

**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): December 29, 2020**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Albuquerque District, Neptune Energy Center LLC/Neptune Solar Plus Storage and Tundra Switchyard Project , SPA-2020-00186-SCO**

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: **Colorado** County/parish/borough: **Pueblo County** City: **N/A**  
Center coordinates of site (lat/long in degree decimal format): Lat. **38.327019°**, Long. **-104.400050°**  
Universal Transverse Mercator: **13 552012.97 4242059.93**

Name of nearest waterbody: **Chico Creek**

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **John Martin Reservoir**

Name of watershed or Hydrologic Unit Code (HUC): **12-Digit HUC-Andy Creek (110200040307)**

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: **See attached JD forms.**

**D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**

Office (Desk) Determination. Date: **November 5, 2020**

Field Determination. Date(s): **August 18, 2020**

**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):<sup>1</sup>**

TNWs, including territorial seas

Wetlands adjacent to TNWs

Relatively permanent waters<sup>2</sup> (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: (SC-2) **15,842 linear feet**, (SC-3) **12334 linear feet**, (SC-4) **720 linear feet**, (SC-5) **1469 linear feet**, (SC-

2) **110-foot wide**, (SC-3) **30-foot wide**, (SC-4) **720-foot wide**, (SC-5) **50-foot wide**, and/or acres.

Wetlands: acres.

**c. Limits (boundaries) of jurisdiction based on: **Not Applicable.****

Elevation of established OHWM (if known): **unknown**

**2. Non-regulated waters/wetlands (check if applicable):<sup>3</sup>**

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**

<sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.

<sup>2</sup> 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).

<sup>3</sup> 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<sup>4</sup> 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: HUC-12: Andy Creek (110200040307) 22,518 acres

Drainage area: Andy Creek Watershed-35.2 square miles

Average annual rainfall: 12.42 inches

Average annual snowfall: 30 inches

(ii) **Physical Characteristics:**

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 1 tributaries before entering TNW.

Project waters are 30 (or more) river miles from TNW.

Project waters are 5-10 river miles from RPW.

Project waters are 30 (or more) aerial (straight) miles from TNW.

Project waters are 2-5 aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW<sup>5</sup>: Flows from the Andy Creek watershed discharges into Chico Creek. From Chico Creek, flows travel approximately 6.3-river miles south into the Arkansas River. Approximately 110 river miles from the confluence of Chico Creek and the Arkansas River is John Martin Reservoir, a TNW.

Tributary stream order, if known:

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

Tributary is:  Natural

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

<sup>5</sup> 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:
- Manipulated (man-altered). Explain:

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

Average width:        feet  
 Average depth:        feet  
 Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):

- |   |  |                                   |
|---|--|-----------------------------------|
| <input checked="" type="checkbox"/> Silts | <input checked="" type="checkbox"/> Sands          | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles          | <input type="checkbox"/> Gravel                    | <input type="checkbox"/> Muck     |
| <input type="checkbox"/> Bedrock          | <input type="checkbox"/> Vegetation. Type/% cover: |                                   |
| <input type="checkbox"/> Other. Explain:  |  |                                   |

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: **The dominate soils within the tributaries of Andy Creek watershed are Razor clay, eroded (Re2), Razor clay loam (Ra), and Limon silty clay loam, 0 to 2 percent slopes (LnA). These soils have erodibility whole soil K factors, as determined by the Natural Resources Conservation Service (NRCS), of .17, .24, and .37, respectively. The values for Re2 and Ra indicate these soils are not easily erodible and allow for more runoff, while LnA soils tend to be more erodible but produce higher amounts of runoff. All of the tributaries appear to be stable.**

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope):        %

(c) Flow:

Tributary provides for: **Ephemeral flow**

Estimate average number of flow events in review area/year: **20 (or greater)**

Describe flow regime: **Sporadic and flashy.**

Other information on duration and volume:

Surface flow is: **Discrete and confined.** Characteristics:

Subsurface flow: **Unknown.** Explain findings:

- Dye (or other) test performed:

Tributary has (check all that apply):

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Bed and banks   |   |
| <input checked="" type="checkbox"/> OHWM <sup>6</sup> (check all indicators that apply):                            |   |
| <input checked="" type="checkbox"/> clear, natural line impressed on the bank                                       | <input type="checkbox"/> the presence of litter and debris          |
| <input type="checkbox"/> changes in the character of soil   | <input type="checkbox"/> destruction of terrestrial vegetation      |
| <input checked="" type="checkbox"/> shelving  | <input type="checkbox"/> the presence of wrack line                 |
| <input checked="" type="checkbox"/> vegetation matted down, bent, or absent   | <input checked="" type="checkbox"/> sediment sorting                |
| <input type="checkbox"/> leaf litter disturbed or washed away   | <input type="checkbox"/> scour                                      |
| <input type="checkbox"/> sediment deposition  | <input type="checkbox"/> multiple observed or predicted flow events |
| <input type="checkbox"/> water staining   | <input type="checkbox"/> abrupt change in plant community           |
| <input type="checkbox"/> other (list):  |   |
| <input checked="" type="checkbox"/> Discontinuous OHWM. <sup>7</sup> Explain: <b>SC-4 has a discontinuous OHWM.</b> |   |

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

- |  |  |
|--|--|
| <input type="checkbox"/> High Tide Line indicated by:              | <input type="checkbox"/> Mean High Water Mark indicated by:            |
| <input type="checkbox"/> oil or scum line along shore objects      | <input type="checkbox"/> survey to available datum;                    |
| <input type="checkbox"/> fine shell or debris deposits (foreshore) | <input type="checkbox"/> physical markings;                            |
| <input type="checkbox"/> physical markings/characteristics         | <input type="checkbox"/> vegetation lines/changes in vegetation types. |
| <input type="checkbox"/> tidal gauges                              |  |
| <input type="checkbox"/> other (list):                             |  |

**(iii) Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain:

Identify specific pollutants, if known: **Sediment is the primary pollutant within these waterways.**

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

<sup>6</sup>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.

<sup>7</sup>Ibid.

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings: **Chico Creek is known to contain populations of the Southern redbelly dace (Family, Cyprinidae) and the Arkansas darter (Etheostoma cragini). Although the fish is not a federally listed species, it is considered locally uncommon in Colorado and has been state designated as endangered and listed as a Tier 1 species of greatest conservation need. The Andy Creek watershed provides periodic flow to the lower Chico Creek, which during flow events or events that cause ponding within Chico Creek could provide habitat and/or travel corridors for both sensitive fish species.**
  - Aquatic/wildlife diversity. Explain findings:

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: \_\_\_\_\_ acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain:

Surface flow is: **Pick List**

Characteristics:

Subsurface flow: **Pick List**. Explain findings:

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

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

Riparian buffer. Characteristics (type, average width):

Vegetation type/percent cover. Explain:

Habitat for:

Federally Listed species. Explain findings:

Fish/spawn areas. Explain findings:

Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings:

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

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

Approximately \_\_\_\_\_ acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

### C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: **It has been determined, aquatic resources SC-2, SC-3, SC-4, and SC-5 have a significant nexus to the John Martin Reservoir, a TNW located within the Arkansas River. The reaches within the Andy Creek watershed listed above have defined channel bed and banks throughout their course or discontinuous reaches of defined bed and bank (i.e. SC-4) with little to no established mature vegetation indicating flow occurs frequently enough to define the bed and banks and discourage establishment of mature vegetation. Additionally, the confluence of the main stem of Andy Creek with Chico Creek appear to be well established indicating flows from this watershed reach Chico Creek at periodic intervals. The contribution of floodwater flows from the Andy Creek watershed is exhibited in other indicators within Chico Creek. Chico Creek, immediately upstream of the confluence of Andy Creek and Chico Creek, has an average approximate stream width of 85 feet while downstream of the confluence the average approximate stream width is 93 feet. Stream widening within this reach is an indication that Chico Creek is widening to accommodate floodwater flows from the Andy Creek watershed. The influence of large flow events can contribute to widening of ephemeral streams in the arid-southwest (Levick et. al 2008). Consistent stream records documenting flow within Chico Creek are almost nonexistent except for a small amount of data from the early 1940's and late 1990's. Stream data from the U.S. Geological Survey (USGS) stream gauge at the DOT test Road Bridge (USGS No. 07110400-Chico CR Near Pueblo Chemical Depot, CO), located approximately 3.75 river miles north of the confluence of Andy Creek and Chico Creek, note consistent flows from the dates of June 1, 1997 through August 31, 1999. Additional USGS stream data from the stream gauge at the North Avondale Bridge (USGS No. 07110500-Chico Creek Near North Avondale, CO), located approximately 4.6 river miles south of the confluence of Andy Creek and Chico Creek and approximately 1.7 river miles north of the confluence of Chico Creek and the Arkansas River, note sporadic flashy flows for the dates of March 1, 1941 through August 31, 1946. No other stream gauge data for Chico Creek was found. Lastly, on August 18, 2020, a site examination was conducted within the review area. During the examination, ponded water was observed within SC-3 and SC-4. These observations were a result of a .02-inch rain event which occurred on August 15, 2020. Observing ponding from a minor rain event suggests a large rain event is not necessary to produce flows within the Andy Creek watershed, rather small rain events within this watershed have the ability to produce flow and contribute floodwaters downstream to Chico Creek. Additionally, during the site examination rough cocklebur (*Xanthium strumarium*) was identified within the OHWM of SC-3. Rough cocklebur is listed in the Corps national wetland plant list for Colorado and categorized as Facultative. Facultative plants are considered by the Corps to be indicators of wetland vegetation. Although there did not appear to be a wetland within this aquatic resource, the presence of the rough cocklebur is an indication that SC-3 receives sufficient flows to support the life cycle of a plant that is considered a wetland indicator. In conclusion, the aquatic resources listed above have a significant nexus that is more than speculative as exhibited by indicators that suggest floodwater flows within the review area occur at continual intervals and**

discharge into Chico Creek, then to the Arkansas River. Therefore, the tributaries have a substantial capacity to carry flood waters to the Arkansas River which then contributes flow to the John Martin Reservoir, a TNW.

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

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

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

TNWs: linear feet, wide, Or acres.  
 Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**

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

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

Tributary waters: linear feet wide.  
 Other non-wetland waters: acres.

Identify type(s) of waters:

3. **Non-RPWs<sup>8</sup> 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: (SC-2) 15,842 linear feet, (SC-3) 12334 linear feet, (SC-4) 720 linear feet, (SC-5) 1469 linear feet, (SC-2) 110-foot wide, (SC-3) 30-foot wide, (SC-4) 720-foot wide, (SC-5) 50-foot wide.

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

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

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

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

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

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

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

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

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

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

---

<sup>8</sup>See Footnote # 3.

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

**7. Impoundments of jurisdictional waters.<sup>9</sup>**

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):<sup>10</sup>**

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

**Identify water body and summarize rationale supporting determination:**

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

- Tributary waters: \_\_\_\_\_ linear feet, \_\_\_\_\_ wide.
- Other non-wetland waters: \_\_\_\_\_ acres.
- Identify type(s) of waters:
- Wetlands: \_\_\_\_\_ acres.

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

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

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

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

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

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

**SECTION IV: DATA SOURCES.**

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

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
- 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:

<sup>9</sup> To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

<sup>10</sup> Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
  - USGS NHD data.
  - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: **1:24K; Devine**
- USDA Natural Resources Conservation Service Soil Survey. Citation: **Custom Soil Resource Report for Pueblo Area, Colorado, Parts of Pueblo and Custer County. Online Resource. Accessed November 17, 2020.**
- National wetlands inventory map(s). Cite name:
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: **Accessed November 17, 2020.**
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): **Applicant submitted aerial photos.**  
or  Other (Name & Date): **Onsite photos from August 18, 2020 site visit and applicant submitted photos.**
- Previous determination(s). File no. and date of response letter:
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify): **USGS Stream Stats Report (Andy Creek Watershed, Wolf Arroyo Watershed, & Chico Creek Watershed); USGS Streamer Report (Chico Creek); USGS Stream Gauge Data (07099970, 07106500, 07109500, 07110500, & 07110400); NOAA Climate Data (Precipitation data, rainfall data, snowfall data, record precipitation data, & annual climate data summary); Colorado Parks and Wildlife Factsheet (Arkansas Darter & Red belly Dace); NRCS Soil erodibility K factor report; NRCS Land Resource Regions and Major LandResource Areas of the United States, the Caribbean, and the Pacific Basin. USACE National Wetland Plant List (Colorado). "The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest". U.S. Environmental Protection Agency and USDA/ARS Southwest Watershed Research Center, EPA/600/R-08/134, ARS/233046, 116 pp.**

**B. ADDITIONAL COMMENTS TO SUPPORT JD:**

**It has been determined, aquatic resources SC-2, SC-3, SC-4, and SC-5 have a significant nexus to the John Martin Reservoir, a TNW located within the Arkansas River. These aquatic resources have a significant nexus that is more than speculative as exhibited by indicators that suggest floodwater flows within the review area occur at continual intervals and discharge into Chico Creek, then to the Arkansas River. Therefore, the tributaries have a substantial capacity to carry flood waters to the Arkansas River which then contributes flow to the John Martin Reservoir, a TNW.**



**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): December 29, 2020**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Albuquerque District, Neptune Energy Center LLC/Neptune Solar Plus Storage and Tundra Switchyard Project , SPA-2020-00186-SCO**

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: **Colorado** County/parish/borough: **Pueblo County** City: **N/A**  
Center coordinates of site (lat/long in degree decimal format): Lat. **38.327019°**, Long. **-104.400050°**  
Universal Transverse Mercator: **13 552012.97 4242059.93**

Name of nearest waterbody: **Arkansas River**

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **John Martin Reservoir**

Name of watershed or Hydrologic Unit Code (HUC): **12-Digit HUC-Outlet Chico Creek (110200040309)**

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: **See attached JD forms.**

**D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**

Office (Desk) Determination. Date: **November 5, 2020**

Field Determination. Date(s): **August 18, 2020**

**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):<sup>1</sup>**

TNWs, including territorial seas

Wetlands adjacent to TNWs

Relatively permanent waters<sup>2</sup> (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: **1784** linear feet, **220** wide, and/or \_\_\_\_\_ acres.

Wetlands: \_\_\_\_\_ acres.

**c. Limits (boundaries) of jurisdiction based on: **Not Applicable.****

Elevation of established OHWM (if known): **unknown**

**2. Non-regulated waters/wetlands (check if applicable):<sup>3</sup>**

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**

<sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.

<sup>2</sup> 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).

<sup>3</sup> 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<sup>4</sup> 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: HUC-12-Outlet Chico Creek (110200040309) 19,615 acres

Drainage area: Outlet Chico Creek Watershed-723 square miles

Average annual rainfall: 12.42 inches

Average annual snowfall: 30 inches

(ii) **Physical Characteristics:**

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 1 tributaries before entering TNW.

Project waters are 30 (or more) river miles from TNW.

Project waters are 5-10 river miles from RPW.

Project waters are 30 (or more) aerial (straight) miles from TNW.

Project waters are 2-5 aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW<sup>5</sup>: Flow from this reach of Chico Creek travels approximately 7.25 river miles south into the Arkansas River. Approximately 110 river miles from the confluence of Chico Creek and the Arkansas River is John Martin Reservoir, a TNW.

Tributary stream order, if known:

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

Tributary is:  Natural

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

<sup>5</sup> 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:
- Manipulated (man-altered). Explain:

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

Average width:        feet  
 Average depth:        feet  
 Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

- |   |  |                                   |
|---|--|-----------------------------------|
| <input checked="" type="checkbox"/> Silts | <input checked="" type="checkbox"/> Sands          | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles          | <input type="checkbox"/> Gravel                    | <input type="checkbox"/> Muck     |
| <input type="checkbox"/> Bedrock          | <input type="checkbox"/> Vegetation. Type/% cover: |                                   |
| <input type="checkbox"/> Other. Explain:  |  |                                   |

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: **This reach of Chico Creek is primarily composed of Bankard sand, 0 to 2 percent slopes (Bk), which has an erodibility whole soil K factor, as determined by the NRCS, of .02. This value indicates Bk soils are easily detached and less susceptible to runoff. The reach appears to be stable.**

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope):        %

(c) Flow:

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

Estimate average number of flow events in review area/year: **20 (or greater)**

Describe flow regime: **Shallow flows but relatively consistent throughout the year.**

Other information on duration and volume: **Stream data from the U.S. Geological Survey (USGS) stream gauge at the DOT test Road Bridge (USGS No. 07110400-Chico CR Near Pueblo Chemical Depot, CO), located approximately 2.5-river miles north of the Chico Creek reach within the review area, note relatively consistent flows with seasonal influences from the dates of June 1, 1997 through August 31, 1999. Additionally, the USGS National Hydrograph Dataset identifies this reach as having intermittent flow.**

Surface flow is: **Discrete and confined.** Characteristics:

Subsurface flow: **Unknown.** Explain findings:

- Dye (or other) test performed:

Tributary has (check all that apply):

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Bed and banks  |   |
| <input checked="" type="checkbox"/> OHWM <sup>6</sup> (check all indicators that apply): |   |
| <input checked="" type="checkbox"/> clear, natural line impressed on the bank            | <input type="checkbox"/> the presence of litter and debris          |
| <input type="checkbox"/> changes in the character of soil                                | <input type="checkbox"/> destruction of terrestrial vegetation      |
| <input checked="" type="checkbox"/> shelving   | <input type="checkbox"/> the presence of wrack line                 |
| <input checked="" type="checkbox"/> vegetation matted down, bent, or absent              | <input checked="" type="checkbox"/> sediment sorting                |
| <input type="checkbox"/> leaf litter disturbed or washed away                            | <input type="checkbox"/> scour                                      |
| <input type="checkbox"/> sediment deposition   | <input type="checkbox"/> multiple observed or predicted flow events |
| <input type="checkbox"/> water staining  | <input type="checkbox"/> abrupt change in plant community           |
| <input type="checkbox"/> other (list):   |   |
| <input type="checkbox"/> Discontinuous OHWM. <sup>7</sup> Explain:                       |   |

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

- |  |  |
|--|--|
| <input type="checkbox"/> High Tide Line indicated by:              | <input type="checkbox"/> Mean High Water Mark indicated by:            |
| <input type="checkbox"/> oil or scum line along shore objects      | <input type="checkbox"/> survey to available datum;                    |
| <input type="checkbox"/> fine shell or debris deposits (foreshore) | <input type="checkbox"/> physical markings;                            |
| <input type="checkbox"/> physical markings/characteristics         | <input type="checkbox"/> vegetation lines/changes in vegetation types. |
| <input type="checkbox"/> tidal gauges                              |  |
| <input type="checkbox"/> other (list):                             |  |

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain:

Identify specific pollutants, if known: **Sediment is the primary pollutant within this waterway.**

<sup>6</sup>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.

<sup>7</sup>Ibid.

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

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings: **Chico Creek is known to contain populations of the Southern redbelly dace (Family, Cyprinidae) and the Arkansas darter (Etheostoma cragini). Although the fish is not a federally listed species, it is considered locally uncommon in Colorado and has been state designated as endangered and listed as a Tier 1 species of greatest conservation need. Ponded or flowing water within this reach of Chico Creek could provide habitat and/or travel corridors for both sensitive fish species.**
  - Aquatic/wildlife diversity. Explain findings:

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size:            acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain:

Surface flow is: **Pick List**

Characteristics:

Subsurface flow: **Pick List**. Explain findings:

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

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

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

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

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

Approximately            acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

**C. SIGNIFICANT NEXUS DETERMINATION**

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

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

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

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

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

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

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:  
 TNWs: linear feet, wide, Or acres.  
 Wetlands adjacent to TNWs: acres.
2. **RPWs that flow directly or indirectly into TNWs.**  
 Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:  
 Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: **See Section IV B. below.**

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

- Tributary waters: **1784** linear feet **220** wide.
  - Other non-wetland waters: acres.
- Identify type(s) of waters:

**3. Non-RPWs<sup>8</sup> that flow directly or indirectly into TNWs.**

- Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

- Tributary waters:            linear feet,            wide.  
 Other non-wetland waters:            acres.

Identify type(s) of waters:

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

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

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

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

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

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

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

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

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

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

**7. Impoundments of jurisdictional waters.<sup>9</sup>**

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):<sup>10</sup>**

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

**Identify water body and summarize rationale supporting determination:**

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

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

<sup>8</sup>See Footnote # 3.

<sup>9</sup>To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

<sup>10</sup> 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.

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

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

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

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

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

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

**SECTION IV: DATA SOURCES.**

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

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - Office concurs with data sheets/delineation report.
  - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
  - USGS NHD data.
  - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: **1:24K; Devine**
- USDA Natural Resources Conservation Service Soil Survey. Citation: **Custom Soil Resource Report for Pueblo Area, Colorado, Parts of Pueblo and Custer County. Online Resource. Accessed November 17, 2020.**
- National wetlands inventory map(s). Cite name:
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: **Accessed November 17, 2020.**
- 100-year Floodplain Elevation is:        (National Geodectic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): **Applicant submitted aerial photos.**  
or  Other (Name & Date): **Onsite photos from August 18, 2020 site visit and applicant submitted photos.**
- Previous determination(s). File no. and date of response letter:
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify): **USGS Stream Stats Report (Andy Creek Watershed, Wolf Arroyo Watershed, & Chico Creek Watershed); USGS Streamer Report (Chico Creek); USGS Stream Gauge Data (No. 07110400); NOAA Climate Data (Precipitation data, rainfall data, snowfall data, record precipitation data, & annual climate data summary); Colorado Parks and Wildlife Factsheet (Arkansas Darter & Red belly Dace); NRCS Soil erodibility K factor report; NRCS Land Resource Regions and Major LandResource Areas of the United States, the Caribbean, and the Pacific Basin**

**B. ADDITIONAL COMMENTS TO SUPPORT JD:**

This reach of Chico Creek is a relatively permanent waterway that appears to be the lateral extent of intermittent flows as dense vegetation along the streambank appears to decline from this point on. Downstream of the review area flows appear to transition to an ephemeral regime. Although downstream flows appear to be ephemeral, USGS stream data from the stream gauge at the North Avondale Bridge (USGS No. 07110500-Chico Creek Near North Avondale, CO), located approximately 5.5-river miles south of the review area and approximately 1.7 river miles north of the confluence of Chico Creek and the Arkansas River, note sporadic flashy flows for the dates of March 1, 1941 through August 31, 1946. This data combined with the lack of vegetation within the stream channel and the defined bed and banks throughout the channel south of the review area indicate the downstream reach of Chico Creek serves as a connection from the review area to the Arkansas River, and finally to the John Martin Reservoir, a TNW.

**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): December 18, 2020**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Albuquerque District, Neptune Energy Center LLC/Neptune Solar Plus Storage and Tundra Switchyard Project , SPA-2020-00186-SCO**

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: **Colorado** County/parish/borough: **Pueblo County** City: **N/A**  
Center coordinates of site (lat/long in degree decimal format): Lat. **38.327019°**, Long. **-104.400050°**  
Universal Transverse Mercator: **13 552012.97 4242059.93**

Name of nearest waterbody: **Chico Creek**

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

Name of watershed or Hydrologic Unit Code (HUC): **12-Digit HUC-Outlet Chico Creek (110200040309) and Wolf Arroyo (110200040308)**

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: **See attached JD forms.**

**D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**

Office (Desk) Determination. Date: **November 5, 2020**

Field Determination. Date(s):

**SECTION II: SUMMARY OF FINDINGS**

**A. RHA SECTION 10 DETERMINATION OF JURISDICTION.**

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

Explain:

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

There **Are no** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply):<sup>1</sup>**

TNWs, including territorial seas

Wetlands adjacent to TNWs

Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs

Non-RPWs that flow directly or indirectly into TNWs

Wetlands directly abutting RPWs that flow directly or indirectly into TNWs

Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs

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

Impoundments of jurisdictional waters

Isolated (interstate or intrastate) waters, including isolated wetlands

**b. Identify (estimate) size of waters of the U.S. in the review area:**

Non-wetland waters: linear feet, wide, and/or acres.

Wetlands: acres.

**c. Limits (boundaries) of jurisdiction based on: **Not Applicable.****

Elevation of established OHWM (if known):

**2. Non-regulated waters/wetlands (check if applicable):<sup>3</sup>**

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain: **Based on a combination of information submitted by the applicant and obtained from desktop review, it has been determined that SC-22 (517-linear feet by 5-feet wide), SC-24 (1128-linear feet by 60-feet wide), and P-20 (0.06 acres) are non-jurisdictional aquatic resources (ARs). SC-24 is an isolated aquatic resource that exhibits a marginal bed and bank which becomes dispersed sheet flow as it nears No. 23. SC-24 does not have a connection to Chico Creek. SC-22 is an isolated feature that exhibits bed bank within a portion of the reach, which then becomes dispersed sheet flow with no downstream connectivity to Chico Creek. P-20 is an isolated natural depression which**

<sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.

<sup>2</sup> 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).

<sup>3</sup> Supporting documentation is presented in Section III.F.



**captures and ponds sheet flow from adjacent uplands. This feature does not exhibit a downstream connection to Chico Creek.**

### **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<sup>4</sup> 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:       **acres**  
Drainage area:       **square miles**  
Average annual rainfall:       inches  
Average annual snowfall:       inches

###### **(ii) Physical Characteristics:**

###### **(a) Relationship with TNW:**

- Tributary flows directly into TNW.
- Tributary flows through **1** tributaries before entering TNW.

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

---

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

Identify flow route to TNW<sup>5</sup>:  
Tributary stream order, if known:

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

**Tributary** is:  Natural  
 Artificial (man-made). Explain:  
 Manipulated (man-altered). Explain:

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

Average width:       feet  
Average depth:       feet  
Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

Silts                       Sands                       Concrete  
 Cobbles                   Gravel                    Muck  
 Bedrock                  Vegetation. Type/% cover:  
 Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope):        %

(c) Flow:

Tributary provides for: **Pick List**

Estimate average number of flow events in review area/year: **Pick List**

Describe flow regime:

Other information on duration and volume:

Surface flow is: **Pick List**. Characteristics:

Subsurface flow: **Pick List**. Explain findings:

Dye (or other) test performed:

Tributary has (check all that apply):

Bed and banks  
 OHWM<sup>6</sup> (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.<sup>7</sup> Explain:

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

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

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain:

Identify specific pollutants, if known:

<sup>5</sup> 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.

<sup>6</sup>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.

<sup>7</sup>Ibid.

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

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

- Properties:
- Wetland size: \_\_\_\_\_ acres
  - Wetland type. Explain:
  - Wetland quality. Explain:
  - Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain:

Surface flow is: **Pick List**

Characteristics:

Subsurface flow: **Pick List**. Explain findings:

- Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

- Directly abutting
- Not directly abutting
  - Discrete wetland hydrologic connection. Explain:
  - Ecological connection. Explain:
  - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

- Project wetlands are **Pick List** river miles from TNW.
- Project waters are **Pick List** aerial (straight) miles from TNW.
- Flow is from: **Pick List**.
- Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

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

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

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

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

Approximately \_\_\_\_\_ acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
------------------------------	------------------------	------------------------------	------------------------

Summarize overall biological, chemical and physical functions being performed:

### C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

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

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:  
 TNWs: linear feet, wide, Or acres.  
 Wetlands adjacent to TNWs: acres.
2. **RPWs that flow directly or indirectly into TNWs.**  
 Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:  
 Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

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

- Tributary waters: linear feet wide.
- Other non-wetland waters: acres.

Identify type(s) of waters:

3. **Non-RPWs<sup>8</sup> 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.

---

<sup>8</sup>See Footnote # 3.

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

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

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

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

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

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

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

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

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

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

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

**7. Impoundments of jurisdictional waters.<sup>9</sup>**

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):<sup>10</sup>**

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

**Identify water body and summarize rationale supporting determination:**

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

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

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

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.

<sup>9</sup> To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

<sup>10</sup> 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.

- 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): **The review area contained two (2) stock ponds (i.e. SP-1 and SP-3) that are constructed in uplands. Flow from these ponds do not have a connection to Chico Creek. The 1986 preamble to 33 CFR Part 328.3, states that the Corps generally does not consider artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and which is used exclusively for such purposes as stock watering, irrigation, or settling basins to be water of the U.S. Therefore, SP-1 and SP-3 are considered non-jurisdictional.**

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): (SC-22) 517 linear feet, (SC-24) 1128 linear feet linear feet, (SC-22) 5-foot wide, (SC-24) 60-foot wide.
- Lakes/ponds: (P-20) 0.06 acres.
- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

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

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

**SECTION IV: DATA SOURCES.**

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

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - Office concurs with data sheets/delineation report.
  - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps:
- Corps navigable waters’ study:
- U.S. Geological Survey Hydrologic Atlas:
  - USGS NHD data.
  - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: **1:24K; Devine**
- USDA Natural Resources Conservation Service Soil Survey. Citation: **Custom Soil Resource Report for Pueblo Area, Colorado, Parts of Pueblo and Custer County. Online Resource. Accessed November 17, 2020.**
- National wetlands inventory map(s). Cite name:
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: **Accessed November 17, 2020.**
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): **Applicant submitted aerial photos.**  
or  Other (Name & Date): **Onsite photos from August 18, 2020 site visit and applicant submitted photos.**
- Previous determination(s). File no. and date of response letter:
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify): **USGS Stream Stats Report (Andy Creek Watershed, Wolf Arroyo Watershed, & Chico Creek Watershed); USGS Streamer Report (Chico Creek); USGS Stream Gauge Data (No. 07110500 & No. 07110400); NOAA Climate Data (Precipitation data, rainfall data, snowfall data, record precipitation data, & annual climate data summary); Colorado Parks and Wildlife Factsheet (Arkansas Darter & Red belly Dace); NRCS Soil erodibility K factor report; NRCS Land Resource Regions and Major LandResource Areas of the United States, the Caribbean, and the Pacific Basin**

**B. ADDITIONAL COMMENTS TO SUPPORT JD:**

Based on a combination of information submitted by the applicant and obtained from desktop review, it has been determined that SC-22, SC-24, and P-20 are isolated non-jurisdictional aquatic resources (ARs). SC-24 is an isolated aquatic resource that exhibits a marginal bed and bank which becomes dispersed sheet flow as it nears No. 23. SC-24 does not have a connection to Chico Creek. SC-22 is an isolated feature that exhibits bed bank within a portion of the reach, which then becomes dispersed sheet flow with no downstream connectivity to Chico Creek. P-20 is an isolated natural depression which captures and ponds sheet flow from adjacent uplands. This feature does not exhibit a downstream connection to Chico Creek.

The review area contained two (2) stock ponds (i.e. SP-1 and SP-3) that are constructed in uplands. Flow from these ponds do not have a connection to Chico Creek. The 1986 preamble to 33 CFR Part 328.3, states that the Corps generally does not consider artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and which is used exclusively for such purposes as stock watering, irrigation, or settling basins to be water of the U.S. Therefore, SP-1 and SP-3 are considered non-jurisdictional.

**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): December 29, 2020**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Albuquerque District, Neptune Energy Center LLC/Neptune Solar Plus Storage and Tundra Switchyard Project , SPA-2020-00186-SCO**

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: **Colorado** County/parish/borough: **Pueblo County** City: **N/A**  
Center coordinates of site (lat/long in degree decimal format): Lat. **38.327019°**, Long. **-104.400050°**  
Universal Transverse Mercator: **13 552012.97 4242059.93**

Name of nearest waterbody: **Chico Creek**

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **John Martin Reservoir**

Name of watershed or Hydrologic Unit Code (HUC): **12-Digit HUC-Wolf Arroyo (110200040308)**

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: **See attached JD forms.**

**D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**

Office (Desk) Determination. Date: **November 5, 2020**

Field Determination. Date(s): **August 18, 2020**

**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):<sup>1</sup>**

TNWs, including territorial seas

Wetlands adjacent to TNWs

Relatively permanent waters<sup>2</sup> (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: (SC-6) 2246-linear feet, (SC-7) 1261-linear feet, (SC-8) 8091-linear feet, (SC-9) 1979-linear feet, (SC-10) 742-linear feet, (SC-11) 4181-linear feet, (SC-13) 3022-linear feet, (SC-14) 1217-linear feet, (SC-27) 377-linear feet, (SC-29) 394-linear feet, (SC-30) 2234-linear feet, (SC-31) 81-linear feet, (SC-32) 130-linear feet, (SC-6) 30-foot wide, (SC-7) 20-foot wide, (SC-8) 15-foot wide, (SC-9) 68-foot wide, (SC-10) 27-foot wide, (SC-11) 40-foot wide, (SC-13) 26-foot wide, (SC-14) 20-foot wide, (SC-27) 24-foot wide, (SC-29) 10-foot wide, (SC-30) 32-foot wide, (SC-31) 19-foot wide, (SC-32) 11-foot wide, and/or (SP-2) 1.27 acres.

Wetlands:            acres.

**c. Limits (boundaries) of jurisdiction based on: **Not Applicable.****

Elevation of established OHWM (if known): **unknown**

**2. Non-regulated waters/wetlands (check if applicable):<sup>3</sup>**

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain:

**SECTION III: CWA ANALYSIS**

<sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.

<sup>2</sup> 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).

<sup>3</sup> Supporting documentation is presented in Section III.F.



**A. TNWs AND WETLANDS ADJACENT TO TNWs**

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

**1. TNW**

Identify TNW:

Summarize rationale supporting determination:

**2. Wetland adjacent to TNW**

Summarize rationale supporting conclusion that wetland is “adjacent”:

**B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):**

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody<sup>4</sup> 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: **HUC-12: Wolf Arroyo (110200040308) 9,014 acres**  
Drainage area: **Wolf Arroyo Watershed-14.1 square miles square miles**  
Average annual rainfall: **12.42 inches**  
Average annual snowfall: **30 inches**

**(ii) Physical Characteristics:**

**(a) Relationship with TNW:**

- Tributary flows directly into TNW.
- Tributary flows through **1** tributaries before entering TNW.

Project waters are **30 (or more)** river miles from TNW.  
Project waters are **2-5** river miles from RPW.  
Project waters are **30 (or more)** aerial (straight) miles from TNW.  
Project waters are **2-5** aerial (straight) miles from RPW.  
Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW<sup>5</sup>: **Flow from the mainstem of Wolf Arroyo watershed discharges into Chico Creek. From Chico Creek, flows travel approximately 3.7-river miles south into the Arkansas River. Approximately 110 river miles from the confluence of Chico Creek and the Arkansas River is John Martin Reservoir, a TNW.**  
Tributary stream order, if known:

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

<sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

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

- Tributary is:  Natural  
 Artificial (man-made). Explain:  
 Manipulated (man-altered). Explain:

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

Average width: feet  
 Average depth: feet  
 Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):

- |   |  |                                   |
|---|--|-----------------------------------|
| <input checked="" type="checkbox"/> Silts | <input checked="" type="checkbox"/> Sands          | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles          | <input type="checkbox"/> Gravel                    | <input type="checkbox"/> Muck     |
| <input type="checkbox"/> Bedrock          | <input type="checkbox"/> Vegetation. Type/% cover: |                                   |
| <input type="checkbox"/> Other. Explain:  |  |                                   |

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: **The dominate soils within the tributaries of Wolf Arroyo watershed are Razor clay, eroded (Re2), Midway-Shale outcrop complex, 1 to 9 percent slopes (MsD), and Limon silty clay loam, 0 to 2 percent slopes (LnA). These soils have erodibility whole soil K factors, as determined by the Natural Resources Conservation Service (NRCS), of .17, .24, and .37, respectively. The values for Re2 and MsD indicate these soils are not easily erodible and allow for more runoff, while LnA soils tend to be more erodible but produce higher amounts of runoff. All of the tributaries appeared to be stable.**

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Ephemeral flow**

Estimate average number of flow events in review area/year: **20 (or greater)**

Describe flow regime: **Sporadic and flashy.**

Other information on duration and volume:

Surface flow is: **Discrete and confined.** Characteristics:

Subsurface flow: **Unknown.** Explain findings:

- Dye (or other) test performed:

Tributary has (check all that apply):

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Bed and banks  |   |
| <input checked="" type="checkbox"/> OHWM <sup>6</sup> (check all indicators that apply):                             |   |
| <input checked="" type="checkbox"/> clear, natural line impressed on the bank  | <input type="checkbox"/> the presence of litter and debris          |
| <input type="checkbox"/> changes in the character of soil  | <input type="checkbox"/> destruction of terrestrial vegetation      |
| <input checked="" type="checkbox"/> shelving   | <input type="checkbox"/> the presence of wrack line                 |
| <input checked="" type="checkbox"/> vegetation matted down, bent, or absent  | <input checked="" type="checkbox"/> sediment sorting                |
| <input type="checkbox"/> leaf litter disturbed or washed away  | <input type="checkbox"/> scour                                      |
| <input type="checkbox"/> sediment deposition   | <input type="checkbox"/> multiple observed or predicted flow events |
| <input type="checkbox"/> water staining  | <input type="checkbox"/> abrupt change in plant community           |
| <input type="checkbox"/> other (list):   |   |
| <input checked="" type="checkbox"/> Discontinuous OHWM. <sup>7</sup> Explain: <b>SC-27 has a discontinuous OHWM.</b> |   |

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

- |  |  |
|--|--|
| <input type="checkbox"/> High Tide Line indicated by:              | <input type="checkbox"/> Mean High Water Mark indicated by:            |
| <input type="checkbox"/> oil or scum line along shore objects      | <input type="checkbox"/> survey to available datum;                    |
| <input type="checkbox"/> fine shell or debris deposits (foreshore) | <input type="checkbox"/> physical markings;                            |
| <input type="checkbox"/> physical markings/characteristics         | <input type="checkbox"/> vegetation lines/changes in vegetation types. |
| <input type="checkbox"/> tidal gauges                              |  |
| <input type="checkbox"/> other (list):                             |  |

(iii) **Chemical Characteristics:**

<sup>6</sup>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.

<sup>7</sup>Ibid.

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain:

Identify specific pollutants, if known: **Sediment is the primary pollutant within these waterways.**

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

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings: **Chico Creek is known to contain populations of the Southern redbelly dace (Family, Cyprinidae) and the Arkansas darter (Etheostoma cragini). Although the fish is not a federally listed species, it is considered locally uncommon in Colorado and has been state designated as endangered and listed as a Tier 1 species of greatest conservation need. The Wolf Arroyo watershed provides periodic flow to the lower Chico Creek, which during flow events or events that cause ponding within Chico Creek could provide habitat and/or travel corridors for both sensitive fish species.**
  - Aquatic/wildlife diversity. Explain findings:

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: \_\_\_\_\_ acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain:

Surface flow is: **Pick List**

Characteristics:

Subsurface flow: **Pick List**. Explain findings:

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

- Directly abutting
- Not directly abutting
  - Discrete wetland hydrologic connection. Explain:
  - Ecological connection. Explain:
  - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

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

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

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

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

Approximately \_\_\_\_\_ acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
------------------------------	------------------------	------------------------------	------------------------

Summarize overall biological, chemical and physical functions being performed:

**C. SIGNIFICANT NEXUS DETERMINATION**

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

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

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

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

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: **It has been determined aquatic resources (ARs) SC-6, SC-7, SC-8, SC-9-, SC-10, SC-11, SC-13, SC-14, SC-27, SC-29, SC-30, SC-31, and SC-32 have a significant nexus to the John Martin Reservoir, a TNW located within the Arkansas River. The reaches within the review area listed above have defined channel bed and banks throughout their course or discontinuous reaches of defined bed and bank (i.e. SC-27) with little to no established mature vegetation indicating flow occurs frequently enough to define the bed and banks and discourage establishment of mature vegetation. Additionally, the confluence of the main stem of the Wolf Arroyo watershed with Chico Creek appears to be well established indicating flows from this watershed reach Chico Creek at frequencies which establish an observable connection. The contribution of floodwater flows from the Wolf Arroyo watershed are exhibited in other indicators within Chico Creek. Within Chico Creek, downstream of the confluence of the main stem of Wolf Arroyo watershed and Chico Creek, the average approximate stream width is 114 feet compared with the approximate average width of 93 feet upstream, between the Andy Creek confluence with Chico Creek and the confluence of the mainstem Wolf Arroyo watershed with Chico Creek. Stream widening within this reach is an indication that Chico Creek is widening to accommodate floodwater flows from the Wolf Arroyo watershed. The influence of large flow events can contribute to widening of ephemeral streams in the arid-southwest (Levick et. al 2008). Consistent stream records documenting flow within Chico Creek are almost nonexistent except for a small amount of data from the early 1940’s and late 1990’s. Stream data from the U.S. Geological Survey (USGS) stream gauge at the DOT test Road Bridge (USGS No. 07110400-Chico CR Near Pueblo Chemical Depot, CO), located approximately 6.4 river miles north of the confluence of the main stem of the Wolf Arroyo watershed and Chico Creek, note relatively consistent flows from the dates of June 1, 1997 through August 31, 1999. Additional USGS stream data from the stream gauge at the North Avondale Bridge (USGS No. 07110500-Chico Creek Near North Avondale, CO), located approximately 2 river miles south of the confluence of the Wolf Arroyo watershed and Chico Creek and approximately 1.7 river miles north of the confluence of Chico Creek and the Arkansas River, note sporadic flashy flows for the dates of March 1, 1941 through August 31, 1946. No other stream gauge data for Chico Creek was found. Lastly, on August 18, 2020, a site examination was conducted within the review area. During the examination, moist soil was observed at SC-30. These observations were a result of a .02-inch rain event which occurred on August 15, 2020. In conclusion, the aquatic resources listed above have a significant nexus that is more than speculative as exhibited by indicators that suggest floodwater flows within the review area occur at**

continual intervals and discharge into Chico Creek, then to the Arkansas River. Therefore, the tributaries have a substantial capacity to carry flood waters to the Arkansas River, which then contributes flow to the John Martin Reservoir.

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

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

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

- TNWs:            linear feet,            wide, Or            acres.  
 Wetlands adjacent to TNWs:            acres.

2. **RPWs that flow directly or indirectly into TNWs.**

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

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

- Tributary waters:            linear feet            wide.  
 Other non-wetland waters:            acres.

Identify type(s) of waters:

3. **Non-RPWs<sup>8</sup> 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: (SC-6) 2246-linear feet, (SC-7) 1261-linear feet, (SC-8) 8091-linear feet, (SC-9) 1979-linear feet, (SC-10) 742-linear feet, (SC-11) 4181-linear feet, (SC-13) 3022-linear feet, (SC-14) 1217-linear feet, (SC-27) 377-linear feet, (SC-29) 394-linear feet, (SC-30) 2234-linear feet, (SC-31) 81-linear feet, (SC-32) 130-linear feet, (SC-6) 30-feet wide, (SC-7) 20-feet wide, (SC-8) 15-feet wide, (SC-9) 68-feet wide, (SC-10) 27-feet wide, (SC-11) 40-feet wide, (SC-13) 26-feet wide, (SC-14) 20-feet wide, (SC-27) 24-feet wide, (SC-29) 10-feet wide, (SC-30) 32-feet wide, (SC-31) 19-feet wide, (SC-32) 11-feet wide.

- Other non-wetland waters: (SP-2) 1.27 acres.

Identify type(s) of waters: SP-2 is a stock pond constructed within a waters of the U.S. SP-2 was constructed within AR SC-11. See section IV B. below.

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

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

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

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

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

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

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

---

<sup>8</sup>See Footnote # 3.

- 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.<sup>9</sup>**

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):<sup>10</sup>**

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

**Identify water body and summarize rationale supporting determination:**

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

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

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

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

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

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

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

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

**SECTION IV: DATA SOURCES.**

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

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.

<sup>9</sup> To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

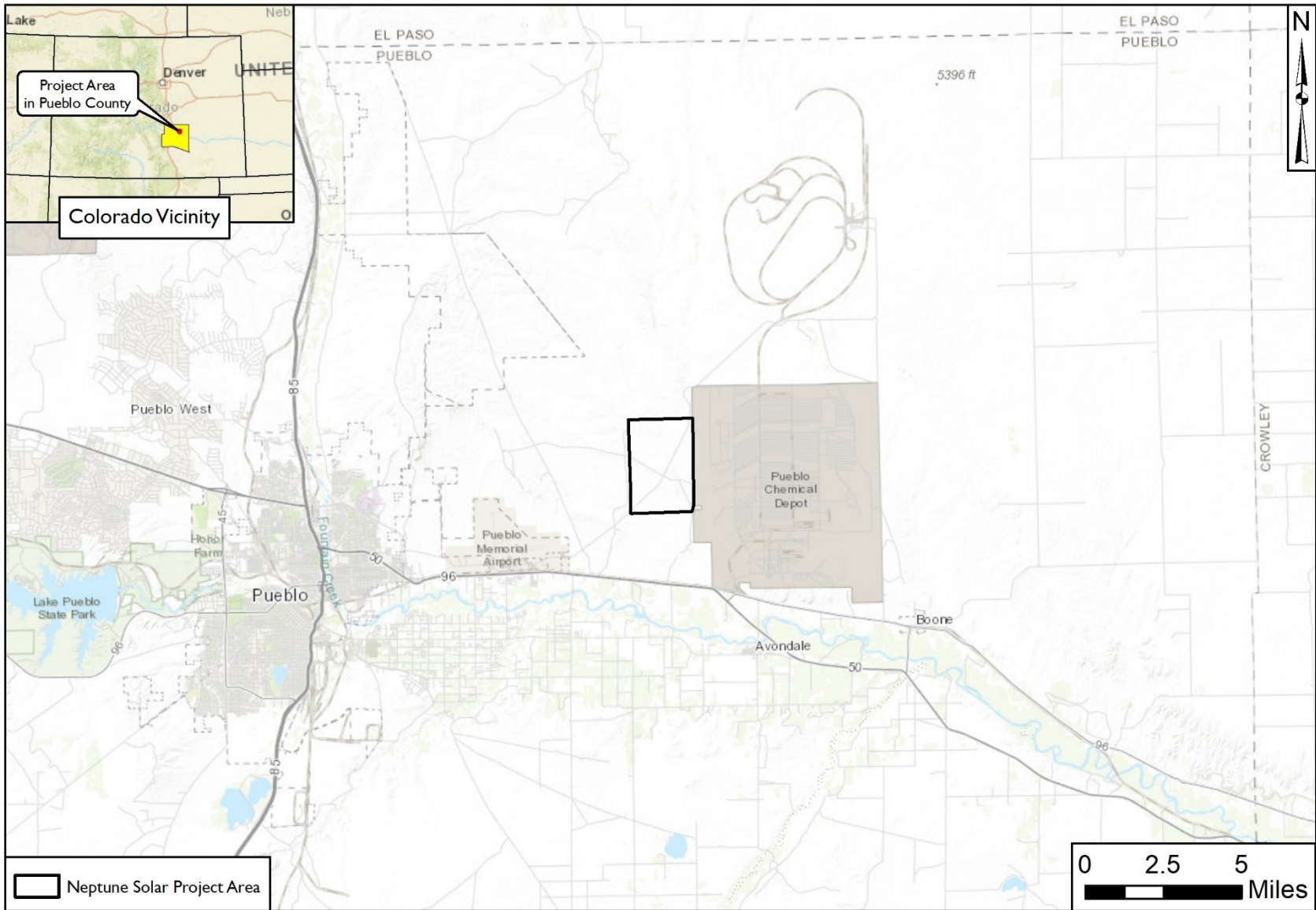
<sup>10</sup> Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

- Office concurs with data sheets/delineation report.
- Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
  - USGS NHD data.
  - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: **1:24K; Devine**
- USDA Natural Resources Conservation Service Soil Survey. Citation: **Custom Soil Resource Report for Pueblo Area, Colorado, Parts of Pueblo and Custer County. Online Resource. Accessed November 17, 2020.**
- National wetlands inventory map(s). Cite name:
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: **Accessed November 17, 2020.**
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): **Applicant submitted aerial photos.**  
or  Other (Name & Date): **Onsite photos from August 18, 2020 site visit and applicant submitted photos.**
- Previous determination(s). File no. and date of response letter:
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify): **USGS Stream Stats Report (Andy Creek Watershed, Wolf Arroyo Watershed, & Chico Creek Watershed); USGS Streamer Report (Chico Creek); USGS Stream Gauge Data (No. 07110500 & No. 07110400); NOAA Climate Data (Precipitation data, rainfall data, snowfall data, record precipitation data, & annual climate data summary); Colorado Parks and Wildlife Factsheet (Arkansas Darter & Red belly Dace); NRCS Soil erodibility K factor report; NRCS Land Resource Regions and Major LandResource Areas of the United States, the Caribbean, and the Pacific Basin. Levick, L., J. Fonseca, D. Goodrich, M. Hernandez, D. Semmens, J. Stromberg, R. Leidy, M. Scianni, D. P. Guertin, M. Tluczek, and W. Kepner. 2008. "The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest". U.S. Environmental Protection Agency and USDA/ARS Southwest Watershed Research Center, EPA/600/R-08/134, ARS/233046, 116 pp.**

**B. ADDITIONAL COMMENTS TO SUPPORT JD:**

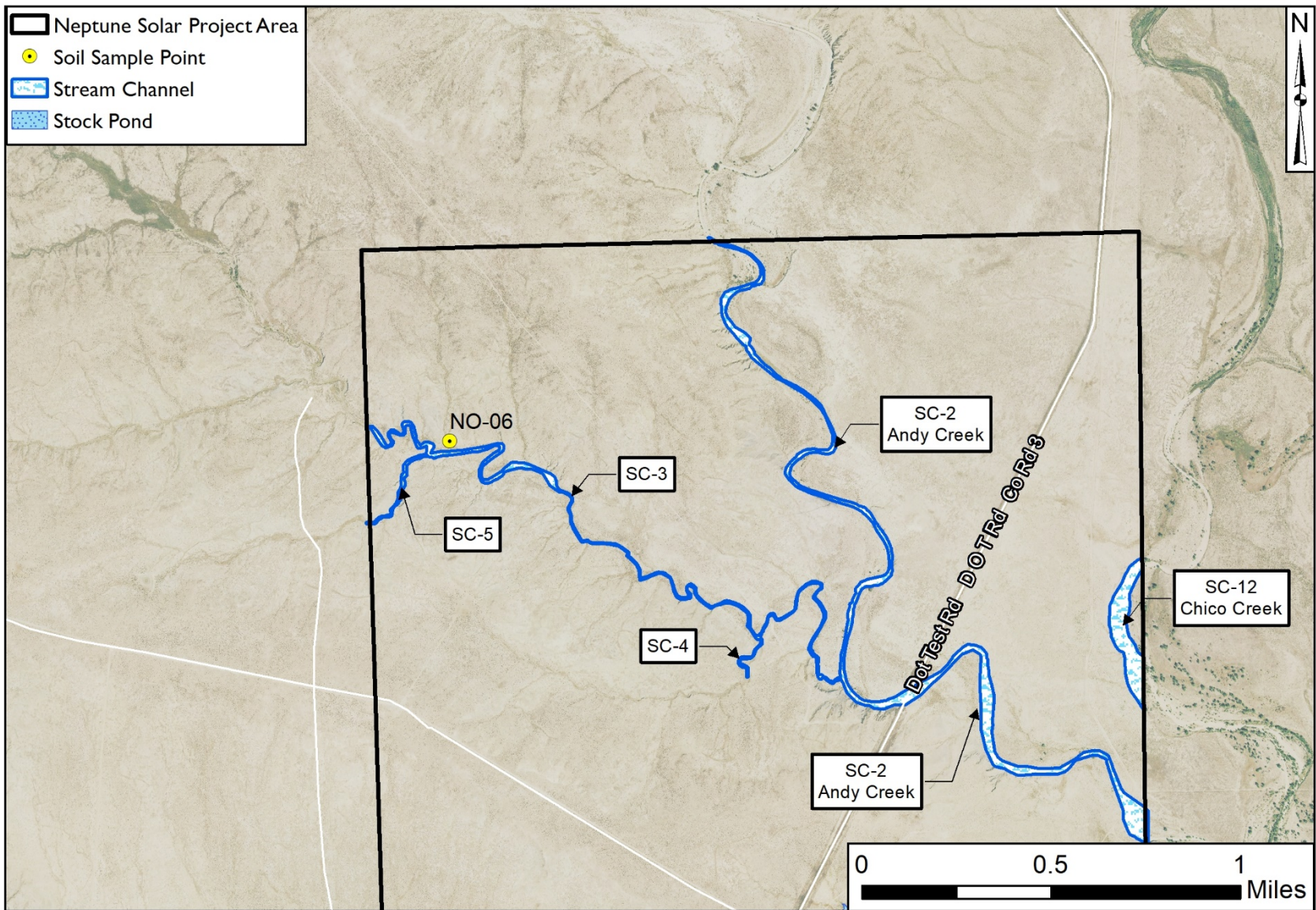
Aquatic resources SC-6, SC-7, SC-8, SC-9-, SC-10, SC-11, SC-13, SC-14, SC-27, SC-29, SC-30, SC-31, and SC-32 have a significant nexus to the John Martin Reservoir, a TNW located within the Arkansas River. These aquatic resources have a significant nexus that is more than speculative as exhibited by indicators that suggest floodwater flows within the review area occur at continual intervals and discharge into Chico Creek, then to the Arkansas River. Therefore, the tributaries have a substantial capacity to carry flood waters to the Arkansas River, which then contributes flow to the John Martin Reservoir.

SP-2 is a stock pond constructed within AR SC-11. SP-2 captures flows from the upstream reach of SC-11 and discharges flow downstream of the constructed pond. Due to the fact SP-2 was constructed within a waters of the U.S. (i.e. SC-11), SP-2 is a jurisdictional feature and, therefore, a waters of the U.S.



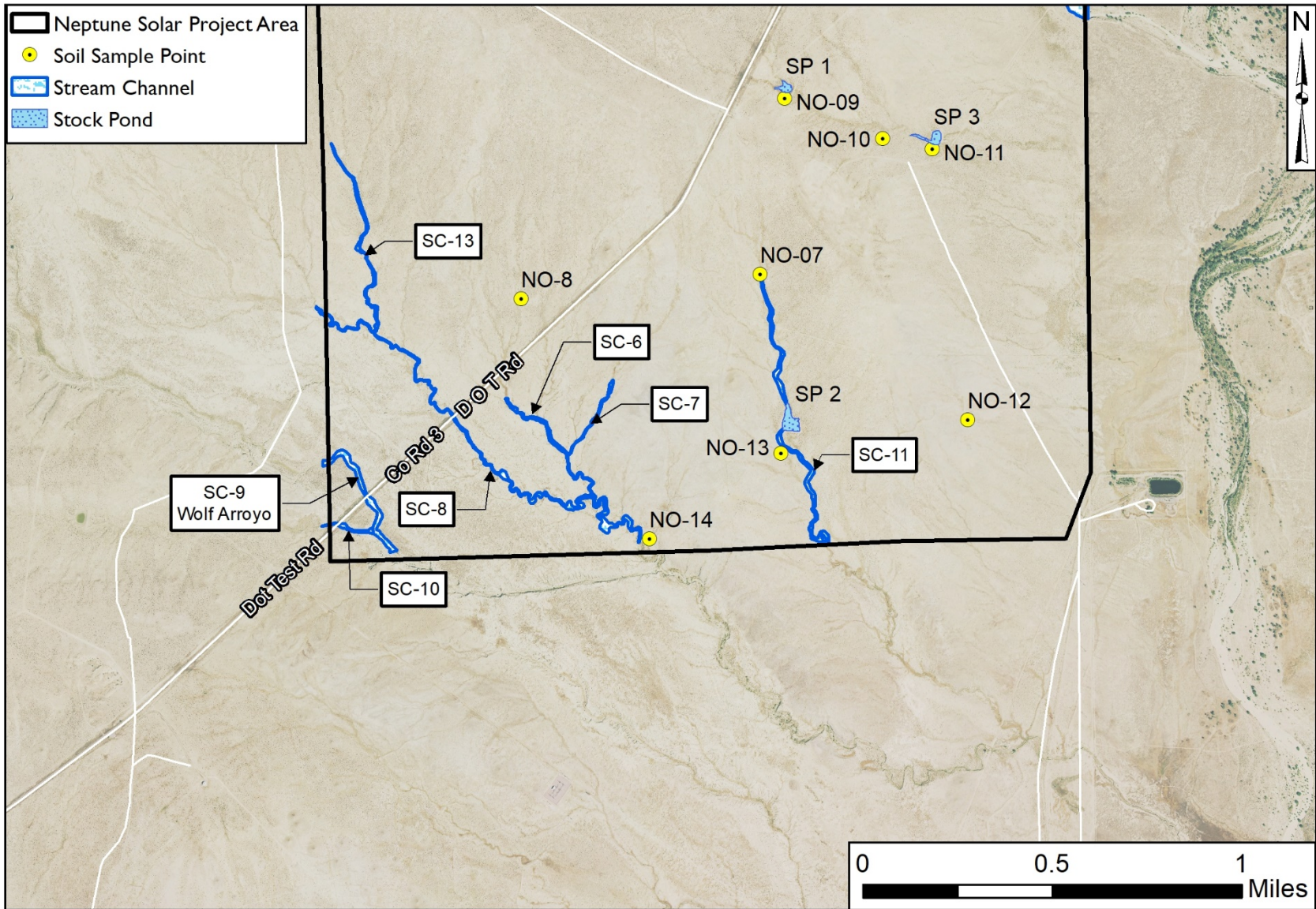
**Figure 1 Project Area**





**Figure 4 Field Delineation Results, Northern Portion of Project Area**





**Figure 4b Field Delineation Results, Southern Portion of the Project Area**