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

REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): AUG 27 2014

DISTRICT OFFICE FILE NAME AND NUMBER CENAR-RMN (Hawk/Webb Property/Pre-App/ID) 2013-01905-M24

ь.	DISTRICT OFFICE, FILE NAME, AND NUMBER: CENAB-RIMN (Hawk/webb/F10perty/F1e-App/3D) 2015-01905-01924
C.	PROJECT LOCATION AND BACKGROUND INFORMATION: State:MD County/parish/borough: Anne Arundel City: Arnold Center coordinates of site (lat/long in degree decimal format): Lat. 39.03525° N, Long76.507217° W. Universal Transverse Mercator:
	Reach 1, west portion of the site, unnamed tributary, perennial flow that runs parallel to western boundary of the site.
	Reach 2, north portion of the site, unnamed intermittent tributary to Reach 1, runs along northern boundary of the site.
	Reach 3, north portion of the site, unnamed ephemeral tributary to Reach 2, runs along nothern boundary of the site.
	Reach 4, north portion of the site, unnamed ephemeral tributary to Reach 1, runs along nothern boundary of the site.
	Wetlands along Reach 1- northwest portion of the site, 0.35 acres.
	Name of nearest waterbody: Mill Creek
	Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Mill Creek Name of watershed or Hydrologic Unit Code (HUC): 02060004
	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: Field Determination. Date(s): 09/27/13
	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.
	re Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the ew 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:
В. (CWA SECTION 404 DETERMINATION OF JURISDICTION.
The	re Are "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): 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:

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).

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: .

width (ft) and/or 0.28 acres.

 $^{\rm 3}$ Supporting documentation is presented in Section III.F.

Non-wetland waters: 1,823linear feet: Wetlands: 0.35 acres.

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:

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 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.

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

(i) General Area Conditions: Watershed size: 15acres Drainage area: 15 acres Average annual rainfall: 42 inches Average annual snowfall:

(ii) Physical Characteristics:

(a) Relationship with TNW: Tributary flows directly into TNW. Tributary flows through 2 tributaries before entering TNW. Project waters are 1 (or less) river miles from TNW. Project waters are 1 (or less) river miles from RPW. Project waters are 1 (or less) aerial (straight) miles from TNW. Project waters are 1 (or less) aerial (straight) miles from RPW. Project waters cross or serve as state boundaries. Explain: Identify flow route to TNW⁵: ephermeral channel flow to unnamed stream to Mill Creek. 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

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 C Tributary is:	Characteristics (check all that apply ☑ Natural ☐ Artificial (man-made). Explai ☐ Manipulated (man-altered). E	n:			
		Average width Average depth		mate):			
		☐ Silts ☐ Cobbles ☐ Bedrock	ubstrate composition (check all tha Sands Gravel Vegetation. Type/% lain: Leaf litter and sands.		:	☐ Concrete ☐ Muck	
		Presence of run/riff Tributary geometry	/stability [e.g., highly eroding, slow le/pool complexes. Explain: : Relatively straight (approximate average slope): 0-5 %		oanks].	Explain: some erosion and upalnd vegetated b	ank
	(c)	Estimate average no Describe flow	for: Ephemeral flow Imber of flow events in review are regime: ehemeral flow. On duration and volume: less than 2				
		Surface flow is: Dis	screte and confined. Characteristi	cs:			
			o. Explain findings:				
		clear, i change shelvii vegeta leaf lit sedime water:	check all indicators that apply): natural line impressed on the bank es in the character of soil ng tion matted down, bent, or absent ter disturbed or washed away ent deposition staining	de the se sc m	estruction e preser diment our ultiple o	nce of litter and debris on of terrestrial vegetation nce of wrack line sorting observed or predicted flow events ange in plant community	
		☐ High Tide☐ oil or s☐ fine sh	e Line indicated by: scum line along shore objects ell or debris deposits (foreshore) al markings/characteristics auges	Mean H	High Wavey to a rical ma	t of CWA jurisdiction (check all that apply): ater Mark indicated by: available datum; arkings; lines/changes in vegetation types.	
(iii)	Cha		.g., water color is clear, discolored no water flowing in the ephermera			er quality; general watershed characteristics, en here were no standing wet spots in the drainag	

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.

	(iv)		logical Characteristics. Channel supports (check all that apply): Riparian corridor. Characteristics (type, average width): channel is within the forest. 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:
2.	Cha	ract	eristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW
	(i)		sical Characteristics: General Wetland Characteristics: Properties: Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain:
		(b)	General Flow Relationship with Non-TNW: Flow is: Pick List. Explain:
			Surface flow is: Pick List Characteristics:
			Subsurface flow: Pick List. Explain findings: Dye (or other) test performed:
		(c)	Wetland Adjacency Determination with Non-TNW: ☐ Directly abutting ☐ Not directly abutting ☐ Discrete wetland hydrologic connection. Explain: ☐ Ecological connection. Explain: ☐ Separated by berm/barrier. Explain:
		(d)	Proximity (Relationship) to TNW Project wetlands are Pick List river miles from TNW. Project waters are Pick List aerial (straight) miles from TNW. Flow is from: Pick List. Estimate approximate location of wetland as within the Pick List floodplain.
	(ii)	Cha	emical Characteristics: racterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: https://example.com/racteristics/racteris
	(iii)	Biol	logical Characteristics. Wetland supports (check all that apply): Riparian buffer. Characteristics (type, average width): Vegetation type/percent cover. Explain: Habitat for: Federally Listed species. Explain findings: Fish/spawn areas. Explain findings: Other environmentally-sensitive species. Explain findings: Aquatic/wildlife diversity. Explain findings:
3.	Cha	All	eristics of all wetlands adjacent to the tributary (if any) wetland(s) being considered in the cumulative analysis: Pick List proximately () acres in total are being considered in the cumulative analysis.

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed: Reach 3 and Reach 4 are ephemeral channels that do not have evidence of these functions. It is an eroded feature that exhibits some stream characteristics.

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: Reach 3 and Reach 4 run along the north boundary of the site. They are both unnamed ephemeral channels. Reach 3 is connected to Reach 2 near the northwest corner of the site, and Reach 4 is connected to Reach 1 near the northwest corner of the site. Reach 3 is approximately a straight line linear 170-foot channel. Reach 4 is approximately a straight line linear 730-foot channel. There are no abutting or adjacent wetlands at both the ephemeral channel areas. There were no sitings of crayfish, snails, fish, amphibians or wetland vegetation in both channels. There is no evidence that both systems are fed by groundwater and there is some erosion with leaf litter and some sand sediment in the bottom. Both channels are located within a forested area. A detailed assessment of the quality of wildlife habitat was not performed. Both channels and adjacent upland areas provide habitat for a variety of upland wildlife species. Both channels support nutrient cycling. The riparian forested corridor manages the nutrients from the adjacent forested land. The deciduous forest also inputs detritus into both ephemeral systems. Both channels lack the plant cover to cycle the nutrients in the detritus. Both channels carry some sediment from forest runoff as well as the eroding banks and the drainage pattern above the ephemeral channel. Both channels maintain the capacity to transport sediments from the abutting forest. Both channels do not have the vegetative cover to trap and uptake pollutants in the stormwater runoff that is received in the channel. Both channels, with abutting forested uplands, filter some runoff. Although the ephemeral channels are located in a forested area, both channels' banks lack the vegetative cover to shade the water column of the stream. The channel does not influence the cold and hot weather conditions of waters downslope of the both channels. There is little opportunity for both channels to provide flood storage. Groundwater discharge or recharge was not confirmed in the field. Both channels are on private property, not navigable and have limited recreational opportunities due to small size. The water quality functions of both channels, although limited, directly influence downstream areas, therefore providing a direct benefit to the overall public health. Based on the above and field experience in Maryland, both Reach 3 and Reach 4 have significant nexus with the physical, chemical or biologial integrity of the TNW.
- 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:
	TERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL AT 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:
	Reach 1, is a perennial stream that has continuous flow throughout the year. The stream is relatively straight with a few meanders and approximately 10 feet wide. It connects to Reach 2 and Reach 4 at the northwest corner of the site. The stream is a perennial nontidal tributary of Mill Creek, a tidal navigable tributary to the Chesapeake Bay, a tidal navigable interstate waterway. Visual observation of flow in the channel at various times of the year indicates that this stream 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: Reach 2, is an intermittent stream that has flow seasonally, three months or more each year. Flow in this
	intermittent channel was observed during the September 27, 2013 site visit. This channel is relatively straight and approximately 10 feet wide. The upper limit of Reach 2 connects to Reach 1.
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: 950 linear feet10width (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: Observations during the Corps field review of 27 Sep 2013 revealed that the wetlands are directly connected to and physically touch the perennial stream.
	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: 0.35 acres.
5.	Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.
	Provide acreage estimates for jurisdictional wetlands in the review area: acres.

D.

⁸See Footnote # 3.

	6.	Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs. Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C. Provide estimates for jurisdictional wetlands in the review area: acres.
	7.	Impoundments of jurisdictional waters. 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.	SUC	DLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY CH 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:
		vide 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.	NO	N-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Other: (explain, if not covered above):
	fact	vide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR ors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional gment (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
		vide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such adding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet, width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: . Wetlands: acres.

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. SU	PPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked
ar	nd requested, appropriately reference sources below):
\geq	Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Klebasko Environmental, LLC Wetland Delineation
R	eport dated September 10, 2013 and plan print dated August 2013.
\triangleright	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.
\triangleright	U.S. Geological Survey map(s). Cite scale & quad name:Round Bay Quad.
\triangleright	USDA Natural Resources Conservation Service Soil Survey. Citation:websoilsurvey.nrcs.usda.gov.
\triangleright	National wetlands inventory map(s). Cite name:Round Bay Quad.
	State/Local wetland inventory map(s): .
	FEMA/FIRM maps: .
	100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
\triangleright	Photographs: Aerial (Name & Date):
	or 🔀 Other (Name & Date):August 15, 2013.
	Previous determination(s). File no. and date of response letter:
	Applicable/supporting case law: .
	Applicable/supporting scientific literature: .
\triangleright	Other information (please specify):Corps field review of 9/17/2013.

B. ADDITIONAL COMMENTS TO SUPPORT JD:

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