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): May 22, 2015

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CENAB-OP-RMS (TEN MILE CREEK/JD) 2013-02052-M32

PROJECT LOCATION AND BACKGROUND INFORMATION: Reaches: Stream reaches and abutting and adjacent wetlands from Y9 to H1, starting on plan sheet 4, continuing on plan sheet 3, and ending on plan sheet 2; 12 stream reaches and 8 non-tidal wetlands of the total 35 streams and 56 non-tidal wetlands on an approximately 718-acre property referred to as the Ten Mile Creek Property.

State: **Maryland** County/parish/borough: **Montgomery** City: **Clarksburg**
Center coordinates of site (lat/long in degree decimal format): Lat. **N 39.220425** Long. **W - 77.305164**
Name of nearest waterbody: **Ten Mile Creek**
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Potomac River**
The site is located along the west side of Clarksburg Road, north of West Old Baltimore Road, and east of Shiloh Church Road, in Clarksburg, Montgomery County, Maryland. All waters on site drain southwest to Ten Mile Creek, located offsite parallel to the west property boundary. Ten Mile Creek flows into Little Seneca Creek, which drains to Little Seneca Lake, which drains to Seneca Creek, which drains to the Potomac River, a tidal, navigable, interstate tributary of the Chesapeake Bay, an interstate TNW.
Name of watershed or Hydrologic Unit Code (HUC): **Potomac River - 02070010**
☒ 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: **01 May 2015**
☒ Field Determination. Date(s): **31 October 2013, 21 November 2013**

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There are not "*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: The north portion (plan 4-3-2; Y9 – H1) of the project site consists of 8 nontidal wetlands (0.8912 acres) and 12 nontidal stream reaches (5,855 linear feet). Total area of waters is approximately 21,981 linear feet of jurisdictional waters, 5.07 acres of wetlands.**

[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).

The project impact area is indicated below.

c. **Limits (boundaries) of jurisdiction based on: the Eastern Mountain and Piedmont Regional Supplement to the Corps Wetland 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 not to be jurisdictional. Explain:

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: **92.5 square miles (Catoctin Creek Watershed: 10 digit HUC 020700803)**
Drainage area: **Ten Mile Creek - greater than 3,500 acres**[5]
Normal average monthly rainfall for **October (3.1 inches) and November (3.4 inches)**[6]
Departure from normal average monthly rainfall for **October 2013 (3 – 4 inches more than annual average) and November 2013 (0.5 inches less than average in the general vicinity of the project area)**[7]

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[3] Supporting documentation is presented in Section III.F.
[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] **Pulte Homes (2014) Frequently Asked Questions. http://www.ten-milecreek.com/faq/. Accessed 01 April 2015.**
[6] **Maryland Department of the Environment, Normal Monthly Precipitation Totals (in Inches) for Maryland Counties, http://www.mde.state.md.us/programs/Water/WaterConservation/CurrentConditions/Pages/Programs/WaterPrograms/Water_Conservation/previous_conditions/normalprecip_new.aspx Accessed 01 April 2015.**

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

☒ Tributary flows through **~ 4** tributaries before entering TNW

Project waters are approximately **~16.3** river miles from TNW.
Project waters are approximately **less than 1** river miles from RPW.
Project waters are approximately **11.3** aerial (straight) miles from TNW.
Project waters are approximately **less than 1** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: **N/A**.
Identify flow route to TNW[8]: **seven first order streams on site flow into five second order streams that flow directly into Ten Mile Creek, located offsite parallel to the west property boundary. Ten Mile Creek flows into Little Seneca Creek, which drains to Little Seneca Lake, which drains to Seneca Creek, which drains to the Potomac River, a tidal, navigable, interstate tributary of the Chesapeake Bay, an interstate TNW.**

Tributary stream order, if known: **1st order (S1, S3, S5, S7, S8, S10, S11), 2nd order (S2, S4, S6, S9, S12)**

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

Tributary is: ☒ Natural: **all (S1, S3, S5, S7, S8, S10, S11, S2, S4, S6, S9, S12)**
☐ Artificial (man-made). Explain:
☐ Manipulated (man-altered). Explain:

Tributary properties with respect to top of bank (estimate):
Average width: **6 - 15 feet**
Average depth: **3 feet**
Average side slopes: **0.5 - 1: 1**

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: **moderate stability – banks vegetated for all (S1, S3, S5, S7, S8, S10, S11, S2, S4, S6, S9, S12)**
Tributary geometry:
Tributary gradient (approximate average slope): **S1, S2, S11, S12, S10, S7 (5%), S8, S9, S6, S4, S3, S5 (1.5%).**

(c) Flow:

Tributary provides for: **perennial flow (S3, S4, S5, S6, S7, S8, S9), intermittent flow (S2, S10, and S12), and ephemeral flow (S1 and S11)**
Estimate average number of flow events in review area/year: **unknown**
Describe flow regime: **see above**
Other information on duration and volume:
Surface flow is: **varies, see above**
Characteristics:
Subsurface flow: **unknown;**
☐ Dye (or other) test performed**: N/A.**

Tributary has (check all that apply):
☒ Bed and banks **(all)**
☒ OHWM[9] (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

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[7] **NOAA, Advanced Hydrological Prediction Service, http://water.weather.gov/precip/. Accessed 01 April 2015.**
[8] 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.
[9] 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

☐ sediment deposition
☐ water staining
☐ other (list):
☐ multiple observed or predicted flow events
☐ abrupt change in plant community

☐ Discontinuous OHWM.[10] 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)
- ☐ physical markings/characteristics
- ☐ tidal gauges
- ☐ other (list):

☐ Mean High Water Mark indicated by:
- ☐ survey to available datum;
- ☐ physical markings;
- ☐ vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:

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

Explain: **water generally clear in all streams with occasional iron or bacterial sheen on the water surface in slow moving portions of channels. The Catoctin Creek Watershed (10-digit HUC 0207000803) has approximately 207.3 miles of perennial and intermittent streams (combined). The land cover of the watershed as of 2006 included approximately 7.5 percent developed land (0.9% impervious cover), 31.0 percent forest, and 60.6 percent agricultural use (pasture/hay and cultivation)[11]. Ten Mile Creek is characterized as the highest quality stream system in the Washington D.C. metropolitan area and is a tributary to Little Seneca Reservoir/Lake, the emergency water supply for Washington D.C.[12]**

Identify specific pollutants, if known: **unknown**

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

☒ Riparian corridor. Characteristics (type, average width): **The streams and wetlands in the north portion of the site are located in a forested corridor. While there is one large agricultural field near the upper reaches and one near the lower reaches of streams and wetlands in this portion of the area of review, the forested corridor is wide in this portion of the site, with an average width of 4,429 feet. The forested corridor is dominated by approximately 5 to 50 year old deciduous forest, depending on the reach.**

☒ Wetland fringe. Characteristics: **abutting PFOs on S4, S5, S7 and S12**

☒ Habitat for:

☐ Federally Listed species. Explain findings:

☒ Fish/spawn areas. Explain findings: **The streams in this portion of the site with perennial flow (S3, S4, S5, S6, S7, S8, S9) appear to have a variety of in-stream fish and invertebrate habitat. Streams with seasonally intermittent flow (S2, S10, and S12) would be expected to support fish habitat on at least a seasonal basis.**

☐ Other environmentally-sensitive species. Explain findings:

☒ Aquatic/wildlife diversity. Explain findings: **Along with riparian upland forested habitat, supports habitat for forest dwelling species, including mammals, reptiles, amphibians, and mammals.**

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 (acres): **W8 [plan 4] – 0.237, W7 [plan 3] – 0.0062, W1 [plan 2] – 0.13, W2 [plan 2] – 0.1132, W3 [plan 2] – 0.3079, W4 [plan 2] - 0.0109, W5 [plan 2] - 0.03, W6 [plan 2] - 0.056**

Wetland type. **eight PFOs (all)**

Wetland quality. Explain: **Refer to Section IV.B.**

Project wetlands cross or serve as state boundaries. Explain: **N/A**.

(b) General Flow Relationship with Non-TNW:

Flow is: **W8 drains north via unconfined surface flow offsite to an unnamed tributary of Ten Mile Creek. W7 directly abuts and flows directly into S12, an RPW, which drains north offsite to a tributary of Ten Mile Creek. W1 and W2 directly abut and flow directly into S4, a RPW, which drains into S6. W3 drains via unconfined surface flow to S5, a RPW, which drains into S6. W4 directly abuts and flows directly into S5, a RPW, which drains into S6. W5 directly abuts and drains directly into S7, a RPW, which drains into S9.W6 drains east via unconfined surface flow to S9. S6 and S9 drain south offsite to Ten Mile Creek.**

Surface flow is**: clear.**

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[10] Ibid.

[11] **USACE HUC Characterization tool, Catoctin Creek Watershed (10-digit HUC 0207000803). Accessed 02 May 2014.**

[12] **Audubon Naturalist Society, (2014) Ten Mile Creek: Saving Our Last Best Stream. http://www.audubonnaturalist.org/index.php/ten-mile-creek#issues. Accessed 01 April 2015.**

Characteristics:

Subsurface flow: **unconfirmed in the field, but likely present** Explain findings: **groundwater seeps were not observed in wetland area on site during Corps site visit. However, all fifteen wetlands in the southernmost portion of the area of review are located at the toe of hillslopes and are directly abutting streams, indicating that groundwater discharge is present to support baseflow to maintain wetland hydrology that would otherwise be lost to the stream channel.**

☐ Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

☒ Directly abutting **(W1, W2, W4, W5, W7)**

☒ Not directly abutting

☒ Discrete wetland hydrologic connection. Explain: **Mostly unconfined, discontinuous upland drainages and overland sheet flow connect W3 to S5 (25 feet apart). Mostly unconfined, discontinuous upland drainages and overland sheet flow connect W6 to S9 (45 feet apart). Mostly unconfined, discontinuous upland drainages and overland sheet flow connect W8 to the unnamed tributary to Ten Mile Creek offsite (40 feet apart).**

☐ Ecological connection. Explain:

☐ Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **~16.3** river miles from TNW.

Project wetlands are **~11.3** aerial (straight) miles from TNW.

Flow is from: **W8 drains north offsite to an unnamed tributary of Ten Mile Creek. W7 drains to S12, which drains north offsite to an unnamed tributary of Ten Mile Creek. W1 and W2 drain to S4 and W3 and W4 drain to S5. S4 and S5 drain to S6, which drains south offsite to Ten Mile Creek. W5 drains to S7, which drains to S9. W6 drains to S9, which drains south offsite to Ten Mile Creek. Ten Mile Creek is located offsite parallel to the west property boundary. Ten Mile Creek flows into Little Seneca Creek, which drains to Little Seneca Lake, which drains to Seneca Creek, which drains to the Potomac River, a tidal, navigable, interstate tributary of the Chesapeake Bay, an interstate TNW.**

Estimate approximate location of wetland as within the floodplain: **All of the wetlands within the north portion of the area of review are within the 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 color is clear; ground is very soft; water quality was not examined and no sensitive species were observed;**

Identify specific pollutants, if known: **none known**

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

☒ Riparian buffer. Characteristics (type, average width): **The streams and wetlands in the north portion of the site are located in a forested corridor. While there is one large agricultural field near the upper reaches and one near the lower reaches of streams and wetlands in this portion of the area of review, the forested corridor is wide in this portion of the site, with an average width of 4,429 feet. The forested corridor is dominated by approximately 5 to 50 year old deciduous forest, depending on the reach.**

☒ Vegetation type/percent cover. Explain: **Deciduous forest ranges in age from approximately 5 – 50 year old trees, depending on the area;**

☐ Habitat for: **unknown – detailed wildlife study not completed for site**

☐ Federally Listed species. Explain findings:

☐ Fish/spawn areas. Explain findings:

☐ Other environmentally-sensitive species. Explain findings:

☒ Aquatic/wildlife diversity. Explain findings: **Along with riparian upland forested habitat, supports habitat for forest dwelling species, including mammals, reptiles, amphibians, and mammals.**

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

All wetland(s) being considered in the cumulative analysis: **8 jurisdictional wetlands in north portion of site (plan 4-3-2, Y9 – H1) – 0.8912 acres, out of 56 total jurisdictional wetlands onsite (5.07 acres).**

Approximately **5.07** acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
W8 (N) [plan 4]	**0.237**	**W7 (Y) [plan 3]**	**0.0062**
W1 (Y) [plan 2]	**0.13**	**W2 (Y) [plan 2]**	**0.1132**
W3 (N) [plan 2]	**0.3079**	**W4 (N) [plan 2]**	**0.0109**
W5 (Y) [plan 2]	**0.03**	**W6 (N) [plan 2]**	**0.056**

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:

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: **S11 drains 27 feet north directly into S12, which drains 345 linear feet before draining offsite to an unnamed tributary of Ten Mile Creek. S1 drains 205 feet north to S2, which drains 584 feet north to S4, a RPW that drains into S6, a RPW that drains into Ten Mile Creek. Ten Mile Creek is located offsite and parallel to the west property boundary. Ten Mile Creek flows into Little Seneca Creek, which drains to Little Seneca Lake, which drains to Seneca Creek, which drains to the Potomac River, a tidal, navigable, interstate tributary of the Chesapeake Bay, an interstate 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: **W3 drains 25 feet downslope through mostly unconfined, discontinuous upland drainages and overland sheet flow to S5. W6 drains 45 feet downslope through mostly unconfined, discontinuous upland drainages and overland sheet flow to S9. W8 drains 40 feet downslope through mostly unconfined, discontinuous upland drainages and overland sheet flow to an offsite unnamed tributary of Ten Mile Creek. S5 drains south to S6, which drains south offsite to Ten Mile Creek. S9 drains south offsite to Ten Mile Creek. Ten Mile Creek is located offsite parallel to the west property boundary. Ten Mile Creek flows into Little Seneca Creek, which drains to Little Seneca Lake, which drains to Seneca Creek, which drains to the Potomac River, a tidal, navigable, interstate tributary of the Chesapeake Bay, an interstate TNW.**

* Aquatic Life (Organisms): **Due to the ephemeral nature of the flow in S1 and S11, large aquatic organisms, such as fish, or aquatic organisms that require longer term flow would not be expected to be present. However, more opportunistic organisms that only require a short period of time to develop, such as some species of benthic macro-invertebrates, could potentially be expected to be present. During the Corps' site visit on 31 October and 21 November 2013, at the beginning of the wet season, water was not observed to be flowing in the channels, but no rain had fallen at the site in the five days prior to the site visit. While much of central Maryland, including the project area, received 3 to 4 inches more rain than average in October, central Maryland received 0.5 inches less than normal average monthly rainfall for November during November 2013.**

W3, W6, and W8 that drain to S5, S9, and an unnamed tributary offsite, respectively, would not provide habitat for large aquatic organisms or those that require long periods of flow, but may support organisms that only require brief periods of inundation to survive. Water draining from W3, W6, and W8 would be expected to indirectly support aquatic life in the adjacent streams by improving the quality of water draining to the perennial stream.

* Habitat for Wildlife: **A detailed assessment of the quality of wildlife habitat was not performed. The forested stream corridors, wetlands, and adjacent upland areas provide habitat for a variety of upland wildlife species, such as white-tailed deer.**

* Support Nutrient Cycling: **The ephemeral channels and abutting riparian areas would encourage chemical processes that require oxygenated conditions. Also, for wetlands and streams located in forested areas where carbon (fallen leaves) is allowed to be incorporated into the soil, uptake by plants can take place and carbon is provided to facilitate microbial action for nutrient cycling. Additionally, the conveyance of some of the detritus downstream may provide soil nutrition and a food source for fish and other aquatic organisms downstream. Reducing conditions in W3, W6, and W8 would encourage chemical processes that require anaerobic conditions, e.g. denitrification, also supported by the detritus from the surrounding upland areas, i.e. providing carbon to facilitate microbial respiration.**

* Sediment Transport: **The opportunity to perform this function is adequate for the streams with ephemeral flow (S1 and S11) because within these streams there are no major blockages, such as a beaver dam, to arrest the transport of sediment. W3, W6, and W8 do not contribute to sediment transport, but the vegetation in the four wetlands would be expected to contribute to sediment trapping.**

* Pollutant Trapping: **Overland drainage from nearby agricultural fields may enter the system within the forested area. Potential sources of pollutants, such as excess fertilizer, sediment, pesticides, and fecal matter (from cattle grazing), may enter the stream system. All the streams and wetlands on site are located in vegetated areas. Plants in general, and trees in particular, may trap some of the pollutants transported into the wetlands and streams on site. Ephemeral channels only tend to flow during and for a short period after storm events and in-channel flow during storm events tends to have very limited residence time; therefore although some of the vegetation in the floodplain may be able to trap pollutants, there is likely to be limited trapping of pollutants overall. W3, W6, and W8 that drain to S5, S9, and an unnamed tributary offsite, respectively, would be expected to have some success at trapping some of the anticipated pollutants, particularly nutrients via plant uptake, and sediment and some less persistent pesticides, due to the trapping in the soil and treatment with microbial processes in reducing conditions.**

* WQ Improvement: **Ephemeral channels only tend to flow during and for a short period after storm events and in-channel flow during storm events tends to have very limited residence time; therefore although some of the vegetation in the floodplain may be able to trap pollutants, there is likely to be limited trapping of pollutants overall. Conversely, if the ephemeral streams in this portion of the area of review (S1 and S11) were to be exposed to a pollutant, there is the possibility, depending on the persistence of the pollutant, for the pollutant to be transported from the ephemeral streams to the nearest TNW, the Potomac River. W3, W6, and W8 that drain to S5, S9, and an unnamed tributary offsite, respectively, would be expected to have some success at trapping some of the anticipated pollutants, particularly nutrients via plant uptake, and sediment and some less persistent pesticides, due to the trapping in the soil and treatment with microbial processes in reducing conditions; therefore, W3, W6, and W8 would be expected to have a moderate opportunity to improve the chemical and physical aspects of water quality in S5, S9, and waters downstream offsite.**

* Temperature: **The trees in the riparian buffer and in and around W3, W6, and W8 would be expected to contribute shade which would moderate temperature fluctuations in the channel, thereby moderating fluctuations of the concentration of dissolved oxygen (DO) and improving biological water quality improvement.**

* Flood Storage: **S1 and S11 are stable and connected to their floodplains, which would allow them to provide flood storage. W3, W6, and W8 would be expected to contribute to flood storage by holding water that drains to those wetlands.**

* Commerce: **S1 and S11 are all too small and flow too infrequently to provide recreational boating or fishing and thus have limited opportunities to support commerce. W3, W6, and W8 do not contain drainages that are large enough to support commerce. However, they would be expected to contribute stream flow and a small amount detritus to downstream waters which would improve water quality downstream in the Potomac River, a TNW which does support some fishing activities and supports boating in the tidal areas.**

* Navigation: **S1 and S11 are too small to be navigable. W3, W6, and W8 do not contain drainages that are navigable.**

* Recreation: **S1, S11, W3, W6, and W8 are all located on private property and have limited recreational opportunities due to small size and lack of regular or seasonal water flow regime. If allowed, the area of review could support additional recreational activities such as hiking and bird watching proportionate to the riparian upland forested habitat.**

* Public Health: **All of the streams and wetlands on site indirectly drain into Ten Mile Creek, which is the main tributary of Little Seneca Lake, the emergency drinking water source for the Washington D.C. metropolitan area. If a stream or wetland on site were to become impaired (e.g. pesticide spill), it is possible that the Little Seneca Lake could be affected, which would affect public health.**

* Groundwater Discharge: **Groundwater seeps were not observed during the 31 October and 21 November 2013 site visits.**

* Groundwater recharge: **S1 and S11 are ephemeral streams that flow primarily during and briefly after storm events. Therefore, water in these streams would be expected to be moving at a velocity that is too fast to encourage groundwater recharge. W3, W6, and W8 would be expected to hold enough water to at least result in saturated soils during a portion of the growing season, therefore they would be expected to be connected to the groundwater table for at least part of the time and could provide groundwater recharge.**

Based on the above and field experience in Central Maryland, S1, S11, W3, W6, and W8 do have a significant nexus with the physical, chemical, or biological integrity of the 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:
☐ 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: **The streams S3, S4, S5, S6, S7, S8, and S9 all were observed to have well developed stream morphology characteristic of perennial flow, including channel sinuosity; sediment sorting; flow observed during the Corps site visit at the beginning of the "wet season"; and clear and consistent bed, bank, and ordinary high water mark as indicated by the absence of rooted vegetation within the channel, the absence of debris within the channel, and some scour of the channel.**

☒ 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: The streams **S2, S10, and S12 were all observed to have moderately-well developed stream morphology characteristic of seasonally-intermittent flow, including channel sinuosity; sediment sorting; flow observed during the Corps site visit at the beginning of the "wet season"; and clear and consistent bed, bank, and ordinary high water mark as indicated by the absence of rooted vegetation within the channel, the absence of debris within the channel, and some scour of the channel. While the seasonally-intermittent streams had many of the same stream morphological characteristics as the perennial streams, the characteristics in the seasonally-intermittent streams were generally not as well defined or as consistent.**

Provide estimates for jurisdictional waters in the review area (check all that apply):
☒ Tributary waters (linear feet): **S3 (764), S4 (630), S5 (480), S6 (1,074), S7 (466), S8 (409), S9 (470), S2 (584), S10 (401), and S12 (345)**
☐ Other non-wetland waters: acres.
Identify type(s) of waters:

3. Non-RPWs[13] 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: **S1 (205) and S11 (27)**

☐ 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: **W1, W2, W4, W5, and W7 all directly overlap in aerial coverage with portions of the streams they are directly abutting.**
☒ 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: **W7 is directly overlapping in aerial coverage with portions of the stream it is directly abutting.**

[13]See Footnote # 3.

Provide acreage estimates for jurisdictional wetlands in the review area: **W7 [plan 3] – 0.0062, W1 [plan 2] – 0.13, W2 [plan 2] – 0.1132, W4 [plan 2] - 0.0109, W5 [plan 2] - 0.03,**

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: **W8 [plan 4] – 0.237, W3 [plan 2] – 0.3079, W6 [plan 2] - 0.056**

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:

7. **Impoundments of jurisdictional waters.**[14]
   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):[15]

☐ 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:
☐ Other non-wetland waters:
   Identify type(s) of waters:
☐ Wetlands:

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

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

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

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

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[14] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[15] **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.***

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

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

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply) - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **ADC vicinity map included in Klebasko Environmental LLC Delineation Report submission dated 26 September 2013.**
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☒ Office concurs with data sheets/delineation report. **With three exceptions that were resolved: 1) upland area on hillslope – originally marked as wetland and later listed as an upland area at the examination and behest of the Corps; 2) a wetland marked on the original plans as PFO which was relabeled as PEM at the examination and behest of the Corps; 3) a stream that had expanded beyond its original delineated area as a result of ponding from a beaver dam, the limits of which were expanded at the examination and behest of the Corps.**
☐ 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: **From USFWS mapping website (http://www.fws.gov/wetlands/Data/Mapper.html) Included in delineation report**
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: **soil resource report of soil series mapped on site included in delineation report.**
☒ National wetlands inventory map(s). Cite name: **From USFWS mapping website (http://www.fws.gov/wetlands/Data/Mapper.html) Included in delineation report**
☒ State/Local wetland inventory map(s): **Wetlands of Special State Concern and state wetlands data layer for area of review from the MERLIN interactive map.**
☐ FEMA/FIRM maps:
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): high resolution **aerial imagery of site dated 2011 – 2013 and 2010-2011, and infrared imagery dated 1988 - 1994 from MDNR MERLIN mapping website**
or ☒ Other (Name & Date): **Photographs dated August 2013 included with Delineation Report.**
☐ Previous determination(s). File no. and date of response letter:
☐ Applicable/supporting case law:
☐ Applicable/supporting scientific literature:
☒ Other information (please specify): **see footnotes elsewhere in basis form and listed in references below**

B. ADDITIONAL COMMENTS TO SUPPORT JD:

References:

USACE HUC Characterization tool, Catoctin Creek Watershed (10-digit HUC 0207000803). Accessed 02 May 2014.

Audubon Naturalist Society, (2014) Ten Mile Creek: Saving Our Last Best Stream. http://www.audubonnaturalist.org/index.php/ten-mile-creek#issues. Accessed 01 April 2015.

USACE HUC Characterization tool, Catoctin Creek Watershed (10-digit HUC 0207000803). Accessed 02 May 2014.
Pulte Homes (2014) Frequently Asked Questions. http://www.ten-milecreek.com/faq/. Accessed 01 April 2015.

Maryland Department of the Environment, Normal Monthly Precipitation Totals (in Inches) for Maryland Counties, http://www.mde.state.md.us/programs/Water/WaterConservation/CurrentConditions/Pages/Programs/WaterPrograms/Water_Conservation/previous_conditions/normalprecip_new.aspx Accessed 01 April 2015.

NOAA, Advanced Hydrological Prediction Service, http://water.weather.gov/precip/. Accessed 01 April 2015.

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): May 22, 2015

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CENAB-OP-RMS (TEN MILE CREEK/JD) 2013-02052-M32

PROJECT LOCATION AND BACKGROUND INFORMATION: Reaches: Stream reaches and abutting and adjacent wetlands from W9 to T1, starting on plan sheet 7, continuing on plan sheet 6, and ending on plan sheet 5; 7 stream reaches and 22 non-tidal wetlands of the total 35 streams and 56 non-tidal wetlands on an approximately 718-acre property referred to as the Ten Mile Creek Property.

State: **Maryland** County/parish/borough: **Montgomery** City: **Clarksburg**
Center coordinates of site (lat/long in degree decimal format): Lat. **N 39.220425** Long. **W - 77.305164**
Name of nearest waterbody: **Ten Mile Creek**
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Potomac River**
The site is located along the west side of Clarksburg Road, north of West Old Baltimore Road, and east of Shiloh Church Road, in Clarksburg, Montgomery County, Maryland. All waters on site drain southwest to Ten Mile Creek, located offsite parallel to the west property boundary. Ten Mile Creek flows into Little Seneca Creek, which drains to Little Seneca Lake, which drains to Seneca Creek, which drains to the Potomac River, a tidal, navigable, interstate tributary of the Chesapeake Bay, an interstate TNW.
Name of watershed or Hydrologic Unit Code (HUC): **Potomac River - 02070010**
☒ 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: **01 May 2015**
☒ Field Determination. Date(s): **31 October 2013, 21 November 2013**

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There are not "*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: The north-central portion (plan 7-6-5; W9 - T1) of the project site consists of 22 nontidal wetlands (1.4361 acres) and 7 nontidal stream reaches (7,617 linear feet). Total area of waters in the area of review is approximately 21,981 linear feet of jurisdictional waters, 5.07 acres of wetlands.**

[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).

The project impact area is indicated below.

c. **Limits (boundaries) of jurisdiction based on: the Eastern Mountain and Piedmont Regional Supplement to the Corps Wetland 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 not to be jurisdictional. Explain:

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: **92.5 square miles (Catoctin Creek Watershed: 10 digit HUC 020700803)**
Drainage area: **Ten Mile Creek - greater than 3,500 acres**[5]
Normal average monthly rainfall for **October (3.1 inches) and November (3.4 inches)**[6]
Departure from normal average monthly rainfall for **October 2013 (3 – 4 inches more than annual average) and November 2013 (0.5 inches less than average in the general vicinity of the project area)**[7]

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[3] Supporting documentation is presented in Section III.F.
[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] **Pulte Homes (2014) Frequently Asked Questions. http://www.ten-milecreek.com/faq/. Accessed 01 April 2015.**
[6] **Maryland Department of the Environment, Normal Monthly Precipitation Totals (in Inches) for Maryland Counties, http://www.mde.state.md.us/programs/Water/WaterConservation/CurrentConditions/Pages/Programs/WaterPrograms/Water_Conservation/previous_conditions/normalprecip_new.aspx Accessed 01 April 2015.**

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

☒ Tributary flows through **~ 4** tributaries before entering TNW

Project waters are approximately **~16.3** river miles from TNW.
Project waters are approximately **less than 1** river miles from RPW.
Project waters are approximately **11.3** aerial (straight) miles from TNW.
Project waters are approximately **less than 1** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: **N/A**.
Identify flow route to TNW[8]: **three first order streams on site flow into four second order streams that flow directly into Ten Mile Creek, located offsite parallel to the west property boundary. Ten Mile Creek flows into Little Seneca Creek, which drains to Little Seneca Lake, which drains to Seneca Creek, which drains to the Potomac River, a tidal, navigable, interstate tributary of the Chesapeake Bay, an interstate TNW.**

Tributary stream order, if known: **1st order (S17, S19, S20), 2nd order (S13, S14, S15, S18)**

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

Tributary is: ☒ Natural: **all (S17, S18, S19, S20, S13, S14, S15)**
☐ Artificial (man-made). Explain:
☐ Manipulated (man-altered). Explain:

Tributary properties with respect to top of bank (estimate):
Average width: **6 - 15 feet**
Average depth: **3 feet**
Average side slopes: **0.5 - 1: 1**

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: **moderate stability – banks vegetated for all (S17, S18, S19, S20, S13, S14, S15)**
Tributary geometry:
Tributary gradient (approximate average slope): **S20 (5%), S18 (2%); S17, S19, S13, S14, S15 (1.5%).**

(c) Flow:

Tributary provides for: **perennial flow all (S17, S18, S19, S20, S13, S14, S15)**
Estimate average number of flow events in review area/year: **continuous – perennial flow**
Describe flow regime: **see above**
Other information on duration and volume:
Surface flow is: **varies, see above**
Characteristics:
Subsurface flow: **unknown;**
☐ Dye (or other) test performed**: N/A.**

Tributary has (check all that apply):
☒ Bed and banks **(all)**
☒ OHWM[9] (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

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[7] **NOAA, Advanced Hydrological Prediction Service, http://water.weather.gov/precip/. Accessed 01 April 2015.**
[8] 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.
[9] 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

☐ other (list):
☐ Discontinuous OHWM.[10] 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)
- ☐ physical markings/characteristics
- ☐ tidal gauges
- ☐ other (list):

☐ Mean High Water Mark indicated by:
- ☐ survey to available datum;
- ☐ physical markings;
- ☐ vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:

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

Explain: **water generally clear in all streams with occasional iron or bacterial sheen on the water surface in slow moving portions of channels. The Catoctin Creek Watershed (10-digit HUC 0207000803) has approximately 207.3 miles of perennial and intermittent streams (combined). The land cover of the watershed as of 2006 included approximately 7.5 percent developed land (0.9% impervious cover), 31.0 percent forest, and 60.6 percent agricultural use (pasture/hay and cultivation)[11]. Ten Mile Creek is characterized as the highest quality stream system in the Washington D.C. metropolitan area and is a tributary to Little Seneca Reservoir/Lake, the emergency water supply for Washington D.C.[12]**

Identify specific pollutants, if known: **unknown**

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

☒ Riparian corridor. Characteristics (type, average width): **The streams and wetlands in the north-central portion of the site are located in a forested corridor. The corridor is an average width of 43 feet at the upper portions and first order tributaries and surrounded by agricultural row crops and grazing fields. In the downstream portions of the system, closer to the west boundary of the area of review, the forested corridor increases in width to 3,401 feet. The forested corridor is dominated by approximately 5 to 50 year old deciduous forest, depending on the reach.**

☒ Wetland fringe. Characteristics: **abutting PFOs on S18, S20, S17, S13, S14 and S15**

☒ Habitat for:
- ☐ Federally Listed species. Explain findings:
- ☒ Fish/spawn areas. Explain findings: **The streams within this portion of the site all have perennial flow and appear to have a variety of in-stream fish and invertebrate habitat.**
- ☐ Other environmentally-sensitive species. Explain findings:
- ☒ Aquatic/wildlife diversity. Explain findings: **Along with riparian upland forested habitat, supports habitat for forest dwelling species, including mammals, reptiles, amphibians, and mammals.**

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 (acres): **W29 [plan 7] – 0.02, W30 [plan 7] – 0.063, W16 [plan 6] – 0.07, W17 [plan 6] – 0.025, W18 [plan 6] – 0.11,W19 [plan 6] - 0.011, W20 [plan 6] - 0.012, W-21 [plan 6] - 0.03, W-22 [plan 6] - 0.015, W57 [plan 6] – 0.013, W23 [plan 6] – 0.0061, W24 [plan 6] – 0.057, W25 [plan 6] – 0.064, W26 [plan 6] – 0.05, W27 [plan 6] – 0.03, W28 [plan 6] – 0.11, W9 [plan 5] – 0.014, W10 [plan 5] – 0.08, W11 [plan 5] – 0.03, W12 [plan 5] – 0.4, W13 [plan 5] – 0.006, W14 [plan 5] – 0.04**

Wetland type. **22 PFOs (W29, W30, W16, W17, W18, W19, W20, W22, W57, W23, W24, W25, W26, W27, W28, W9, W10, W11, W12, W13, and W14)**

Wetland quality. Explain: **Refer to Section IV.B.**

Project wetlands cross or serve as state boundaries. Explain: **N/A**.

(b) General Flow Relationship with Non-TNW:

Flow is: **W16, W18, W20, W21, W22, W57, W23, W29 and W30 directly abut and flow directly into S18, an RPW, which drains into S13. W17 directly abuts and flows directly into S17, an RPW, which drains into S18, an RPW, which drains into S13.W26, W27, and W28 directly abut and flow directly into S20, an RPW, which drains into S13. W9, W10, W11, W12, and W14 directly abut and flow directly into S13, a RPW, which drains into S15. W11and W14 directly abut and flow directly into S14. W12 is directly abutting and flows directly into both S14 and S15. S14 and S15 drain offsite into Ten Mile Creek.**

[10] Ibid.
[11] **USACE HUC Characterization tool, Catoctin Creek Watershed (10-digit HUC 0207000803). Accessed 02 May 2014.**
[12] **Audubon Naturalist Society, (2014) Ten Mile Creek: Saving Our Last Best Stream. http://www.audubonnaturalist.org/index.php/ten-mile-creek#issues. Accessed 01 April 2015.**

Surface flow is: **clear.**
Characteristics:
Subsurface flow: **unconfirmed in the field, but likely present** Explain findings: **groundwater seeps were not observed in wetland area on site during Corps site visit. However, all twenty-two wetlands in the north-central portion of the area of review are located at the toe of hillslopes and are directly abutting streams, indicating that groundwater discharge is present to support baseflow to maintain wetland hydrology that would otherwise be lost to the stream channel.**
☐ Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:
☒ Directly abutting **(W29, W30, W16, W17, W18, W20, W22, W57, W23, W26, W27, W28, W9, W10, W11, W12, and W14)**

☒ Not directly abutting
☒ Discrete wetland hydrologic connection. Explain: **Mostly unconfined, discontinuous upland drainages and overland sheet flow connect W19 to S18 (49 feet apart). Mostly unconfined, discontinuous upland drainages and overland sheet flow connect W24 to S18 (46 feet apart). Mostly unconfined, discontinuous upland drainages and overland sheet flow connect W25 to S18 (38 feet apart). Mostly unconfined, discontinuous upland drainages and overland sheet flow connect W13 to S14 (21 feet apart).**
☐ Ecological connection. Explain:
☐ Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW
Project wetlands are **~16.3** river miles from TNW.
Project wetlands are **~11.3** aerial (straight) miles from TNW.
Flow is from: **The wetlands (W29, W30, W16, W17, W18, W19, W20, W22, W57, W23, W24, W25, W26, W27, W28, W9, W10, W11, W12, W13, and W14) drain indirectly or directly into S14 and S15, which drains west offsite to Ten Mile Creek located offsite parallel to the west property boundary. Ten Mile Creek flows into Little Seneca Creek, which drains to Little Seneca Lake, which drains to Seneca Creek, which drains to the Potomac River, a tidal, navigable, interstate tributary of the Chesapeake Bay, an interstate TNW.**
Estimate approximate location of wetland as within the floodplain: **All (W29, W30, W16, W17, W18, W19, W20, W22, W57, W23, W24, W25, W26, W27, W28, W9, W10, W11, W12, W13, and W14) are within 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 color is clear; ground is very soft; water quality was not examined and no sensitive species were observed;**
Identify specific pollutants, if known: **none known**

(iii) Biological Characteristics. Wetland supports (check all that apply):
☒ Riparian buffer. Characteristics (type, average width): **The streams and wetlands in the north-central portion of the site are located in a forested corridor. The corridor is an average width of 43 feet at the upper portions and first order tributaries and surrounded by agricultural row crops and grazing fields. In the downstream portions of the system, closer to the west boundary of the area of review, the forested corridor increases in width to 3,401 feet. The forested corridor is dominated by approximately 5 to 50 year old deciduous forest, depending on the reach.**
☒ Vegetation type/percent cover. Explain: **Deciduous forest ranges in age from approximately 5 – 50 year old trees, depending on the area;**
☐ Habitat for: **unknown – detailed wildlife study not completed for site**
☐ Federally Listed species. Explain findings:
☐ Fish/spawn areas. Explain findings:
☐ Other environmentally-sensitive species. Explain findings:
☒ Aquatic/wildlife diversity. Explain findings: **Along with surrounding upland forested habitat, supports habitat for forest dwelling species, including mammals, reptiles, amphibians, and mammals.**

3. Characteristics of all wetlands adjacent to the tributary (if any)
All wetland(s) being considered in the cumulative analysis: **22 nontidal wetlands - 1.4361 acres, out of 56 total jurisdictional wetlands onsite (5.07 acres).**
Approximately **5.07** acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
W29 (Y) [plan 7]	**0.02**	**W30 (Y) [plan 7]**	**0.063**
W16 (Y) [plan 6]	**0.07**	**W17 (Y) [plan 6]**	**0.025**
W18 (Y) [plan 6]	**0.11**	**W19 (N) [plan 6]**	**0.011**
W20 (Y) [plan 6]	**0.012**	**W-21 (Y) [plan 6]**	**0.03**

W-22 (Y) [plan 6]	**0.015**	**W57 (Y) [plan 6]**	**0.013**
W23 (Y) [plan 6]	**0.0061**	**W24 (N) [plan 6]**	**0.057**
W25 (N) [plan 6]	**0.064**	**W26 (Y) [plan 6]**	**0.05**
W27 (Y) [plan 6]	**0.03**	**W28 (Y) [plan 6]**	**0.11**
W9 (Y) [plan 5]	**0.014**	**W10 (Y) [plan 5]**	**0.08**
W11 (Y) [plan 5]	**0.03**	**W12 (Y) [plan 5]**	**0.4**
W13 (N) [plan 5]	**0.006**	**W14 (Y) [plan 5]**	**0.04**

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:

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: **W19 drains 49 feet downslope through mostly unconfined, discontinuous upland drainages and overland sheet flow to S18. W24 drains 46 feet downslope through mostly unconfined, discontinuous upland drainages and overland sheet flow to S18. W25 drains 38 feet downslope through mostly unconfined, discontinuous upland drainages and overland sheet flow to S18. W13 drains 21 feet downslope through mostly unconfined, discontinuous upland drainages and overland sheet flow to S14. S18 drains directly into S13, which drains directly into S14 and S15, which drain west an additional 619 and 721 feet respectively to connect to Ten Mile Creek, a perennial tributary that drains indirectly to the Potomac River, a TNW.**

   * Aquatic Life (Organisms): **W19, W24, and W25 that drain to S18 and W13 that drains to S14 would not provide habitat for large aquatic organisms or those that require long periods of flow, but may support organisms that only require brief periods of inundation to survive. Water draining from W19, W24, W25, and W13 would be expected to indirectly support aquatic life in the adjacent S18 and S14 by improving water quality in the perennial stream.**

   * Habitat for Wildlife: **A detailed assessment of the quality of wildlife habitat was not performed. The forested stream corridors, wetlands, and adjacent upland areas provide habitat for a variety of upland wildlife species, such as white-tailed deer.**

* Support Nutrient Cycling: **Reducing conditions in W19, W24, W25, and W13 would encourage chemical processes that require anaerobic conditions, e.g. denitrification, also supported by the detritus from the surrounding upland areas, i.e. providing carbon to facilitate microbial respiration.**

* Sediment Transport: **W19, W24, W25, and W13 do not contribute to sediment transport, but the vegetation in the four wetlands would be expected to contribute to sediment trapping.**

* Pollutant Trapping: **Overland drainage from nearby agricultural fields may enter the system within the forested area. Potential sources of pollutants, such as excess fertilizer, sediment, pesticides, and fecal matter (from cattle grazing), may enter the stream system. All the streams and wetlands on site are located in vegetated areas. Plants in general, and trees in particular, may trap some of the pollutants transported into the wetlands and streams on site. W19, W24, and W25 adjacent to S18, a RPW, and Wetland 13 adjacent to S14, a RPW, would be expected to have some success at trapping some of the anticipated pollutants, particularly nutrients via plant uptake, and sediment and some less persistent pesticides, due to the trapping in the soil and treatment with microbial processes in reducing conditions.**

* WQ Improvement: **W19, W24, and W25 adjacent to S18, a RPW, and Wetland 13 adjacent to S14, a RPW, would be expected to have some success at trapping some of the anticipated pollutants, particularly nutrients via plant uptake, and sediment and some less persistent pesticides, due to the trapping in the soil and treatment with microbial processes in reducing conditions; therefore, W19, W24, W25, and W13 would be expected to have a moderate opportunity to improve the chemical and physical aspects of water quality in S18 and S16, respectively, and downstream offsite.**

* Temperature: **The trees in and around W19, W24, W25, and W13 would be expected to contribute shade which would moderate temperature fluctuations in water draining from the wetlands to S18 and S16 respectively, thereby moderating fluctuations of the concentration of dissolved oxygen (DO) and improving biological water quality improvement as the water enters the stream.**

* Flood Storage: **W19, W24, W25, and W13 would be expected to contribute to flood storage by holding water that drains to that wetland.**

* Commerce: **W19, W24, W25, and W13 do not contain drainages that are large enough to support commerce. However, the would be expected to contribute to flow and a small amount of detritus to the adjacent RPWs and downstream waters which would improve water quality downstream in the Potomac River, a TNW. The Potomac River does support some fishing activities and supports boating in the tidal areas.**

* Navigation: **W19, W24, W25, and W13 do not contain drainages that are navigable.**

* Recreation: **W19, W24, W25, and W13 are located on private property and have limited recreational opportunities due to small size and lack of regular or seasonal water flow regime. If allowed, the area of review could support additional recreational activities such as hiking and bird watching proportionate to the surrounding upland forested habitat.**

* Public Health: **All of the streams and wetlands on site indirectly drain into Ten Mile Creek, which is the main tributary of Little Seneca Lake, the emergency drinking water source for the Washington D.C. metropolitan area. If a stream or wetland on site were to become impaired (e.g. pesticide spill), it is possible that the Little Seneca Lake could be affected, which would affect public health.**

* Groundwater Discharge: **Groundwater seeps were not observed during the 31 October and 21 November 2013 site visits.**

* Groundwater recharge: **W19, W24, W25, and W13 would be expected to hold enough water to at least result in saturated soils during a portion of the growing season; therefore W19, W24, W25, and W13 would be expected to be connected to the groundwater table for at least part of the time and would have the opportunity to provide groundwater recharge.**

Based on the above and field experience in Central Maryland, W19, W24, W25, and W13 do have a significant nexus with the physical, chemical, or biological integrity of the 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:
☐ 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: **The streams S18, S17, S19, S20, S13, S14 and S15 all were observed to have well developed stream morphology characteristic of perennial flow, including channel sinuosity; sediment sorting; flow observed during the Corps site visit at the beginning of the "wet season" when the last rain had been approximately five days**

prior to the site visit; and clear and consistent bed, bank, and ordinary high water mark as indicated by the absence of rooted vegetation within the channel, the absence of debris within the channel, and some scour of the channel.

☐ 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): **S18 (3,955), S17 (192), S19 (84), S20 (1,174), S13 (1,171), S14 (467), and S15 (574)**
☐ Other non-wetland waters: acres.
Identify type(s) of waters:

3. Non-RPWs[13] 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: **W29, W30, W16, W17, W18, W20, W22, W57, W23, W26, W27, W28, W9, W10, W11, W12, and W14 all directly overlap in aerial coverage with portions of the streams they are directly abutting.**
☐ 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: **W29 [plan 7] – 0.02, W30 [plan 7] – 0.063, W16 [plan 6] – 0.07, W17 [plan 6] – 0.025, W18 [plan 6] – 0.11, W20 [plan 6] - 0.012, W-21 [plan 6] - 0.03, W-22 [plan 6] - 0.015, W57 [plan 6] – 0.013, W23 [plan 6] – 0.0061, W26 [plan 6] – 0.05, W27 [plan 6] – 0.03, W28 [plan 6] – 0.11, W9 [plan 5] – 0.014, W10 [plan 5] – 0.08, W11 [plan 5] – 0.03, W12 [plan 5] – 0.4, W14 [plan 5] – 0.04**

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: **W19 [plan 6] - 0.011, W24 [plan 6] – 0.057, W25 [plan 6] – 0.064, and W13 [plan 5] – 0.006**

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:

7. Impoundments of jurisdictional waters.[14]
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):[15]

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

☐ 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:
☐ Other non-wetland waters:
Identify type(s) of waters:
☐ Wetlands:

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

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

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

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

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **ADC vicinity map included in Klebasko Environmental LLC Delineation Report submission dated 26 September 2013.**
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☒ Office concurs with data sheets/delineation report. **With three exceptions that were resolved: 1) upland area on hillslope – originally marked as wetland and later listed as an upland area at the examination and behest of the Corps; 2) a wetland marked on the original plans as PFO which was relabeled as PEM at the examination and behest of the Corps; 3) a stream that had expanded beyond its original delineated area as a result of ponding from a beaver dam, the limits of which were expanded at the examination and behest of the Corps.**
☐ 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: **From USFWS mapping website (http://www.fws.gov/wetlands/Data/Mapper.html) Included in delineation report**

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[15] **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.***

☒ USDA Natural Resources Conservation Service Soil Survey. Citation: **soil resource report of soil series mapped on site included in delineation report.**
☒ National wetlands inventory map(s). Cite name: **From USFWS mapping website (http://www.fws.gov/wetlands/Data/Mapper.html) Included in delineation report**
☒ State/Local wetland inventory map(s): **Wetlands of Special State Concern and state wetlands data layer for area of review from the MERLIN interactive map.**
☐ FEMA/FIRM maps:
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): high resolution **aerial imagery of site dated 2011 – 2013 and 2010-2011, and infrared imagery dated 1988 - 1994 from MDNR MERLIN mapping website**
or ☒ Other (Name & Date): **Photographs dated August 2013 included with Delineation Report.**
☐ Previous determination(s). File no. and date of response letter:
☐ Applicable/supporting case law:
☐ Applicable/supporting scientific literature:
☒ Other information (please specify): **see footnotes elsewhere in basis form and listed in references below**

B. ADDITIONAL COMMENTS TO SUPPORT JD:

References:

USACE HUC Characterization tool, Catoctin Creek Watershed (10-digit HUC 0207000803). Accessed 02 May 2014.

Audubon Naturalist Society, (2014) Ten Mile Creek: Saving Our Last Best Stream. http://www.audubonnaturalist.org/index.php/ten-mile-creek#issues. Accessed 01 April 2015.

USACE HUC Characterization tool, Catoctin Creek Watershed (10-digit HUC 0207000803). Accessed 02 May 2014.
Pulte Homes (2014) Frequently Asked Questions. http://www.ten-milecreek.com/faq/. Accessed 01 April 2015.

Maryland Department of the Environment, Normal Monthly Precipitation Totals (in Inches) for Maryland Counties, http://www.mde.state.md.us/programs/Water/WaterConservation/CurrentConditions/Pages/Programs/WaterPrograms/Water_Conservation/previous_conditions/normalprecip_new.aspx Accessed 01 April 2015.

NOAA, Advanced Hydrological Prediction Service, http://water.weather.gov/precip/. Accessed 01 April 2015.

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): May 22, 2015

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CENAB-OP-RMS (TEN MILE CREEK/JD) 2013-02052-M32

PROJECT LOCATION AND BACKGROUND INFORMATION: Reaches: Stream reaches and abutting and adjacent wetlands from K9 to K191, starting on plan sheet 9, continuing on plan sheet 8, and ending on plan sheet 5; 6 stream reaches and 11 non-tidal wetlands of the total 35 streams and 56 non-tidal wetlands on an approximately 718-acre property referred to as the Ten Mile Creek Property.

State: **Maryland** County/parish/borough: **Montgomery** City: **Clarksburg**
Center coordinates of site (lat/long in degree decimal format): Lat. **N 39.220425** Long. **W - 77.305164**
Name of nearest waterbody: **Ten Mile Creek**
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Potomac River**
The site is located along the west side of Clarksburg Road, north of West Old Baltimore Road, and east of Shiloh Church Road, in Clarksburg, Montgomery County, Maryland. All waters on site drain southwest to Ten Mile Creek, located offsite parallel to the west property boundary. Ten Mile Creek flows into Little Seneca Creek, which drains to Little Seneca Lake, which drains to Seneca Creek, which drains to the Potomac River, a tidal, navigable, interstate tributary of the Chesapeake Bay, an interstate TNW.
Name of watershed or Hydrologic Unit Code (HUC): **Potomac River - 02070010**
☒ 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: **01 May 2015**
☒ Field Determination. Date(s): **31 October 2013, 21 November 2013**

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There are not "*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: The south-central portion (plan 9–8-5; K9 – K191) of the project site consists of 11 nontidal wetlands (1.7755 acres) and 6 nontidal stream reaches (4,888 linear feet). Total area of waters is approximately 21,981 linear feet of jurisdictional waters, 5.07 acres of wetlands.**

[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).

The project impact area is indicated below.

c. **Limits (boundaries) of jurisdiction based on: the Eastern Mountain and Piedmont Regional Supplement to the Corps Wetland 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 not to be jurisdictional. Explain:

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: **92.5 square miles (Catoctin Creek Watershed: 10 digit HUC 020700803)**
Drainage area: **Ten Mile Creek - greater than 3,500 acres**[5]
Normal average monthly rainfall for **October (3.1 inches) and November (3.4 inches)**[6]
Departure from normal average monthly rainfall for **October 2013 (3 – 4 inches more than annual average) and November 2013 (0.5 inches less than average in the general vicinity of the project area)**[7]

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[3] Supporting documentation is presented in Section III.F.
[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] **Pulte Homes (2014) Frequently Asked Questions. http://www.ten-milecreek.com/faq/. Accessed 01 April 2015.**
[6] **Maryland Department of the Environment, Normal Monthly Precipitation Totals (in Inches) for Maryland Counties, http://www.mde.state.md.us/programs/Water/WaterConservation/CurrentConditions/Pages/Programs/WaterPrograms/Water_Conservation/previous_conditions/normalprecip_new.aspx Accessed 01 April 2015.**

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

☒ Tributary flows through **~ 4** tributaries before entering TNW

Project waters are approximately **~16.3** river miles from TNW.
Project waters are approximately **less than 1** river miles from RPW.
Project waters are approximately **11.3** aerial (straight) miles from TNW.
Project waters are approximately **less than 1** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: **N/A**.
Identify flow route to TNW[8]: **three first order streams on site flow into three second order streams that flow directly into Ten Mile Creek, located offsite parallel to the west property boundary. Ten Mile Creek flows into Little Seneca Creek, which drains to Little Seneca Lake, which drains to Seneca Creek, which drains to the Potomac River, a tidal, navigable, interstate tributary of the Chesapeake Bay, an interstate TNW.**

Tributary stream order, if known: **1st order (S24, S21, S23), 2nd order (S16, S22, S31)**

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

Tributary is: ☒ Natural: **all (S16, S24, S21, S22, S23, S31)**
☐ Artificial (man-made). Explain:
☐ Manipulated (man-altered). Explain:

Tributary properties with respect to top of bank (estimate):
Average width: **6 - 15 feet**
Average depth: **3 feet**
Average side slopes: **0.5 - 1: 1**

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: **moderate stability – banks vegetated for all (S16, S24, S21, S22, S23, S31)**
Tributary geometry:
Tributary gradient (approximate average slope): **S22, S21 (5%), S23 (2%); S31, S16, S24 (1.5%).**

(c) Flow:

Tributary provides for: **perennial flow (S16, 24), and intermittent flow (S21, S22, S23, S31)**
Estimate average number of flow events in review area/year: **unknown**
Describe flow regime: **see above**
Other information on duration and volume:
Surface flow is: **varies, see above**
Characteristics:
Subsurface flow: **unknown;**
☐ Dye (or other) test performed**: N/A.**

Tributary has (check all that apply):
☒ Bed and banks **(all)**
☒ OHWM[9] (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

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[7] **NOAA, Advanced Hydrological Prediction Service, http://water.weather.gov/precip/. Accessed 01 April 2015.**
[8] 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.
[9] 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

☐ other (list):
☐ Discontinuous OHWM.[10] 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)
- ☐ physical markings/characteristics
- ☐ tidal gauges
- ☐ other (list):

☐ Mean High Water Mark indicated by:
- ☐ survey to available datum;
- ☐ physical markings;
- ☐ vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:

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

Explain: **water generally clear in all streams with occasional iron or bacterial sheen on the water surface in slow moving portions of channels. The Catoctin Creek Watershed (10-digit HUC 0207000803) has approximately 207.3 miles of perennial and intermittent streams (combined). The land cover of the watershed as of 2006 included approximately 7.5 percent developed land (0.9% impervious cover), 31.0 percent forest, and 60.6 percent agricultural use (pasture/hay and cultivation)[11]. Ten Mile Creek is characterized as the highest quality stream system in the Washington D.C. metropolitan area and is a tributary to Little Seneca Reservoir/Lake, the emergency water supply for Washington D.C.[12]**

Identify specific pollutants, if known: **unknown**

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

☒ Riparian corridor. Characteristics (type, average width): **The streams and wetlands in the south-central portion of the site are located in a forested corridor. While there is one large agricultural field near the upper reaches and a smaller field near the center reaches of streams and wetlands in this portion of the area of review, the forested corridor is wide in this portion of the site, with a minimum width of 400 feet and a maximum width, extending offsite, of 4,746 feet. The forested corridor is dominated by approximately 5 to 50 year old deciduous forest, depending on the reach.**

☒ Wetland fringe. Characteristics: **abutting PFOs on S16, S24, and S23**

☒ Habitat for:
- ☐ Federally Listed species. Explain findings:
- ☒ Fish/spawn areas. Explain findings: **The streams within this portion of the site with perennial flow (S16 and S24) appear to have a variety of in-stream fish and invertebrate habitat. Streams with seasonally intermittent flow (S21, S22, S23, and S31) would be expected to support fish habitat on at least a seasonal basis**
- ☐ Other environmentally-sensitive species. Explain findings:
- ☒ Aquatic/wildlife diversity. Explain findings: **Along with riparian upland forested habitat, supports habitat for forest dwelling species, including mammals, reptiles, amphibians, and mammals.**

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 (acres): **W15 [plan 5] – 0.0372, W31 [plan 8] – 0.063, W32 [plan 8] – 0.032, W33 [plan 8] – 0.1163, W34 [plan 8] – 0.034, W56 [plan 8] – 0.016, W35 [plan 8] – 0.037, W36 [plan 8] – 0.12, W38 [plan 8] – 0.10, W39 [plan 9] - 0.48, W40 [plan 9] - 0.74,**

Wetland type. **ten PFOs (W15, W31, W32, W33, W34, W56, W35, W36, W38, W39), one PEMs (W40)**

Wetland quality. Explain: **Refer to Section IV.B.**

Project wetlands cross or serve as state boundaries. Explain: **N/A**.

(b) General Flow Relationship with Non-TNW:

Flow is: **W39 directly abuts and flows directly into S24, an RPW, which drains into S16. W15 is adjacent to S16. W40, W31, W32, W33, W34, W56, W35, and W36 directly abut and flow directly into S16, a RPW, which drains offsite into Ten Mile Creek.**

Surface flow is**: clear.**

Characteristics:

Subsurface flow: **unconfirmed in the field, but likely present** Explain findings: **groundwater seeps were not observed in wetland area on site during Corps site visit. However, all fifteen wetlands in the south-central portion**

[10]Ibid.

[11] **USACE HUC Characterization tool, Catoctin Creek Watershed (10-digit HUC 0207000803). Accessed 02 May 2014.**

[12] **Audubon Naturalist Society, (2014) Ten Mile Creek: Saving Our Last Best Stream. http://www.audubonnaturalist.org/index.php/ten-mile-creek#issues. Accessed 01 April 2015.**

of the area of review are located at the toe of hillslopes and are directly abutting streams, indicating that groundwater discharge is present to support baseflow to maintain wetland hydrology that would otherwise be lost to the stream channel.

☐ Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

☒ Directly abutting **(W31, W32, W33, W34, W56, W35, W36, W38, W39, W40)**

☒ Not directly abutting

☒ Discrete wetland hydrologic connection. Explain: **mostly unconfined, discontinuous upland drainages and overland sheet flow connect W15 to S16.**

☐ Ecological connection. Explain:

☐ Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **~16.3** river miles from TNW.

Project wetlands are **~11.3** aerial (straight) miles from TNW.

Flow is from: **Ten wetlands (W41, W42, W43, W53, W47, W48, W49, W53, W50, W51, W52, W44, W45, W55, and W46) out of the 11 wetlands within the south-central portion of the site drain indirectly or directly into S16, which drains northwest offsite to Ten Mile Creek, located offsite parallel to the west property boundary. W38 drains directly into S23, which drains into S22, which drains into S31, which drains northwest offsite to Ten Mile Creek, located offsite parallel to the west property boundary. Ten Mile Creek flows into Little Seneca Creek, which drains to Little Seneca Lake, which drains to Seneca Creek, which drains to the Potomac River, a tidal, navigable, interstate tributary of the Chesapeake Bay, an interstate TNW.**

Estimate approximate location of wetland as within the floodplain: **All (W15, W31, W32, W33, W34, W56, W35, W36, W38, W39, W40) are within the floodplain of their respective stream channels.**

(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 color is clear; ground is very soft; water quality was not examined and no sensitive species were observed;**

Identify specific pollutants, if known: **none known**

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

☒ Riparian buffer. Characteristics (type, average width): **The streams and wetlands in the south-central portion of the site are located in a forested corridor. While there is one large agricultural field near the upper reaches and a smaller field near the center reaches of streams and wetlands in this portion of the area of review, the forested corridor is wide in this portion of the site, with a minimum width of 400 feet and a maximum width, extending offsite, of 4,746 feet. The forested corridor is dominated by approximately 5 to 50 year old deciduous forest, depending on the reach.**

☒ Vegetation type/percent cover. Explain: **Deciduous forest ranges in age from approximately 5 – 50 year old trees, depending on the area;**

☐ Habitat for: **unknown – detailed wildlife study not completed for site**

☐ Federally Listed species. Explain findings:

☐ Fish/spawn areas. Explain findings:

☐ Other environmentally-sensitive species. Explain findings:

☒ Aquatic/wildlife diversity. Explain findings: **Along with riparian upland forested habitat, supports habitat for forest dwelling species, including mammals, reptiles, amphibians, and mammals.**

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

All wetland(s) being considered in the cumulative analysis: **11 jurisdictional wetlands in south-central portion of site (plan 9-8-5, K9 – K191) – 1.7755 acres, out of 56 total jurisdictional wetlands onsite (5.07 acres).**

Approximately **5.07** acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
W15 (N) [plan 5]	**0.0372**	**W31 (Y) [plan 8]**	**0.063**
W32 (Y) [plan 8]	**0.032**	**W33 (Y) [plan 8]**	**0.1163**
W34 (Y) [plan 8]	**0.034**	**W56 (Y) [plan 8]**	**0.016**
W35 (Y) [plan 8]	**0.037**	**W36 (Y) [plan 8]**	**0.12**
W38 (Y) [plan 8]	**0. 10**	**W39 (Y) [plan 9]**	**0.48**
W40 (Y) [plan 9]	**0.74**		

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:

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: **W15 drains 69 feet downslope through mostly unconfined, discontinuous upland drainages and overland sheet flow to S16, a perennial tributary which drains an additional 185 feet west to connect to Ten Mile Creek, a perennial tributary that drains indirectly to the Potomac River, a TNW.**

   * Aquatic Life (Organisms): **Wetland W15 that drains to S16 would not provide habitat for large aquatic organisms or those that require long periods of flow, but may support organisms that only require brief periods of inundation to survive. Water draining from W15 would be expected to indirectly support aquatic life in the adjacent S16 by improving water quality in the perennial stream.**

   * Habitat for Wildlife: **A detailed assessment of the quality of wildlife habitat was not performed. The forested stream corridors, wetlands, and adjacent upland areas provide habitat for a variety of upland wildlife species, such as white-tailed deer.**

   * Support Nutrient Cycling: **Reducing conditions in W15 would encourage chemical processes that require anaerobic conditions, e.g. denitrification, also supported by the detritus from the surrounding upland areas, i.e. providing carbon to facilitate microbial respiration.**

   * Sediment Transport: **W15 does not contribute to sediment transport, but the vegetation in W15 would be expected to contribute to sediment trapping.**

   * Pollutant Trapping: **Overland drainage from nearby agricultural fields may enter the system within the forested area. Potential sources of pollutants, such as excess fertilizer, sediment, pesticides, and fecal matter (from cattle grazing), may enter the stream system. All the streams and wetlands on site are located in vegetated areas. Plants in general, and trees in particular, may trap some of the pollutants transported into the wetlands and streams on site. W15, adjacent to the S16, a RPW, would be expected to have some success at trapping some of the anticipated pollutants, particularly nutrients via plant uptake, and sediment and some less persistent pesticides, due to the trapping in the soil and treatment with microbial processes in reducing conditions.**

* WQ Improvement: **W15, adjacent to the S16, a RPW, would be expected to have some success at trapping some of the anticipated pollutants, particularly nutrients via plant uptake, and sediment and some less persistent pesticides, due to the trapping in the soil and treatment with microbial processes in reducing conditions; therefore, W15 would be expected to have a moderate opportunity to improve the chemical and physical aspects of water quality in S16 and downstream offsite.**

* Temperature: **The trees in and around W15 would be expected to contribute shade which would moderate temperature fluctuations in water draining from the wetland to S16, thereby moderating fluctuations of the concentration of dissolved oxygen (DO) and improving biological water quality improvement as the water enters the stream.**

* Flood Storage: **W15 would be expected to contribute to flood storage by holding water that drains to that wetland.**

* Commerce: **Wetland W15 does not contain drainages that are large enough to support commerce. However, W15 would be expected to contribute to flow and a small amount of detritus to the adjacent S16 and downstream waters which would improve water quality downstream in the Potomac River, a TNW. The Potomac River does support some fishing activities and supports boating in the tidal areas.**

* Navigation: **Wetland W15 does not contain drainages that are navigable.**

* Recreation: **W15 is located on private property and has limited recreational opportunities due to small size and lack of regular or seasonal water flow regime. If allowed, the area of review could support additional recreational activities such as hiking and bird watching proportionate to the surrounding upland forested habitat.**

* Public Health: **All of the streams and wetlands on site indirectly drain into Ten Mile Creek, which is the main tributary of Little Seneca Lake, the emergency drinking water source for the Washington D.C. metropolitan area. If a stream or wetland on site were to become impaired (e.g. pesticide spill), it is possible that the Little Seneca Lake could be affected, which would affect public health.**

* Groundwater Discharge: **Groundwater seeps were not observed during the 31 October and 21 November 2013 site visits.**

* Groundwater recharge: **Wetlands W15 would be expected to hold enough water to at least result in saturated soils during a portion of the growing season; therefore W15 would be expected to be connected to the groundwater table for at least part of the time and would have the opportunity to provide groundwater recharge.**

Based on the above and field experience in Central Maryland, W15 does have a significant nexus with the physical, chemical, or biological integrity of the 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:
☐ 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: **The streams S16 and 24 were observed to have well developed stream morphology characteristic of perennial flow, including channel sinuosity; sediment sorting; flow observed during the Corps site visit at the beginning of the "wet season" or ponding in the channel when the last rain had been approximately five days prior to the site visit; and clear and consistent bed, bank, and ordinary high water mark as indicated by the absence of rooted vegetation within the channel, the absence of debris within the channel, and some scour of the channel.**

☒ 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: The streams **S21, S22, S31 and S23 were all observed to have moderately-well developed stream morphology characteristic of seasonally-intermittent flow, including channel sinuosity; sediment sorting; flow observed during the Corps site visit at the beginning of the "wet season" or ponding in the channel when the last rain had been approximately five days prior to the site visit; and clear and consistent bed, bank, and ordinary high water mark as indicated by the absence of rooted vegetation within the channel, the absence of debris within the channel, and some scour of the channel. While the seasonally-intermittent streams had many of the same stream morphological characteristics as the perennial streams, the characteristics in the seasonally-intermittent streams were generally not as well defined or as consistent.**

Provide estimates for jurisdictional waters in the review area (check all that apply):
☒ Tributary waters (linear feet): **S16 (2,898), S21 (156), S22 (451), S23 (264), S31 (723), S31 (396)**
☐ Other non-wetland waters: acres.

Identify type(s) of waters:

3. **Non-RPWs[13] 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: **W31, W32, W33, W34, W56, W35, W36, W39, W40 are all directly overlapping in aerial coverage with portions of the streams they are directly abutting.**
☒ 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: **W38 is directly overlapping in aerial coverage with portions of the stream it is directly abutting.**

Provide acreage estimates for jurisdictional wetlands in the review area: **W31 [plan 8] - 0.063, W32 [plan 8] - 0.032, W33 [plan 8] - 0.1163, W34 [plan 8] - 0.034, W56 [plan 8] - 0.016, W35 [plan 8] - 0.037, W36 [plan 8] - 0.12, W38 [plan 8] - 0. 10, W39 [plan 9] - 0.48, W40 [plan 9] - 0.74**

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: **W15 [plan 5] - 0.0372**

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:

7. **Impoundments of jurisdictional waters.[14]**
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):[15]
☐ 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:

[13] See Footnote # 3.
[14] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[15] 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.*

☐ Other non-wetland waters:
Identify type(s) of waters:
☐ Wetlands:

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

☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.

☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.

☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).

☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:

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

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

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

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

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

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **ADC vicinity map included in Klebasko Environmental LLC Delineation Report submission dated 26 September 2013.**

☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.

☒ Office concurs with data sheets/delineation report. **With three exceptions that were resolved: 1) upland area on hillslope – originally marked as wetland and later listed as an upland area at the examination and behest of the Corps; 2) a wetland marked on the original plans as PFO which was relabeled as PEM at the examination and behest of the Corps; 3) a stream that had expanded beyond its original delineated area as a result of ponding from a beaver dam, the limits of which were expanded at the examination and behest of the Corps.**

☐ 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: **From USFWS mapping website (http://www.fws.gov/wetlands/Data/Mapper.html) Included in delineation report**

☒ USDA Natural Resources Conservation Service Soil Survey. Citation: **soil resource report of soil series mapped on site included in delineation report.**

☒ National wetlands inventory map(s). Cite name: **From USFWS mapping website (http://www.fws.gov/wetlands/Data/Mapper.html) Included in delineation report**

☒ State/Local wetland inventory map(s): **Wetlands of Special State Concern and state wetlands data layer for area of review from the MERLIN interactive map.**

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

☒ Photographs: ☒ Aerial (Name & Date): high resolution **aerial imagery of site dated 2011 – 2013 and 2010-2011, and infrared imagery dated 1988 - 1994 from MDNR MERLIN mapping website**
or ☒ Other (Name & Date): **Photographs dated August 2013 included with Delineation Report.**

☐ Previous determination(s). File no. and date of response letter:
☐ Applicable/supporting case law:
☐ Applicable/supporting scientific literature:
☒ Other information (please specify): **see footnotes elsewhere in basis form and listed in references below**

B. ADDITIONAL COMMENTS TO SUPPORT JD:

References:

USACE HUC Characterization tool, Catoctin Creek Watershed (10-digit HUC 0207000803). Accessed 02 May 2014.

Audubon Naturalist Society, (2014) Ten Mile Creek: Saving Our Last Best Stream. http://www.audubonnaturalist.org/index.php/ten-mile-creek#issues. Accessed 01 April 2015.

USACE HUC Characterization tool, Catoctin Creek Watershed (10-digit HUC 0207000803). Accessed 02 May 2014.
Pulte Homes (2014) Frequently Asked Questions. http://www.ten-milecreek.com/faq/. Accessed 01 April 2015.

Maryland Department of the Environment, Normal Monthly Precipitation Totals (in Inches) for Maryland Counties, http://www.mde.state.md.us/programs/Water/WaterConservation/CurrentConditions/Pages/Programs/WaterPrograms/Water_Conservation/previous_conditions/normalprecip_new.aspx Accessed 01 April 2015.

NOAA, Advanced Hydrological Prediction Service, http://water.weather.gov/precip/. Accessed 01 April 2015.

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): May 22, 2015

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CENAB-OP-RMS (TEN MILE CREEK/JD) 2013-02052-M32

PROJECT LOCATION AND BACKGROUND INFORMATION: Reaches: Stream reaches and abutting and adjacent wetlands from D161 to D1, on plan sheets 9 and 10: 9 stream reaches and 15 non-tidal wetlands of the total 35 streams and 56 non-tidal wetlands on an approximately 718-acre property referred to as the Ten Mile Creek Property.

State: **Maryland** County/parish/borough: **Montgomery** City: **Clarksburg**
Center coordinates of site (lat/long in degree decimal format): Lat. **N 39.220425** Long. **W - 77.305164**
Name of nearest waterbody: **Ten Mile Creek**
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Potomac River**
The site is located along the west side of Clarksburg Road, north of West Old Baltimore Road, and east of Shiloh Church Road, in Clarksburg, Montgomery County, Maryland. All waters on site drain southwest to Ten Mile Creek, located offsite parallel to the west property boundary. Ten Mile Creek flows into Little Seneca Creek, which drains to Little Seneca Lake, which drains to Seneca Creek, which drains to the Potomac River, a tidal, navigable, interstate tributary of the Chesapeake Bay, an interstate TNW.
Name of watershed or Hydrologic Unit Code (HUC): **Potomac River - 02070010**
☒ 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: **01 May 2015**
☒ Field Determination. Date(s): **31 October 2013, 21 November 2013**

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There are not "*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: The south portion (plan 9 – 10; D161 – D1) of the project site consists of 15 nontidal wetlands (0.9694 acres) and 9 nontidal stream reaches (3,612 linear feet). Total area of waters within the area of review is approximately 21,981 linear feet of jurisdictional waters, 5.07 acres of wetlands.**

      The project impact area is indicated below.

[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: the Eastern Mountain and Piedmont Regional Supplement to the Corps 1987 Wetland 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 not to be jurisdictional. Explain:

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: **92.5 square miles (Catoctin Creek Watershed: 10 digit HUC 020700803)**
Drainage area: **Ten Mile Creek - greater than 3,500 acres**[5]
Normal average monthly rainfall for **October (3.1 inches) and November (3.4 inches)**[6]
Departure from normal average monthly rainfall for **October 2013 (3 – 4 inches more than annual average) and November 2013 (0.5 inches less than average in the general vicinity of the project area)**[7]

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[3] Supporting documentation is presented in Section III.F.
[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] **Pulte Homes (2014) Frequently Asked Questions. http://www.ten-milecreek.com/faq/. Accessed 01 April 2015.**
[6] **Maryland Department of the Environment, Normal Monthly Precipitation Totals (in Inches) for Maryland Counties, http://www.mde.state.md.us/programs/Water/WaterConservation/CurrentConditions/Pages/Programs/WaterPrograms/Water_Conservation/previous_conditions/normalprecip_new.aspx Accessed 01 April 2015.**
[7] **NOAA, Advanced Hydrological Prediction Service, http://water.weather.gov/precip/. Accessed 01 April 2015.**

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

☒ Tributary flows through **~ 4** tributaries before entering TNW

Project waters are approximately **~16.3** river miles from TNW.
Project waters are approximately **less than 1** river miles from RPW.
Project waters are approximately **11.3** aerial (straight) miles from TNW.
Project waters are approximately **less than 1** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: **N/A**.
Identify flow route to TNW[8]: **(six first order streams on site flow into three second order streams that flow directly into Ten Mile Creek, located offsite parallel to the west property boundary. Ten Mile Creek flows into Little Seneca Creek, which drains to Little Seneca Lake, which drains to Seneca Creek, which drains to the Potomac River, a tidal, navigable, interstate tributary of the Chesapeake Bay, an interstate TNW.)**

Tributary stream order, if known: **1st order (S25, S26, S27, S28, S32, S33), 2nd order (S29, S30, S34)**

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

Tributary is: ☒ Natural: **all (S26, S25, S27, S29, S30, S28, S32, S33, S34)**
☐ Artificial (man-made). Explain:
☐ Manipulated (man-altered). Explain:

Tributary properties with respect to top of bank (estimate):
Average width: **6 - 15 feet**
Average depth: **3 feet**
Average side slopes: **0.5 - 1: 1**

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: **moderate stability – banks vegetated for all (S25, S26, S27, S29, S30, S28, S32, S33, and S34)**
Tributary geometry:
Tributary gradient (approximate average slope): **S25 (5%), S26 (2%); S27, S29, S30, S28, S32, S33, S34 (1.5%).**

(c) Flow:

Tributary provides for: **intermittent flow (S26, S27, S29, S30, S28, S34), and ephemeral flow (S25, S32,and S33)**
Estimate average number of flow events in review area/year: **unknown**
Describe flow regime: **see above**
Other information on duration and volume:
Surface flow is: **varies, see above**
Characteristics:
Subsurface flow: **unknown;**
☐ Dye (or other) test performed**: N/A.**

Tributary has (check all that apply):

☒ Bed and banks **(all)**
☒ OHWM[9] (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):	

[8] 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.
[9] 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

☐ Discontinuous OHWM.[10] 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)
- ☐ physical markings/characteristics
- ☐ tidal gauges
- ☐ other (list):

☐ Mean High Water Mark indicated by:
- ☐ survey to available datum;
- ☐ physical markings;
- ☐ vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:

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

Explain: **water generally clear in all streams with occasional iron or bacterial sheen on the water surface in slow moving portions of channels. The Catoctin Creek Watershed (10-digit HUC 0207000803) has approximately 207.3 miles of perennial and intermittent streams (combined). The land cover of the watershed as of 2006 included approximately 7.5 percent developed land (0.9% impervious cover), 31.0 percent forest, and 60.6 percent agricultural use (pasture/hay and cultivation)[11]. Ten Mile Creek is characterized as the highest quality stream system in the Washington D.C. metropolitan area and is a tributary to Little Seneca Reservoir/Lake, the emergency water supply for Washington D.C.[12]**

Identify specific pollutants, if known: **unknown**

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

☒ Riparian corridor. Characteristics (type, average width): **the streams and wetlands in the south portion of the site are located in a forested corridor (ranging in width from 33 feet at the upper portions and first order tributaries, to 3,424 feet toward the southwest corner of the site), dominated by approximately 5 – 50 year old deciduous forest, depending on the reach;**

☒ Wetland fringe. Characteristics: **abutting PFOs on S26, S27, S28, and S29**

☒ Habitat for:

☐ Federally Listed species. Explain findings:

☒ Fish/spawn areas. Explain findings: **Streams with seasonally intermittent flow (S26, S27, S29, S30, S28, S34) would be expected to support fish habitat on at least a seasonal basis**

☐ Other environmentally-sensitive species. Explain findings:

☒ Aquatic/wildlife diversity. Explain findings: **Along with riparian upland forested habitat, supports habitat for forest dwelling species, including mammals, reptiles, amphibians, and mammals.**

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 (acres): **W41 [plan 9] - 0.033, W42 [plan 9] - 0.041, W43 [plan 9] - 0.0078, W53 [plan 9] - 0.0136, W47 [plan 10] – 0.0028, W48 [plan 10] – 0.0032, W49 [plan 10] – 0.10, W54 [plan 10] – 0.55, W50 [plan 10] – 0.041, W51 [plan 10] – 0.044, W52 [plan 10] – 0.018, W44 [plan 10] – 0.021, W45 [plan 10] – 0.050, W55 [plan 10] – 0.022, W46 [plan 10] – 0.030,**

Wetland type. **fifteen PFOs (W41, W42, W43, W53, W47, W48, W49, W53, W50, W51, W52, W44, W45, W55, and W46)**

Wetland quality. Explain: **Refer to Section IV.B.**

Project wetlands cross or serve as state boundaries. Explain: **N/A**.

(b) General Flow Relationship with Non-TNW:

Flow is: **W41 and W53 directly abut and flow directly into S26, an RPW, which drains into S27. W45, W46, and W55 directly abut and flow directly into S29, a RPW, which drains into S27. W44 directly abuts and drains directly into S28, a RPW, which drains into S27. W42, W43, W47, W48, W49, W54, W50, W51, and W52 directly abut and flow directly into S27, a RPW, which drains into S30. S30 drains offsite into Ten Mile Creek.**

Surface flow is**: clear.**

Characteristics:

Subsurface flow: **unconfirmed in the field, but likely present** Explain findings: **groundwater seeps were not observed in wetland area on site during Corps site visit. However, all fifteen wetlands in the south portion of the area of review are located at the toe of hillslopes and are directly abutting streams, indicating that groundwater**

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[10] Ibid.

[11] **USACE HUC Characterization tool, Catoctin Creek Watershed (10-digit HUC 0207000803). Accessed 02 May 2014.**

[12] **Audubon Naturalist Society, (2014) Ten Mile Creek: Saving Our Last Best Stream. http://www.audubonnaturalist.org/index.php/ten-mile-creek#issues. Accessed 01 April 2015.**

discharge is present to support baseflow to maintain wetland hydrology that would otherwise be lost to the stream channel.

☐ Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

☒ Directly abutting **(W41, W42, W43, W53, W47, W48, W49, W53, W50, W51, W52, W44, W45, W55, W46)**

☐ Not directly abutting

☐ Discrete wetland hydrologic connection. Explain:

☐ Ecological connection. Explain:

☐ Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **~16.3** river miles from TNW.

Project wetlands are **~11.3** aerial (straight) miles from TNW.

Flow is from: **The wetlands (W41, W42, W43, W53, W47, W48, W49, W53, W50, W51, W52, W44, W45, W55, and W46) drain indirectly or directly into S27, which drains southwest offsite to Ten Mile Creek located offsite parallel to the west property boundary. Ten Mile Creek flows into Little Seneca Creek, which drains to Little Seneca Lake, which drains to Seneca Creek, which drains to the Potomac River, a tidal, navigable, interstate tributary of the Chesapeake Bay, an interstate TNW.**

Estimate approximate location of wetland as within the floodplain: **All (W41, W42, W43, W53, W47, W48, W49, W53, W50, W51, W52, W44, W45, W55, and W46) are within floodplain abutting stream channels.**

(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 color is clear; ground is very soft; water quality was not examined and no sensitive species were observed;**

Identify specific pollutants, if known: **none known**

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

☒ Riparian buffer. Characteristics (type, average width): **the streams and wetlands in the south portion of the site are located in a forested corridor (ranging in width from 33 feet at the upper portions and first order tributaries, to 3,424 feet toward the southwest corner of the site)**

☒ Vegetation type/percent cover. Explain: **Deciduous forest ranges in age from approximately 5 – 50 year old trees, depending on the area;**

☐ Habitat for: **unknown – detailed wildlife study not completed for site**

☐ Federally Listed species. Explain findings:

☐ Fish/spawn areas. Explain findings:

☐ Other environmentally-sensitive species. Explain findings:

☒ Aquatic/wildlife diversity. Explain findings: **Along with riparian upland forested habitat, supports habitat for forest dwelling species, including mammals, reptiles, amphibians, and mammals.**

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

All wetland(s) being considered in the cumulative analysis: **15 jurisdictional wetlands in south portion of site (plan 9 – 10, D161 – D1) – 0.9694 acres, out of 56 total jurisdictional wetlands onsite (5.07 acres).**

Approximately **5.07** acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
W41 (Y) [plan 9]	**0.033**	**W42 (Y) [plan 9]**	**0.041**
W43 (Y) [plan 9]	**0.0078**	**W53 (Y) [plan 9]**	**0.0136**
W47 (Y) [plan 10]	**0.0032**	**W48 (Y) [plan 10]**	**0.0028**
W49 (Y) [plan 10]	**0.10**	**W54 (Y) [plan 10]**	**0.55**
W50 (Y) [plan 10]	**0.041**	**W51 (Y) [plan 10]**	**0.044**
W52 (Y) [plan 10]	**0.018**	**W44 (Y) [plan 10]**	**0.021**
W45 (Y) [plan 10]	**0.050**	**W55 (Y) [plan 10]**	**0.022**
W46 (Y) [plan 10]	**0.030**		

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:

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:**S25 drains 113 feet southwest directly into S27, which drains 1,294 linear feet before draining offsite directly to Ten Mile Creek. S32 and S33 drain 151 and 137 linear feet, respectively, south into S34, which drains for an additional 123 linear feet before draining offsite directly to Ten Mile Creek.**

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: **N/A**

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: **N/A**

   * Aquatic Life (Organisms): **Due to the ephemeral nature of the flow in S25, S32, and S33, large aquatic organisms, such as fish, or aquatic organisms that require longer term flow would not be expected to be present. However, more opportunistic organisms that only require a short period of time to develop, such as some species of benthic macro-invertebrates, could potentially be expected to be present. During the Corps' site visit on 31 October and 21 November 2013, at the beginning of the wet season, water was not observed to be flowing in the channels, but no rain had fallen at the site in the five days prior to the site visit. While much of central Maryland, including the project area, received 3 to 4 inches more rain than average in October, central Maryland received 0.5 inches less than normal average monthly rainfall for November during November 2013.**

   * Habitat for Wildlife: **A detailed assessment of the quality of wildlife habitat was not performed. The forested stream corridors, wetlands, and adjacent upland areas provide habitat for a variety of upland wildlife species, such as white-tailed deer.**

   * Support Nutrient Cycling: **The ephemeral channels and abutting riparian areas would encourage chemical processes that require oxygenated conditions. Also, for wetlands and streams located in forested areas where carbon (fallen leaves) is allowed to be incorporated into the soil, uptake by plants can take place and carbon is provided to facilitate microbial action for nutrient cycling. Additionally, the conveyance of some of the detritus downstream may provide soil nutrition and a food source for fish and other aquatic organisms downstream.**

   * Sediment Transport: **The opportunity to perform this function is adequate for the streams with ephemeral flow (S25, S32, and S33) because within these streams there are no major blockages, such as a beaver dam, to arrest the transport of sediment.**

   * Pollutant Trapping: **Overland drainage from nearby agricultural fields may enter the system within the forested area. Potential sources of pollutants, such as excess fertilizer, sediment, pesticides, and fecal matter (from cattle grazing), may enter the stream system. All the streams and wetlands on site are located in vegetated areas. Plants in general, and trees in particular, may trap some of the pollutants transported into the wetlands and streams on site. Ephemeral channels only tend to flow during and for a short period after storm events and in-channel flow during storm events tends to have very**

limited residence time; therefore although some of the vegetation in the floodplain may be able to trap pollutants, there is likely to be limited trapping of pollutants overall.

* WQ Improvement: **Based on opportunities for trapping pollutants and facilitating nutrient cycling, the streams in the area of review have a moderate opportunity to improve the chemical and physical aspects of water quality.**

* Temperature: **The trees in the riparian buffer would be expected to contribute shade which would moderate temperature fluctuations in the channel, thereby moderating fluctuations of the concentration of dissolved oxygen (DO) and improving biological water quality improvement.**

* Flood Storage: **S25, S32 and S33 are stable and connected to their floodplains, which would allow them to provide flood storage.**

* Commerce: **S25, S32 and S33 are all too small and flow too infrequently to provide recreational boating or fishing and thus have limited opportunities to support commerce. However, they would be expected to contribute stream flow and a small amount detritus to downstream waters which would improve water quality downstream in the Potomac River, a TNW which does support some fishing activities and supports boating in the tidal areas.**

* Navigation: **S25, S32 and S33 are too small to be navigable.**

* Recreation: **S25, S32 and S33 are all located on private property and have limited recreational opportunities due to small size and lack of regular or seasonal water flow regime. If allowed, the area of review could support additional recreational activities such as hiking and bird watching proportionate to the riparian upland forested habitat.**

* Public Health: **All of the streams and wetlands on site indirectly drain into Ten Mile Creek, which is the main tributary of Little Seneca Lake, the emergency drinking water source for the Washington D.C. metropolitan area. If a stream or wetland on site were to become impaired (e.g. pesticide spill), it is possible that the Little Seneca Lake could be affected, which would affect public health.**

* Groundwater Discharge: **Groundwater seeps were not observed during the 31 October and 21 November 2013 site visits.**

* Groundwater recharge: **S25, S32 and S33 are all ephemeral streams that flow primarily during and briefly after storm events. Therefore, water in these streams would be expected to be moving at a velocity that is too fast to encourage groundwater recharge.**

Based on the above and field experience in Central Maryland, S25, S32 and S33 do have a significant nexus with the physical, chemical, or biological integrity of the 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:
   ☐ 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: **The streams S26, S27, S29, S30, S28, S34 were all observed to have moderately-well developed stream morphology characteristic of seasonally-intermittent flow, including channel sinuosity; sediment sorting; flow observed during the Corps site visit at the beginning of the "wet season" or ponding in the channel when the last rain had been approximately five days prior to the site visit; and clear and consistent bed, bank, and ordinary high water mark as indicated by the absence of rooted vegetation within the channel, the absence of debris within the channel, and some scour of the channel. The streams are sufficiently developed to be visible on multiple years of aerial photography.**

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   ☒ Tributary waters (linear feet): **S26 (140), S27 (1294), S29 (1157), S30 (126), S28 (380), S34 (123)**
   ☐ Other non-wetland waters: acres.
   Identify type(s) of waters:

3. **Non-RPWs[13] 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: **S25 (113), S32 (151), and S33 (137)**

☐ 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:
☒ 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: **All fifteen wetlands in the south portion of the area of review directly overlap in aerial coverage with portions of the streams they are directly abutting.**

Provide acreage estimates for jurisdictional wetlands in the review area: **W-41 [plan 9] - 0.033, W-42 [plan 9] - 0.041, W-43 [plan 9] - 0.0078, W-53 [plan 9] - 0.0136, W47 [plan 10] – 0.0028, W48 [plan 10] – 0.0032, W49 [plan 10] – 0.10, W54 [plan 10] – 0.55, W50 [plan 10] – 0.041, W51 [plan 10] – 0.044, W52 [plan 10] – 0.018, W44 [plan 10] – 0.021, W45 [plan 10] – 0.050, W55 [plan 10] – 0.022, W46 [plan 10] – 0.030,**

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:

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:

7. **Impoundments of jurisdictional waters.[14]**
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):[15]
☐ 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:
☐ Other non-wetland waters:

[13] See Footnote # 3.
[14] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[15] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

Identify type(s) of waters:
☐ Wetlands:

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

☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.

☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.

☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).

☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:

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

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

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

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

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

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply) - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **ADC vicinity map included in Klebasko Environmental LLC Delineation Report submission dated 26 September 2013.**

☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.

☒ Office concurs with data sheets/delineation report. **With three exceptions that were resolved: 1) upland area on hillslope – originally marked as wetland and later listed as an upland area at the examination and behest of the Corps; 2) a wetland marked on the original plans as PFO which was relabeled as PEM at the examination and behest of the Corps; 3) a stream that had expanded beyond its original delineated area as a result of ponding from a beaver dam, the limits of which were expanded at the examination and behest of the Corps.**

☐ 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: **From USFWS mapping website (http://www.fws.gov/wetlands/Data/Mapper.html) Included in delineation report**

☒ USDA Natural Resources Conservation Service Soil Survey. Citation: **soil resource report of soil series mapped on site included in delineation report.**

☒ National wetlands inventory map(s). Cite name: **From USFWS mapping website (http://www.fws.gov/wetlands/Data/Mapper.html) Included in delineation report**

☒ State/Local wetland inventory map(s): **Wetlands of Special State Concern and state wetlands data layer for area of review from the MERLIN interactive map.**

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

☒ Photographs: ☒ Aerial (Name & Date): high resolution **aerial imagery of site dated 2011 – 2013 and 2010-2011, and infrared imagery dated 1988 - 1994 from MDNR MERLIN mapping website**
or ☒ Other (Name & Date): **Photographs dated August 2013 included with Delineation Report.**

☐ Previous determination(s). File no. and date of response letter:
☐ Applicable/supporting case law:
☐ Applicable/supporting scientific literature:
☒ Other information (please specify): **see footnotes elsewhere in basis form and listed in references below**

B. ADDITIONAL COMMENTS TO SUPPORT JD:

References:

USACE HUC Characterization tool, Catoctin Creek Watershed (10-digit HUC 0207000803). Accessed 02 May 2014.

Audubon Naturalist Society, (2014) Ten Mile Creek: Saving Our Last Best Stream. http://www.audubonnaturalist.org/index.php/ten-mile-creek#issues. Accessed 01 April 2015.

USACE HUC Characterization tool, Catoctin Creek Watershed (10-digit HUC 0207000803). Accessed 02 May 2014.
Pulte Homes (2014) Frequently Asked Questions. http://www.ten-milecreek.com/faq/. Accessed 01 April 2015.

Maryland Department of the Environment, Normal Monthly Precipitation Totals (in Inches) for Maryland Counties, http://www.mde.state.md.us/programs/Water/WaterConservation/CurrentConditions/Pages/Programs/WaterPrograms/Water_Conservation/previous_conditions/normalprecip_new.aspx Accessed 01 April 2015.

NOAA, Advanced Hydrological Prediction Service, http://water.weather.gov/precip/. Accessed 01 April 2015.