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): 9/11/2014

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: MVR; Proposed Walmart Store #86383; 2014-1059

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Iowa County/parish/borough: Linn City: Cedar Rapids
Center coordinates of site (lat/long in degree decimal format): Lat. 41.9752° **N**, Long. -91.6052° **W**.
Universal Transverse Mercator:
Name of nearest water body: Unnamed Tributary to the Cedar River
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Cedar River
Name of watershed or Hydrologic Unit Code (HUC): 0780206

☒ 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: 10/21/14
☒ Field Determination. Date(s): 9/4/2014

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: 0 Acres
Wetlands: 1.75 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 1, 2, 3 are determined to be Isolated waters due to a lack of a significant nexus (connection) to down-slope TNW. Ephemeral Drainages 1 & 2 are non-jurisdictional due to a lack of a ordinary high water mark and a defined bed and bank. They are created by storm water runoff.**

---

[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: **acres**
Drainage area: **acres**
Average annual rainfall: inches
Average annual snowfall: inches

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

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

Identify flow route to TNW[5]:
Tributary stream order, if known: .

[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.

(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:
Average depth:
Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain:.
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime: .
Other information on duration and volume: .

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

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

Tributary has (check all that apply):
☐ Bed and banks
☐ OHWM[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:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain:
Identify specific pollutants, if known:

(iv) Biological Characteristics. Channel supports (check all that apply):
☐ Riparian corridor. Characteristics (type, average width): .

[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.

☐ 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: Although void of trees, ED-1 does exhibit some herbaceous and limited shrub vegetation and is expected to provide marginal breeding and foraging habitat for amphibians and birds that also utilize navigable waters.

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:1.75 (cumulative) acres
Wetland type. Explain: Primarily emergent with a limited forested component.
Wetland quality. Explain: Good, supports a relatively diverse community of mostly native hydrophytes.
Project wetlands cross or serve as state boundaries. Explain: N/A.

(b) General Flow Relationship with Non-TNW:
Flow is: **Ephemeral flow**. Explain: Only during extreme precipitation events.

Surface flow is**: Ephemeral**
Characteristics: Faint surface drainage features connect the wetland (which extends beyond the project area ~.4 acres) to an apparently excavated pond immediately to the west. The pond is connected, via a culvert, to a storm water detention pond behind the nearby HyVee grocery store that empties into the sewage grid for the city for approximately 2,000 linear feet before day lighting into an unnamed blue line RPW which eventually empties into the Cedar River.

Subsurface flow: **Yes**. Explain findings: The detention pond is connected to the local storm sewer grid and the runoff goes through ~2000 linear feet of conduit before connecting to the very upper reaches of an unnamed blue line stream.
☐ 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 **1-2** river miles from TNW.
Project waters are **1-2** aerial (straight) miles from TNW.
Flow is from: **Wetland to navigable waters.**
Estimate approximate location of wetland as within the **500-year or greater** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: No standing water in the wetlands. Recent and significant stockpiling of earthen material onsite and upslope from existing wetlands has resulted in substantial runoff of silt-laden materials in the vicinity of the wetlands.
Identify specific pollutants, if known: .

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

☐ Riparian buffer. Characteristics (type, average width): .
☒ Vegetation type/percent cover. Explain: Nearly 100% cover by primarily FACW and Obligate grasses, sedges, forbs and trees/shrubs throughout.
☐ Habitat for:
☐ Federally Listed species. Explain findings: None observed .
☐ Fish/spawn areas. Explain findings: Site is separated from RPW by nearly 0.5 miles of storm sewer, fish can't reach the site.
☐ Other environmentally-sensitive species. Explain findings: No environmentally sensitive species observed .
☐ Aquatic/wildlife diversity. Explain findings: Aquatic wildlife not observed.

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

All wetland(s) being considered in the cumulative analysis: Wetland 1 (WL-1) .17 acres ephemeral drainage area, wet to wet mesic prairie, mostly emergent with a small forested/scrub/shrub area; Wetland 2 (WL-2) .06 acres closed depression, seasonally flooded basin, sedge dominated; Wetland 3 (WL-3) .01 acres closed concave depression, forested seasonally flooded basin; Wetland 4 (WL-4) .57 acres wet meadow, emergent with scrub/shrub trees; Wetland 5 (WL-5) 1.18 acres forested and sedge meadow, emergent/forested wetland that begins to the North as a sedge meadow with a high variety of hydrophytes with intermittent forested components and becomes completely forested on the Southern 2/3 of the wetland; Offsite extension of WL-5, approximately 0.4 acres of emergent wetland.

List and describe (Emergent, scrub/shrub, forested) the five wetlands: Emergent, scrub/shrub combination.
Approximately (2.4) 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)
WL-1	N	.17 acres	WL-4	N	.57 acres
WL-2	N	.06 acres	WL-5	N	1.18 acres
WL-3	N	.01 acres	Offsite extension of WL 5	N	0.4 acres

Summarize overall biological, chemical and physical functions being performed: The wetlands provide some wildlife habitat, sediment detainment, and pollution control. Large and small vertebrates and invertebrates would be expected to prosper in such a wetland however none were specifically observed during the field visit. Sediment detainment is certainly occurring, and is evident because silt fences that have been installed in Wetland 5 to prevent sediment flow are now buried (Photograph #2). Wetlands 4 & 5, as well as the off-site extension of Wetland 5, are now providing the only observed sediment detainment. The functions/benefits in regards to pollution are the filtration of local herbicides and pesticides that are generally spread onto residential lawns as well as the removal of any pollutants that might be attached to the silt particles on the pile of fill being spread in the upland areas of the project site.

C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

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

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

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

a. The wetlands identified as WL-1 thru WL-5 in the wetland delineation report provided by Terracon total 1.99 acres in area and the ephemeral drainage areas total 200 linear feet (per Terracon report pg 16). The wetlands identified as WL-1,2,3 have no direct connections to any other wetlands found within the project area/drainage area and are therefore isolated. Wetlands identified as WL-4 & 5 have been deemed to be connected (Wetland delineation report pg. 9) by the consultant and connectivity to the down-slope RPW (an unnamed blue-line stream on the USGS Topographic Map) approximately 0.75 miles to the southwest relies on a distinct surface connection to an excavated pond (estimated at 10-20 feet deep per Terracon agent) immediately to the west of Wetlands 4 & 5 by an extension of the identified wetlands (in the delineation report) totaling an estimated .4 acres directly abutting the excavated pond. The water from the pond then continues westward via a culvert underneath 42nd Street SE (an ordinary high-water mark was identified at the mouth of the culvert, as well as a water mark on the culvert wall approximately 12 inches high, in photograph #1). The water from the pond then drains into a man-made (~360 linear feet; measured on Google Earth Pro) storm water detention pond behind an existing HyVee commercial lot. Water then empties into the storm sewer pipes on the far western end of the basin (photograph #3) and then continues west and south through a series of underground pipes and storm sewers for approximately 2,200 linear feet (provided by research done by the Terracon agent via e-mail; attachment #1) before out- letting into to the upper reaches of an unnamed blue-line RPW(Attachment F, Lidar of RPW showing defined bed and bank) that flows directly into the Cedar River (TNW) about 1.5 miles to the south.

b. The relative reach for this wetland complex extends from the wetlands through the non-navigable, non-permanent waterways identified as the excavated pond and the storm water basin and stops at the sewage entrance on the West end of the storm water basin. We have determined this as our review area due to the guidance on page 40 (Attachment I) of the USACE Jurisdictional Determination Form Instructional Guidebook as well as the figure shown on page 41 (Attachment J). In the Delineation report provided by Terracon the presence of a historical stream can be seen dating back into the 1980's and it can be assumed due to the known current location of the sewage pipe that the pipes took the place of what used to be a stream. Rock Island District (with EPA support) has determined in previous Approved JDs that a pipe that replaces a stream does not remove the connection to the surrounding watershed and can be considered a viable connection and thus a RPW. Due to this fact the RPW corridor extends up to the inlet of the storm sewer pipes and extends downstream until the RPW reaches the TNW the Cedar River.

c. We have determined that the evaluated wetlands 4 & 5 as identified by Terracon (and any other wetlands similarly situated in the watershed) possess limited flood storage capacity due to relatively small size (approximately 2.15 acres cumulatively) shallow depth (almost flat) and small drainage area (< 40 acres) however they have a significant nexus due to the large amounts of development in the watershed of the Cedar River which has increased the frequency of flooding in the area.

d. The physical hydrological connection between the wetlands and the downstream TNW are dependent on the water level of the excavated pond as well as the amount of precipitation that accumulates on the pond's watershed. We (Corps) have calculated that the drainage area for the excavated pond is about 100 acres (Attachments G & H). The elevation of the pond on September 4th, 2014 (the day our field site visit took place) was about 2-3 feet below the mouth of the culvert. Using drainage based calculations the amount of precipitation that would need to fall on the watershed of the 1 acre pond to raise the elevation up to a level equal to that of the base of the culvert would be roughly 1" of rainfall(Attachment D). The frequency that this occurs has been calculated using the Palo, IA field gage located approximately 7 miles to the Northwest along the Cedar River. On average there are 8 occasions per year dating back to 1953 (Attachment C, NOAA Climatology data) in which 1" of precipitation falls on the drainage area of the excavated pond. An exact frequency cannot be 100% accurately ascertained due to other environmental and climate parameters that affect the amount of drainage that actually reaches the pond, however using our formulas and supporting gage data we have come to this conclusion. It is supported by the fact that the areas around the mouths of the culvert have no vegetation near them. A lack of vegetation suggests that this area is submerged at enough of a frequency that vegetation cannot prosper. In regards to flow we have identified in photograph #1 that there is a water stain about 12" above the base of the culvert. This culvert appears to be a 36" diameter culvert and using Manning's Principle (Attachment E) to calculate the flow through the culvert at the time that the elevation of the water reached 12" above the base of the culvert, it was moving at a velocity of 19 CFS. This is a fairly high velocity and would explain the scouring and lack of vegetation in and around the culvert openings.

e. Contaminants (silt, nitrogen, phosphorus) entering the evaluated wetlands due to the pre-project and current stock piling of fill material in the central upland areas of the project site, and from overland flow in the basin are filtered out by the wetlands prior to reaching the excavated pond (photograph #2 and phone conversation memo #1) before entering a system of underground pipes in which it flows for approximately ½ mile before day-lighting into an unnamed RPW that eventually enters the Cedar River. A general function of any such wetland is the filtration of contaminants and because it has been verified that the wetlands are in fact retaining silt from the upland fill site, it can be reasonably assumed that the contaminants attached to the sediment particles are being filtered as well. Other materials that are being filtered out by these wetlands are the oils and heavy metals associated with the vehicles that travel on Mt. Vernon Road and neighboring

property owners that have applied herbicides and pesticides to enhance their lawns. The EPA has provided information stating that the TNW (Cedar River) being protected by these wetlands has been listed as impaired by an excess of Nitrogen. These wetlands provide a significant benefit to the filtration of nitrogen that is applied on any neighboring properties as fertilizer.

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 down slope RPW, 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 Cedar 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 EPA that the Cedar River has a biological impairment with regards to mussels downstream of where the RPW discharges into the TNW. They are specifically vulnerable to siltation and pollutants. 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 the Cedar River.

g. Based on the above, we have determined that the wetlands identified as WL-4 & 5 (totaling 1.75 acres) described in Terracon'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 (Cedar River). Wetlands identified as WL-1,2,3 have been determined to be isolated and the ephemeral drainages 1 & 2 have been deemed non-jurisdictional due to a lack of significant nexus (connection) and do not possess a substantial or measurable effect in relation to the biological, chemical, or physical integrity of the proximate TNW (Cedar River).

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

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

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

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

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

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

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

[8]See Footnote # 3.

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: **(WL-4 & WL-5) 1.75 acres.**

7. **Impoundments of jurisdictional waters.**[9]
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
   ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

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

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

Identify water body and summarize rationale supporting determination: .

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

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

☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☒ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: See (3.) (C.) above. .
☐ 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): **Ephemeral drainages 1 & 2 totaling 200 linear feet**.
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☒ Wetlands: **WL-1 thru WL-3 = .24 cumulative acres.**

SECTION IV: DATA SOURCES.

[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.*

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 Manhard Consulting via Terracon's wetland report.

☒ 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:1:13000; Bertram, IA (Appendix A, Figure 1, delineation report).

☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Linn County, Iowa (Appendix A, Figure 3, delineation report).

☒ National wetlands inventory map(s). Cite name: Bertram, IA (Appendix A, Figure 2, delineation report).

☐ State/Local wetland inventory map(s): .

☐ FEMA/FIRM maps: .

☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)

☒ Photographs: ☒ Aerial (Name & Date): Appendix B, figures 1-15, 1930's to 2013.
or ☐ Other (Name & Date): .

☐ Previous determination(s). File no. and date of response letter: .

☐ Applicable/supporting case law: .

☐ Applicable/supporting scientific literature: .

☒ Other information (please specify):Lidar (Appendix A, Figure 4, delineation), Google Earth Pro, 1975 soil inventory (Appendix A, Figure 3, delineation report), Wetland Delineation Map (Appendix A, Figure 5, delineation report), Photograph Attachments 1-3, E-mail attachment #1, Attachment #1: sewage mapping, phone memo #1, Attachment A: EPA Comments, Attachment B: Aerial map of overall project area, Attachment C: E-mail from Water Control Engineer, Attachment D: Runoff Calculations, Attachment E: Manning's Principle Calculation, Attachment F: Lidar of blue line RPW, Attachment G: Drainage data for pond, USGS Stream Stats, Attachment H: Aerial Drainage path from Wetlands, USGS Stream Stats, Attachment I: pg 40 JD guidebook, Attachment J: pg 41 JD guidebook.

B. ADDITIONAL COMMENTS TO SUPPORT JD: Information gathered during 9/4/14 onsite inspection and additional comments provided by EPA region 7 in Attachment A which support our designation of the jurisdiction of WL-4 & 5 and the isolation of WL-1,2,3 and Ephemeral Drainages 1 & 2.

Attachment #1 is a drawing by the Terracon agent in an attempt to identify the sewage pipes located to the West of the storm water basin located behind HyVee. He has added about 400 linear feet more than is currently present. The first 400 feet of blue line is the location of the storm water basin and is not actually pipe. The length of the sewage pipes is closer to 2,200 linear feet. He has identified the intakes on the West side of the basin and these are the locations where the pipes are physically connected to the storm water detention basin.