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): April 17, 2015

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Denver Regulatory Office, Omaha District
Lagae Ranch, NWO-2008-2767-DEN

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Drainage North of Lagae Road Reach 1
State: Colorado County/parish/borough: Douglas Co. City: Castle Pines
Center coordinates of site (lat/long in degree decimal format): Latitude: N. 39.4581388, Longitude: W. -104.8900277
Universal Transverse Mercator:
Name of nearest waterbody: Newlin Gulch
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Rueter-Hess Reservoir
Name of watershed or Hydrologic Unit Code (HUC): Middle South Platte-Cherry Creek 10190003
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☒ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☒ Office (Desk) Determination. Date: December 22, 2014
☒ Field Determination. Date(s): February 12, 2015

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 waters[2] (RPWs) that flow directly or indirectly into TNWs
   ☐ Non-RPWs that flow directly or indirectly into TNWs
   ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
   ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
   ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
   ☐ Impoundments of jurisdictional waters
   ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
   Non-wetland waters: 700 linear feet: 2 width (ft) and/or 0.03 acres.
   Wetlands: 0.07 acre.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
   Elevation of established OHWM (if known): Variable based on location.

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

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[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

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

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

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

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

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:
Watershed size: Newlin Gulch upstream of Rueter-Hess Reservoir = 18 **square miles**
Drainage area: The project area on Upper Newlin Gulch constitutes approximately 5 square miles of the approximately 18 contributing square miles to the Reuter Hess watershed.
Average annual rainfall: 17.75 inches
Average annual snowfall: 57.2 inches

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

Project waters are **2-5** river miles from TNW.
Project waters are **2-5** river miles from RPW.
Project waters are **2-5** 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. Flows from this reach contribute surface runoff to Newlin Gulch. Newlin Gulch flows into Rueter-Hess Reservoir, a TNW.
Tributary stream order, if known: The tributary is a first order stream

(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: 2 feet
Average depth: 4 inches
Average side slopes: Vertical (1:1 or less)

Primary tributary substrate composition (check all that apply):
☒ Silts ☒ Sands ☐ Concrete

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

☐ Cobbles ☐ Gravel ☐ Muck
☐ Bedrock ☐ Vegetation. Type/% cover:
☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Tributary is generally stable. There are natural meanders and wetlands within and abutting the channel.

Presence of run/riffle/pool complexes. Explain: None were observed

Tributary geometry: **Relatively straight**

Tributary gradient (approximate average slope): < 2 %

(c) Flow:

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

Estimate average number of flow events in review area/year: 1

Describe flow regime: the flow regime is composed of intermittent flows from a irrigation return flow and flashy short duration flows associated with stormwater runoff from nearby development.

Other information on duration and volume:

Flows within parts of the channel are intermittent and seasonal.

Surface flow is: **Discrete and confined**. Characteristics: Surface flow is primarily within the main channel although wetlands do extend beyond the channel in places.

Subsurface flow: **Yes**. Explain findings: Water in the drainage is partially the result of subsurface return irrigation flows. Sandy soils within the project area also convey subsurface flows.

☐ Dye (or other) test performed: .

Tributary has (check all that apply):

☒ Bed and banks

☒ OHWM[5] (check all indicators that apply):

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

☐ Discontinuous OHWM.[6] Explain:

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

☐ High Tide Line indicated by:

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

☐ Mean High Water Mark indicated by:

- ☐ survey to available datum;
- ☐ physical markings;
- ☐ vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:

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

Explain: Water color within the tributary was relatively clear, no obvious signs of pollution were observed. The tributary collects return irrigation flows and stormwater runoff.

Identify specific pollutants, if known:

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

☒ Riparian corridor. Characteristics (type, average width): The area is intermittently-lined with stands of oak and willow trees, and the banks and bottom of the channel are densely vegetated with a mixture of herbaceous wetland plants in all areas. The wetlands are herbaceous and of moderated quality which equal 0.07 acre.

☒ Vegetation type/percent cover. Explain: area includes palustrine emergent persistent vegetation with a component of palustrine scrub-shrubs along the banks. Cover is close to 100%.

☒ Habitat for:

[5]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.

[6]Ibid.

☐ Federally Listed species. Explain findings: .
☐ Fish/spawn areas. Explain findings: .
☐ Other environmentally-sensitive species. Explain findings: .
☒ Aquatic/wildlife diversity. Explain findings: The area is probably a travel corridor for small game.

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: NL1= 0.004, NL2 = 0.019, NL3 = 0.008, NL4 = 0.035

Wetland type. Explain: Palustrine Emergent

Wetland quality. Explain: A functional assessment of the wetland was not conducted, but wetlands would be considered low to moderate quality based on the diversity of plant species, the absence of regular or intensive disturbance and the connectivity of the wetlands to the channel.

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

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: The channel is an intermittent stream, which receives hydrology from groundwater and surface flows. Wetlands discharge and absorb water and facilitate exchange with the Newlin Gulch North Tributary.

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

Characteristics: Surface flow is from irrigation return flows, and stormwater runoff from precipitation and snowmelt.

.

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 waters are **2-5** river miles from TNW.

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

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

Estimate approximate location of wetland as within the **500-year or greater** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Water within the wetland system was clear, no obvious indicators of pollutant were observed.

Identify specific pollutants, if known: Unknown

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

☒ Riparian buffer. Characteristics (type, average width): The area is intermittently-lined with stands of oak and willow trees, and the banks and bottom of the channel are densely vegetated with a mixture of herbaceous wetland plants in all areas. The wetlands are herbaceous and of moderated quality which equal 0.07 acres.

☒ Vegetation type/percent cover. Explain: area includes palustrine emergent persistent vegetation with a component of palustrine scrub-shrubs along the banks. Cover is close to 100%.

☒ Habitat for:

☐ Federally Listed species. Explain findings: .

☐ Fish/spawn areas. Explain findings: .

☐ Other environmentally-sensitive species. Explain findings: .

☒ Aquatic/wildlife diversity. Explain findings: The area is probably a travel corridor for small game.

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

All wetland(s) being considered in the cumulative analysis: **4**

Approximately (0.07) 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)
NL1	y	0.004		
NL2	y	0.019		
NL3	y	0.008		
NL4	y	0.035		

Summarize overall biological, chemical and physical functions being performed:
General Wildlife Habitat (moderate), Flood Attenuation and Dynamic Surface Storage (low), Sediment / Nutrient / Toxicant Retention and Removal (low), Sediment / Bank Stabilization(low), Production Export / Food Chain Support (low), Ground Water Discharge / Recharge (low).

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

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

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

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

2. **RPWs that flow directly or indirectly into TNWs.**
   ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   ☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: This drainage was walked by multiple people over multiple time frames including representative from the Army Corps of Engineers and biologists from Smith Environmental. In 2014, site walks on September 22, September 30, and October 1, 2014 indicated that water was within the channel throughout the fall and through the winter. An additional site visit was conducted on January 16, 2015 to review areas upstream from Lagae Road.

Provide estimates for jurisdictional waters in the review area (check all that apply):
☒ Tributary waters: **700** linear feet **2** width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. **Non-RPWs[7] that flow directly or indirectly into TNWs.**
☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

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

☒ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: This drainage was walked by multiple people over multiple time frames including representative from the Army Corps of Engineers and biologists from Smith Environmental. In 2014, site walks on September 22, September 30, and October 1, 2014 indicated that water was within the channel throughout the fall and through the winter. An additional site visit was conducted on January 16, 2015 to review areas upstream from Lagae Road.

Provide acreage estimates for jurisdictional wetlands in the review area: 0.07 acres.

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

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

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

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

7. **Impoundments of jurisdictional waters.[8]**
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):[9]
☐ 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: .

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[7] See Footnote # 3.
[8] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[9] **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.***

Identify water body and summarize rationale supporting determination: .

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

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

☐ Other: (explain, if not covered above):

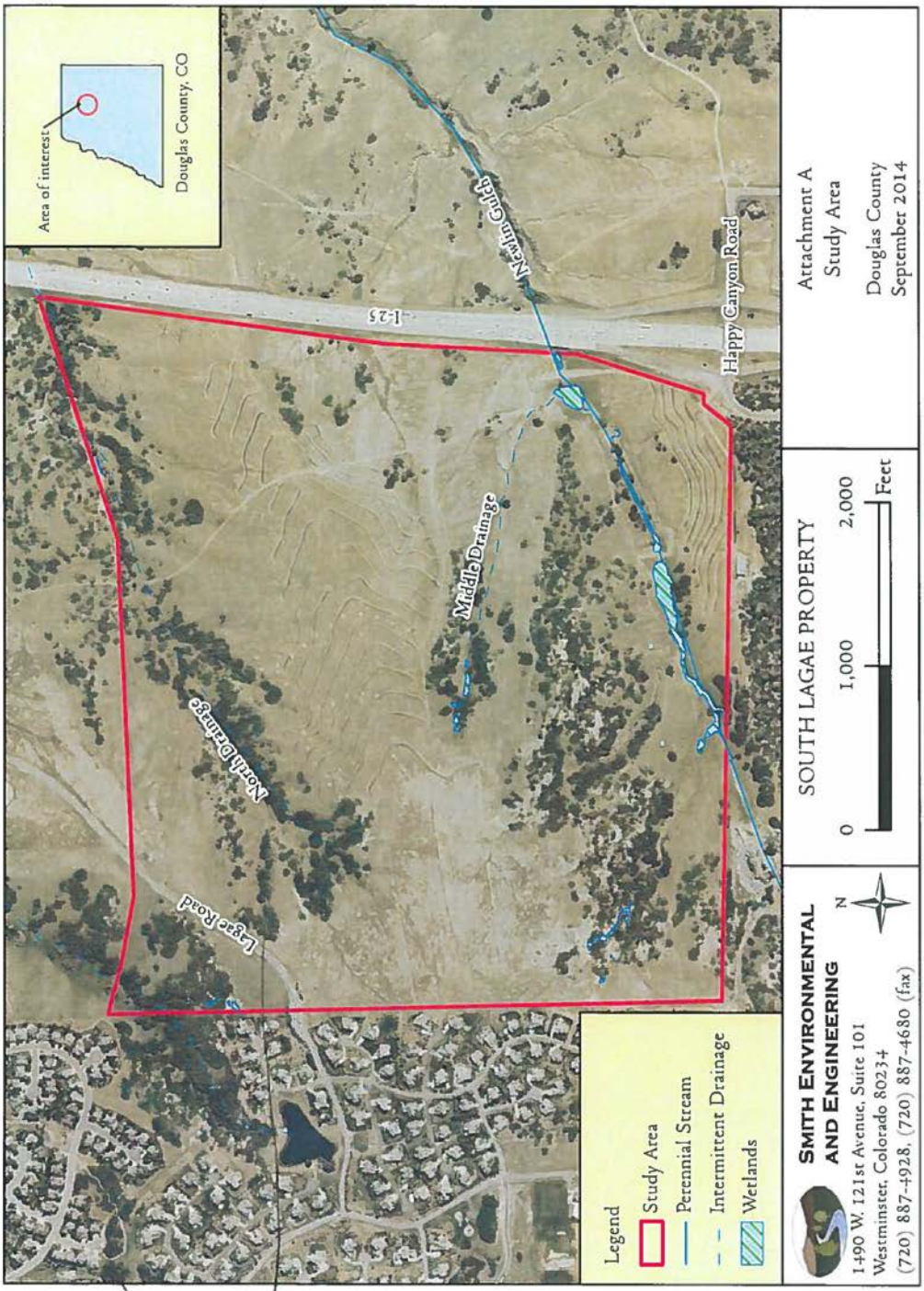
Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams):
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands:

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams):
☐ Lakes/ponds:
☐ Other non-wetland waters: List type of aquatic resource:
☐ Wetlands:

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: Smith Environmental and Engineering for Lagae Ranch, Castle Pines Village
☐ 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. USGS 8 = Middle South Platte-Cherry Creek 10190003
☒ U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Sedalia & Castle Rock North.
☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☐ Aerial (Name & Date): provided by applicant
or ☒ Other (Name & Date): Provided by Corps.
☒ Previous determination(s). File no. and date of response letter: November 1, 2007, NWO-2007-2195-DEN = non-jurisdictional
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature:
☐ Other information (please specify):

B. ADDITIONAL COMMENTS TO SUPPORT JD:



Isolated Geo

SMITH ENVIRONMENTAL AND ENGINEERING
1490 W. 121st Avenue, Suite 101
Westminster, Colorado 80234
(720) 887-4928, (720) 887-4680 (fax)

N

SOUTH LAGAE PROPERTY

0 150 300 Feet

Attachment C
Drainage North of Lagae Road

Douglas County
September 2014

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

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A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): April 17, 2015

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Denver Regulatory Office, Omaha District
Lagae Ranch, NWO-2008-2767-DEN

C. PROJECT LOCATION AND BACKGROUND INFORMATION: North Drainage of South Lagae Ranch, wetland ND1- Reach 2 Wetland ND 1 is located within an upland Swale approximately 1.5 miles up-gradient from the seasonal RPW Newlin Gulch, the closest waters of the US. Wetlands ND 1 does not have a significant nexus to a TNW.

State: Colorado County/parish/borough: Douglas Co. City: Castle Pines
Center coordinates of site (lat/long in degree decimal format): Latitude: 39.46040833 N, Longitude: -104.87836388 W
Universal Transverse Mercator:
Name of nearest waterbody: North Drainage from South Lagae Ranch
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: N/A
Name of watershed or Hydrologic Unit Code (HUC): Middle South Platte-Cherry Creek 10190003
☒ 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.

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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*]

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   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
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   ☐ Wetlands adjacent to TNWs
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   ☐ 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]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

---

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

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

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

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

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

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:
Watershed size: Newlin Gulch upstream of Rueter-Hess Reservoir = 18 **square miles**
Drainage area: The project area on Upper Newlin Gulch constitutes approximately 5 square miles of the approximately 18 contributing square miles to the Reuter Hess watershed.
Average annual rainfall: 17.75 inches
Average annual snowfall: 57.2 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☒ Tributary flows through **0** before entering TNW.

Project waters are **2-5** river miles from TNW.
Project waters are **1-2** river miles from RPW.
Project waters are **2-5** aerial (straight) miles from TNW.
Project waters are **1-2** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: .

Identify flow route to TNW. In extreme precipitation events, the upland swale would contribute surface runoff to Newlin Gulch. Newlin Gulch flows into Rueter-Hess Reservoir, a TNW.
Tributary stream order, if known: upland swale

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☒ upland swale
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate): upland swale
Average width:
Average depth:
Average side slopes:

Primary tributary substrate composition (check all that apply): upland swale
☐ Silts ☐ ☐ Concrete

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

☐ Cobbles ☐ Gravel ☐ Muck
☐ Bedrock ☐ Vegetation. Type/% cover:
☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Stable: upland swale
Presence of run/riffle/pool complexes. Explain: None
Tributary geometry: **Meandering**
Tributary gradient (approximate average slope): 2 %

(c) Flow:
Tributary provides for: **Overland sheet flow**
Estimate average number of flow events in review area/year: **2-5**
Describe flow regime: Flashy, short duration because flows quickly disappear into the sandy ground.
Other information on duration and volume:
60% of storms have less than 0.1 inches of precipitation and produce practically no runoff.

Surface flow is: **Overland sheetflow**. Characteristics:

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

Tributary has (check all that apply): upland swale
☐ Bed and banks
☐ OHWM[5] (check all indicators that apply):
☐ clear, natural line impressed on the bank
☐ changes in the character of soil
☐ shelving
☐ vegetation matted down, bent, or absent
☐ leaf litter disturbed or washed away
☐ sediment deposition
☐ water staining
☐ other (list):
☐ the presence of litter and debris
☐ destruction of terrestrial vegetation
☐ the presence of wrack line
☐ sediment sorting
☐ scour
☐ multiple observed or predicted flow events
☐ abrupt change in plant community
☐ Discontinuous OHWM.[6] Explain:

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

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: upland swale is normally dry.
Identify specific pollutants, if known:

(iv) Biological Characteristics. Channel supports (check all that apply):
☒ Riparian buffer. Characteristics (type, average width): The upland swale is intermittently-lined with stands of oak and willow trees, and the banks and bottom of the channel are densely vegetated with a mixture of herbaceous wetland plants in all areas. The wetlands are herbaceous and of moderated quality which equal 0.019 acres.
☒ Vegetation type/percent cover. Explain: upland swale includes palustrine emergent persistent vegetation with a component of palustrine scrub-shrubs along the banks. Cover is close to 100%.

☒ Habitat for:
☐ Federally Listed species. Explain findings: .
☐ Fish/spawn areas. Explain findings: .
☐ Other environmentally-sensitive species. Explain findings: .
☒ Aquatic/wildlife diversity. Explain findings: The upland swale is probably a travel corridor for small game.

[5]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.
[6]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: ND1 = 0.019

Wetland type. Explain: Palustrine Emergent

Wetland quality. Explain: Moderate

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

(b) General Flow Relationship with Non-TNW:

Flow is: **No Flow** . Explain: .

Surface flow is**:** **Overland sheetflow**

Characteristics: .

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

☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW: upland swale

☐ Directly abutting

☐ Not directly abutting

☐ Discrete wetland hydrologic connection. Explain: .

☐ Ecological connection. Explain: .

☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

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

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

Flow is from: **No Flow**.

Estimate approximate location of wetland as within the **500-year or greater** floodplain.

(ii) Chemical Characteristics:

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

Identify specific pollutants, if known: Unknown

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

☒ Riparian buffer. Characteristics (type, average width): The upland swale is intermittently-lined with stands of oak and willow trees, and the banks and bottom of the channel are densely vegetated with a mixture of herbaceous wetland plants in all areas. The wetlands are herbaceous and of moderated quality which equal 0. 019 acres.

☒ Vegetation type/percent cover. Explain: upland swale includes palustrine emergent persistent vegetation with a component of palustrine scrub-shrubs along the banks. Cover is close to 100%.

☒ Habitat for:

☐ Federally Listed species. Explain findings: .

☐ Fish/spawn areas. Explain findings: .

☐ Other environmentally-sensitive species. Explain findings: .

☒ Aquatic/wildlife diversity. Explain findings: The upland swale is probably a travel corridor for small game.

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

All wetland(s) being considered in the cumulative analysis: **1**

Approximately (0.019) 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)
ND1 y	0.019		

Summarize overall biological, chemical and physical functions being performed:

General Wildlife Habitat (moderate), Flood Attenuation and Dynamic Surface Storage (low), Sediment / Nutrient / Toxicant Retention and Removal (low), Sediment / Bank Stabilization(low), Production Export / Food Chain Support (low), Ground Water Discharge / Recharge (low).

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:

   Absence of significant nexus determination:
   Wetlands ND1 is located in an upland swale approximately 1.5 miles up-gradient of Newlin Gulch. There are intermittent erosional features within the swale, such as occasional headcuts, but no clear and defined OHWM physical indicators. The swale traverses downslope approximately 0.75 mile from the wetlands, and is then culverted under I-25. On the east side of I-25, the swale begins to display consistent OHWM indicators, likely due to stormwater runoff associated with I-25.

   The composition of the drainage substrates is highly porous alluvial sand and gravel, and both rainfall and any accumulated flows quickly disappear into the ground. Only during less-frequent, high-precipitation storms flows would gather and negotiate through the broad upland swale to reach Newlin Gulch. This 0.75 mile of upland drainage demonstrates that surface flows to Newlin Gulch have insufficient hydraulic energy to cause the display of OHWM physical indicators. Based on topography of the land and physical evidence it appears unlikely that flows from the up-gradient wetland reach Newlin Gulch on any routine basis.

   The hydrologic nexus to Rueter-Hess Reservoir is so minimal as to be insubstantial. The land within the basin is relatively undeveloped with no cultivated agricultural lands or irrigated lawns, where fertilizers might be applied and transported downstream. While more significant flows events may move sediments within the swale, these sediements would rarely, if ever, traverse the 0.75 mile of upland. There is also no evidence of a significnat biological or ecological nexus, such as ESA habitat or aquatic life movement.

   There is no evidence of the presence of more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of the downstream TNW. Based on the preceeding data/rationale, Wetland ND1 has an insubtantial ecological and hydrological nexuses to Rueter-Hess Reservoir, a TNW.

   Lack of interstate commerce nexus.
   There is no evidence of a link between the resource in the review area and interstate or foreign commerce. The resource in the review area is not used by interstate or foreign travelers for recreational or other purposes, does not support fish or shellfish and is not used for industrial purpose by industries in interstate commerce [33 CFR 328.3(a)(3)(i-iii)].

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

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

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

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

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

3. **Non-RPWs[7] that flow directly or indirectly into TNWs.**
   - ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

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

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

   Provide acreage estimates for jurisdictional wetlands in the review area:

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

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

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

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

7. **Impoundments of jurisdictional waters.[8]**
   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).

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[7] See Footnote # 3.
[8] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

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):[9]

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

Identify water body and summarize rationale supporting determination: .

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

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

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

- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- ☒ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  - ☒ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- ☒ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: There is no evidence of the presence of more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of the downstream TNW. Based on the preceeding data/rationale, Wetland ND1 has an insubtantial ecological and hydrological nexus to Rueter-Hess Reservoir, a TNW.
- ☐ Other: (explain, if not covered above):

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

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

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

- ☒ Non-wetland waters (i.e., rivers, streams):
- ☐ Lakes/ponds:
- ☐ Other non-wetland waters: List type of aquatic resource:
- ☒ Wetlands: 0.019 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: Smith Environmental and Engineering
- ☐ 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.

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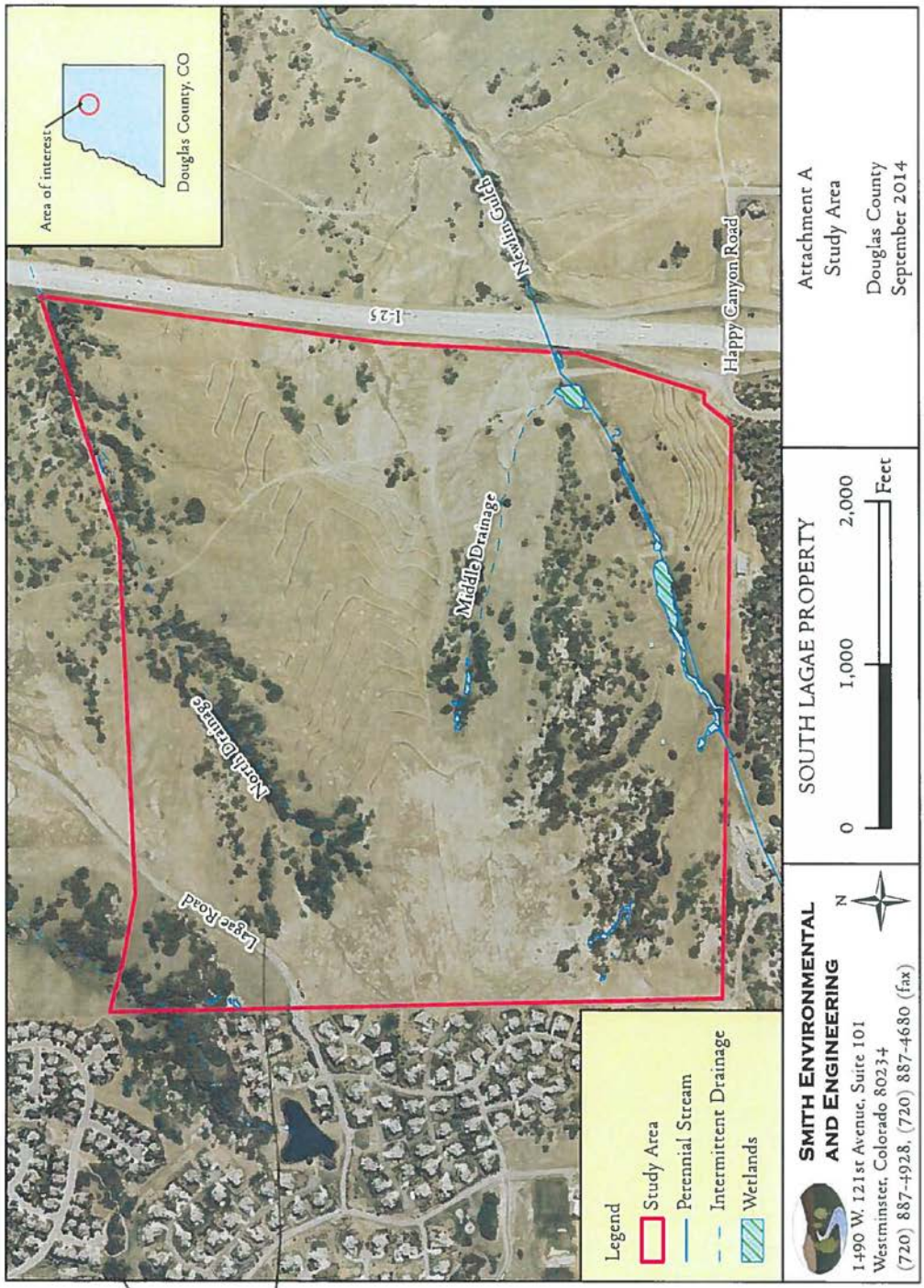
[9] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

☒ USGS 8 and 12 digit HUC maps. USGS 8 = Middle South Platte-Cherry Creek 10190003
☒ U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Sedalia & Castle Rock North.
☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☐ Photographs: ☐ Aerial (Name & Date):
or ☐ Other (Name & Date): .
☒ Previous determination(s). File no. and date of response letter: November 1, 2007, NWO-2007-2195-DEN = non-jurisdictional
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature:
☐ Other information (please specify):

B. ADDITIONAL COMMENTS TO SUPPORT JD:



Isolated Geo

SMITH ENVIRONMENTAL AND ENGINEERING
1490 W. 121st Avenue, Suite 101
Westminster, Colorado 80234
(720) 887-4928, (720) 887-4680 (fax)

N

SOUTH LAGAE PROPERTY

0 100 200 Feet

Attachment B
North Drainage

Douglas County
September 2014

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): April 17, 2015

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Denver Regulatory Office, Omaha District
Lagae Ranch, NWO-2008-2767-DEN

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Middle Drainage Reach 3
State: Colorado County/parish/borough: Douglas Co. City: Castle Pines
Center coordinates of site (lat/long in degree decimal format): Latitude: N. 39.45426, Longitude: W. -104.883016
Universal Transverse Mercator:
Name of nearest waterbody: Newlin Gulch
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Rueter-Hess Reservoir
Name of watershed or Hydrologic Unit Code (HUC): Middle South Platte-Cherry Creek 10190003
- ☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
- ☒ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
- ☒ Office (Desk) Determination. Date: December 22, 2014
- ☒ Field Determination. Date(s): February 12, 2015

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 and are not** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
   - ☒ TNWs, including territorial seas
   - ☐ Wetlands adjacent to TNWs
   - ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
   - ☒ Non-RPWs that flow directly or indirectly into TNWs
   - ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
   - ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
   - ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
   - ☐ Impoundments of jurisdictional waters
   - ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
   Non-wetland waters: approximately 1 mile
   Wetlands: Wetlands NG 1-9 = 2.24 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
   Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):** [3]
   - ☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: Wetlands MD1, MD2, MD3, and MD 4 are located approximately 1,500 feet up-gradient from Upper Newlin Gulch on a broad upland slope.

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[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW: Rueter-Hess Reservoir.

Summarize rationale supporting determination: Rueter-Hess Reservoir was completed in 2009 and began filling in 2010. Section 404 special conditions associated with the completed construction of the reservoir, as well as the Recreation Master Plan, indicate that commercial recreation at the reservoir associated with fishing and boating is eminent. Recreational offerings include bike trails, picnic and playground facilities, boat storage areas, concession and restroom facilities, a dog park, wildlife viewing, fishing, and a nature center.

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent": .

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

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

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

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

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: Newlin Gulch upstream of Rueter-Hess Reservoir = 18 **square miles**
Drainage area: The project area on Upper Newlin Gulch constitutes approximately 5 square miles of the approximately 18 contributing square miles to the Reuter Hess watershed.
Average annual rainfall: 17.75 inches
Average annual snowfall: 57.2 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.
☒ Tributary flows through **1** tributary before entering TNW.

Project waters are **2-5** river miles from TNW.
Project waters are **1 (or less)** river miles from RPW.
Project waters are **2-5** aerial (straight) miles from TNW.

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

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

Identify flow route to TNW. Upper Newlin Gulch flows to Newlin Gulch, which flows to Reuter-Hess Reservoir.
Tributary stream order, if known: 1st order

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

Tributary is:
- ☒ Natural
- ☐ Artificial (man-made). Explain: .
- ☒ Manipulated (man-altered). Explain: two bermed ponds have been constructed in-channel.

Tributary properties with respect to top of bank (estimate):
Average width: 2 feet
Average depth: 1 feet
Average side slopes: **4:1 (or greater)**

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: Lower reach in project area is stable: sediment deposition and vegetation. Upper reach in project area is highly eroding with 10 foot sloughing banks in some places.
Presence of run/riffle/pool complexes. Explain: None
Tributary geometry: **Meandering**
Tributary gradient (approximate average slope): Ranges from 5-8% in upper reach to 1-3% in lower reach.

(c) Flow:
Tributary provides for: **Ephemeral flow**
Estimate average number of flow events in review area/year: **2-5**
Describe flow regime: Flashy, short duration during precipitation events. The tributary also receives a significant portion of its flows from an adjoining residential housing development located up-gradient and from the adjoining Castle Pines Metropolitan District water treatment, storage and distribution facility, also located immediately up-gradient.
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):
☒ Bed and banks
☒ OHWM[5] (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.[6] Explain: Within the 1 mile of reach within the project area there is a brief 120' upland inclusion

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;

[5]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.
[6]Ibid.

☐ fine shell or debris deposits (foreshore)
☒ physical markings/characteristics
☐ tidal gauges
☐ other (list):
☐ 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: Non-wetland portion of Newlin Gulch is normally dry, sandy soils are easily deposited and eroded, producing poor water quality. The watershed is generally unpopulated rural land with some grazing.
Identify specific pollutants, if known: Sediment, and potentially phosphates and nitrates from up-gradient land uses.

(iv) Biological Characteristics. Channel supports (check all that apply):
☒ Riparian corridor. Characteristics (type, average width): An upland and wetland riparian corridor is located adjacent to the tributary.

☐ 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:
Corridor generally has upland vegetation throughout the upland swales, supporting natural high plains wildlife and birds.

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: NG1-9 = 2.24 acres
Wetland type. Explain: Palustrine Emergent
Wetland quality. Explain: Moderate
Project wetlands cross or serve as state boundaries. Explain: no.

(b) General Flow Relationship with Non-TNW:
Flow is: **Ephemeral flow**. Explain: Flows during precipitation events. In addition, the water treatment facility discharges directly into the gulch.

Surface flow is**: Discrete and 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 waters are **2-5** river miles from TNW.
Project waters are **2-5** aerial (straight) miles from TNW.
Flow is from: **Wetland to 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: water quality fair
Identify specific pollutants, if known: Sediment, and potentially phosphates and nitrates from up-gradient land uses.

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

☒ Riparian buffer. Characteristics (type, average width): Upper Newlin Gulch drainage is intermittently-lined with stands of oak and willow trees, and the banks and bottom of the channel are densely vegetated with a mixture of wetland plants and upland grasses.

☒ Vegetation type/percent cover. Explain: Channel includes palustrine emergent persistent vegetation with a component of palustrine scrub-shrubs along the banks. Cover is close to 100%.

☒ Habitat for:

- ☐ Federally Listed species. Explain findings: .
- ☐ Fish/spawn areas. Explain findings: .
- ☐ Other environmentally-sensitive species. Explain findings: .
- ☒ Aquatic/wildlife diversity. Explain findings: The drainage is probably a travel corridor for small game.

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

All wetland(s) being considered in the cumulative analysis: **9**

Approximately (2.24) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

	Directly abuts? (Y/N)	Size (in acres)
NG1	y	0.047
NG2	y	0.404
NG3	y	0.013
NG4	y	0.195
NG5	y	1.372
NG6	y	0.157
NG7	y	0.002
NG8	y	0.002
NG9	y	0.015

Summarize overall biological, chemical and physical functions being performed:
General Wildlife Habitat (moderate), Flood Attenuation and Dynamic Surface Storage (high), Sediment / Nutrient / Toxicant Retention and Removal (high), Sediment / Bank Stabilization(high), Production Export / Food Chain Support (high), Ground Water Discharge / Recharge (high).

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 portion of Upper Newlin Gulch in the review area is approximately 1 mile in length. The headwaters for this reach begin within the project area, immediately east of the adjoining residential housing development on the west border of the review area. It appears the tributary receives a significant portion of its flows from an adjoining residential housing development located up-gradient and from the adjoining Castle Pines Metropolitan District water treatment, storage and distribution facility, also located immediately up-gradient. The water treatment facility was actively discharging into the gulch at during a February 12, 2009 site visit by the Corps. Site visit conducted on September 20, 2014 found no active discharge for that day.

The upstream 1/3 of this reach (NG6, NG7, NG8, and NG9) is typified by steep grades, rocky outcropping and sloughing banks, some reaching 10', likely due to the up-gradient land uses. Approximately 1/3 mile down-gradient from where the reach begins, slope grade lessens and there is a brief 120' upland inclusion. On the downstream side of the upland inclusion, the tributary transitions into a slope wetland, which is continuous for the remainder of the reach within the project area. Due to the relatively large size of the wetland in the lower 2/3 of the tributary, it appears that shallow sub-surface flow from the upper 1/3 of the reach traverses the 120' upland inclusion with regularity, along with overland sheet-flow during heavy precipitation events.

At the far east end of the reach within the project area, Newlin Gulch flows into a pond. The downstream side of the pond has a vertical outlet pipe, which discharges into a small channel that is culverted under I-25. In 2009 it was stated that the vegetation around the pond has a distinct change in character, with upland species above the pipe height, and wetland species below. In 2014 it was found that the pipe was corroded at the base which allowed water from the pond to continually flow downstream. Regulators could see and hear the water flowing down through the pipe. While no information was available on the frequency of the pond filling sufficiently to overflow into the pipe, the flowing water indicates continuous discharge through the base of the pipe.

During and following precipitation events, ephemeral tributaries collect and transport water and sometimes sediment from the upper reaches of the landscape downstream to TNWs. The adjacent wetlands have the capacity to act as natural detention areas, perform erosion control measures, flood control and flood attenuation functions, as well as sediment mitigation by holding back sediment runoff that would eventually enter Newlin Gulch and Rueter-Hess Reservoir. Pollutant trapping and filtration and improvement of water quality are functions that may significantly affect the chemical, physical, and biological integrity of downstream TNWs.

Stream system functions are degraded by significant phosphorus and nitrate loading due to nutrient and sediment impacts associated with population growth and rapid urbanization of upstream systems. Wetland plants have the ability to uptake chemicals such as nitrates and phosphates which naturally erode from the soil. This uptake of the chemicals by the wetland vegetation improves downstream water quality by preventing the chemicals from continuing downstream. Water quality filtration is a function of these wetlands which is important to the stream system. These wetlands within the watershed incrementally and cumulatively increase the water quality of downstream tributaries, which in this case includes Newlin Gulch and Rueter-Hess Reservoir, a TNW.

The adjacent wetlands also have the capacity to transfer nutrients and organic carbon, in a seasonal time-frame, that supports wetlands and wildlife habitats. The wetlands are used by Great Plains mammals, birds, crustaceans, macro and micro invertebrates, reptiles and amphibians all of which make up the local food chain. This up gradient ecosystem consisting of the adjacent wetlands and Newlin Gulch are the foundation for a food chain that increases the value and function of downstream ecosystems.

Based on the above information these upstream headwaters ecosystems promotes the structural, biological, chemical, physical and ecological components for downstream tributaries. Newlin Gulch and the adjacent wetlands **(NG1-9)** have a significant nexus to the nearest TNW, which is the Rueter-Hess Reservoir.

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

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

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

2. **RPWs that flow directly or indirectly into TNWs.**
   ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .

☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: Flashy, short duration during precipitation events. The tributary also receives a significant portion of its flows from an adjoining residential housing development located up-gradient and from the adjoining Castle Pines Metropolitan District water treatment, storage and distribution facility, also located immediately up-gradient.

Provide estimates for jurisdictional waters in the review area (check all that apply):
☒ Tributary waters: 5,350 linear feet 10 width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. Non-RPWs[7] 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: 5,000 linear feet width 5 (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: **.**

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

☒ **Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:** Flashy, short duration during precipitation events. The tributary also receives a significant portion of its flows from an adjoining residential housing development located up-gradient and from the adjoining Castle Pines Metropolitan District water treatment, storage and distribution facility, also located immediately up-gradient. The upstream 1/3 of this reach (NG6, NG7, NG8, and NG9) is typified by steep grades, rocky outcropping and sloughing banks, some reaching 10', likely due to the up-gradient land uses. Approximately 1/3 mile down-gradient from where the reach begins, slope grade lessens and there is a brief 120' upland inclusion. On the downstream side of the upland inclusion, the tributary transitions into a slope wetland, which is continuous for the remainder of the reach within the project area. Due to the relatively large size of the wetland in the lower 2/3 of the tributary, it appears that shallow sub-surface flow from the upper 1/3 of the reach traverses the 120' upland inclusion with regularity, along with overland sheet-flow during heavy precipitation events.

Provide acreage estimates for jurisdictional wetlands in the review area: **2.24** acres.

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

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

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

Provide estimates for jurisdictional wetlands in the review area: 2.24 acres.

7. Impoundments of jurisdictional waters.[8]
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).

[7] See Footnote # 3.
[8] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

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):[9]

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

Identify water body and summarize rationale supporting determination: .

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

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

☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☒ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. MD1 = 0.061 ac, MD2 = 0.018 ac, MD3 =0.084 ac, MD4 = 0.015 ac.
☒ 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):

There is no information available to show that this wetland 1) is or could be used by interstate or foreign travlers for recreational or other purposes, 2) produces fish or shellfish which are or could be taken and sold in interstate or foreign commerce, or 3) is or could be used for industrial purposes by industries in the interstae commerce.

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams):
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☒ Wetlands: 0.178 acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams):
☐ Lakes/ponds:
☐ Other non-wetland waters: List type of aquatic resource:
☐ Wetlands:

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: Smith Environmental and Engineering
☐ 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.

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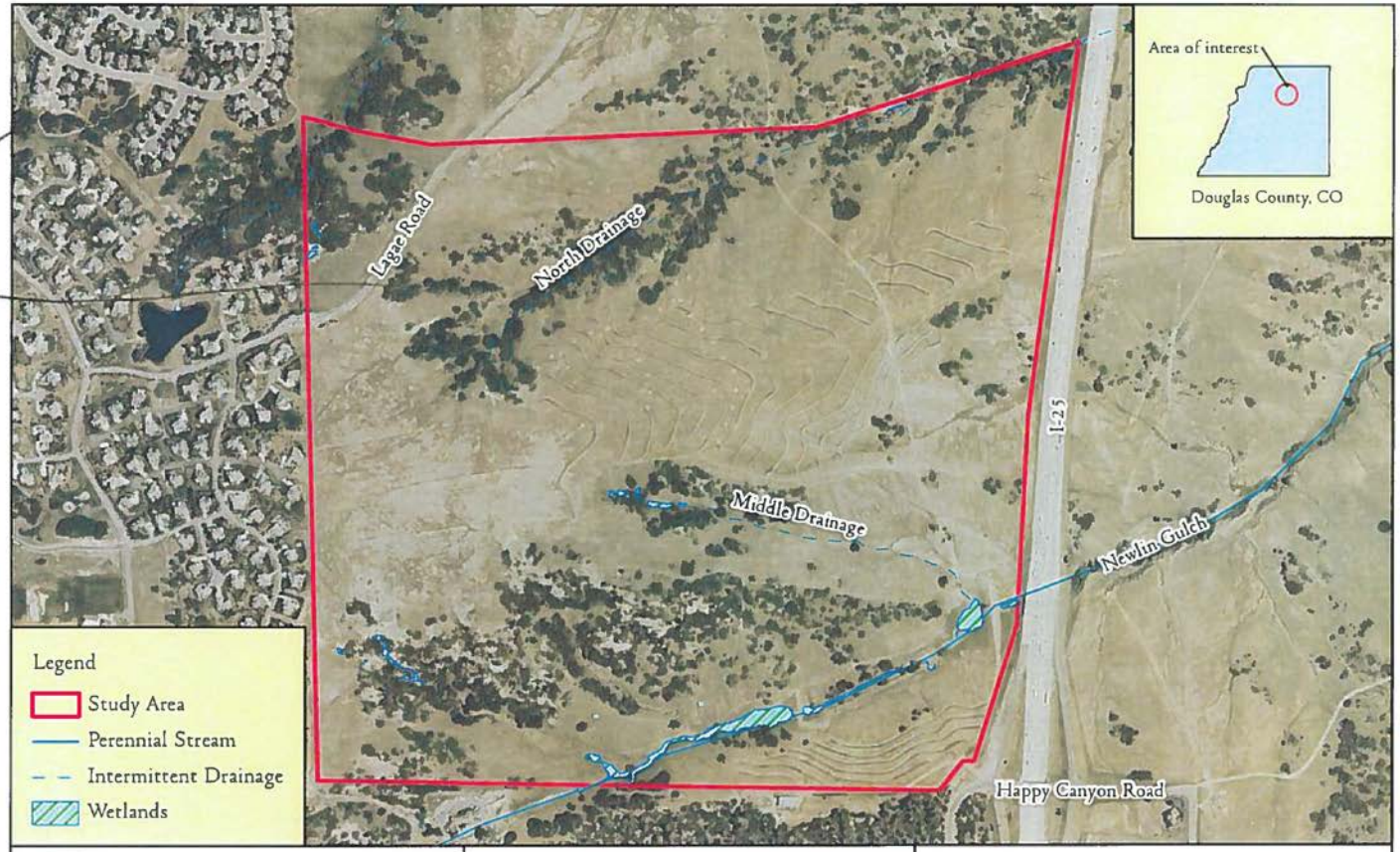
[9] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

☒ USGS 8 and 12 digit HUC maps. USGS 8 = Middle South Platte-Cherry Creek 10190003
☒ U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Sedalia & Castle Rock North.
☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☐ Aerial (Name & Date):
or ☒ Other (Name & Date):Newlin Gulch, no dates.
☐ Previous determination(s). File no. and date of response letter:
☐ Applicable/supporting case law: .
☒ Applicable/supporting scientific literature: Rueter-Hess Reservoir Final EIS, July 2003.
☒ Other information (please specify): Rueter-Hess Reservoir Section 404 permit.

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Isolated Cell



SMITH ENVIRONMENTAL AND ENGINEERING
1490 W. 121st Avenue, Suite 101
Westminster, Colorado 80234
(720) 887-4928, (720) 887-4680 (fax)

N

SOUTH LAGAE PROPERTY

0 1,000 2,000 Feet

Attachment A
Study Area

Douglas County
September 2014

SMITH ENVIRONMENTAL AND ENGINEERING
1490 W. 121st Avenue, Suite 101
Westminster, Colorado 80234
(720) 887-4928, (720) 887-4680 (fax)

N

SOUTH LAGAE PROPERTY

0 150 300 Feet

Attachment D
Middle Drainage

Douglas County
September 2014

SMITH ENVIRONMENTAL AND ENGINEERING
1490 W. 121st Avenue, Suite 101
Westminster, Colorado 80234
(720) 887-4928, (720) 887-4680 (fax)

N

SOUTH LAGAE PROPERTY

0 500 1,000 Feet

Attachment E
Newlin Gulch

Douglas County
September 2014