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):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:Sacramento District Redding Office, Theresa Cambell Living Trust, SPK-2007-1894

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State:California County/parish/borough: Shasta City: Anderson
Center coordinates of site (lat/long in degree decimal format): Lat. 40.4514° **N**, Long. -122.3173° **W**.
Universal Transverse Mercator:
Name of nearest waterbody: Tormey Drain
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Sacramento River
Name of watershed or Hydrologic Unit Code (HUC): Lower Sacramento River
☒ 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: January 31, 2008
☒ Field Determination. Date(s): January 10, 2008

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: 264 linear feet: 2.5 width (ft) and/or 0.014 acres.
      Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **Established by OHWM.**
      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: **a constructed upland ditch was assessed for wetland characteristics as well as an OHWM. Though it is a means for water to flow from a wetland to the constructed ditch (2:CC), it did not meet either the wetland delineation standards or display an OHWM and is therefore not jurisdiction nor considered to be a feature. This swale can convey overland sheetflow and is a source of hydrologic connection between 1:WM and 2:CC which eventually connects to the onstream RPW**.

[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: 1720**acres**
Drainage area: 7 **acres**
Average annual rainfall: 30 inches
Average annual snowfall: inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☒ Tributary flows through **4** tributaries before entering TNW.

Project waters are **2-5** river miles from TNW.
Project waters are **1-2** 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 TNW[5]: The unamed on-site non-RPW (3:CC and 2:CC, feature name changes after flow direction change) flow through 4:WM (a seasonal wetland) before passing into 5:CC (another constructed non-RPW) 50 feet from the end of 2:CC. 5:CC flows into 7:WM (another seasonal wetland) before draining into 10:CC (on-site RPW). 10:CC

[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.

flows less than a mile to Tormey Drain through the Anderson City Stormwater System it enters one block east of the site. Tormey drain flows directly into the Sacramento River..
Tributary stream order, if known: 1st order.

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☐ Natural
☒ Artificial (man-made). Explain: All tributaries on-site were excavated by the landowner. A large portion of the site is wetland (33%) and the landowner dug the ditches from, through and around wetlands all over the site. The ditches were dug to help drain wetlands on-site and move the water off-site. The ditches had indicators of an Ordinary High Water Mark and have lowered the groundwater elevation. It is possible that historic tributaries were in fact present here and were removed when this portion of Anderson was built. This feature (3:CC and 2:CC) is a channel constructed artificially and is smaller than the on-site RPW constructed channels and only carries water from adjacent wetlands to the RPW.
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: 2 feet
Average depth: 1-2 feet
Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):
☒ Silts ☒ Sands ☐ Concrete
☐ Cobbles ☒ Gravel ☒ Muck
☐ Bedrock ☒ Vegetation. Type/% cover: 35%, Obligate, Facultative and Facultative-Wet wetland species.
☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: The tributary is more stable than the other RPW's. The ditches were excavated in upland soils that are not naturally meant to be the bed or bank of a stream. Iron from the soil was leaching into the stream and sediments and silt from the banks were found throughout the streams below the OHWM. Since the bed and banks were cut by human intervention, they are defined well at this point but could wash out during high flow events.
Presence of run/riffle/pool complexes. Explain: Not known.
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): 1-2 %

(c) Flow:
Tributary provides for: **Intermittent but not seasonal flow**
Estimate average number of flow events in review area/year: **11-20**
Describe flow regime: Flow occurs during and after rain events which occur frequently for a three-four month period. The tributary collects runoff, overland sheet flow, and water from abbutting and adjacent wetlands that leach into the tributary. The tributary also has intermittent flow in the winter.
Other information on duration and volume: Anderson is subject to flooding and regularly does flood. This site is a prime example of the area receiving many large rain events and volumes of flow being subject to dramatic changes.

Surface flow is: **Confined.** Characteristics: Tributary was excavated with a definitive channel that would direct water precisely where the channel was cut.

Subsurface flow: **Unknown**. Explain findings: Tributary is likely received a lot of water from abutting and adjacent waters on-site but no test was performed to prove this. It is easily assumed.
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):
☐ clear, natural line impressed on the bank ☐ the presence of litter and debris
☐ changes in the character of soil ☐ destruction of terrestrial vegetation
☒ shelving ☐ the presence of wrack line
☒ vegetation matted down, bent, or absent ☐ sediment sorting
☐ leaf litter disturbed or washed away ☐ scour
☐ sediment deposition ☒ multiple observed or predicted flow events
☐ water staining ☒ abrupt change in plant community
☐ other (list):
☐ Discontinuous OHWM.[7] Explain: .

[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.

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 color was discolored during site visit. High concentrations of iron and sediments/silts were leaching into or deposited into the water. This can be attributed to recent and current storm events(rain) at and before the time of the site visit. Water quality was not extremely good. The site had been previously grazed by cattle and likely had high concentrations of organic material and minerals from cattle feces.

Identify specific pollutants, if known: Cattle feces.

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

☐ Riparian corridor. Characteristics (type, average width): .

☒ Wetland fringe. Characteristics: Tributary had some wetland plants growing througout a majority of it. It was dug through the largest wetland feature in order to facilitate draining it. Therefore, hydrophytic vegetation could be found along the banks (fringe). The wetland fringe was often contiguous with the wetlands abutting and was indistinguishable as a separate fringe. Typha, Cyperus, Juncus and other species were found.

☒ Habitat for:
- ☐ Federally Listed species. Explain findings: .
- ☐ Fish/spawn areas. Explain findings: .
- ☐ Other environmentally-sensitive species. Explain findings: .
- ☒ Aquatic/wildlife diversity. Explain findings: Waterfowl, amphibians, invertebrates, riparian birds, and mammals such as deer could potentially use the site for it's aquatic fetures and value.

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:0.052acres

Wetland type. Explain:Seasonal Wet Meadow with emergent vegetation.

Wetland quality. Explain:Good, this wetland received the least influence from grazing which occurred throughout a majority of the site historically. It contained the highest diversity of plants and the feature continued offsite. The portion on-site was a very small portion of the entire feature for which the rest was not mapped.

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Ephemeral flow**. Explain: Small ammounts of water were seen at the lower portion of the upland ditch during the site visit. This was during and after rain events so it likely only flows above ground during and after rain.

Surface flow is**: Overland sheetflow**

Characteristics: water flows over the surface through a slightly defined upland ditch.

Subsurface flow: **Yes**. Explain findings: .

☒ Dye (or other) test performed: water was seen percolating through the soil of the ditch and some ponding was visible right before 3/2:CC occurs.

(c) Wetland Adjacency Determination with Non-TNW:

☐ Directly abutting

☒ Not directly abutting

☒ Discrete wetland hydrologic connection. Explain: Water passes both subsurface and above surface through a constructed upland ditch that did not have an OHWM or wetland indicators into 3/2:CC.

☒ Ecological connection. Explain: Invertebrates, birds and other species could easily pass from 1:WM to 3/2:CC during rain events..

☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **2-5** river miles from TNW.

Project waters are **1-2** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters.**

Estimate approximate location of wetland as within the **500-year or greater** 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 was fairly clear in this wetland but did have some discoloration due to weather conditions before and during the site visit (rain). Water quality was best in this wetland since a large portion extended off-site and was unmodified or affected by the on-site manipulations. Little to no cattle grazing was evident in this wetland.

Identify specific pollutants, if known: potentially cattle feces.

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

☐ Riparian buffer. Characteristics (type, average width): .

☒ Vegetation type/percent cover. Explain:80%, wetland species dominant.

☒ Habitat for:

☐ Federally Listed species. Explain findings: .

☐ Fish/spawn areas. Explain findings: .

☐ Other environmentally-sensitive species. Explain findings: .

☒ Aquatic/wildlife diversity. Explain findings:Waterfowl, amphibians, invertebrates, riparian birds, and mammals such as deer could potentially use the site for it's aquatic fetures and value.

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

All wetland(s) being considered in the cumulative analysis: **10**

Approximately (10) 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: 1:WM has the best water quality onsite as it did not receive heavy grazing historically. The total wetland size is unknown as it goes off-site. It is impossible to know how many more wetlands drain into this tributary. The wetlands due provide habitat for many animals, holds floodwaters, filters pollutants and plays an intricate role locally in the ecosystem.

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:CC and 2:CC are the same water feature but named separately at the point where the constructed channel takes a 90 degree turn southeast. 4:WM and 1:WM are adjacent/abutting and flow into 3:CC/2:CC. 4:WM is a jurisdictional water of the U.S. since it is abutting the on-site RPW. Therefore, this significant nexus covers 1:WM and 3:CC/2:CC only. The adjacent wetlands play an important role in filtering pollutants on-site. Due to high concentrations of organic matter buildup on-site as well as pollutants from cattle feces, the on-site constructed channel which is a non-relatively permanent water with intermittent flow (3:CC, 2:CC) in combination with it's wetlands have more than signifcant effect on downstream traditionally navigable waters. The adjacent wetlands have the ability to trap and filter pollutants, store floodwater, increase water quality that will enter the non-RPW and eventually the downstream TNW. The non-RPW has the ability to carry floodwaters/pullutants to the TNW (direct hydrologic connection has been established) and the potential to have polutants/floodwaters reduced downstream from effects of the adjacent wetlands. The water in 3:CC and 2:CC passes through 4:WM (and from) and 7:WM which were both independently analyzed and found to be jurisdictional based on the fact that they are abutting a RPW. The tributary and it's adjacent wetlands provide lifecycle support functions for species within the TNW by providing nutrients, water, and organic carbons which can be used for food, habitat or other important processes in fish and animal lifecycles. These nutrients and carbons are very important in foodwebs within the Sacramento River (for fish, invertebrates, birds, mammals and more). Considering it's close proximity to the Sacramento River, it is easy to grasp that the physical, chemical, and biological functions being performed by the on-site non-RPW and it's adjacent wetland will directly contribute to the physical, chemical, and biological integrity of the Sacramento River. Since these wetlands do perform very important functions for the tributaries on-site and the non-RPW tributaries collect and drain water from these wetlands to the RPW, it is apparent that the non-RPW's do affect the flow (significantly) of the RPW as well as the water quality and quantity that does enter the RPW. 1:WM is approximately 100 feet from 3:CC and slopes into it. A ditch was cut from 1:WM to 3/2:CC but was not very defined and lacked characteristics of a wetland and did not display an OHWM. However, this ditch does act as a conveyance system to pass water from 1:WM to 3/2:CC during and after rain events. Therefore, through overland sheetflow and subsurface flow, a direct hydrologic connection has been established.

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

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

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

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

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

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

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   - ☒ Tributary waters: **264** linear feet **2.5**width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: **.**

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

[8]See Footnote # 3.

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

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

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

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

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

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

Provide estimates for jurisdictional wetlands in the review area: **0.052**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 width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

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

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

Provide 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 width (ft).
☐ 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):

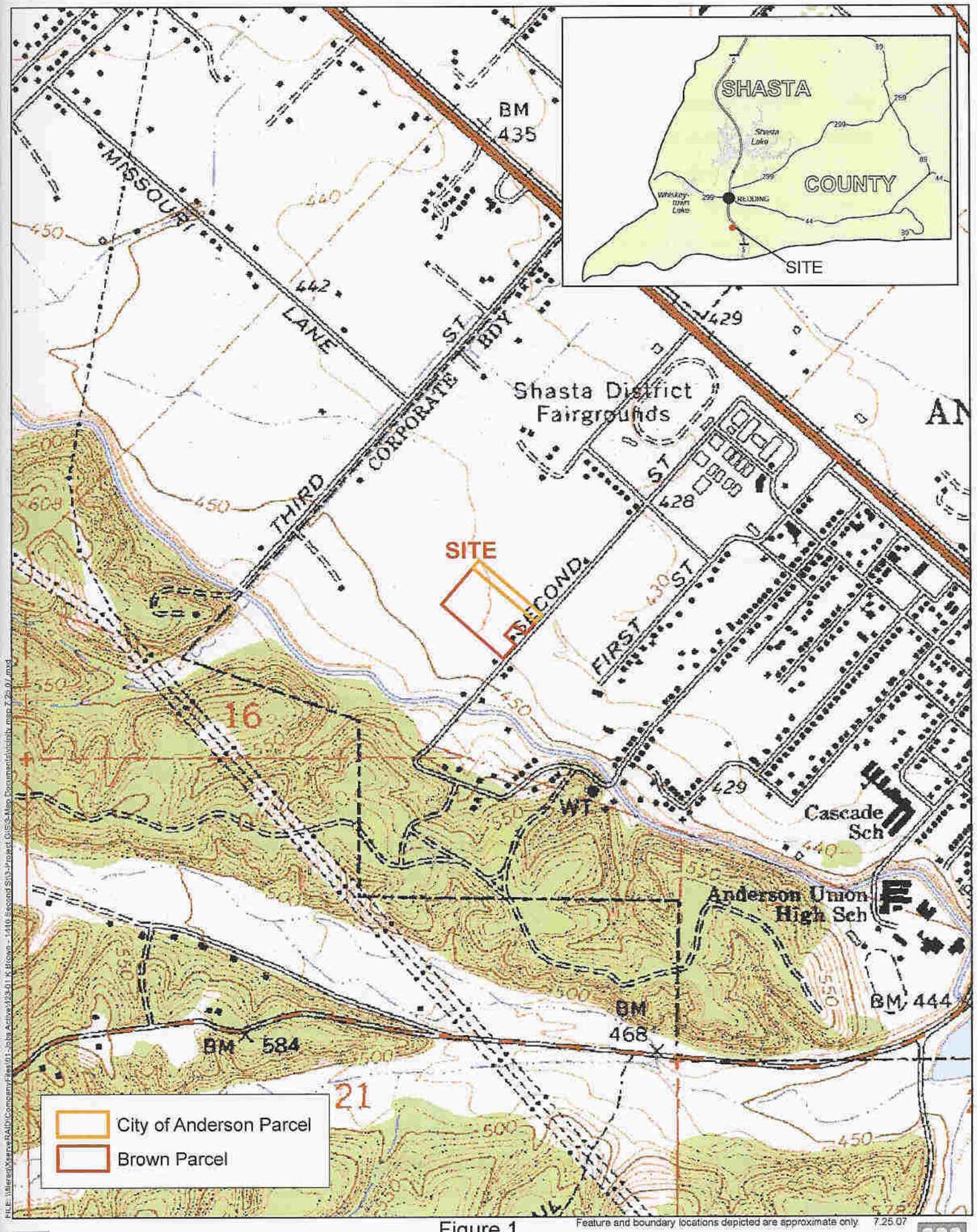
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:ENPLAN provided Delineation.
☒ 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:Anderson quad 1":1000'.
☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date):Aerial map prepared by ENPLAN on August 14, 2007, containing delineated property and features.
  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):Information obtained from site visit such as hydrology, topographic relief, and general site characteristics. Consultant also provided map of Anderson stormwater plan documenting the exact route of water from the site to Tormey Drain.

B. ADDITIONAL COMMENTS TO SUPPORT JD: Additional JD Forms have been prepared for calls. This site has been significantly disturbed. All water on-site is flowing generally to the eastern most point on the site. The RPW eventually collects all water leaving the site. However, due to the erratic location and methodology of the constructed ditches dug through, to and from wetlands on-site, it is difficult to depict what relation one wetland has to a specific ditch. One thing is known based on the site visit and local knowledge of the site. Water from every wetland connects both on the surface and through subsurface flow to the RPW who's waters connect to the Sacramento River downstream. This in itself could be basis for jurisdiction. If the non-RPW's (smaller ditches) were not dug connecting wetland to wetland that eventually abutts the RPW, these wetlands would have still been adjacent to the RPW and jurisdictional due to their chemical, physical, and biological connection with the RPW. Specifically 3:CC which turns into 2:CC runs through the eastern edge of the portion of 4:WM which is abutting the RPW. It flows Northeast and connects back in with 4:WM at the point where an outstretched finger extends from the larger portion of the feature. At the point where 3:CC connects to 2:CC, it collects water, nutrients, sediments, and/or potential pollutants from 1:WM through an upland ditch (overland sheet flow and subsurface flow). The water from 1:WM and the western portion of 4:WM passes through the eastern finger of 4:WM and drains into 5:CC (another intermittent non-RPW) which abutts and drains into 7:WM. 7:WM is directly abutting and drains into the farthest east portion of the RPW before it leaves the site.



FILE: \\Mieran\Xerox RAID\Company Files\01-Jobs Active\123-01 K Brown - 1440 Second St\3-Project GIS\3-Map Documents\vicinity map 7-25-07.mxd

Figure 1

Vicinity Map

Feature and boundary locations depicted are approximate only. 7.25.07

ENPLAN

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):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:Sacramento District Redding Office, Theresa Cambell Living Trust, SPK-2007-1894

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State:California County/parish/borough: Shasta City: Anderson
Center coordinates of site (lat/long in degree decimal format): Lat. 40.4514° **N**, Long. -122.3173° **W**.
Universal Transverse Mercator:
Name of nearest waterbody: Tormey Drain
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Sacramento River
Name of watershed or Hydrologic Unit Code (HUC): Lower Sacramento River
☒ 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: January 31, 2008
☒ Field Determination. Date(s): January 10, 2008

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: 1288linear feet: 10width (ft) and/or 0.251 acres.
      Wetlands: 1.965 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      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: .

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

[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.

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: 1720**acres**
   Drainage area: 42 **Pick List**
   Average annual rainfall: 30 inches
   Average annual snowfall: inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **2** tributaries before entering TNW.

   Project waters are **2-5** river miles from TNW.
   Project waters are **1-2** 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 TNW[5]: The unamed Seasonal RPW on-site flows less than a mile to Tormey Drain through the Anderson City Stormwater System it enters one block east of the site. Tormey drain flows directly into the Sacramento River..
   Tributary stream order, if known: 2nd order.

   (b) General Tributary Characteristics (check all that apply):
   Tributary is: ☐ Natural

[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.

☒ Artificial (man-made). Explain: The tributary on-site was excavated by the landowner. A large portion of the site is wetland (33%) and the landowner dug the ditches from, through and around wetlands all over the site. The ditches were dug to help drain wetlands on-site and move the water off-site. The ditches had indicators of an Ordinary High Water Mark and have lowered the groundwater elevation. It is possible that historic tributaries were in fact present here that were removed when Anderson was built.

☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: 10 feet
Average depth: 1-2 feet
Average side slopes: **Vertical (1:1 or less).**

Primary tributary substrate composition (check all that apply):

☒ Silts	☒ Sands	☐ Concrete
☐ Cobbles	☒ Gravel	☒ Muck
☐ Bedrock	☒ Vegetation. Type/% cover: 15%, Obligate, Facultative and Facultative-Wet wetland species.	

☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: The tributary is likely eroding at a high rate. The ditches were excavated in upland soils that are not naturally meant to be the bed or bank of a stream. Iron from the soil was leaching into the stream and sediments and silt from the banks were found throughout the streams below the OHWM. Since the bed and banks were cut by human intervention, they are defined well at this point but could wash out during high flow events.

Presence of run/riffle/pool complexes. Explain: Not known.
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: **20 (or greater)**

Describe flow regime: Flow occurs during and after rain events which occur frequently for a three-four month period. The tributary collects runoff, overland sheet flow, and water from abbutting and adjacent wetlands that leach into the tributary. The tributary also has seasonal flow in the summer when it catches water that leaks from the ACID canal nearby off-site. The stream may have seasonal flow for two distint time periods during the year and sparatic flow after rain events not in peak wet season.

Other information on duration and volume: Anderson is subject to flooding and regularily does flood. This site is a prime example of the area receiving many large rain events and volumes of flow being subject to dramatic changes.

Surface flow is: **Confined.** Characteristics: Tributary was excavated with a definitive channel that would direct water precisely where the channel was cut.

Subsurface flow: **Yes**. Explain findings: Tributary is likely received a lot of water from abutting and adjacent waters on-site but no dye test was performed to prove this. However, water was seen leaching through the walls (bank) of the RPW from the abutting wetlands..

☐ Dye (or other) test performed: .

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

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

☐ Discontinuous OHWM.[7] Explain: .

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

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;

[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.

☐ 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: Water color was discolored during site visit. High concentrations of iron and sediments/silts were leaching into or deposited into the water. This can be attributed to recent and current storm events(rain) at and before the time of the site visit. Water quality was not extremely good. The site had been previously grazed by cattle and likely had high concentrations of organic material and minerals from cattle feces.

Identify specific pollutants, if known: Cattle feces.

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

☐ Riparian corridor. Characteristics (type, average width): .

☒ Wetland fringe. Characteristics: Tributary had wetland plants growing througout a majority of it as the ditch was dug through the center of the largest onsite wetlands in order to drain them. Therefore, hydrophytic vegetation could be found along the banks (fringe) for a most of the extent of the RPW. The wetland fringe was often contiguous with the wetlands abutting and was indistinguishable as a separate fringe. Typha, Cyperus, Juncus and other species were found.

☒ Habitat for:

☐ Federally Listed species. Explain findings: .

☐ Fish/spawn areas. Explain findings: .

☐ Other environmentally-sensitive species. Explain findings: .

☒ Aquatic/wildlife diversity. Explain findings: Waterfowl, amphibians, invertebrates, riparian birds, and mammals such as deer could potentially use the site for it's aquatic fetures and value.

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:2.168acres

Wetland type. Explain:This JD covers Wetland Feature 4:WM, 7:WM, 14:WM, and 15:WM which directly abut the seasonal RPW. Wetlands abutting the RPW are listed as Wet Meadows on the delineation map. They are depressional seasonal wetlands that hold water for the majority of the wet season and remain saturated for additional periods of time. These wetland features are all similarily situated in reference to the RPW.

Wetland quality. Explain:Water quality of the wetlands is not extremely high. The wetlands had cattle grazing in the past and have built up organics as a result of this. However, the wetlands have plants grow abundantly throughout the wetlands. The are dense, high quality wetland species that aid in removing contaminants from water, thus increasing the water quality in the on-site RPW.

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: The RPW was cut and excavated through the wetlands so a contnuous hydrologic connection occurs multiple times throughout the wet season.

Surface flow is**: Overland sheetflow**

Characteristics: Since the ditch was cut through the wetland, water spills into the ditch from the wetland multiple times. Water does not have a defined route to the RPW but could occur at multiple locations.

Subsurface flow: **Yes**. Explain findings: Water was seen leaching through the side wall (banks) of the RPW from the wetlands abutting them during the site visit. This occurred at multiple locations.

☒ Dye (or other) test performed: Visual test seeing water pass through the poors in the side of the excavated ditch. The sides are soil from and within the wetland.

(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 **2-5** river miles from TNW.

Project waters are **1-2** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters.**

Estimate approximate location of wetland as within the **500-year or greater** 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 was somewhat discolored(hint of red-brown). It was raining during the site visit and had been raining previous to the site visit. Therefore the water was uncharacteristically discolored. Normally, I imagine it would be fairly clear.

Identify specific pollutants, if known: cattle feces.

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

☐ Riparian buffer. Characteristics (type, average width): .

☒ Vegetation type/percent cover. Explain:90% cover, mostly wetland plant species such as Juncus, Lotus, Polygogon, Mentha, Cyperus, and Rumex spp.

☒ Habitat for:

☐ Federally Listed species. Explain findings: .

☐ Fish/spawn areas. Explain findings: .

☐ Other environmentally-sensitive species. Explain findings: .

☒ Aquatic/wildlife diversity. Explain findings:Waterfowl, other birds, mammals, invertebrate, and amphibians.

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

All wetland(s) being considered in the cumulative analysis: **30 (or more)**

Approximately (12) 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)
WM:15- Y	0.023	WM:7- Y	0.203
WM:14- Y	0.097	WM:6- N	0.021
WM:9- N	0.066	WM:1-N	0.052
WM:4- Y	1.642		

Summarize overall biological, chemical and physical functions being performed: Wetlands on-site improve water quality by acting as a sponge to trap, filter, and remove a large majority of the potetial pollutants from cattle feces and/or other pollutants that could enter downstream TNW. Total number of wetlands in drainage considered for the cumultive analysis came from taking a ratio of wetland numbers and acreage on-site and appying it to the rest of the drainage. Nearby sites sourounding showed similar characteric wetland types and numbers. The listed wetlands above are all the wetlands on-site and are what is being used as reference for the rest of the drainage area. The wetlands hold flood waters, thereby reducing flooding downstream. The wetlands provide potential habitat, food, and water to nearby species. The wetlands have the capability to transport nutrients as well as contaminants to the TNW.

C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

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

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

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

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

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

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: Don Burk of ENPLAN stated on-site that the tributary would have at least seasonal flow for three months. He indicated that it would likely transport water for nearly all of the wet season and that it also had flowing water for a three month period during the summer. The ACID canal nearby is used to transport water for agriculture/irrigation during the dry months of summer. Water from this canal leaks/leaches directly into the tributary upstream and off-site of the project location. The consultant indicated that this was in fact normal and that water was flowing at the time of the sit visit during the most dry and most hot period of the year. The tributary was transporting high flow velocities at the time of my site visit.

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☒ Tributary waters: **1288** linear feet**10**width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

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

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

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
   - ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **.**
   - ☒ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: The RPW was excavated/cut through the middle of many on-site wetland features. Hydrology was observed passing from the wetland into the RPW both on the surface and below. Hydrology is continuous between the wetland and the RPW.

   Provide acreage estimates for jurisdictional wetlands in the review area: **1.965** acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

[8]See Footnote # 3.

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

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

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

7. Impoundments of jurisdictional waters.[9]

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]

☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

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

☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

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

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

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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.*

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:ENPLAN provided Delineation.
- ☒ 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:Anderson quad 1":1000'.
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
- ☐ National wetlands inventory map(s). Cite name: .
- ☐ State/Local wetland inventory map(s): .
- ☐ FEMA/FIRM maps: .
- ☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date):Aerial map prepared by ENPLAN on August 14, 2007, containing delineated property and features.
  or ☒ Other (Name & Date):Multiple site photos were taken during the site visit and are available upon request.
- ☐ Previous determination(s). File no. and date of response letter: .
- ☐ Applicable/supporting case law: .
- ☐ Applicable/supporting scientific literature: .
- ☒ Other information (please specify):Information obtained from site visit such as hydrology, topographic relief, and general site characteristics. Consultant also provided map of Anderson stormwater plan documenting the exact route of water from the site to Tormey Drain.

B. ADDITIONAL COMMENTS TO SUPPORT JD: Additional JD Forms have been prepared for other jurisdictional calls.

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):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:Sacramento District Redding Office, Theresa Cambell Living Trust, SPK-2007-1894

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State:California County/parish/borough: Shasta City: Anderson
Center coordinates of site (lat/long in degree decimal format): Lat. 40.4514° **N**, Long. -122.3173° **W**.
Universal Transverse Mercator:
Name of nearest waterbody: Tormey Drain
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Sacramento River
Name of watershed or Hydrologic Unit Code (HUC): Lower Sacramento River
☒ 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: January 31, 2008
☒ Field Determination. Date(s): January 10, 2008

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: 102 linear feet: 2 width (ft) and/or 0.005 acres.
      Wetlands: 0.066 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      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: .

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

[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.

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: 1720**acres**
   Drainage area: 10 **acres**
   Average annual rainfall: 30 inches
   Average annual snowfall: inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **4** tributaries before entering TNW.

   Project waters are **2-5** river miles from TNW.
   Project waters are **1-2** 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 TNW[5]: The unamed on-site non-RPW (8:CC) flows into 5:CC (another constructed non-RPW). 5:CC flows into 7:WM (another seasonal wetland) before draining into 10:CC (on-site RPW). 10:CC flows less than a mile to Tormey Drain through the Anderson City Stormwater System it enters one block east of the site. Tormey drain flows directly into the Sacramento River..
   Tributary stream order, if known: 1st order.

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

[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.

Tributary is: ☐ Natural

☒ Artificial (man-made). Explain: All tributaries on-site were excavated by the landowner. A large portion of the site is wetland (33%) and the landowner dug the ditches from, through and around wetlands all over the site. The ditches were dug to help drain wetlands on-site and move the water off-site. The ditches had indicators of an Ordinary High Water Mark and have lowered the groundwater elevation. It is possible that historic tributaries were in fact present here and were removed when this portion of Anderson was built. This feature (8:CC) is a channel constructed artificially and is smaller than the on-site RPW constructed channels and only carries water from adjacent wetlands to the RPW.

☐ Manipulated (man-altered). Explain: .

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

Average width: 2 feet

Average depth: 1-2 feet

Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):

☒ Silts	☒ Sands	☐ Concrete
☐ Cobbles	☒ Gravel	☒ Muck
☐ Bedrock	☒ Vegetation. Type/% cover: 35%, Obligate, Facultative and Facultative-Wet wetland species.	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: The tributary is more stable than the other RPW's. The ditches were excavated in upland soils that are not naturally meant to be the bed or bank of a stream. Iron from the soil was leaching into the stream and sediments and silt from the banks were found throughout the streams below the OHWM. Since the bed and banks were cut by human intervention, they are defined well at this point but could wash out during high flow events.

Presence of run/riffle/pool complexes. Explain: Not known.

Tributary geometry: **Relatively straight**

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

(c) Flow:

Tributary provides for: **Intermittent but not seasonal flow**

Estimate average number of flow events in review area/year: **11-20**

Describe flow regime: Flow occurs during and after rain events which occur frequently for a three-four month period. The tributary collects runoff, overland sheet flow, and water from abbutting and adjacent wetlands that leach into the tributary. The tributary also has intermittent flow in the winter.

Other information on duration and volume: Anderson is subject to flooding and regularly does flood. This site is a prime example of the area receiving many large rain events and volumes of flow being subject to dramatic changes.

Surface flow is: **Confined.** Characteristics: Tributary was excavated with a definitive channel that would direct water precisely where the channel was cut.

Subsurface flow: **Unknown**. Explain findings: Tributary is likely received a lot of water from abutting and adjacent waters on-site but no test was performed to prove this. It is easily assumed. Visual confirmation of water percolating through the soil was observed during the site visit. Given the close proximity, topography, and conditions, 9:WM was contributing subsurface flow to this channel.

☐ Dye (or other) test performed: .

Tributary has (check all that apply):

☒ Bed and banks

☒ OHWM[6] (check all indicators that apply):

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

☐ Discontinuous OHWM.[7] Explain: .

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

☐ High Tide Line indicated by: ☐ Mean High Water Mark indicated by:

[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.

☐ oil or scum line along shore objects
☐ fine shell or debris deposits (foreshore)
☐ physical markings/characteristics
☐ tidal gauges
☐ other (list):
☐ 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 color was discolored during site visit. High concentrations of iron and sediments/silts were leaching into or deposited into the water. This can be attributed to recent and current storm events(rain) at and before the time of the site visit. Water quality was not extremely good. The site had been previously grazed by cattle and likely had high concentrations of organic material and minerals from cattle feces.

Identify specific pollutants, if known: Cattle feces.

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

☐ Riparian corridor. Characteristics (type, average width): .

☒ Wetland fringe. Characteristics: Tributary had some wetland plants growing througout a majority of it. It was dug in order to facilitate draining wetland feature 9:WM. Hydrophytic vegetation could be found along the banks (fringe). Typha, Cyperus, Juncus and other species were found.

☒ Habitat for:

☐ Federally Listed species. Explain findings: .

☐ Fish/spawn areas. Explain findings: .

☐ Other environmentally-sensitive species. Explain findings: .

☒ Aquatic/wildlife diversity. Explain findings: Waterfowl, amphibians, invertebrates, riparian birds, and mammals such as deer could potentially use the site for it's aquatic fetures and value.

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:0.066 acres

Wetland type. Explain:Seasonal Wet Meadow with emergent vegetation.

Wetland quality. Explain:Fair. This wetland received historic grazing. It would hold water for longer periods of time due to a compressed soil layer.

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Ephemeral flow**. Explain: Small ammounts of water were seen percolating at the lower portion of a upland swale which led into 8:CC during the site visit. This was during and after rain events so it likely only flows (overland sheetflow) above ground during and after rain.

Surface flow is**: Overland sheetflow**

Characteristics: water flows over the surface through a slightly defined upland swale.

Subsurface flow: **Yes**. Explain findings: .

☒ Dye (or other) test performed: water was seen percolating through the soil of the ditch and some ponding was visible in the swale right before 8:CC occurs.

(c) Wetland Adjacency Determination with Non-TNW:

☐ Directly abutting

☒ Not directly abutting

☒ Discrete wetland hydrologic connection. Explain: Water passes both subsurface and above surface through a constructed upland ditch that did not have an OHWM or wetland indicators into 3/2:CC.

☒ Ecological connection. Explain: Invertebrates, birds and other species could easily pass or transport nutrients, food, and/or other carbon from 9:WM to 8:CC during rain events..

☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **2-5** river miles from TNW.

Project waters are **1-2** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters.**

Estimate approximate location of wetland as within the **500-year or greater** 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 was fairly clear in this wetland but did have some discoloration due to weather conditions before and during the site visit (rain). Water quality is fair and the wetland actively filters pollutants.
Identify specific pollutants, if known: potentially cattle feces.

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

☐ Riparian buffer. Characteristics (type, average width): .
☒ Vegetation type/percent cover. Explain:80%, wetland species dominant.
☒ Habitat for:
☐ Federally Listed species. Explain findings: .
☐ Fish/spawn areas. Explain findings: .
☐ Other environmentally-sensitive species. Explain findings: .
☒ Aquatic/wildlife diversity. Explain findings:Waterfowl, amphibians, invertebrates, riparian birds, and mammals such as deer could potentially use the site for it's aquatic fetures and value.

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)
9:WM (N)	0.066		

Summarize overall biological, chemical and physical functions being performed: 9:WM may be the only wetland considered adjacent for this analysis but water could pass from other wetlands on-site into this one and therefore are considered cumulatively. However, it is not exactly known how many could or should be included so only 9:WM is documented above. It is impossible to know how many more wetlands contribute to this tributary. The adjacent wetland does provide habitat for many animals, holds floodwaters, filters pollutants and plays an intricate role locally in the ecosystem.

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: 9:WM is adjacent and flows into 8:CC. The adjacent wetland plays an important role in filtering pollutants on-site. Due to high concentrations of organic matter buildup on-site as well as pollutants from cattle feces, the on-site constructed channel which is a non-relatively permanent water with intermittent flow (8:CC) in combination with it's wetland have more than signifcant effect on downstream traditionally navigable waters. The adjacent wetland has the ability to trap and filter pollutants, store floodwater, increase water quality that will enter the non-RPW and eventually the downstream TNW. The non-RPW has the ability to carry floodwaters/pullutants to the TNW (direct hydrologic connection has been established) and the potential to have polutants/floodwaters reduced downstream from effects of the adjacent wetland. The tributary and it's adjacent wetlands provide lifecycle support functions for species within the TNW by providing nutrients, water, and organic carbons which can be used for food, habitat or other important processes in fish and animal lifecycles. These nutrients and carbons are very important in foodwebs within the Sacramento River (for fish, invertebrates, birds, mammals and more). Considering it's close proximity to the Sacramento River, it is easy to grasp that the physical, chemical, and biological functions being performed by the on-site non-RPW and it's adjacent wetland will directly contribute to the physical, chemical, and biological integrity of the Sacramento River. Since the wetland performs very important functions for the tributary on-site and the non-RPW tributary collects and drain water from this wetland to the RPW, it is apparent that the non-RPW affects the flow (significantly) of the RPW as well as the water quality and quantity that enters the RPW. 9:WM is approximately 30 feet from 8:CC and slopes into it. An upland swale connects 9:WM to 8:CC. This swale did not have characterstics of a wetland and did not display an OHWM. However, this swale does act as a conveyance system to pass water from 9:WM to 8:CC during and after rain events. Therefore, through overland sheetflow and subsurface flow, a direct hydrologic connection has been established.

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

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

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

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

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

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

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   - ☒ Tributary waters: **102** linear feet **2** width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: **.**

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

[8]See Footnote # 3.

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

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

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

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

   Provide estimates for jurisdictional wetlands in the review area: **0.066** 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 width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

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

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 width (ft).
☐ 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, width (ft).

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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.*

☐ 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:ENPLAN provided Delineation.
☒ 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:Anderson quad 1":1000'.
☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date):Aerial map prepared by ENPLAN on August 14, 2007, containing delineated property and features.
  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):Information obtained from site visit such as hydrology, topographic relief, and general site characteristics. Consultant also provided map of Anderson stormwater plan documenting the exact route of water from the site to Tormey Drain.

B. ADDITIONAL COMMENTS TO SUPPORT JD: Additional JD Forms have been prepared for calls. This site has been significantly disturbed. All water on-site is flowing generally to the eastern most point on the site. The RPW eventually collects all water leaving the site. However, due to the erratic location and methodology of the constructed ditches dug through, to and from wetlands on-site, it is difficult to depict what relation one wetland has to a specific ditch. One thing is known based on the site visit and local knowledge of the site. Water from every wetland connects both on the surface and through subsurface flow to the RPW who's waters connect to the Sacramento River downstream. This in itself could be basis for jurisdiction. If the non-RPW's (smaller ditches) were not dug connecting wetland to wetland that eventually abutts the RPW, these wetlands would have still been adjacent to the RPW and jurisdictional due to their chemical, physical, and biological connection with the RPW. Specifically 8:CC connects to 5:CC which flows through 7:WM which abuts the RPW passes water into it. 8:CC collects water, nutrients, sediments, and/or potential pollutants from 9:WM through an upland swale (overland sheet flow and subsurface flow) and deposits them in the Sacramento River.

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):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:Sacramento District Redding Office, Theresa Cambell Living Trust, SPK-2007-1894

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State:California County/parish/borough: Shasta City: Anderson
Center coordinates of site (lat/long in degree decimal format): Lat. 40.4514° **N**, Long. -122.3173° **W**.
Universal Transverse Mercator:
Name of nearest waterbody: Tormey Drain
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Sacramento River
Name of watershed or Hydrologic Unit Code (HUC): Lower Sacramento River
☒ 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: January 31, 2008
☒ Field Determination. Date(s): January 10, 2008

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: 140 linear feet: 2 width (ft) and/or acres.
      Wetlands: 0.021 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      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: .

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

[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.

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: 1720**acres**
   Drainage area: 10 **acres**
   Average annual rainfall: 30 inches
   Average annual snowfall: inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **3** tributaries before entering TNW.

   Project waters are **2-5** river miles from TNW.
   Project waters are **1-2** 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 TNW[5]: The unamed on-site non-RPW (5:CC) flows through 7:WM (seasonal wetland) before draining into 10:CC (on-site RPW). 10:CC flows less than a mile to Tormey Drain through the Anderson City Stormwater System it enters one block east of the site. Tormey drain flows directly into the Sacramento River..
   Tributary stream order, if known: 2nd order.

   (b) General Tributary Characteristics (check all that apply):
   Tributary is: ☐ Natural

[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.

☒ Artificial (man-made). Explain: All tributaries on-site were excavated by the landowner. A large portion of the site is wetland (33%) and the landowner dug the ditches from, through and around wetlands all over the site. The ditches were dug to help drain wetlands on-site and move the water off-site. The ditches had indicators of an Ordinary High Water Mark and have lowered the groundwater elevation. It is possible that historic tributaries were in fact present here and were removed when this portion of Anderson was built. This feature (5:CC) is a channel constructed artificially and is smaller than the on-site RPW constructed channels and only carries water from adjacent wetlands to the RPW.

☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: 2 feet
Average depth: 1-2 feet
Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):

☒ Silts	☒ Sands	☐ Concrete
☐ Cobbles	☒ Gravel	☒ Muck
☐ Bedrock	☒ Vegetation. Type/% cover: 35%, Obligate, Facultative and Facultative-Wet wetland species.	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: The tributary is more stable than the RPW's. The ditches were excavated in upland soils that are not naturally meant to be the bed or bank of a stream. Iron from the soil was leaching into the stream and sediments and silt from the banks were found throughout the streams below the OHWM. Since the bed and banks were cut by human intervention, they are defined well at this point but could wash out during high flow events.
Presence of run/riffle/pool complexes. Explain: Not known.
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): 1-2 %

(c) Flow:
Tributary provides for: **Intermittent but not seasonal flow**
Estimate average number of flow events in review area/year: **11-20**
Describe flow regime: Flow occurs during and after rain events which occur frequently for a three-four month period. The tributary collects runoff, overland sheet flow, and water from abbutting and adjacent wetlands that leach into the tributary. The tributary also has intermittent flow in the winter.
Other information on duration and volume: Anderson is subject to flooding and regularly does flood. This site is a prime example of the area receiving many large rain events and volumes of flow being subject to dramatic changes.

Surface flow is: **Confined.** Characteristics: Tributary was excavated with a definitive channel that would direct water precisely where the channel was cut.

Subsurface flow: **Unknown**. Explain findings: Tributary is likely receiving water from adjacent waters on-site but no test was performed to prove this. It is easily assumed.
☐ Dye (or other) test performed: .

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

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

☐ Discontinuous OHWM.[7] Explain: .

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

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

[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.

☐ 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: Water color was discolored during site visit. High concentrations of iron and sediments/silts were leaching into or deposited into the water. This can be attributed to recent and current storm events(rain) at and before the time of the site visit. Water quality was not extremely good. The site had been previously grazed by cattle and likely had high concentrations of organic material and minerals from cattle feces.

Identify specific pollutants, if known: Cattle feces.

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

☐ Riparian corridor. Characteristics (type, average width): .

☒ Wetland fringe. Characteristics: Tributary had some wetland plants growing througout a majority of it. It was dug through the largest wetland feature in order to facilitate draining it. Therefore, hydrophytic vegetation could be found along the banks (fringe). The wetland fringe was often contiguous with the wetlands abutting and was indistinguishable as a separate fringe. Typha, Cyperus, Juncus and other species were found.

☒ Habitat for:

☐ Federally Listed species. Explain findings: .

☐ Fish/spawn areas. Explain findings: .

☐ Other environmentally-sensitive species. Explain findings: .

☒ Aquatic/wildlife diversity. Explain findings: Waterfowl, amphibians, invertebrates, riparian birds, and mammals such as deer could potentially use the site for it's aquatic fetures and value.

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:0.052acres

Wetland type. Explain:Seasonal Wet Meadow with emergent vegetation.

Wetland quality. Explain:Good, this wetland received the least influence from grazing which occurred throughout a majority of the site historically. It contained the highest diversity of plants and the feature continued offsite. The portion on-site was a very small portion of the entire feature for which the rest was not mapped.

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Ephemeral flow**. Explain: Small ammounts of water were seen at the lower portion of the upland ditch during the site visit. This was during and after rain events so it likely only flows above ground during and after rain.

Surface flow is**: Overland sheetflow**

Characteristics: water flows over the surface through a slightly defined upland ditch.

Subsurface flow: **Yes**. Explain findings: .

☒ Dye (or other) test performed: water was seen percolating through the soil of the ditch and some ponding was visible right before 3/2:CC occurs.

(c) Wetland Adjacency Determination with Non-TNW:

☐ Directly abutting

☒ Not directly abutting

☒ Discrete wetland hydrologic connection. Explain: Water passes both subsurface and above surface through a constructed upland ditch that did not have an OHWM or wetland indicators into 3/2:CC.

☒ Ecological connection. Explain: Invertebrates, birds and other species could easily pass from 1:WM to 3/2:CC during rain events..

☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **2-5** river miles from TNW.

Project waters are **1-2** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters.**

Estimate approximate location of wetland as within the **500-year or greater** 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 was fairly clear in this wetland but did have some discoloration due to weather conditions before and during the site visit (rain). Water quality was best in this wetland since a large portion extended

off-site and was unmodified or affected by the on-site manipulations. Little to no cattle grazing was evident in this wetland.

Identify specific pollutants, if known: potentially cattle feces.

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

☐ Riparian buffer. Characteristics (type, average width): .

☒ Vegetation type/percent cover. Explain:80%, wetland species dominant.

☒ Habitat for:

☐ Federally Listed species. Explain findings: .

☐ Fish/spawn areas. Explain findings: .

☐ Other environmentally-sensitive species. Explain findings: .

☒ Aquatic/wildlife diversity. Explain findings:Waterfowl, amphibians, invertebrates, riparian birds, and mammals such as deer could potentially use the site for it's aquatic fetures and value.

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

All wetland(s) being considered in the cumulative analysis: **10**

Approximately (10) 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)
1:WM (N)	0.052	4:WM (Y)	1.642
9:WM (N)	0.066	6:WM (N)	0.021

Summarize overall biological, chemical and physical functions being performed: 6:WM has good water quality onsite as it did not receive heavy grazing historically. It is on the city owned portion of the lot. A portion of this wetland goes off-site and is not mapped. The total wetland size is unknown as it goes off-site. It is impossible to know how many more wetlands drain into this tributary. However, it is known that 4:WM which is jurisdicitonal flows into this channel and is abutting, 3:CC/2:CC and it's wetland (1:WM) flow into this,as well as 8:CC and it's adjecent wetland 9:WM. The wetlands provide habitat for many animals, hold floodwaters, filter pollutants and play an intricate role locally in the ecosystem.

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: 6:WM is adjacent to 5:CC and is the only wetland being analyzed in this significant nexus evaluation. Other wetlands and tributaries flow into this but are separately reviewed. 3/2:CC and 1:WM flow into 4:WM which is a jurisdictional water of the U.S. since it is abutting the on-site RPW. Other features such as 8:CC and 9:WM are also considered cumulatively. The adjacent wetlands play an important role in filtering pollutants on-site. Due to high concentrations of organic matter buildup on-site as well as pollutants from cattle feces, the on-site constructed channel which is a non-relatively permanent water with intermittent flow (8:CC) in combination with it's wetlands have more than signifcant effect on downstream traditionally navigable waters. The adjacent wetlands have the ability to trap and filter pollutants, store floodwater, increase water quality that will enter the non-RPW and eventually the downstream TNW. The non-RPW has the ability to carry floodwaters/pullutants to the TNW (direct hydrologic connection has been established) and the potential to have polutants/floodwaters reduced downstream from effects of the adjacent wetlands. 5:CC is connected on both ends by jurisdictional wetlands. These wetlands abut 5:CC but are also abutting an RPW. The tributary and it's adjacent wetlands provide lifecycle support functions for species within the TNW by providing nutrients, water, and organic carbons which can be used for food, habitat or other important processes in fish and animal lifecycles. These nutrients and carbons are very important in foodwebs within the Sacramento River (for fish, invertebrates, birds, mammals and more). Considering it's close proximity to the Sacramento River, it is easy to grasp that the physical, chemical, and biological functions being performed by the on-site non-RPW and it's adjacent wetland will directly contribute to the physical, chemical, and biological integrity of the Sacramento River. Since these wetlands do perform very important functions for the tributaries on-site and the non-RPW tributaries collect and drain water from these wetlands to the RPW, it is apparent that the non-RPW's do affect the flow (significantly) of the RPW as well as the water quality and quantity that does enter the RPW. 6:WM is approximately 50 feet from 5:CC and slightly slopes toward it. It's close proximity, potential for surface and subsurface hydrologic connectivity and it's ecological connection aid in it affecting the water quality and quantity in 5:CC.

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

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

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

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

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

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

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   - ☒ Tributary waters: **140** linear feet **2** width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: **.**

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

[8]See Footnote # 3.

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

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

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

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

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

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

☒ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: **0.021** 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 width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

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

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

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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.*

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:ENPLAN provided Delineation.
- ☒ 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:Anderson quad 1":1000'.
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
- ☐ National wetlands inventory map(s). Cite name: .
- ☐ State/Local wetland inventory map(s): .
- ☐ FEMA/FIRM maps: .
- ☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date):Aerial map prepared by ENPLAN on August 14, 2007, containing delineated property and features.
  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):Information obtained from site visit such as hydrology, topographic relief, and general site characteristics. Consultant also provided map of Anderson stormwater plan documenting the exact route of water from the site to Tormey Drain.

B. ADDITIONAL COMMENTS TO SUPPORT JD: Additional JD Forms have been prepared for calls. This site has been significantly disturbed. All water on-site is flowing generally to the eastern most point on the site. The RPW eventually collects all water leaving the site. However, due to the erratic location and methodology of the constructed ditches dug through, to and from wetlands on-site, it is difficult to depict what relation one wetland has to a specific ditch. One thing is known based on the site visit and local knowledge of the site. Water from every wetland connects both on the surface and through subsurface flow to the RPW who's waters connect to the Sacramento River downstream. This in itself could be basis for jurisdiction. If the non-RPW's (smaller ditches) were not dug connecting wetland to wetland that eventually abutts the RPW, these wetlands would have still been adjacent to the RPW and jurisdictional due to their chemical, physical, and biological connection with the RPW. Specifically 5:CC collects water, nutrients, sediments, and/or potential pollutants from 3/2:CC, 4:WM, 8:CC, 1:WM, and 9:WM. by overland sheet flow and subsurface flow. 5:CC receives the most water and has the largest and most common flows of the three non-RPW's. The other two RPW's and their adjacent wetlands flow into this feature.