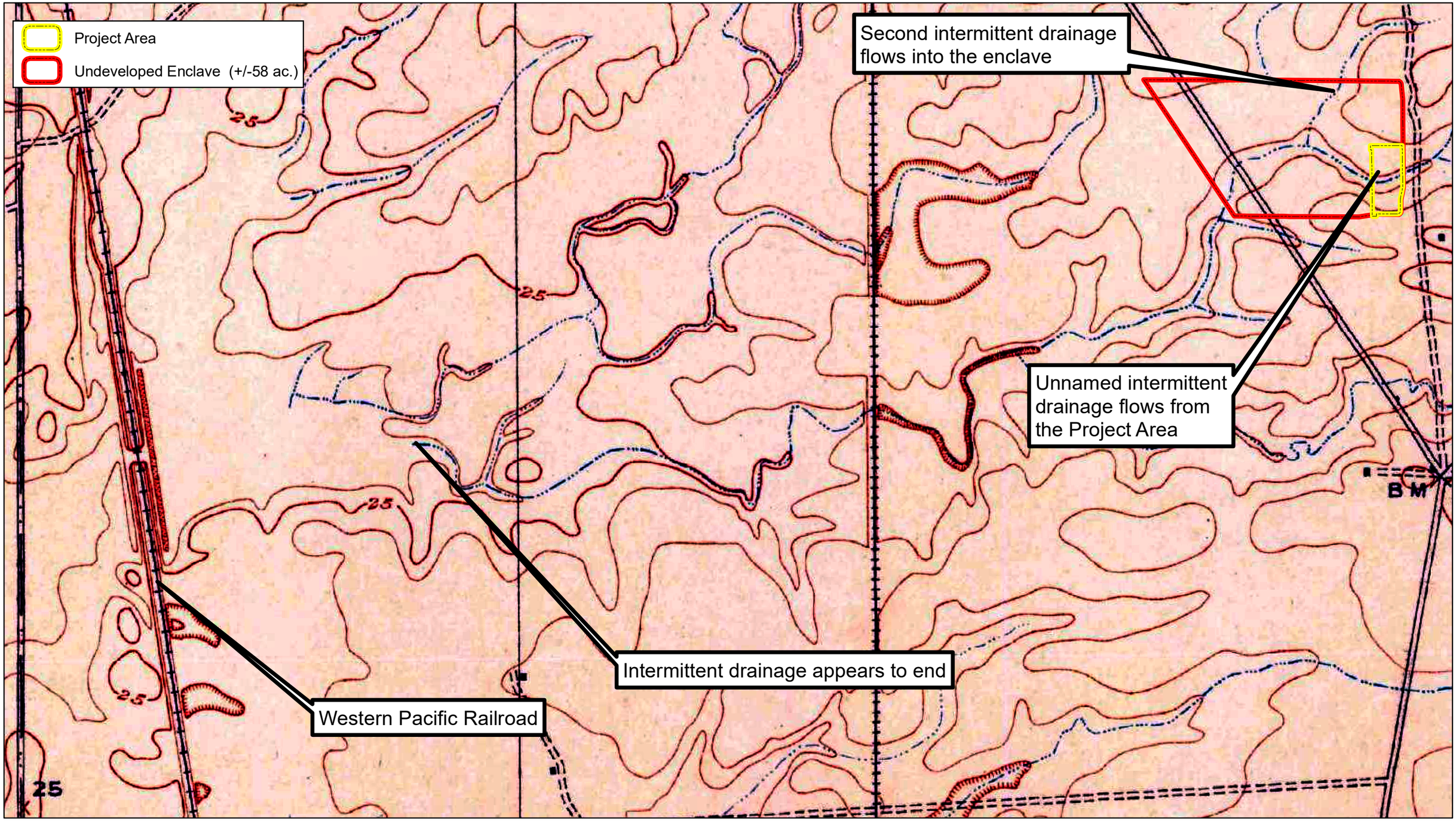
N

Feet

0 500 1,000

Source: *USGS Rio Linda, CA 7.5-Minute Topo,* 1951

Figure 2
Historic Topo - 1951



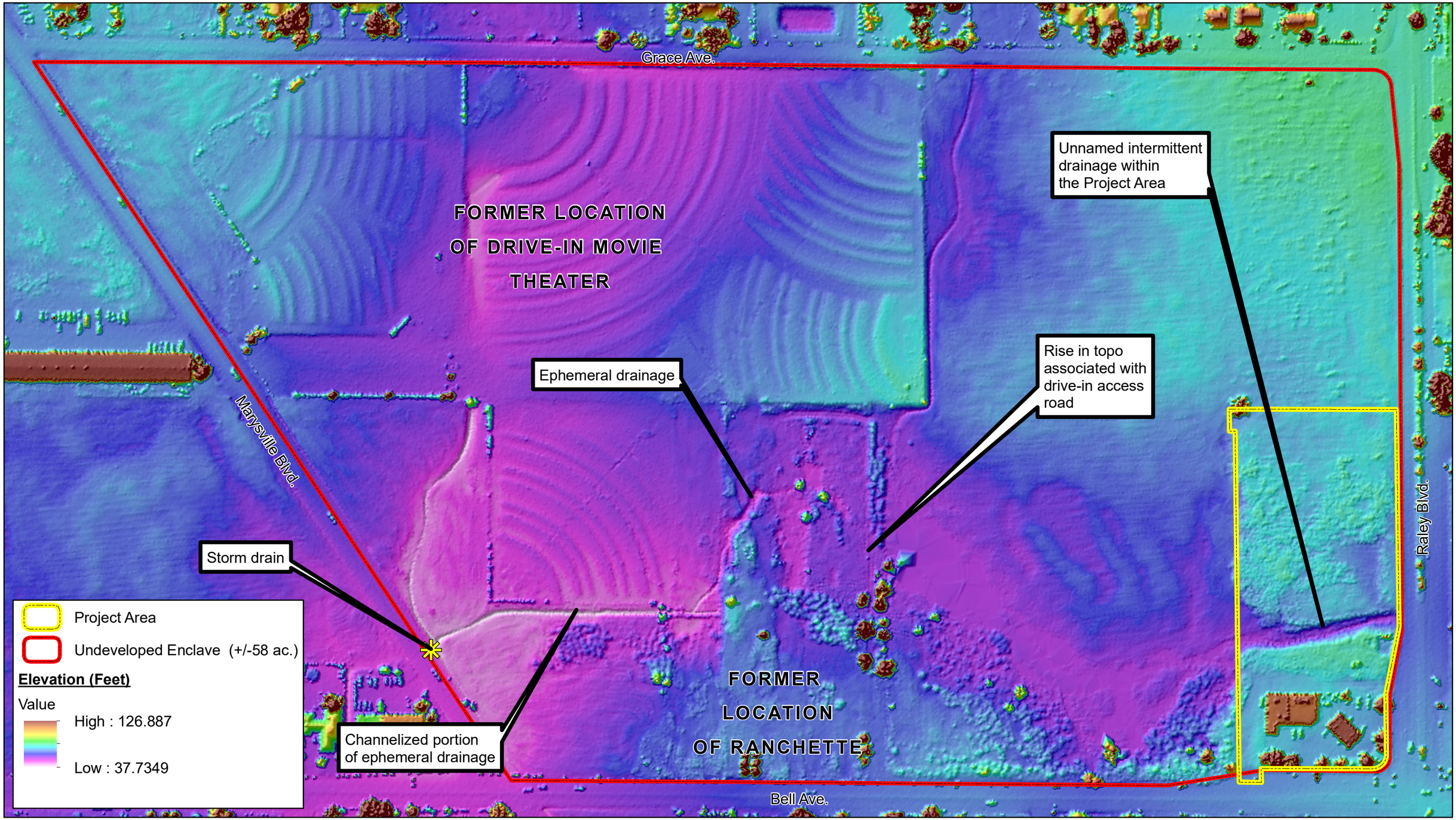
N

Feet

0 500 1,000

Source: *USGS California Arcade Quadrangle,* 1911

Figure 3
Historic Topo - 1911



N

Feet
0 100 200

LiDAR Base: *Sacramento District USACE*, 2023

Figure 4
Current Conditions/LiDAR