SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): March 5, 2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Sacramento District, Creekside Development Project, SPK-2005-00063

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
   State: California  County/parish/borough: Butte County  City: Chico
   Center coordinates of site (lat/long in degree decimal format): Lat. 39.7424619058564°, Long. -121.794807758118°
   Universal Transverse Mercator: 10 603261.69 4399868.04
   Name of nearest waterbody: Dead Horse Slough
   Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Little Chico Creek
   Name of watershed or Hydrologic Unit Code (HUC): Butte Creek, 18020158
   ☑ 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: March 5, 2018
   ☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]
   ☐ Waters subject to the ebb and flow of the tide.
   ☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There are "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: 1.60 acres.
         Wetlands: 2.0 acres.

      c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual
         Elevation of established OHWM (if known): 245' above mean sea level

   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:

SECTION III: CWA ANALYSIS

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.
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: 30,085 acres
       Drainage area: 3,404 acres
       Average annual rainfall: 26 inches
       Average annual snowfall: 0 inches

   (ii) Physical Characteristics:
       (a) Relationship with TNW:
           ☐ Tributary flows directly into TNW.
           ✗ Tributary flows through 1 tributaries before entering TNW.

           Project waters are 1 (or less) river miles from TNW.
           Project waters are 1 (or less) river miles from RPW.
           Project waters are 1 (or less) aerial (straight) miles from TNW.
           Project waters are 1 (or less) aerial (straight) miles from RPW.
           Project waters cross or serve as state boundaries. Explain:

           Identify flow route to TNW⁵: 0.50 mile from the site, Dead Horse Slough flows into Little Chico Creek. Dead Horse Slough has been re-routed and channelized to connect to Little Chico Creek at the junction of State Route 32 and Humboldt Road and as a result; the lower 1.5 miles of Dead Horse Slough was abandoned and is now replaced by commercial and residential development.

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

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
(b) General Tributary Characteristics (check all that apply):

Tributary is:  
☐ Natural  ☑ Artificial (man-made).  Explain: **OW02 (ephemeral stream)(NRPW)** is a man-made channel that transports surface and sub-surface flows from adjacent wetlands and sheet flows from uplands/wetlands located on an adjacent property to the south.

☐ Manipulated (man-altered).  Explain:

Tributary properties with respect to top of bank (estimate):

Average width: **33** feet  
Average depth: **10** feet  
Average side slopes: **2:1**.

Primary tributary substrate composition (check all that apply):

☐ Silts  ☑ Sands  ☐ Concrete  
☐ Cobbles  ☐ Gravel  ☑ Muck  
☐ Bedrock  ☐ Vegetation.  Type/% cover: Riparian & Scrub Shrub/70-80%

☐ Other.  Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks].  Explain: **stable due to upstream California Park Lake and dam.**

Presence of run/riffle/pool complexes.  Explain: **None**

Tributary geometry: **Relatively straight**

Tributary gradient (approximate average slope): **1-2 %**

(c) Flow:

Tributary provides for: **Seasonal flow**

Estimate average number of flow events in review area/year: **6-10**

Describe flow regime: Dead Horse Slough flows approximately 6-9 months/year

Other information on duration and volume:

Surface flow is: **Discrete and confined.** Characteristics: Flows fully within banks.

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):

☐ 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:

\(^6\)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.
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: **Clear with very slight green/brown discoloration from stagnant conditions.** Identify specific pollutants, if known: **Likely to represent typical urban and landscape water runoff pollutants; including, petroleum byproducts and common herbicides/pesticides.**

(iv) **Biological Characteristics.** Channel supports (check all that apply):
- Riparian corridor. Characteristics (type, average width): **Channel supports directly abutting riparian wetland vegetation; including, Salix sp., Quercus sp., and Rubus sp.**
- Wetland fringe. Characteristics: **Channel supports fringe wetland mosaic vegetation.**
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings: **Chinook salmon, Essential Fish Habitat (historic)**
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings: **Aquatic insects, invertebrates, and fish.**

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: **1.01 acres**
     - Wetland type. Explain: **Depressional**
     - Wetland quality. Explain:
   - Project wetlands cross or serve as state boundaries. Explain:

   (b) **General Flow Relationship with Non-TNW:**
   - Flow is: **Intermittent flow.** Explain:
     - Surface flow is: **Overland sheet flow**
     - Characteristics: **restrictive layer (hardpan) approx. 5-10 inches below the surface.**
   - Subsurface flow: Yes. Explain findings: **based on permeability of the soils, subsurface flow connections between the wetland complex and Dead Horse Slough typically occur on a seasonal basis from November to April.**

   (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: **spoils from excavating OW02 were piled up, alongside the eastern side of the channel, and have formed a physical barrier or berm.**

   (d) **Proximity (Relationship) to TNW**
   - Project wetlands are **1 (or less) river miles from TNW.**
   - Project waters are **1 (or less) aerial (straight) miles from TNW.**
   - Flow is from: **Wetland to navigable waters.**
   - Estimate approximate location of wetland as within the **50 - 100-year** 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: **Water is clear. The wetland complex serves as a localized catchment area for the fallow fields and roadside stormwater runoff; therefore, chemical characteristics are likely comprised of petroleum byproducts and common herbicides/pesticides**
   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: **50-70% cover, supports endemic vernal pool plant species**
   - Habitat for:
     - Federally Listed species. Explain findings: **Suitable habitat for Federally-listed as endangered Butte County meadowfoam and vernal pool tadpole shrimp, and the Federally-listed as threatened vernal pool fairy shrimp.**
     - Fish/spawn areas. Explain findings:
     - Other environmentally-sensitive species. Explain findings:
Aquatic/wildlife diversity. Explain findings: macroinvertebrates and crustaceans

3. Characteristics of all wetlands adjacent to the tributary (if any)
   All wetland(s) being considered in the cumulative analysis: 30 (or more)
   Approximately 1.01 acres in total are being considered in the cumulative analysis.

   For each wetland, specify the following:
   
<table>
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<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
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<td>(See table; attachment 1)</td>
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   Summarize overall biological, chemical and physical functions being performed: water quality filtration, water retention, flood storage, primary productivity/organics contribution, and invertebrate/wildlife habitat.

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: OW02, in combination with its adjacent wetlands, have a significant nexus to Little Chico Creek based on their close proximity and more than speculative chemical, physical, and biological connections to the TNW. OW02 and its adjacent wetlands have to ability carry pollutants and flood waters directly into Dead Horse Slough, which results in a transfer of nutrients and organic carbon that support downstream food webs within Little Chico Creek. Due to their close proximity, and sitting within the 100 year floodplain, they have the capacity to capture and clean storm water before entering Dead Horse Slough. OW02 and its adjacent wetlands also provide habitat and lifecycle support functions such as breeding, feeding, and sheltering for invertebrates, crustaceans, and other endemic species native to California.

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: Adjacent wetlands to OW01 have a significant nexus to Little Chico Creek, based on their close proximity and more than speculative chemical, physical, and biological connections to the TNW. The adjacent wetlands have to ability carry pollutants and flood waters directly into Dead Horse Slough, which results in a transfer of nutrients and organic carbon that support downstream food webs within Little Chico Creek. Due to their close proximity, and sitting within the 100 year floodplain, they have the
capacity to capture and clean storm water before entering Dead Horse Slough. The adjacent wetlands also provide habitat and lifecycle support functions such as breeding, feeding, and sheltering for invertebrates, crustaceans, and other endemic species native to California.

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: **OW01 (Dead Horse Slough) (RPW) is an intermittent stream, as shown on USGS 7.5' quadrangle maps.**

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - Tributary waters: 1,982 linear feet 33 wide.
   - Other non-wetland waters: 1.53 acres.

3. **Non-RPWs 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: 496 linear feet, 2 wide.
   - Other non-wetland waters: 0.02 acres.

   Identify type(s) of waters: Riverine

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   - 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:
       - Dead Horse Slough flows 6-9 months/year and is an intermittent stream, as shown on USGS 7.5' quadrangle maps.

   Provide acreage estimates for jurisdictional wetlands in the review area: 1.01 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: 1.01 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: 1.01 acres.

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8See Footnote # 3.
7. **Impoundments of jurisdictional waters.**

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):

- 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): linear feet, 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: September 25, 2017, Creekside Townhouses Project, Draft Delineation of Waters of the U.S., Exhibit A, prepared by Gallaway Enterprises (attachment 2).
- 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.

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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.
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; Chico
- USDA Natural Resources Conservation Service Soil Survey. Citation: February 2014, Custom Soil Resources Report for Butte Area, California, Parts of Butte and Plumas Counties, Creekside Townhomes, prepared by NRCS
- National wetlands inventory map(s). Cite name: USFWS, Version 2.0
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: FIRM panel, dated January 6, 2001 (attachment 3).
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth Pro aerial photography dated August 26, 2005, March 8, 2008, April 14, 2015, April 20, 2016, and May 18, 2017. ESRI, ArcGIS 10.5.1
  or Other (Name & Date): Ground photographs taken by Gallaway Enterprises June & July 2014, provided in their September 2017 delineation report.
- Previous determination(s). File no. and date of response letter:
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify): California Department of Water Resources, Central Valley Floodplain Evaluation and Delineation Program (CVFED) LiDAR, March 2008 (attachment 4).

B. ADDITIONAL COMMENTS TO SUPPORT JD: The applicant’s delineation report, dated September 2017, prepared by Gallaway Enterprises, states that precipitation is the only hydrological input that supports the wetlands on the site and that all of the aquatic features on the site have a direct hydrologic connection, either via surface or sub-surface flows, to Dead Horse Slough.
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**1.01 Vernal pool/swale**

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**1.01 Riparain wetland**

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**1.53 Perennial Stream**

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**0.02 Ephemeral Stream**
Creekside Townhouses Project
Draft Delineation of Waters of the U.S.
Exhibit A

Map By: S. Rossi & C. Davis
Delineation By: E. Gregg
GE: #14-139 07/16/2014 & 06/17/2014
Map Date: 08/24/14; Revised 09/25/17

Data Sources: ESRI, Butte County,
USDA NAIP 07/13/2016

Coordinate System: NAD 1983 California State Plane II (Feet)
Projection: Lambert Conformal Conic
Datum: North American 1983
Vertical Datum: NAVD 88
Made in accordance with the Updated Map & Drawing Standards
for the South Pacific Division Regulatory Program
The features represented on this graphic are considered preliminary until written
verification by the USACE.

Bruce Road
Dead Horse Slough

*See Figure 3, Ground Photographs
Map, for additional information on Photo Points.

Creekside Townhouses Project
Draft Delineation of Waters of the U.S.
Exhibit A

1:1,200 1 inch = 100 feet

Data Sources: ESRI, Butte County,
USDA NAIP 07/13/2016

Map By: S. Rossi & C. Davis
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