

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): 27 August 2012

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CENWO-OD-RWY, American Colloid Company - Syncline Amendment Area, NWO-2012-01989

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Crow Creek (NRPW)

State: Wyoming

County/parish/borough: Crook City: N/A

Center coordinates of site (lat/long in degree decimal format): Lat. 44.98107 N; Long. -104.22175 W

Universal Transverse Mercator:

PLSS Location: Sections 30-32, T58N, R61W; Sections 4-9, T57N, R61W and Sections 1 and 12, T57N, R62W, 6th PM

Name of nearest waterbody: Crow Creek

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

Name of watershed or Hydrologic Unit Code (HUC): Upper Crow Creek (HUC 12) 101202020202

[X] Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

[X] Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

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

[X] Office (Desk) Determination. Date: 15 August 2012

[ ] 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): 1

- [ ] TNWs, including territorial seas
[ ] Wetlands adjacent to TNWs
[ ] Relatively permanent waters2 (RPWs) that flow directly or indirectly into TNWs
[ ] Non-RPWs that flow directly or indirectly into TNWs
[ ] Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
[ ] Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
[ ] Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
[ ] Impoundments of jurisdictional waters
[ ] Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: linear feet: width (ft) and/or acres.

Wetlands: acres.

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

Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):3

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

Explain: Crow Creek, an ephemeral drainage with less than 60 days of continual flow, and abutting wetlands.

SECTION III: CWA ANALYSIS

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

2 For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

3 Supporting documentation is presented in Section III.F.

**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: 65 square miles

Drainage area: 18.5 square miles

Average annual rainfall: 14.18 (Colony Weather Station - WRCC 2011) inches

Average annual snowfall: total annual precipitation in the figure above inches

**(ii) Physical Characteristics:**

**(a) Relationship with TNW:**

Tributary flows directly into TNW.

Tributary flows through 2 tributaries before entering TNW.

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

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

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

Project waters are 20-25 aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: No.

Identify flow route to TNW<sup>5</sup>: Crow Creek flows into the Belle Fourche River which flows into the Cheyenne River in South Dakota. The Cheyenne River is the nearest documented TNW.

Tributary stream order, if known: 2.

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

**Tributary is:**  Natural

Artificial (man-made). Explain: .

Manipulated (man-altered). Explain: There are a significant number of stock reservoirs

constructed on the channel.

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

Average width: 6 feet

Average depth: 2 feet

Average side slopes: 2:1.

<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.

- Primary tributary substrate composition (check all that apply):
- |   |  |                                   |
|---|--|-----------------------------------|
| <input type="checkbox"/> Silts              | <input type="checkbox"/> Sands                     | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles            | <input type="checkbox"/> Gravel                    | <input type="checkbox"/> Muck     |
| <input checked="" type="checkbox"/> Bedrock | <input type="checkbox"/> Vegetation. Type/% cover: |                                   |
| <input type="checkbox"/> Other. Explain:    |  |                                   |

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

Presence of run/riffle/pool complexes. Explain: **No**.

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope): **3 %**

(c) **Flow:**

Tributary provides for: **Ephemeral flow**

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

Describe flow regime: **Short in duration due to rainfall.**

Other information on duration and volume:

Surface flow is: **Confined**. Characteristics: **continuous flow has been interrupted by numerous stock reservoirs.**

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

Dye (or other) test performed:

Tributary has (check all that apply):

- |  |  |
|--|--|
| <input type="checkbox"/> Bed and banks   |  |
| <input checked="" type="checkbox"/> OHWM <sup>6</sup> (check all indicators that apply): |  |
| <input 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 type="checkbox"/> shelving  | <input type="checkbox"/> the presence of wrack line                  |
| <input checked="" type="checkbox"/> vegetation matted down, bent, or absent              | <input 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 checked="" type="checkbox"/> abrupt change in plant community |
| <input type="checkbox"/> other (list):   |  |
| <input checked="" type="checkbox"/> Discontinuous OHWM. <sup>7</sup> Explain:            | <b>Bed and bank are discontinuous within the amendment area.</b>     |

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

- |  |  |
|--|--|
| <input checked="" 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: **No data available**.

Identify specific pollutants, if known:

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

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

<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.

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: 6.0 acres

Wetland type. Explain: PEM Wet Meadow.

Wetland quality. Explain: Unknown.

Project wetlands cross or serve as state boundaries. Explain: No.

(b) General Flow Relationship with Non-TNW:

Flow is: Ephemeral flow. Explain: .

Surface flow is: Confined

Characteristics: .

Subsurface flow: Unknown. Explain findings: .

Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain: .

Ecological connection. Explain: .

Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

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

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

Flow is from: Wetland to/from navigable waters.

Estimate approximate location of wetland as within the 2-year or less floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: No Data Available.

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: PEM Wet Meadow: 90%

Habitat for:

Federally Listed species. Explain findings: No individuals of the Ute Ladies'-tresses orchid were located during any of the agent's field visits.

Fish/spawn areas. Explain findings: No data available.

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: 10

Approximately (Estimated 12 acres along a total stream length of an estimated 132,000 linear feet within a drainage area of 18.5 square miles) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)  
Y

Size (in acres)  
6.0

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed: nutrient cycling, water filtration, sediment transport, flood water attenuation.

### 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: *The relevant reach of Crow Creek consists of the upper reaches of the drainage area downstream to the confluence with Bull Creek, an estimated 25 stream miles. The defined bed and bank of Crow Creek is discontinuous within the Syncline amendment area. Crow Creek flows approximately 60 miles from the downstream end of the amendment area to The Belle Fourche River. The Belle Fourche River flows approximately 215 river miles before reaching the Cheyenne River, the nearest TNW.*

Downstream segments of Crow Creek and The Belle Fourche river have much higher flow regimes and well developed abutting and adjacent wetland communities. Any sediment and nutrient contributions transported from Crow Creek within the amendment area would have to make it through approximately 275 stream miles of wetlands abutting lower Crow Creek and The Belle Fourche River. Those contributions would have virtually no effect on the Cheyenne River. It would be pure speculation to assume the functions provided by wetlands adjacent to the relevant reach of Crow Creek within the study area would have an effect, positive or negative, on the physical, chemical, or biological integrity of the Cheyenne River.

The Belle Fourche River's watershed above its confluence with The Cheyenne River is 7,231 square miles. The area draining in to the relevant reach of Crow Creek totals approximately 18.5 square miles which is a quarter of one percent of the Belle Fourche River watershed. Due to the distance from the relevant reaches to the nearest TNW and the small percentage of the Cheyenne River's watershed the study area comprises, it would be pure speculation to assume the functions provided by the estimated 12 acres of wetlands within the relevant reach of the tributary would have an effect, positive or negative, on the physical, chemical, or biological integrity of the Cheyenne River. Therefore, the relevant reach of Crow Creek lacks a significant nexus to the nearest traditionally navigable water.

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:

**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: **See Section III.C.2.**
- Other: (explain, if not covered above): .

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

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

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

- Non-wetland waters (i.e., rivers, streams): **9,500** linear feet, **5** width (ft).
- Lakes/ponds:          acres.
- Other non-wetland waters:          acres. List type of aquatic resource: .
- Wetlands: **6.0** 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: "[ACC Colony Syncline Project Area, General Wetland and Other Waters of the U.S. Information Summary.](#)" Prepared by Knight Technologies, August 2012
- 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: **1:24,000, Colony, Wyoming** .
- USDA Natural Resources Conservation Service Soil Survey. Citation: .
- National wetlands inventory map(s). Cite name: .
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is:          (National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): **USDA NAIP 2006 and NAIP 2009.**  
or  Other (Name & Date): **Photos in the summary document provided by Knight Technologies.**
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

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

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U.S. Army Corps of Engineers

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County/parish/borough: Crook City: N/A

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Universal Transverse Mercator:

PLSS Location: Sections 30-32, T58N, R61W; Sections 4-9, T57N, R61W and Sections 1 and 12, T57N, R62W, 6th PM

Name of nearest waterbody: Bull Creek

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

Name of watershed or Hydrologic Unit Code (HUC): Upper Crow Creek (HUC 12) 101202020202

[X] Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

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[ ] Field Determination. Date(s):

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[ ] Waters subject to the ebb and flow of the tide.

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Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

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

Non-wetland waters: linear feet: width (ft) and/or acres.

Wetlands: acres.

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

Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):3

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

Explain: Bull Creek, an ephemeral drainage with less than 60 days of continual flow, and abutting wetlands.

SECTION III: CWA ANALYSIS

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

2 For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

3 Supporting documentation is presented in Section III.F.

**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: 65 square miles

Drainage area: 14.0 square miles

Average annual rainfall: 14.18 (Colony Weather Station - WRCC 2011) inches

Average annual snowfall: total annual precipitation in the figure above inches

**(ii) Physical Characteristics:**

**(a) Relationship with TNW:**

Tributary flows directly into TNW.

Tributary flows through 2 tributaries before entering TNW.

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

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

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

Project waters are 20-25 aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: No.

Identify flow route to TNW<sup>5</sup>: Bull Creek flows into Crow Creek which flows into the Belle Fourche River which flows into the Cheyenne River in South Dakota. The Cheyenne River is the nearest documented TNW.

Tributary stream order, if known: 2.

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

**Tributary is:**  Natural

Artificial (man-made). Explain: .

Manipulated (man-altered). Explain: There are a significant number of stock reservoirs

constructed on the channel.

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

Average width: 6 feet

Average depth: 2 feet

Average side slopes: 2:1.

<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.

Primary tributary substrate composition (check all that apply):

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

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

Presence of run/riffle/pool complexes. Explain: **No**.

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope): **3 %**

(c) **Flow:**

Tributary provides for: **Ephemeral flow**

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

Describe flow regime: **Short in duration due to rainfall.**

Other information on duration and volume:

Surface flow is: **Confined**. Characteristics: **continuous flow has been interrupted by numerous stock reservoirs.**

Subsurface flow: **Unknown**. 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

changes in the character of soil

shelving

vegetation matted down, bent, or absent

leaf litter disturbed or washed away

sediment deposition

water staining

other (list):

Discontinuous OHWM.<sup>7</sup> Explain:

the presence of litter and debris

destruction of terrestrial vegetation

the presence of wrack line

sediment sorting

scour

multiple observed or predicted flow events

abrupt change in plant community

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

High Tide Line indicated by:

oil or scum line along shore objects

fine shell or debris deposits (foreshore)

physical markings/characteristics

tidal gauges

other (list):

Mean High Water Mark indicated by:

survey to available datum;

physical markings;

vegetation lines/changes in vegetation types.

(iii) **Chemical Characteristics:**

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

Explain: **No data available**.

Identify specific pollutants, if known:

(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:

<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.

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

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: 0.5 acres

Wetland type. Explain: PEM Wet Meadow.

Wetland quality. Explain: Unknown.

Project wetlands cross or serve as state boundaries. Explain: No.

(b) General Flow Relationship with Non-TNW:

Flow is: Ephemeral flow. Explain:

Surface flow is: Confined

Characteristics:

Subsurface flow: Unknown. Explain findings:

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

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

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

Flow is from: Wetland to/from navigable waters.

Estimate approximate location of wetland as within the 2-year or less floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: No Data Available.

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: PEM Wet Meadow: 90%

Habitat for:

Federally Listed species. Explain findings: No individuals of the Ute Ladies'-tresses orchid were located during any of the agent's field visits.

Fish/spawn areas. Explain findings: No data available.

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: 10

Approximately (Estimated 10 acres along a total stream length of an estimated 98,000 linear feet within a drainage area of 18.5 square miles) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)  
Y

Size (in acres)  
0.5

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed: nutrient cycling, water filtration, sediment transport, flood water attenuation.

### 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: [The relevant reach of Bull Creek consists of the upper reaches of the drainage area downstream to the confluence with Crow Creek, an estimated 18 stream miles. Bull Creek flows approximately 12.5 miles from the downstream end of the amendment area to Crow Creek. Crow Creek flows approximately 53 miles until it reaches The Belle Fourche River. The Belle Fourche River flows approximately 215 river miles before reaching the Cheyenne River, the nearest TNW.](#)

[Downstream segments of Crow Creek and The Belle Fourche river have much higher flow regimes and well developed abutting and adjacent wetland communities. Any sediment and nutrient contributions transported from Bull Creek within the amendment area would have to make it through approximately 281 stream miles of wetlands abutting lower Crow Creek and The Belle Fourche River. Those contributions would have virtually no effect on the Cheyenne River. It would be pure speculation to assume the functions provided by wetlands adjacent to the relevant reach of Bull Creek within the study area would have an effect, positive or negative, on the physical, chemical, or biological integrity of the Cheyenne River.](#)

[The Belle Fourche River's watershed above its confluence with The Cheyenne River is 7,231 square miles. The area draining in to the relevant reach of Bull Creek totals approximately 14 square miles which is less than one quarter of one percent of the Belle Fourche River watershed. Due to the distance from the relevant reaches to the nearest TNW and the small percentage of the Cheyenne River's watershed the study area comprises, it would be pure speculation to assume the functions provided by the estimated 10 acres of wetlands within the relevant reach of the tributary would have an effect, positive or negative, on the physical, chemical, or biological integrity of the Cheyenne River. Therefore, the relevant reach of Bull Creek lacks a significant nexus to the nearest traditionally navigable water.](#)

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:

**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: **See Section III.C.2.**
- Other: (explain, if not covered above): .

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

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

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

- Non-wetland waters (i.e., rivers, streams): 9,500 linear feet, 5width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: 0.5acres.

**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: "ACC Colony Syncline Project Area, General Wetland and Other Waters of the U.S. Information Summary." Prepared by Knight Technologies, August 2012
- 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: 1:24,000, Colony, Wyoming .
- USDA Natural Resources Conservation Service Soil Survey. Citation: .
- National wetlands inventory map(s). Cite name: .
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): USDA NAIP 2006 and NAIP 2009.  
or  Other (Name & Date): Photos in the summary document provided by Knight Technologies.
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

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