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): 1/17/2017

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: MVR; Metro Park West, 2016-1068

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Iowa County/parish/borough: Boone City: Perry

Center coordinates of site (lat/long in degree decimal format): Lat. 41.864° **N**, Long. –94.157 ° **W**.

Universal Transverse Mercator: 403942, 4635313

Name of nearest water body: North Raccoon River

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

Name of watershed or Hydrologic Unit Code (HUC): 07100006

☒ 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: 1/17/2017

☒ Field Determination. Date(s): 12/7/16

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: 3,000 linear feet RPW

Wetlands: 1.84 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 S-1 (.28 acres) and S-2 (.17 acres) are located in the center of the project area and show no connection to any other WUS as they appear to be natural depressions with no further connection on aerial maps, ground photos and lidar. Defined in Section 3C below.**

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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: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW
Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i) General Area Conditions:
Watershed size: 22,400 **square miles**
Drainage area: **240 acres**
Average annual rainfall: 32-34 inches
Average annual snowfall: 30 inches

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

Project waters are **30 (or more)** river miles from TNW.
Project waters are **1 (or less)** river miles from RPW.
Project waters are **30 (or more)** aerial (straight) miles from TNW.
Project waters are **1 (or less)** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. No Explain: .

Identify flow route to TNW[5]: Waters leave the project site traveling South via an unknown tributary to the North Racoon River, the waterway connects with the North Raccoon River immediately upon leaving the project site and it connects

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

with the Raccoon River after 10+ miles, the waterway then connects with the Des Moines River roughly in roughly 10 miles, which is a TNW.
Tributary stream order, if known:.

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☒ Natural
☐ Artificial (man-made). Explain:.
☒ Manipulated (man-altered). Explain: The streams are located immediately downstream of tile outlets. The Eastern perennial stream has an impoundment with a water control box located just below the tile outlet.

Tributary properties with respect to top of bank (estimate):
Average width: WUS-2 40 feet, WUS-1 10 feet (lidar determination)
Average depth: 15-20 feet
Average side slopes: **Vertical (1:1 or less).**

Primary tributary substrate composition (check all that apply):

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Highly eroding, they are exhibiting steep to undercut banks showing a matted or absent vegetation and sediment sorting (ascertained from provided pictures and site visit).
Presence of run/riffle/pool complexes. Explain: No mention in the delineation.
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: **Perennial WUS-2, Inttermittent but not seasonal WUS-1**
Estimate average number of flow events in review area/year: **20 (or greater)**
Describe flow regime: perennial and intermittent.
Other information on duration and volume: .

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

Subsurface flow: **No**. Explain findings:
☐ Dye (or other) test performed: .

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

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

☐ Discontinuous OHWM.[7] Explain: .

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

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

(iii) Chemical Characteristics:

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: Not identified in the delineation but the wetlands that discharge into them are subject to significant agricultural activities which would result in water with moderate turbidity and somewhat clear yet silty water.
Identify specific pollutants, if known: chemical runoff from the adjacent landfill, pesticides, herbicides, nitrogen.

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

☒ Riparian corridor. Characteristics (type, average width): Forested corridor averaging 200-300 feet wide.
☐ Wetland fringe. Characteristics: ☒ Habitat for: vertebrates, invertebrates and amphibians
☐ Federally Listed species. Explain findings: .
☐ Fish/spawn areas. Explain findings: .
☐ Other environmentally-sensitive species. Explain findings: .
☒ Aquatic/wildlife diversity. Explain findings: While fish and other species were not identified as present when the site investigation was completed it should be expected that due to the streams relatively permanent nature and depth. Vertebrates, macro-invertebrates, amphibians and other micro-invertebrate species should be expected to reside in the stream and its corridor.

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: .32 (cumulative) acres
Wetland type. Explain: Emergent
Wetland quality. Explain: Poor, Wetlands are located adjacent to a landfill and active farming operation.
Project wetlands cross or serve as state boundaries. Explain: N/A.

(b) General Flow Relationship with Non-TNW:
Flow is: **Ephemeral flow**. Explain: Seasonal flow.

Surface flow is**: Ephemeral**

Characteristics: Surface drainage connections can be seen on Lidar and aerial photo's extending from the identified wetlands into the waterways, which terminate in a RPW, unnamed tributary to North Raccoon River which eventually becomes North Raccoon River, then the Raccoon River and eventually connects with the Des Moines River a TNW.

Subsurface flow: **No**. Explain findings: The wetlands are connected to the NON-RPWs onsite via overland flow.
☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:
☒ Directly abutting
☒ Not directly abutting
☒ Discrete wetland hydrologic connection.
☐ Ecological connection. Explain: .
☐ Separated by berm/barrier/man-made structures. 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 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 clarity was not described however agricultural activities occur in the neighboring vicinity so the presence of silt and other potential contaminants is presumed present in the wetlands as well.
Identify specific pollutants, if known: None identified in the delineation, however this area should be expected to exhibit high levels of pesticide, herbicide, phosphorus, nitrogen and silt.

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

☐ Riparian buffer. Characteristics (type, average width): .
☒ Vegetation type/percent cover. Explain: Nearly 100% cover in wetlands by primarily FAC, FACW and Obligate vegetation.
☐ Habitat for:
☐ Federally Listed species. Explain findings: None observed.
☐ Fish/spawn areas. Explain findings: No standing water observed.
☐ Other environmentally-sensitive species. Explain findings: No environmentally sensitive species observed.

☒ Aquatic/wildlife diversity. Explain findings: Aquatic wildlife not observed however crawfish burrows were observed during site visit.

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

All wetland(s) being considered in the cumulative analysis: S-3 (.20 acres), S-8 (.03 acres), Wetland-1 (1.52 acres), Wetland-2 (.08 acres), Wetland-3 (.01 acres).

List and describe (Emergent, scrub/shrub, forested) the wetlands: Emergent.
Approximately 1.84 acres and 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)
Wetland-1	Y	1.52 acres	Wetland-2	N	.08 acres
Wetland-3	N	.01 acres	S-3	N	.20 acres
S-8	Y	.03 acres			

Summarize overall biological, chemical and physical functions being performed: The wetlands provide some limited storm water detention, sediment detainment, and pollution control. Small vertebrates, invertebrates and amphibians would be expected to prosper in such a wetland (grouse, deer and crawfish burrows were specifically observed during the field visit). Sediment detainment is a general function of any similar wetland and while it wasn't described as observed during the wetland delineation by Barker Lemar it is presumed to be occurring. The functions/benefits in regards to pollution are the filtration of the pollutants running off of the adjacent fields and landfill, specifically oils from vehicles, herbicides, pesticides, nitrogen and phosphorus.

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 food webs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

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

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

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

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

a. Barker Lemar has identified two relatively permanent tributaries (WUS-1 and WUS-2) that travel from the identified wetlands and into the North Raccoon River after they leave the project area. The tributaries total 3,200 linear feet and exhibit an OHWM with a natural line impressed on the bank, presence of litter and debris, vegetation matted down or absent, sediment sorting and scour due to heavy erosion. The descriptions of the drainage ways did not define these characteristics they were observed in the ground photos provided in the delineation as well as observed onsite during a field visit. These streams appear to exhibit a 1-2 foot deep channel with varying widths. Once the streams leave the property they directly connect with North Raccoon River. This terminates into the Raccoon River, which thereafter empties into the Des Moines River, a TNW. The wetlands identified as Wetland 1, 2, 3, S-3, S-8 in the wetland delineation report provided by Barker Lemar total 1.84 acres in area.

b. The relevant reach for this wetland complex extends from the wetlands through the streams which connect with the non-navigable, permanent waterways identified as Unnamed Tributaries to North Raccoon River. We have determined that the point where the relatively permanent waterways identified in the delineation as WUS-1 and WUS-2(later addition) connect with the North Raccoon River, defines the extent of our review area due to the guidance on page 41 of the USACE Jurisdictional Determination Form Instructional Guidebook with very similar conditions. In researching historical aerial photography the Corps has found that the rpw's identified on-site have had a direct connection to the relatively permanent waterway, unnamed tributary to North Cedar Creek for at least 20+ years on aerial photography and the streams identified as an unnamed tributaries to North Raccoon River appear to be present pre and post-landfill construction in the 1980's.

c. We have determined that the evaluated wetlands, and any other wetlands similarly situated in the watershed, possess minor flood storage capacity due to the relatively small size of their drainage area (approximately 1.84 acres cumulatively, ~240 acres drainage area). They do have a significant nexus due to the fact that they are the only wetlands and ponds present in their immediate drainage area of the review area and there are very few present in the immediate watershed of the unnamed tributary to the North Raccoon River. The Des Moines River watershed has seen an increase to the frequency of flooding in the area due to a lack of riparian corridors in the TNW watershed.

d. The physical hydrological connection between the wetlands and the downstream TNW are dependent on the amount of precipitation that accumulates on the drainage area, as overland flow is the primary form of hydrologic connection. We (Corps) have calculated that the drainage area for the wetlands is about 240 acres using the USGS topographic map and the reported conditions in the delineation by Barker Lemar. They identify that the stream was observed exhibiting a slow flow in connection with the the North Raccoon River. The overland hydrologic connection between the relatively permanent waterways and eventually the downstream TNW identified as the Des Moines River is discrete. The wetlands are connected to the on-site streams through overland flow such as upland swales and other abutting wetlands. The wetlands would only be expected to exhibit a direct connection during seasonal precipitation events.

e. Contaminants (nitrogen, pesticides, herbicides, oils and soil) entering the evaluated wetlands due to the neighboring farming and landfill activities, and from overland flow in the drainage area, are filtered out by the wetlands prior to reaching the relatively permanent waterways (WUS-1 and WUS-2) in which it flows for less than 1 mile before emptying into the North Raccoon River which eventually disperses into the Raccoon River, and then the Des Moines River which is a TNW. A general function of any such wetland is the filtration of contaminants which are present due to the neighboring activities. It can be reasonably assumed that the contaminants attached to the sediment particles released by erosion and farming activities are being filtered. This wetland/stream complex provides a much needed filter to prevent contaminants and sediments from entering the watershed. The tributaries exhibited flow during the observation period and during our onsite visit in the month of December 2016 shows average rainfall (1.33 in) as determined using the WETS tables, while the Corps and consultants were on site. Due to its proximity to the landfill and farming activities the streams provide a direct pathway for pollutants such as oil, pesticide, herbicide, nitrogen and suspended sediment to the downstream TNW.

f. In reference to the same reasons just cited, organic carbon derived from detritus decomposition, and nutrients within the evaluated wetlands are likely to reach the on-site RPW's, and in turn the down slope TNW. These organic carbons are used by downstream organisms as a source of food which increases the overall food chain in the Des Moines River. Due to the hydrologic connection, this provides a benefit to the biological food webs within the RPW and TNW. It has been identified by the IA DNR that the Des Moines River has a biological impairment and must be monitored due to high TMDL values. State and Federal endangered mussel habitat is known to occur downstream of where the RPW discharges into the TNW. They are specifically vulnerable to an increase of sediment in the water and the chemicals that they ingest while filtering the water they live in. The wetlands provide a biological significant nexus to the TNW by filtering out these contaminants that would otherwise enter the TNW and adversely affect the biological integrity of downstream TNW's.

g. Based on the above, we have determined that the wetlands identified as Wetlands 1, 2, 3, S-3 and S-8 (totaling 1.84 acres) as well as the relatively permanent waterways WUS-1 and WUS-2 (totaling 3,000 linear feet) as described in Barker Lemar's wetland delineation report possess more than a speculative capacity to provide a substantial or measurable effect on the biological, chemical and physical integrity of the proximate TNW (Des Moines River).

h. The wetlands identified as S-1 and S-2 do not exhibit a significant nexus to downstream TNW's. They are natural depressions in the agricultural field on the North Central portion of the project site. The rim of the wetlands appear

(pictures provided by applicant, site visit verification and on LIDAR) to be higher than the surrounding area and no discrete connections could be observed when looking on-site, at historical aerial photographs nor on LIDAR maps, it is therefore non-jurisdictional as it does not possess a significant nexus to the downstream TNW.

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: WUS-2 exhibits a natural line on the bank with a defined bed and bank. The riparian corridor is deeply insised and exhibited some natural step down features along with exposed roots to nearby trees. The definition seen on lidar and the visual inspection of the stream provides a clear definition of a perennial waterway with a fairly wide corridor and steep banks.
   - ☒ 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: WUS-1 is identified in the delineation as intermittent and reviewing aerial photos, lidar and the USGS maps a stream is visible intermittently and the corridor is not nearly as wide or defined as WUS-2.

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☒ Tributary waters: 3,000 linear feet
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

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

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   - ☐ Tributary waters:
   - ☐ Other non-wetland waters:
     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: **Wetland 1 feeds directly into WUS-2 as seen on lidar as well as verifying on-site during the investigation. A clear and concise hydrologic connection is visble at the base of wetland 1 where a branch of WUS-2 begins.**

     - ☒ 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: Wetland S-3 is immediately abutting the intermittent stream WUS-1 and a clear connection is visible due to its proximity and overland erosional connection as seen on lidar.

   Provide acreage estimates for jurisdictional wetlands in the review area: **1.55** 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: Wetlands S-8, Wetland 2 and Wetland 3 (.29 acres)

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

[8]See Footnote # 3.

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

Provide estimates for jurisdictional wetlands in the review area:

7. Impoundments of jurisdictional waters.[9]

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

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

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

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

Identify water body and summarize rationale supporting determination: .

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

☒ Tributary waters: 3,000 linear feet.
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☒ Wetlands: 1.84acres.

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 (3.) (C.) above: **Wetlands S-1 and S-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):.
☐ 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):
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☒ Wetlands: .45 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: Materials submitted with application by Barker Lemar in a wetland delineation report.

[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

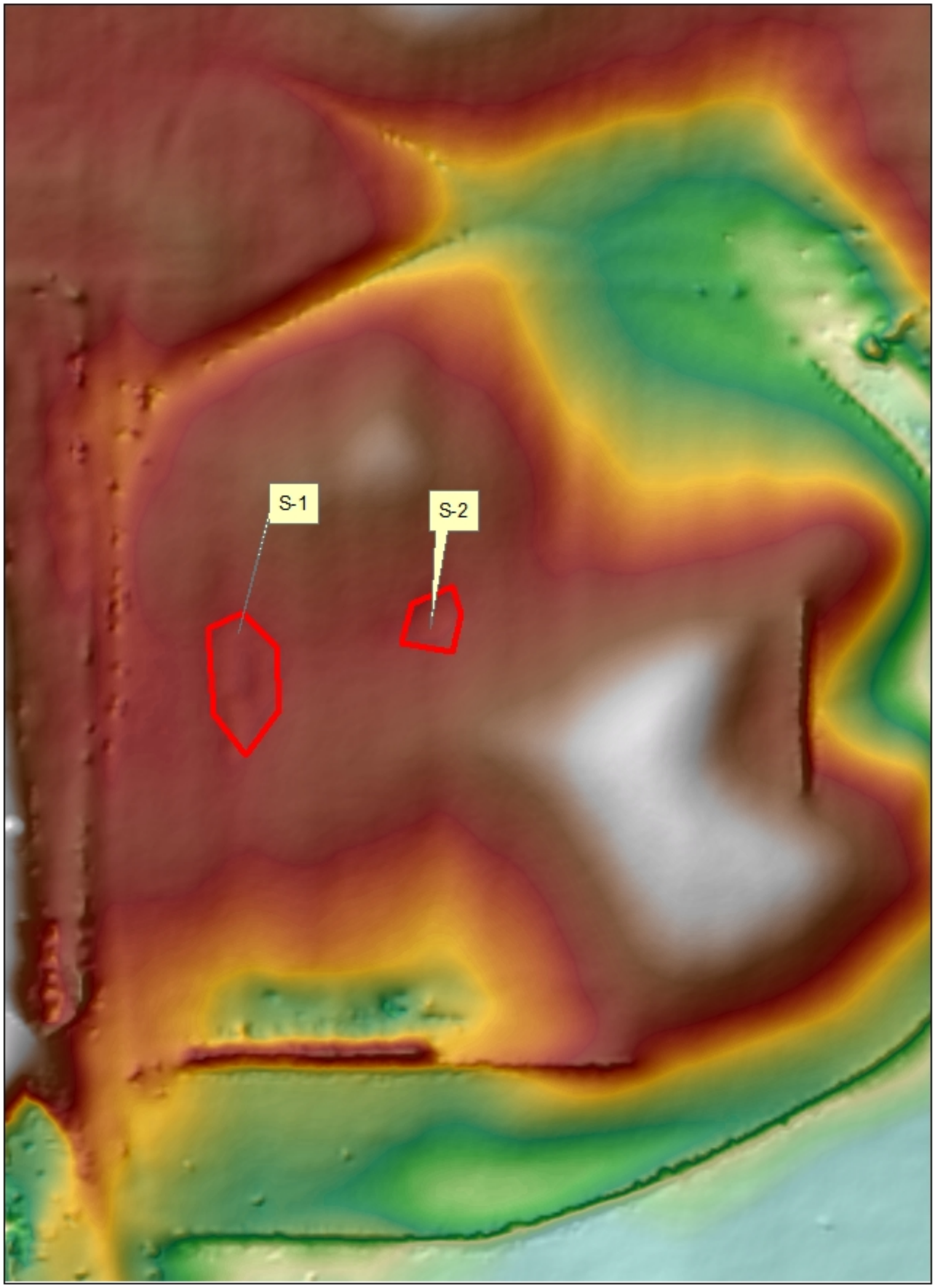
[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

☒ 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; Perry, IA (Figure 1, delineation report).
☐ 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): Delineation site photos 6-15, 12-15, 7-16.
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☒ Other information (please specify): Attachment 1: Wetland Location Map (Exhibit 5, delineation report), Attachment 2-4: Lidar of wetland drainage area

B. ADDITIONAL COMMENTS TO SUPPORT JD:

WUS-2 was added to the original delineation as the applicant simply omitted the RPW from the original report and noted such while on-site for our inspection. The linear feet were estimated based on aerial photography and lidar.

Isolated Wetlands Lidar

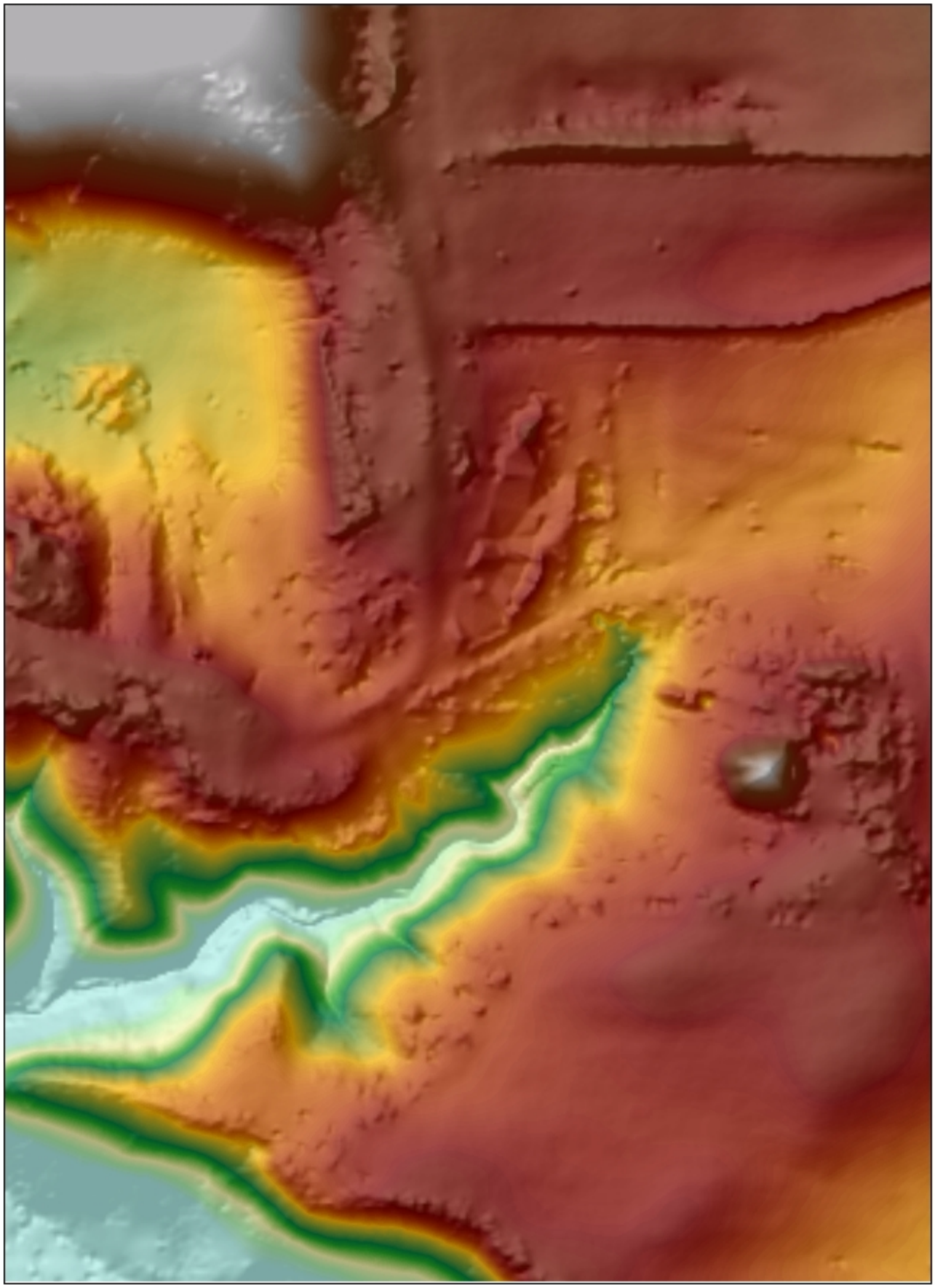


N

0 0.015 0.03 0.06 Miles


S-3
Wetland 3
S-2
S-1
Wetland 2
Wetland 1
WUS-1
S-8
WUS-2
Google

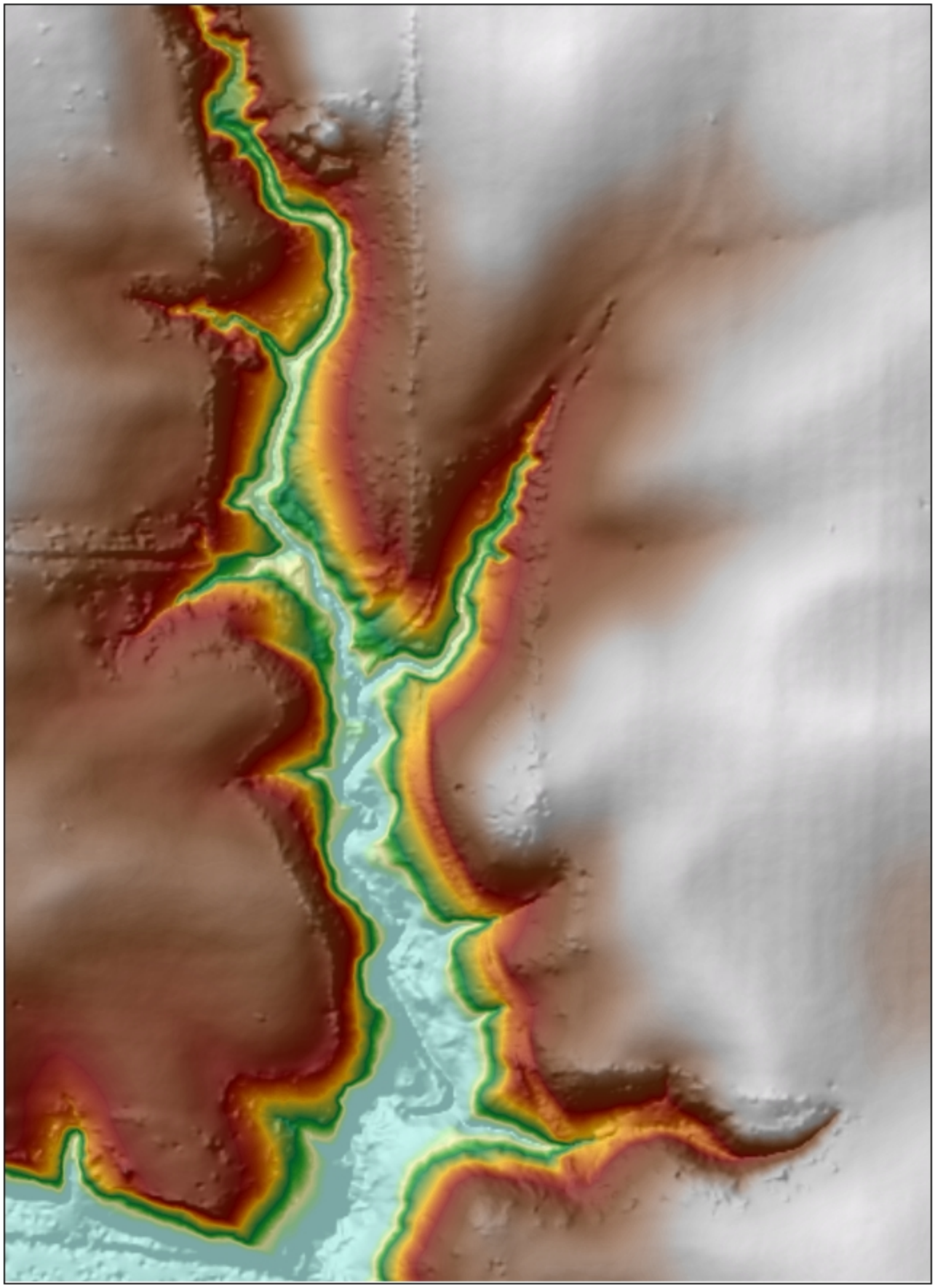
WUS-1 Lidar



N

0 0.015 0.03 0.06 Miles

WUS-2 Lidar



N

0 0.02 0.04 0.08 Miles