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.

| Α. | REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATIO | N (JD |): June 11. | , 2020. |
|----|---|-------|-------------|---------|
|----|---|-------|-------------|---------|

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: NAB-2020-00236 (Two Suns Farm, LLC/JD)

PROJECT LOCATION AND BACKGROUND INFORMATION: Approx. 23.78-acre "review area" located off US 50/301 at the intersection of Cooper's Farm Lane. The existing agricultural site is proposed for commercial development use.

State: Maryland County/parish/borough: Queen Anne's County City: Queenstown
Center coordinates of site (lat/long in degree decimal format): Lat. 38.874493, Long. -76.341902
Name of nearest waterbody: unknown perennial tributary to Wye River
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Wye River
Name of watershed or Hydrologic Unit Code (HUC): 020600020604 (12-digit Federal HUC)

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: 4 April 2020

Field Determination. Date(s): 11 November 2019

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

| There are | not "navigable waters of the U.S | " within Rivers and H | arbors Act (RHA) juris | diction (as defined b | y 33 CFR part 329) |
|---------------|------------------------------------|-----------------------|------------------------|-----------------------|--------------------|
| in the review | ew area. | | | | |
| □ V | Vaters 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 not "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area.

1. Waters of the U.S.

| ndica | ate 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: #linear feet: #width (ft) and/or #acres. Wetlands: #acres.

c. Limits (boundaries) of jurisdiction based on:

Elevation of established OHWM (if known):

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

Notentially jurisdictional waters and/or wetlands were assessed within the review area and determined not to be jurisdictional. Explain: Approx. 625 linear feet (If) of agricultural drainage ditch historically constructed in non-hydric soils (mapped Unicorn-Sassafras series) was assessed within the 23.78-acre review area. The ditch feature conveys

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).

Supporting documentation is presented in Section III.F.

upland flow from roadside ditches constructed to drain US 50/301. The ditch feature does not exhibit a defined ordinary high water mark (OHWM), appears to have been constructed wholly in, and only draining uplands, and does not carry a relatively permanent flow of water. Refer to 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 waterbody⁴ 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

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

| | | Identify flow route to TNW ⁵ : |
|-----|------------|--|
| | | Tributary stream order, if known: |
| (b) | <u>Ger</u> | neral 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: |
| | | 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: Tributary geometry: Tributary gradient (approximate average slope): |
| | (c) | Flow: Tributary provides for: |
| | | Estimate average number of flow events in review area/year: |
| | | Describe flow regime: |
| | | Other information on duration and volume: |
| | | Surface flow is: Characteristics: |
| | | Subsurface flow: |
| | | ☐ Dye (or other) test performed: N/A. |
| | | Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): clear, natural line impressed on the bank changes in the character of soil shelving vegetation matted down, bent, or absent leaf litter disturbed or washed away sediment deposition water staining other (list): Discontinuous OHWM. ⁷ Explain: N/A. |
| | | 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) ☐ Mean High Water Mark indicated by: ☐ survey to available datum; ☐ physical markings; |

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. ⁶A 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 ⁷Ibid.

| | | □ physical markings/characteristics□ tidal gauges□ other (list): | vegetation lines/changes in vegetation types. |
|----|----------|--|---|
| | Ch | emical Characteristics: aracterize tributary (e.g., water color is clear, di characteristics, etc.). Explain: waters convey ntify specific pollutants, if known: | scolored, oily film; water quality; general watershed |
| | (iv) Bid | Diogical Characteristics. Channel supports ☐ Riparian corridor. Characteristics (type, at Wetland fringe. Characteristics: Habitat for: ☐ Federally Listed species. Explain findings: ☐ Fish/spawn areas. Explain findings: ☐ Other environmentally-sensitive species. ☐ Aquatic/wildlife diversity. Explain findings: | verage width): Explain findings: |
| 2. | Charac | teristics of wetlands adjacent to non-TNW t | hat flow directly or indirectly into TNW |
| | | ysical Characteristics: General Wetland Characteristics: Properties: Wetland size: Wetland type. Explain: Wetland quality. Explain: | |
| | | Project wetlands cross or serve as state bour | daries. Explain: |
| | (b) | General Flow Relationship with Non-TNW: Flow is: Explain: | |
| | | Surface flow is: Characteristics: | |
| | | Subsurface flow: Explain findings: Dye (or other) test performed: | |
| | (c) | Wetland Adjacency Determination with Non-T ☐ Directly abutting ☐ Not directly abutting ☐ Discrete wetland hydrologic connection. ☐ Ecological connection. Explain: ☐ Separated by berm/barrier. Explain: | |
| | (d) | Proximity (Relationship) to TNW Project wetlands are river miles from TNW Project waters are aerial (straight) miles from Flow is from: Estimate approximate location of wetland as | om TNW. |
| | | emical Characteristics: aracterize wetland system (e.g., water color is c characteristics; etc.). Explain: | clear, brown, oil film on surface; water quality; general watershed |
| | | ntify specific pollutants, if known: logical Characteristics. Wetland supports (Riparian buffer. Characteristics (type, average vegetation type/percent cover. Explain: Habitat for: Federally Listed species. Explain findings: Fish/spawn areas. Explain findings: Other environmentally-sensitive species. Aquatic/wildlife diversity. Explain findings: | e width): Explain findings: |

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

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

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

For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres)

Directly abuts? (Y/N) Size (in acres)

Summarize overall biological, chemical and physical functions being performed: Refer to Section IV.B.

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:

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

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

| ۱. | TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area: ☐ TNWs: ☐ Wetlands adjacent to TNWs: |
|----|--|
| 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: |

| F. | NO | N-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): |
|----|-----|---|
| | Pro | ntify water body and summarize rationale supporting determination: vide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: Other non-wetland waters: Identify type(s) of waters: Wetlands: |
| E. | WA | LATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH TERS (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: |
| | 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). |
| | | Provide estimates for jurisdictional wetlands in the review area: |
| | 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 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. |
| | | ■ 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: |
| | 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: |
| | | Provide estimates for jurisdictional waters within the review area (check all that apply): Tributary waters: Other non-wetland waters: 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. |
| | | Other non-wetland waters: acres. Identify type(s) of waters: |

 ⁸See Footnote # 3.
 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.

| | 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 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): Approx. 625 linear feet of upland man-made roadside and agricultural drainage ditch excavated in uplands and draining only uplands. The drainage feature enters the site via a single 36-inch culvert beneath the highway and flows south for approx. 625 If within a man-made agricultural drainage ditch beneath US 50/301 downslope beneath Cooper Farm Lane. No surface water connection was observed on aerial imagery, ground photos, topographic/landscape maps, or LiDAR. Upslope flow is generally overland topographic sheet flow where the drainage ditch conveys agricultural and roadside contributing surface runoff. |
| the | vide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), ng best professional judgment (check all that apply): Non-wetland waters (i.e., rivers, streams): Lakes/ponds: Other non-wetland waters: List type of aquatic resource: Wetlands: |
| Pro whe | vide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, ere such a finding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): Lakes/ponds: Other non-wetland waters: acres. List type of aquatic resource: Wetlands: |
| SECTIO | N IV: DATA SOURCES. |
| when Lar | PORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, are checked and requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: delineation survey plan prepared by the Engineering, LLC dated 27 April 2020. 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; Queenstown (7.5-Minute Series) USDA Natural Resources Conservation Service Soil Survey. Citation: Queen Anne's County Soil Survey. National wetlands inventory map(s): Cite name: NWI Wetland Mapper State/Local wetland inventory map(s): Maryland Department of Natural Resources State Wetland Inventory GIS data. FEMA/FIRM maps: Panel 24035C0332D. 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929) Photographs: Aerial (Name & Date): Google Earth aerial imagery years 2013 to 2019; Queen Anne's County perty Viewer 1937 historical aerials or Other (Name & Date): Photos taken by the Corps during the 11 November 9 site visit. Applicable/supporting case law: Applicable/supporting case law: Applicable/supporting scientific literature: Other information (please specify): |

B. ADDITIONAL COMMENTS TO SUPPORT JD: Upland data points were sampled on either side of the drainage ditch feature in question for approximately 625 linear feet from the upslope entry point via the culvert along US 50/301 to the downslope limits at the culvert outlet beneath Cooper Farm Lane. No wetlands vegetation was observed within or adjacent to the drainage ditch feature. The soil samples taken within and adjacent to the agricultural ditch feature did not meet F3 or F6 hydric soil indicator requirements indicating the potential for the ditch feature in question to have been historically constructed in farmed nontidal wetlands. There was no evidence of stress crop areas observed during the 11 November 2019 site visit or recent time lapse

aerial imagery. Representative soils profiles were sampled in and adjacent to the drainage ditch when the water table would be anticipated to be higher in late fall during leaf off. The soil morphology did not show evidence of prolonged surface water ponding within or adjacent to the ditch suggestion soil saturation. Unicorn-Sassafras soil series does not have a hydric rating as Most areas of Unicorn soils are cleared and used for growing corn, soybeans, wheat, and barley.

References:

U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-20. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

Environmental Laboratory. (1987). "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

Cowardin, Lewis M., V. Carter, F.C. Golet, and E. T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Fish & Wildlife Service - Biological Services Program. FWS/OBS-79/31.

Reed, P.B., Jr. 1988. *National List of Plant Species that Occur in Wetlands: 1988 National Summary*. Biological Report 88(24), U.S. Fish and Wildlife Service, Washington D.C.