Approved Jurisdictional Determination DA Number: CENAP-OPR-2022-00077-96 Project Name: Mora Solar LLC CA

This cover letter is for the purpose of summarizing the AJD forms, 1 through 6, for the subject project. The numbers below correspond to their respective AJD form and their summaries indicate what aquatic features each form covers. The study area is in Kidder Township, Carbon County, Pennsylvania and its total area is 929.565 acres. The AJD covers approximately 98 acres, while the rest of the site will be covered by a PJD under the same file name. The AJD and PJD boundaries are shown in the attached delineation identified as, "Figure 6 Wetland and Water Delineation Plan Mora Solar, LLC, dated June 20, 2022, prepared by Kimley Horn, Inc.

- 1) This sheet covers waterway 14 as well as the following wetlands: 7A, 7B, 8, 19.
- 2) This sheet covers waterway 13 as well as the following wetlands: 9 and 18.
- 3) This sheet covers waterway 1 as well as the following wetlands: 3, 4, 5, 6, 10, 11A, 11B, 11C, 12, 13A, 13B, 15A, 15B, 16, 17, 20, 21, 22, 23, 25, 26A, 26B, 31, 32, 33, and 34.
- 4) This sheet covers waterway 12 as well as the following wetlands: 41 and 42.
- 5) This sheet covers waterway 5 as well as the following wetlands: 43 and 44.
- 6) This sheet covers all the following non-jurisdictional features within the AJD study area, identified as follows; wetlands 1, 2, 5A, 14, 24, 27, 28, 29, 30, 35, 46, 47, 45, 54, 56, 58, 59, 60 64, and 90. Waterway 10.

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):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CENAP-OPR-2022-00077-96 Mora Solar LLC CA

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State:Pennsylvania County/parish/borough: Carbon County City: Kidder Township Center coordinates of site (lat/long in degree decimal format): Lat. 41.071144° N, Long. -75.660627° W. Universal Transverse Mercator: 444499.87; 4546864.99; 18T

Name of nearest waterbody: Black Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lehigh River Name of watershed or Hydrologic Unit Code (HUC): 020401060301 Black Creek

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date:
- Field Determination. Date(s): May 3-5, 11, 2022

SECTION II: SUMMARY OF FINDINGS A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There are and are not "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

- a. Indicate presence of waters of U.S. in review area (check all that apply): ¹
 - TNWs, including territorial seas
 - Wetlands adjacent to TNWs
 - Relatively permanent waters² (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
 - \square Isolated (interstate or intrastate) waters, including isolated wetlands
- b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: 5 linear feet: 571 width (ft) and/or 0.05 acres.

Wetlands: 14.617 acres.

- c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual Elevation of established OHWM (if known):N/A.
- 2. Non-regulated waters/wetlands (check if applicable):³
 - Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: Wetlands 1, 2, 5A, 14, 24, 27, 28, 29, 30, 35, 45, 46, 47, 54, 56, 58, 59, 60, 64 were found to be isolated wetlands with no significant nexus to a traditional navigable water. Water 10 was also determined to be non-jurisdictional.

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

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

 (i) General Area Conditions: Watershed size: 11,089.17 acres Drainage area: 896 acres Average annual rainfall: 47 inches Average annual snowfall: 40 inches

(ii) Physical Characteristics:

(a) <u>Relationship with TNW:</u>

 □ Tributary flows directly into TNW.
 ⊠ Tributary flows through 2 tributaries before entering TNW.

Project waters are 5-10 river miles from TNW.
Project waters are 1 (or less) river miles from RPW.
Project waters are 5-10 aerial (straight) miles from TNW.
Project waters are 1 (or less) aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: N/A.

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

Identify flow route to TNW⁵: Waterway 14 flows through or from wetlands 8, 7A, 7B, and 19. Waterway 14 then connects to Black Creek via the Black Creek wetland complex before flowing into the Lehigh River approximately 6 river miles off-site.

Tributary stream order, if known: 1.

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

3:		Natural
----	--	---------

Artificial (man-made). Explain:

Manipulated (man-altered). Explain: There is an access road that cuts through the tribuatry and its associaetd wetlands. It is likely that naturally the wetlands were one wetland before the access road built, but due to the wetland hydrology waterway 14 has formed.

> **Tributary** properties with respect to top of bank (estimate): Average width: 1 feet Average depth: 0.5 feet Average side slopes: 4:1 (or greater)

Primary tributary substrate composition (check all that apply):

⊠ Silts	Sands
Cobbles	🛛 Gravel
Bedrock	□ Vegetation. Type/% cover:
Other. Explain:	

Concrete Muck

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Stabile, runs along the access road and crosses over the road into wetland 19.

Presence of run/riffle/pool complexes. Explain: No, small ephemeral stream.

Tributary geometry: Relatively straight

Tributary gradient (approximate average slope): less than 2 %

(c) Flow:

the road.

Tributary provides for: Ephemeral flow
Estimate average number of flow events in review area/year: 11-20
Describe flow regime: The stream flows during and after preciptation events in a typical year.
Other information on duration and volume:

Surface flow is: Discrete and confined. Characteristics: confined to its channel before flowing over the road into wetland 19.

Subsurface flow: Unknown. Explain findings: Unkown, but likely as all features on site are within the Black Creek drainage area with most have surface connections to the overall wetland complex. .

Dye (or other) test performed:

Tributary has (check all that apply):	
Bed and banks	
$\overline{\boxtimes}$ OHWM ⁶ (check all indicators that apply):	
☐ clear, natural line impressed on the bank [the presence of litter and debris
changes in the character of soil	destruction of terrestrial vegetation
shelving [the presence of wrack line
vegetation matted down, bent, or absent	sediment sorting
leaf litter disturbed or washed away	🛛 scour
sediment deposition	multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	
Discontinuous OHWM. ⁷ Explain:OHWM is n	ot present as it flows over the road, but there is a scour pattern in
If factors other than the OHWM were used to determin	e lateral extent of CWA jurisdiction (check all that apply):
High Tide Line indicated by:	Mean High Water Mark indicated by:
oil or scum line along shore objects	survey to available datum:

on or scum line along shore objects	survey to available datum;
fine shell or debris deposits (foreshore)	physical markings;
physical markings/characteristics	vegetation lines/changes in vegetation types.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW. ⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid



(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: Water color was clear, water quality is generally good although the watershed is known to have pollutants from past mining activities; specifically acid mine drainage.

Identify specific pollutants, if known: The specific pollutants that are known, per a 2008 report by PADEP, within the Black Creek watershed are iron, manganese, and aluminum. The pH is also negatively affected as a result of this pollution. There are no acid mine drainages within the Black Creek Watershed, but it is impacted by acid mine drainage from two of its tributaries that are off-site; Quakake and Hazel Creeks.

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

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics: There are 4 wetlands abutting water 14. \boxtimes
- Habitat for:
 - Federally Listed species. Explain findings:

 - Fish/spawn areas. Explain findings:
 Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings: The aquatic features are part of the Black Creek wetland complex that as a whole contributes to aquatic and wildlife diversity in the region.

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

- (a) General Wetland Characteristics:
 - Properties:

Wetland size: 1.756 acres

Wetland type. Explain: PFO and PEM.

Wetland quality. Explain: Overall high quality, but man altered in that there is an access road cutting through them. They are high quality because they are situated in an old-growth wooded area, display high diversity for the region, and contribute to the Black Creek wetland complex.

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

(b) General Flow Relationship with Non-TNW:

Flow is: Ephemeral flow. Explain: During precipitation events the wetlands overflow through waterway 14 which flows into wetland 19.

Surface flow is: Discrete and confined

Characteristics: The wetlands are continuously saturated, but the water flow becomes confined in waterway 14.

Subsurface flow: Unknown. Explain findings: Unknown, but likely that there is subsurface flow as these wetlands are part of the Black Creek wetland complex. USGS streamstats also indicated that all the wetlands in the AJD study area are within Black Creeks drainage area.

 \Box Dye (or other) test performed: N/A.

- (c) Wetland Adjacency Determination with Non-TNW:
 - Directly abutting
 - Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 - Ecological connection. Explain:
 - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **5-10** river miles from TNW. Project waters are **5-10** aerial (straight) miles from TNW. Flow is from: Wetland to navigable waters Estimate approximate location of wetland as within the **50 - 100-year** 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.

Identify specific pollutants, if known: The specific pollutants that are known, per a 2008 report by PADEP, within the Black Creek watershed are iron, manganese, and aluminum. The pH is also negatively affected as a result of this pollution. There are no acid mine drainages within the Black Creek Watershed, but it is impacted by acid mine drainage from two of its tributaries that are off-site; Quakake and Hazel Creeks.

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

- Riparian buffer. Characteristics (type, average width): The entire site is wooded, mostly old-growth forest.
- Vegetation type/percent cover. Explain: Forested and emergent wetlands; 100% cover.
- Habitat for:

 - Federally Listed species. Explain findings:
 Fish/spawn areas. Explain findings:
 Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings: Is part of the Black Creek wetland complex that as a whole contributes to aquatic and wildlife diversity in the region.

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

All wetland(s) being considered in the cumulative analysis: **4** Approximately (1.756) 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)
7A Y	0.951		
7B Y	0.14		
8 Y	0.127		
19 Y	0.538		

Summarize overall biological, chemical and physical functions being performed: The wetland functions being performed include wildlife habitat and food chain support, surface water retention/detention, groundwater recharge, and absorption and filtering of nutrients and other pollutants.

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: Waterway 14 and wetlands 7A, 7B, 8, and 19 have significant nexus because they flow and connect with Black Creek, which itself flows directly into the Lehigh River approximately 6 river miles off-site. All jurisdictional wetlands and waterways in the study area of this site directly or indirectly flow/connect to Black Creek. I analyzed the site using the USGS streamstats report tool, which showed that the entire study area for the AJD is within the the Black Creek drainage area. Some of these maps also show much of the area being mapped as wetlands surrounding Black Creek. Please refer to supporting documents for further information. The subject features are important to the region and contribute to the Black Creek watershed/wetland complex by supporting wildlife habitat, the foodchain, reatining water, groundwater recharge, and the ability to filter nutrients and pollutants.
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

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

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

RPWs that flow directly or indirectly into TNWs. 2.

Tributaries of TNWs when	e tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that
tributary is perennial:	

Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are
jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows
seasonally: .

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

acres

Tributary waters: linear feet width (ft).

Other non-wetland waters:

Identify type(s) of waters:

Non-RPWs⁸ that flow directly or indirectly into TNWs. 3.

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 \bowtie 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):

acres.

Tributary waters: **131** linear feet **1** width (ft).

Other non-wetland waters:

Identify type(s) of waters:

Wetlands directly abutting an RPW that flow directly or indirectly into TNWs. 4.

Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

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

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

Provide estimates for jurisdictional wetlands in the review area: 1.756 acres.

Impoundments of jurisdictional waters.⁹ 7.

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).

⁸See Footnote # 3.

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

E.	ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY): ¹⁰ which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain: Other factors. Explain:
	Identify water body and summarize rationale supporting determination:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters: . Wetlands: acres.
F.	 NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Other: (explain, if not covered above):
	Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> 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): linear feet width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: . Wetlands: acres.
	Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet, width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
<u>SE(</u>	CTION IV: DATA SOURCES.
А.	 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:Wet;and and Waterway Delineation Plan, Wetland Delineation Report. Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: U.S. Geological Survey Hydrologic Atlas: USGS NHD data. USGS 8 and 12 digit HUC maps. U.S. Geological Survey map(s). Cite scale & quad name: USDA Natural Resources Conservation Service Soil Survey. Citation: National wetlands inventory map(s). Cite name:Figure 3 NWI-NHD-LiDAR Map.

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

- (National Geodectic Vertical Datum of 1929)
- State/Local wetland inventory mark
 FEMA/FIRM maps:Figure 5 FEMA Map.
 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of Photographs: Aerial (Name & Date): Figure 2 Aerial Photo Map, undated. or Other (Name & Date): Appendix D: Photographs.
 Previous determination(s). File no. and date of response letter: Anolicable/supporting case law:
- Previous determination(s). File no. and date of response letter:
 Applicable/supporting case law:
 Applicable/supporting scientific literature:
 Other information (please specify):USGS StreamStats Report.

B. ADDITIONAL COMMENTS TO SUPPORT JD:

APPROVED JURISDICTIONAL DETERMINATION FORM **U.S. Army Corps of Engineers**

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A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CENAP-OPR-2022-00077-96 Mora Solar LLC CA

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State:Pennsylvania County/parish/borough: Carbon County City: Kidder Township Center coordinates of site (lat/long in degree decimal format): Lat. 41.071144° N, Long. -75.660627° W. Universal Transverse Mercator: 444499.87; 4546864.99; 18T

Name of nearest waterbody: Black Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lehigh River Name of watershed or Hydrologic Unit Code (HUC): 020401060301 Black Creek

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date:
- Field Determination. Date(s): May 3-5, 11, 2022

SECTION II: SUMMARY OF FINDINGS A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There are and are not "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

- a. Indicate presence of waters of U.S. in review area (check all that apply): ¹
 - TNWs, including territorial seas
 - Wetlands adjacent to TNWs
 - Relatively permanent waters² (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
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 - Impoundments of jurisdictional waters
 - Isolated (interstate or intrastate) waters, including isolated wetlands
- b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: 5 linear feet: 571 width (ft) and/or 0.05 acres. Wetlands: 14.617 acres.

- c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual Elevation of established OHWM (if known):N/A.
- Non-regulated waters/wetlands (check if applicable):³ 2.
 - Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

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

 (i) General Area Conditions: Watershed size: 11,089.17 acres Drainage area: 896 acres Average annual rainfall: 47 inches Average annual snowfall: 40 inches

(ii) Physical Characteristics:

(a) <u>Relationship with TNW:</u>

 □ Tributary flows directly into TNW.
 ⊠ Tributary flows through 2 tributaries before entering TNW.

Project waters are 5-10 river miles from TNW.
Project waters are 1 (or less) river miles from RPW.
Project waters are 5-10 aerial (straight) miles from TNW.
Project waters are 1 (or less) aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: N/A.

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

Identify flow route to TNW5: Waterway 13 flows through or from wetlands 9 and 18. Waterway 13 then connects to Black Creek via the Black Creek wetland complex before flowing into the Lehigh River approximately 6 river miles offsite.

Tributary stream order, if known: 1.

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

:	Natural

Artificial (man-made). Explain:

Manipulated (man-altered). Explain: There is an access road going through the wetlands and stream. It is likely that wetlands 9 and 18 were one wetland before the access road was built and that due to the wetland hydrology waterway 13 has formed. Waterway 13 is also piped underneath the access road.

> **Tributary** properties with respect to top of bank (estimate): Average width: 2 feet Average depth: 0.8 feet Average side slopes: 4:1 (or greater)

Primary tributary substrate composition (check all that apply):

⊠ Silts	Sands
Cobbles	🛛 Gravel
Bedrock	□ Vegetation. Type/% cover:
Other. Explain:	

Concrete Muck

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Stabile, runs along the access road and crosses under the road trhough a culvert into wetland 18.

Presence of run/riffle/pool complexes. Explain: No, it is a small intermittent stream.

Tributary geometry: Relatively straight

Tributary gradient (approximate average slope): less than 2 %

(c) Flow:

Tributary provides for: Seasonal flow

Estimate average number of flow events in review area/year: 11-20

Describe flow regime: The stream flows during and after precipitation events as well as certain times of the year when groundwater provides water for stream flow.

Other information on duration and volume:

Surface flow is: Confined. Characteristics: The stream is confined to its channel and flows underneath the access road into wetland 18.

Subsurface flow: Unknown. Explain findings: Unkown, but it is likely because all features on site are within the Black Creek drainage area. Most features have surface connections to the overall wetland complex.

Dye (or other) test performed:

Tributary has (check all that apply):

Bed and banks	
OHWM ⁶ (check all indicators that apply):	
☐ clear, natural line impressed on the bank	the presence of litter and debris
□ changes in the character of soil	destruction of terrestrial vegetation
shelving	the presence of wrack line
vegetation matted down, bent, or absent	sediment sorting
🛛 leaf litter disturbed or washed away	Scour scour
sediment deposition	multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	
Discontinuous OHWM. ⁷ Explain: .	
If factors other than the OHWM were used to determine	ne lateral extent of CWA jurisdiction (check all that apply):
High Tide Line indicated by:	Mean High Water Mark indicated by:
oil or scum line along shore objects	survey to available datum;
fine shell or debris deposits (foreshore)	physical markings;
physical markings/characteristics	vegetation lines/changes in vegetation types.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW. ⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid



(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: Water color was clear, water quality is generally good although the Black Creek watershed is known to have pollutants from past mining activities; specifically acid mine drainage.

Identify specific pollutants, if known: The specific pollutants that are known, per a 2008 report by PADEP, within the Black Creek watershed are iron, manganese, and aluminum. The pH is also negatively affected as a result of this pollution. There are no acid mine drainages within the Black Creek Watershed, but it is impacted by acid mine drainage from two of its tributaries that are off-site; Quakake and Hazel Creeks.

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

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics: There are 2 wetlands abutting water 13. \boxtimes
- Habitat for:
 - Federally Listed species. Explain findings:

 - Fish/spawn areas. Explain findings:
 Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings: The aquatic features are part of the Black Creek wetland complex that as a whole contributes to aquatic and wildlife diversity in the region.

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

- (a) General Wetland Characteristics:
 - Properties:

Wetland size: 1.645 acres

Wetland type. Explain: PFO.

Wetland quality. Explain: Overall high quality, but man altered in that there is an access road cutting through them. They are high quality because they are situated in an old-growth wooded area, display high diversity for the region, and contribute to the Black Creek wetland complex.

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

(b) General Flow Relationship with Non-TNW:

Flow is: Intermittent flow. Explain: Seasonal groundwater and storm events contribute to water flow, certain seasons or times of the year when groundwater levels are lowest the tributary may be dry.

Surface flow is: Discrete and confined

Characteristics: The wetlands are continuously saturated, but the water flow becomes confined in waterway 13.

Subsurface flow: Unknown. Explain findings: Unknown, but likely that there is subsurface flow as these wetlands are part of the Black Creek wetland complex. USGS streamstats also indicated that all the wetlands in the AJD study area are within Black Creeks drainage area.

Dye (or other) test performed:

- (c) Wetland Adjacency Determination with Non-TNW:
 - Directly abutting
 - □ Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 - Ecological connection. Explain:
 - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **5-10** river miles from TNW. Project waters are **5-10** aerial (straight) miles from TNW. Flow is from: Wetland to navigable waters Estimate approximate location of wetland as within the **50 - 100-year** 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.

Identify specific pollutants, if known: The specific pollutants that are known, per a 2008 report by PADEP, within the Black Creek watershed are iron, manganese, and aluminum. The pH is also negatively affected as a result of this pollution. There are no acid mine drainages within the Black Creek Watershed, but it is impacted by acid mine drainage from two of its tributaries that are off-site; Quakake and Hazel Creeks.

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

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:

 - Federally Listed species. Explain findings:
 Fish/spawn areas. Explain findings:
 Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings: Is part of the Black Creek wetland complex that as a whole contributes to aquatic and wildlife diversity in the region.

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

All wetland(s) being considered in the cumulative analysis: **2** Approximately (1.645) 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)
9 Y	1.107		
18 Y	0.235		

Summarize overall biological, chemical and physical functions being performed: The wetland functions being performed include wildlife habitat and food chain support, surface water retention/detention, groundwater recharge, and absorption and filtering of nutrients and other pollutants.

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:

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

- TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.
- 2. RPWs that flow directly or indirectly into TNWs.
 - Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
 - Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: In the field I observed continuous waterflow and the waterway has enough seasonal flow that it is conveyed underneath the access road via a culvert.

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

- Tributary waters: **75** linear feet **2** width (ft).
- Other non-wetland waters: acres.
 - Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.

Identify type(s) of waters:

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
 - Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
 - Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: Refer to Section III.B and III.D.2.

Provide acreage estimates for jurisdictional wetlands in the review area: 1.645 acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

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

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

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.⁹

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

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

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

⁸See Footnote #3.

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

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

Identify water body and summarize rationale supporting determination: Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres Identify type(s) of waters: Wetlands: acres. F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: 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): linear feet width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres. Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet, width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres. SECTION IV: DATA SOURCES. A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: U.S. Geological Survey Hydrologic Atlas: USGS NHD data. USGS 8 and 12 digit HUC maps. U.S. Geological Survey map(s). Cite scale & quad name: USDA Natural Resources Conservation Service Soil Survey. Citation: \boxtimes National wetlands inventory map(s). Cite name: Figure 3 NWI-NHD-LiDAR Map. State/Local wetland inventory map(s): \boxtimes FEMA/FIRM maps: 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929) Photographs: Aerial (Name & Date): Figure 2 Aerial Photo Map, undated. or 🛛 Other (Name & Date): Appendix D: Photographs. Previous determination(s). File no. and date of response letter: Applicable/supporting case law: Applicable/supporting scientific literature: $\overline{\boxtimes}$ Other information (please specify): USGS StreamStats Report.

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Other factors. Explain:

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):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CENAP-OPR-2022-00077-96 Mora Solar LLC CA

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State:Pennsylvania County/parish/borough: Carbon County City: Kidder Township Center coordinates of site (lat/long in degree decimal format): Lat. 41.071144° N, Long. -75.660627° W. Universal Transverse Mercator: 444499.87; 4546864.99; 18T

Name of nearest waterbody: Black Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lehigh River Name of watershed or Hydrologic Unit Code (HUC): 020401060301 Black Creek

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date:
- Field Determination. Date(s): May 3-5, 11, 2022

SECTION II: SUMMARY OF FINDINGS A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There are and are not "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

- a. Indicate presence of waters of U.S. in review area (check all that apply): ¹
 - TNWs, including territorial seas
 - Wetlands adjacent to TNWs
 - Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 - Non-RPWs that flow directly or indirectly into TNWs
 - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - Impoundments of jurisdictional waters
 - Isolated (interstate or intrastate) waters, including isolated wetlands
- b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: 5 linear feet: 571 width (ft) and/or 0.05 acres. Wetlands: 14.617 acres.

- c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual Elevation of established OHWM (if known):N/A.
- Non-regulated waters/wetlands (check if applicable):³ 2.
 - Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

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

 (i) General Area Conditions: Watershed size: Pick List Drainage area: Pick List Average annual rainfall: inches Average annual snowfall: inches

(ii) Physical Characteristics:

(a) <u>Relationship with TNW:</u>
 ☐ Tributary flows directly into TNW.

Tributary flows through **Pick List** tributaries before entering TNW.

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

Identify flow route to TNW⁵: . . Tributary stream order, if known:

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

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

	(b)	General Tributary Characteristics (check all that apply):
		Tributary is: 🗌 Natural
		Artificial (man-made). Explain:
		Manipulated (man-altered). Explain:
		Tributary properties with respect to top of bank (estimate): Average width: feet Average depth: feet Average side slopes: Pick List.
		Primary tributary substrate composition (check all that apply):
		Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: . Presence of run/riffle/pool complexes. Explain: . Tributary geometry: Pick List
		Tributary gradient (approximate average slope): %
	(c)	<u>Flow:</u> Tributary provides for: Pick List Estimate average number of flow events in review area/year: Pick List Describe flow regime: Other information on duration and volume:
		Surface flow is: Pick List. Characteristics:
		Subsurface flow: Pick List . Explain findings: . Dye (or other) test performed: .
		Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): the presence of litter and debris clear, natural line impressed on the bank the presence of litter and debris changes in the character of soil destruction of terrestrial vegetation shelving the presence of wrack line vegetation matted down, bent, or absent sediment sorting leaf litter disturbed or washed away scour sediment deposition multiple observed or predicted flow events water staining abrupt change in plant community other (list): Discontinuous OHWM. ⁷ Explain:
		If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): High Tide Line indicated by: Mean High Water Mark indicated by: oil or scum line along shore objects survey to available datum; fine shell or debris deposits (foreshore) physical markings; physical markings/characteristics vegetation lines/changes in vegetation types. tidal gauges other (list):
(iii)	Che Che	emical Characteristics:

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

Identify specific pollutants, if known:

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

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

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:

 - Fish/spawn areas. Explain findings:
 Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW 2.

(i) Physical Characteristics:

- (a) General Wetland Characteristics: Properties: Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain:
- (b) General Flow Relationship with Non-TNW: Flow is: **Pick List**. Explain:

Surface flow is: Pick List Characteristics:

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

(c) Wetland Adjacency Determination with Non-TNW:

- Directly abutting
- □ Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 - Ecological connection. Explain:
 - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW. Project waters are **Pick List** aerial (straight) miles from TNW. Flow is from: **Pick List.** Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Identify specific pollutants, if known:

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

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

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

All wetland(s) being considered in the cumulative analysis: Pick List) acres in total are being considered in the cumulative analysis. Approximately (

For each wetland, specify the following:

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

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

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:

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

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

2. **RPWs that flow directly or indirectly into TNWs.**

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Black Creek was observed to have continous flow, defined bed and bank, sediment sorting, meandering, and other characteristics that are indicative of a perennial stream. Black Creek is also mapped by USGS and is was given its own HUC 12 sub-watershed. Black Creek is a 7.6 mile tributary that connects directly to the Lehigh River. Please refer to supporting documents for more information.
- 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: **175** linear feet **6** width (ft).
- Other non-wetland waters: acres.
 - Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.

Identify type(s) of waters:

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
 - Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: The following wetlands directly abutt or have direct connection with waterway 1 (Black Creek); 3, 4, 5, 6, 10, 11A, 11B, 11C, 12, 13A, 13B, 15A, 15B, 16, 17, 20, 21, 22, 23, 25, 26A, 26B, 31, 32, 33, and 34. These wetlands either directly abutt waterway 1 on-site or off-site, have piped connections with waterway 1, or flow over into waterway 1. Please refer to the attached Wetland and Waterway Delineation Summary for more detailed information on the rationale for each specific wetland.
 - 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: 7.588 acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

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

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

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.⁹

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

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

⁸See Footnote #3.

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

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

	 which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain: Other factors. Explain:
	Identify water body and summarize rationale supporting determination:
	 Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters: . Wetlands: acres.
F.	 NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Other: (explain, if not covered above):
	Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> 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): linear feet width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: . Wetlands: acres.
	 Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet, width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: . Wetlands: acres.
<u>SE</u>	CTION 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: Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: U.S. Geological Survey Hydrologic Atlas: USGS 8 and 12 digit HUC maps. U.S. Geological Survey map(s). Cite scale & quad name: USDA Natural Resources Conservation Service Soil Survey. Citation: National wetlands inventory map(s). FEMA/FIRM maps: 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929) Photographs: Aerial (Name & Date): Figure 2 Aerial Photo Map, undated.
	 or

Other information (please specify): USGS StreamStats Report.

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B. ADDITIONAL COMMENTS TO SUPPORT JD:

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):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CENAP-OPR-2022-00077-96 Mora Solar LLC CA

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State:Pennsylvania County/parish/borough: Carbon County City: Kidder Township Center coordinates of site (lat/long in degree decimal format): Lat. 41.071144° N, Long. -75.660627° W. Universal Transverse Mercator: 444499.87; 4546864.99; 18T

Name of nearest waterbody: Black Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lehigh River Name of watershed or Hydrologic Unit Code (HUC): 020401060301 Black Creek

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date:
- Field Determination. Date(s): May 3-5, 11, 2022

SECTION II: SUMMARY OF FINDINGS A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There are and are not "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

- a. Indicate presence of waters of U.S. in review area (check all that apply): ¹
 - TNWs, including territorial seas
 - Wetlands adjacent to TNWs
 - Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 - Non-RPWs that flow directly or indirectly into TNWs
 - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - Impoundments of jurisdictional waters
 - Isolated (interstate or intrastate) waters, including isolated wetlands
- b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: 5 linear feet: 571 width (ft) and/or 0.05 acres. Wetlands: 14.617 acres.

- c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual Elevation of established OHWM (if known):N/A.
- Non-regulated waters/wetlands (check if applicable):³ 2.
 - Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

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

(i) General Area Conditions: Watershed size: 11,089.17 acres Drainage area: 896 acres Average annual rainfall: 47 inches Average annual snowfall: 40 inches

(ii) Physical Characteristics:

(a) <u>Relationship with TNW:</u>

 □ Tributary flows directly into TNW.
 □ Tributary flows through 2 tributaries before entering TNW.

Project waters are 5-10 river miles from TNW.
Project waters are 1 (or less) river miles from RPW.
Project waters are 5-10 aerial (straight) miles from TNW.
Project waters are 1 (or less) aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: N/A.

Identify flow route to TNW⁵: Waterway 12 connects to the Black Creek Wetland Complex off-site. Tributary stream order, if known: 1.

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

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tri	butary Characteristics	(check all that apply):
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Tributary is: 🛛 Natural

Artificial (man-made). Explain:

Manipulated (man-altered). Explain: There is an access road that cuts between waterway 12 and wetland 42, although it was observed that there is subsurface flow from wetland 42 that contributes to waterway 12's flow regime.

wedana 42, ai	
	Tributary properties with respect to top of bank (estimate): Average width: 2 feet Average depth: 0.6 feet Average side slopes: 3:1 .
	Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain:
waterway beir	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Moderate erosion, likely due to the ng on a steep grade. Presence of run/riffle/pool complexes. Explain: None were observed. Tributary geometry: Relatively straight Tributary gradient (approximate average slope): 6 %
(c) when groundy	<u>Flow:</u> Tributary provides for: Seasonal flow Estimate average number of flow events in review area/year: 11-20 Describe flow regime: The stream flows during and after preciptation events as well as certain times of the year water provides water for stream flow. Other information on duration and volume:
	Surface flow is: Confined. Characteristics: The stream is confined to its channel, no discrete flow was observed.
thus contribut	Subsurface flow: Yes . Explain findings: It was observed that wetland 42 has subsurface flow underneath the access road ing to waterway 12's flow regime. Dye (or other) test performed: N/A.
	Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): the presence of litter and debris 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): .
	If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): High Tide Line indicated by: Mean High Water Mark indicated by: oil or scum line along shore objects survey to available datum; fine shell or debris deposits (foreshore) physical markings/characteristics tidal gauges other (list):

⁽iii) Chemical Characteristics:

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

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: Water color was clear, water quality is generally good although the Black Creek watershed is known to have pollutants from past mining activities; specifically acid mine drainage.

Identify specific pollutants, if known: The specific pollutants that are known, per a 2008 report by PADEP, within the Black Creek watershed are iron, manganese, and aluminum. The pH is also negatively affected as a result of this pollution. There are no acid mine drainages within the Black Creek Watershed, but it is impacted by acid mine drainage from two of its tributaries that are off-site; Quakake and Hazel Creeks.

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

- Riparian corridor. Characteristics (type, average width):
- \boxtimes Wetland fringe. Characteristics: There are 2 wetlands abutting water 12.
- Habitat for:
 - Federally Listed species. Explain findings:

 - Fish/spawn areas. Explain findings:
 Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings: The aquatic features are part of the Black Creek wetland complex that as a whole contributes to aquatic and wildlife diversity in the region.

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: 0.294 acres

Wetland type. Explain: PEM and PFO.

Wetland quality. Explain: Overall high quality, but man altered in that there is an access road cutting through them. They are high quality because they are situated in an old-growth wooded area, display high diversity for the region, and contribute to the Black Creek wetland complex.

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

(b) General Flow Relationship with Non-TNW:

Flow is: Intermittent flow. Explain: Seasonal groundwater and storm events contribute to water flow, certain seasons or times of the year when groundwater levels are lowest the tributary may be dry.

Surface flow is: Discrete and confined

Characteristics: The wetlands are continuously saturated with the water flow becoming confined in waterway 12.

Subsurface flow: Yes. Explain findings: Wetland 42 was observed to have subsurface flow underneath the gravel access road, contributing to waterway 12's flow regime. Also USGS streamstats indicates that all the wetlands in the AJD study area are within Black Creeks drainage area.

 \Box Dye (or other) test performed: N/A.

- (c) Wetland Adjacency Determination with Non-TNW:
 - Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain: Wetland 42 is seperated from waterway 12 by a gravel access road, but a

subsurface connection was observed.

(d) Proximity (Relationship) to TNW

Project wetlands are **5-10** river miles from TNW. Project waters are **5-10** aerial (straight) miles from TNW. Flow is from: Wetland to navigable waters Estimate approximate location of wetland as within the **50 - 100-year** 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.

Identify specific pollutants, if known: The specific pollutants that are known, per a 2008 report by PADEP, within the Black Creek watershed are iron, manganese, and aluminum. The pH is also negatively affected as a result of this pollution. There are no acid mine drainages within the Black Creek Watershed, but it is impacted by acid mine drainage from two of its tributaries that are off-site; Quakake and Hazel Creeks.

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

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:

 - Fish/spawn areas. Explain findings:
 Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings: Is part of the Black Creek wetland complex that as a whole contributes to aquatic and wildlife diversity in the region.

3.

Characteristics of all wetlands adjacent to the tributary (if any) All wetland(s) being considered in the cumulative analysis: **2** Approximately (0.294) 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)
41 Y	0.015		
42 N	0.279		

Summarize overall biological, chemical and physical functions being performed: The wetland functions being performed include wildlife habitat and food chain support, surface water retention/detention, groundwater recharge, and absorption and filtering of nutrients and other pollutants.

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: Wetland 42 is adjacent to, but does not abutt waterway 12. There is an access road that was built seperating wetland 42 from waterway 12 and while there is no culvert connecting them, a subsurface connection underneath the road was observed in the field. It appears that wetland 42 is the main source of waterway 12's flow regime. This is clearly observed in the wetland and water delineation plan. Further evidence pointing towards the subsurface connection and thus a significant nexus is the fact that the HUC 12 map indicates that all wetlands and waterways within the AJD study area are within the Black Creek drainage basin. This makes it highly probable that there are subsurface connections that are and are not readily observed within the study area and is further evidence that wetland 42 does in fact have a significant nexus to Black Creek. Please refer to supporting documents for further clarificiation.

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

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

2. RPWs that flow directly or indirectly into TNWs.

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
- Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: In the field continuous waterflow was observed. There are also multiple geomorphic indicators distinguising this waterway as an intermittent stream. These geomorphic indicators are a defined bed and bank, moderate sinuosity, stream substrate sorting, alluvial deposits, head cut at the access road indicating groundwater/subsurface flow, and topographic indicators showing a natural valley/drainageway. Another indicator is wetland 41's existence, if this were an ephemeral stream wetland 41 would likely not be saturated enough to have formed hyrdic soils and/or the ability to support wetland vegetation.
 - Provide estimates for jurisdictional waters in the review area (check all that apply):

acres.

- Tributary waters: **70** linear feet **2** width (ft).
- Other non-wetland waters:
 - Identify type(s) of waters:

3. Non-RPWs⁸ 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):

acres.

- Tributary waters: linear feet width (ft).
- 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: Refer to sections III.B and III.D.2.

Provide acreage estimates for jurisdictional wetlands in the review area: 0.294 acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: 0.294 acres.

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

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

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.⁹

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

⁸See Footnote # 3.

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

E.	ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY): ¹⁰ which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain: Other factors. Explain:
	Identify water body and summarize rationale supporting determination:
	 Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters: . Wetlands: acres.
F.	 NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Other: (explain, if not covered above):
	Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> 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): linear feet width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: . Wetlands: acres.
	 Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet, width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: . Wetlands: acres.
<u>SE</u>	CTION IV: DATA SOURCES.
А.	 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: Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: U.S. Geological Survey Hydrologic Atlas: USGS NHD data. USGS 8 and 12 digit HUC maps. U.S. Geological Survey map(s). Cite scale & quad name: USDA Natural Resources Conservation Service Soil Survey. Citation:

- National wetlands inventory map(s). Cite name: Figure 3 NWI-NHD-LiDAR Map.
 State/Local wetland inventory map(s):

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

- (National Geodectic Vertical Datum of 1929)

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- FEMA/FIRM maps: .
 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of Photographs: Aerial (Name & Date): Figure 2 Aerial Photo Map, undated. or 🖾 Other (Name & Date): Appendix D: Photographs.
- Previous determination(s). File no. and date of response letter:
 Applicable/supporting case law:
 Applicable/supporting scientific literature:
 Other information (please specify): USGS StreamStats Report.

B. ADDITIONAL COMMENTS TO SUPPORT JD:

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):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CENAP-OPR-2022-00077-96 Mora Solar LLC CA

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State:Pennsylvania County/parish/borough: Carbon County City: Kidder Township Center coordinates of site (lat/long in degree decimal format): Lat. 41.071144° N, Long. -75.660627° W. Universal Transverse Mercator: 444499.87; 4546864.99; 18T

Name of nearest waterbody: Black Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lehigh River Name of watershed or Hydrologic Unit Code (HUC): 020401060301 Black Creek

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date:
- Field Determination. Date(s): May 3-5, 11, 2022

SECTION II: SUMMARY OF FINDINGS A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There are and are not "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

- a. Indicate presence of waters of U.S. in review area (check all that apply): ¹
 - TNWs, including territorial seas
 - Wetlands adjacent to TNWs
 - Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 - Non-RPWs that flow directly or indirectly into TNWs
 - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - Impoundments of jurisdictional waters
 - Isolated (interstate or intrastate) waters, including isolated wetlands
- b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: 5 linear feet: 571 width (ft) and/or 0.05 acres. Wetlands: 14.617 acres.

- c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual Elevation of established OHWM (if known):N/A.
- Non-regulated waters/wetlands (check if applicable):³ 2.
 - Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

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

(i) General Area Conditions: Watershed size: 11,089.17 acres Drainage area: 896 acres Average annual rainfall: 47 inches Average annual snowfall: 40 inches

(ii) Physical Characteristics:

(a) <u>Relationship with TNW:</u>

 □ Tributary flows directly into TNW.
 ⊠ Tributary flows through 2 tributaries before entering TNW.

Project waters are 5-10 river miles from TNW.
Project waters are 1 (or less) river miles from RPW.
Project waters are 5-10 aerial (straight) miles from TNW.
Project waters are 1 (or less) aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: N/A.

Identify flow route to TNW⁵: Waterway 5 connects wetland 44 to 43, runs through wetland 43 and connects to Black Creek off-site.

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

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known: 1.

(b)	General Tributary Characteristics (check all that apply): Tributary is: Image: Characteristics (check all that apply): Image: Characteristics (check all that apply): Image: Characteristics (check all that apply): Image: Characteristics (check all that apply): Image: Characteristics (check all that apply): Image: Characteristics (check all that apply): Image: Characteristics (check all that apply): Image: Characteristics (check all that apply): Image: Characteristics (check all that apply): Image: Characteristics (check all that apply): Image: Characteristics (check all that apply): Image: Characteristics (check all that apply): Image: Characteristics (check all that apply): Image: Characteristics (check all that apply): Image: Characteristics (check all that apply): Image: Characteristics (check all that apply): Image: Characteristics (check all that apply): Image: Characteristics (check all that apply): Image: Characteristics (check all that apply): Image: Characteristics (check all that apply): Image: Check all that apply): Image: Characteristics (check all that apply): Image: Check all that apply (check all that apply): Image: Check all that apply (check all that apply): Image: Check all that apply (check all that apply (ch
	Tributary properties with respect to top of bank (estimate): Average width: 3 feet Average depth: 1 feet Average side slopes: 3:1.
	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: The tributary is stable, not highly eroded. Presence of run/riffle/pool complexes. Explain: None observed. Tributary geometry: Meandering Tributary gradient (approximate average slope): 4 %
(c) when groundy	Flow: Tributary provides for: Seasonal flow Estimate average number of flow events in review area/year: 11-20 Describe flow regime: The stream flows during and after precipitation events as well as certain times of the year water provides water for stream flow. Other information on duration and volume:
	Surface flow is: Confined. Characteristics: The stream is confined to its channel, no discrete flow was observed.
the Black Cree	Subsurface flow: Unknown . Explain findings: Unkown, but all wetlands and waterways within the study area are within ek drainage area, so subsurface flows on-site are possible. In this instance no subsurface flow was observed.
	Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): clear, natural line impressed on the bank clear, natural line impressed on the bank changes in the character of soil destruction of terrestrial vegetation shelving vegetation matted down, bent, or absent sediment deposition sediment deposition water staining other (list):
	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):
(iii) Che Cha	mical Characteristics: racterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: Water color was clear, water quality is generally good although the Black Creek watershed is known to have

pollutants from past mining activities; specifically acid mine drainage.

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

Identify specific pollutants, if known: The specific pollutants that are known, per a 2008 report by PADEP, within the Black Creek watershed are iron, manganese, and aluminum. The pH is also negatively affected as a result of this pollution. There are no acid mine drainages within the Black Creek Watershed, but it is impacted by acid mine drainage from two of its tributaries that are off-site; Quakake and Hazel Creeks.

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

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics: There are 2 wetlands that abutt water 5. \boxtimes
- Habitat for:
 - Federally Listed species. Explain findings:

 - Fish/spawn areas. Explain findings:
 Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings: The aquatic features are part of the Black Creek wetland complex that as a whole contributes to aquatic and wildlife diversity in the region.

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: 3.334 acres Wetland type. Explain: PFO. Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain: Overall high quality, but man altered in that there is an access road cutting through them. They are high quality because they are situated in an old-growth wooded area, display high diversity for the region, and contribute to the Black Creek wetland complex.

(b) General Flow Relationship with Non-TNW:

Flow is: Intermittent flow. Explain: Seasonal groundwater and storm events contribute to water flow, certain seasons or times of the year when groundwater levels are lowest the tributary may be dry.

Surface flow is: Confined

Characteristics: Surface flow is confined to waterway 5's channel.

Subsurface flow: Unknown. Explain findings: Unknown, but likely that there is subsurface flow as these wetlands are part of the Black Creek wetland complex. USGS streamstats also indicated that all the wetlands in the AJD study area are within Black Creeks drainage area.

Dye (or other) test performed:

- (c) Wetland Adjacency Determination with Non-TNW:
 - Directly abutting
 - Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 - Ecological connection. Explain:
 - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **5-10** river miles from TNW. Project waters are **5-10** aerial (straight) miles from TNW. Flow is from: Wetland to navigable waters Estimate approximate location of wetland as within the **50 - 100-year** 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.

Identify specific pollutants, if known: The specific pollutants that are known, per a 2008 report by PADEP, within the Black Creek watershed are iron, manganese, and aluminum. The pH is also negatively affected as a result of this pollution. There are no acid mine drainages within the Black Creek Watershed, but it is impacted by acid mine drainage from two of its tributaries that are off-site; Quakake and Hazel Creeks.

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

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:

 - Federally Listed species. Explain findings:
 Fish/spawn areas. Explain findings:
 Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings: Is part of the Black Creek wetland complex that as a whole contributes to aquatic and wildlife diversity in the region.

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

All wetland(s) being considered in the cumulative analysis: **2** Approximately (3.334) 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)
43 Y	0.527		
44 Y	2.807		

Summarize overall biological, chemical and physical functions being performed: The wetland functions being performed include wildlife habitat and food chain support, surface water retention/detention, groundwater recharge, and absorption and filtering of nutrients and other pollutants.

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:

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

- TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.
- 2. RPWs that flow directly or indirectly into TNWs.
 - Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
 - Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: In the field continuous waterflow was observed. There are also multiple geomorphic indicators distinguising this waterway as an intermittent stream. These geomorphic indicators are a defined bed and bank, moderate sinuosity, stream

substrate sorting, alluvial deposits, head cut at the access road indicating groundwater/subsurface flow, and topographic indicators showing a natural valley/drainageway.

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

Tributary waters: linear feet width (ft).

Other non-wetland waters: acres.

Identify type(s) of waters:

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

.

Tributary waters: linear feet width (ft).

Other non-wetland waters: acres.

Identify type(s) of waters:

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

- Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
- Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

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

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

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.⁹

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

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

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

which are or could be used by interstate or foreign travelers for recreational or other purposes.

from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.

⁸See Footnote #3.

 $^{^9}$ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

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

- Interstate isolated waters. Explain:
- Other factors. Explain:

Identif	v water	body and	l summarize	rationale su	pporting	determination:	
Lachten	, mater	Nou, and	. Summer nev	i actonate ba	ppor ung	actor minuterone	

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

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.

Identify type(s) of waters:

Wetlands: acres.

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

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based <u>solely</u> 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 <u>sole</u> 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): linear feet width (ft).

Lakes/ponds: acres.

- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

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

- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- Lakes/ponds: acres.

Other non-wetland waters: acres. List type of aquatic resource:

Wetlands: acres.

SECTION IV: DATA SOURCES.

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

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name:
- USDA Natural Resources Conservation Service Soil Survey. Citation:
- National wetlands inventory map(s). Cite name: Figure 3 NWI-NHD-LiDAR Map.
- State/Local wetland inventory map(s):
- FEMA/FIRM maps:
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Figure 2 Aerial Photo Map, undated.
 - or Other (Name & Date): Appendix D: Photographs.
- Previous determination(s). File no. and date of response letter:
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify): USGS StreamStats Report.

B. ADDITIONAL COMMENTS TO SUPPORT JD:

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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):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CENAP-OPR-2022-00077-96 Mora Solar LLC CA

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State:Pennsylvania County/parish/borough: Carbon County City: Kidder Township Center coordinates of site (lat/long in degree decimal format): Lat. 41.071144° N, Long. -75.660627° W. Universal Transverse Mercator: 444499.87; 4546864.99; 18T

Name of nearest waterbody: Black Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lehigh River Name of watershed or Hydrologic Unit Code (HUC): 020401060301 Black Creek

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date:
- Field Determination. Date(s): May 3-5, 11, 2022

SECTION II: SUMMARY OF FINDINGS A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There are and are not "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

- a. Indicate presence of waters of U.S. in review area (check all that apply): ¹
 - TNWs, including territorial seas
 - Wetlands adjacent to TNWs
 - Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 - Non-RPWs that flow directly or indirectly into TNWs
 - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - Impoundments of jurisdictional waters
 - Isolated (interstate or intrastate) waters, including isolated wetlands
- b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: 5 linear feet: 571 width (ft) and/or 0.05 acres.

Wetlands: 14.617 acres.

- c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual Elevation of established OHWM (if known):N/A.
- 2. Non-regulated waters/wetlands (check if applicable):³
 - Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: Wetlands 1, 2, 5A, 14, 24, 27, 28, 29, 30, 35, 45, 46, 47, 54, 56, 58, 59, 60, 64 were found to be isolated wetlands with no significant nexus to a traditional navigable water. Water 10 was also determined to be non-jurisdictional.

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

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

 (i) General Area Conditions: Watershed size: Pick List Drainage area: Pick List Average annual rainfall: inches

Average annual snowfall: 0 inches

(ii) Physical Characteristics:

(a) <u>Relationship with TNW:</u>

 ☐ Tributary flows directly into TNW.
 ☐ Tributary flows through **Pick List** tributaries before entering TNW.

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

Identify flow route to TNW⁵: . . Tributary stream order, if known:

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

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

	(b)	General Tributary Characteristics (check all that apply):
		Tributary is: 🗌 Natural
		Artificial (man-made). Explain:
		Manipulated (man-altered). Explain:
		Tributary properties with respect to top of bank (estimate): Average width: feet Average depth: feet Average side slopes: Pick List.
		Average side slopes. The List.
		Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain: .
		Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: . Presence of run/riffle/pool complexes. Explain: . Tributary geometry: Pick List
		moutary gradient (approximate average slope): %
	(c)	<u>Flow:</u> Tributary provides for: Pick List Estimate average number of flow events in review area/year: Pick List Describe flow regime: Other information on duration and volume:
		Surface flow is: Pick List. Characteristics:
		Subsurface flow: Pick List. Explain findings:
		Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): clear, natural line impressed on the bank the presence of litter and debris changes in the character of soil destruction of terrestrial vegetation shelving the presence of wrack line vegetation matted down, bent, or absent sediment sorting leaf litter disturbed or washed away scour sediment deposition multiple observed or predicted flow events water staining abrupt change in plant community other (list):
		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 survey to available datum; physical markings/characteristics vegetation lines/changes in vegetation types.
(iii)	Che Cha	emical Characteristics:

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

Identify specific pollutants, if known:

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

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

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:

 - Fish/spawn areas. Explain findings:
 Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW 2.

(i) Physical Characteristics:

- (a) General Wetland Characteristics: Properties: Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain:
- (b) General Flow Relationship with Non-TNW: Flow is: **Pick List**. Explain:

Surface flow is: Pick List Characteristics:

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

(c) Wetland Adjacency Determination with Non-TNW:

- Directly abutting
- □ Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 - Ecological connection. Explain:
 - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW. Project waters are **Pick List** aerial (straight) miles from TNW. Flow is from: **Pick List.** Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Identify specific pollutants, if known:

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

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

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

All wetland(s) being considered in the cumulative analysis: Pick List) acres in total are being considered in the cumulative analysis. Approximately (

For each wetland, specify the following:

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

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

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:

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

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

2. **RPWs that flow directly or indirectly into TNWs.**

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

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

acres.

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

3. <u>Non-RPWs⁸ that flow directly or indirectly into TNWs.</u>

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):

acres.

- Tributary waters: linear feet width (ft).
- 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:

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

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

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

Provide estimates for jurisdictional wetlands in the review area: acres.

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

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

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

Identify water body and summarize rationale supporting determination:

⁸See Footnote #3.

 $^{^9}$ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

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

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

.

Tributary waters: linear feet width (ft).

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

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

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Wetlands 1, 2, 5A, 14, 24, 27, 28, 29, 30, 35, 45, 46, 47, 54, 56, 58, 59, 60, 64 were found to be isolated wetlands with no significant nexus to a traditional navigable water. Water 10 was also determined to be non-jurisdictional.
- 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): linear feet width (ft).

Lakes/ponds: acres.

- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

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

- \boxtimes Non-wetland waters (i.e., rivers, streams): 277 linear feet, 2 width (ft).
- Lakes/ponds:
- Other non-wetland waters: acres. List type of aquatic resource:
- \square Wetlands: 2.755 acres.

SECTION IV: DATA SOURCES.

- A. SUPPORTING DATA. Data reviewed for JD (check all that apply checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
 - \boxtimes Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
 - Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - \boxtimes Office concurs with data sheets/delineation report.

acres.

- 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:
 - USDA Natural Resources Conservation Service Soil Survey. Citation:
- \boxtimes National wetlands inventory map(s). Cite name: Figure 3 NWI-NHD-LiDAR Map.
- State/Local wetland inventory map(s):
- FEMA/FIRM maps:

- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Figure 2 Aerial Photo Map, undated.
 - or $\overline{\boxtimes}$ Other (Name & Date): Appendix D: Photographs.
 - Previous determination(s). File no. and date of response letter:
 - Applicable/supporting case law:
- Applicable/supporting scientific literature:
- \square Other information (please specify): USGS StreamStats Report.

B. ADDITIONAL COMMENTS TO SUPPORT JD:

PREPARED BY: Nikolas Tranchik Senior Project Manager, Section II





Legend



NOTES

Delineation performed July 26 to 30, August 2 to 5, and September 22 and 24, 2021 by Kimley-Horn wetland scientists Max Ojserkis, PWS; Ryan Merritt, PWS; Kenny Jesensky, PWS; Samantha Stratton, WPIT; and Anna Quinto.

USACE biologist Nikolas Tranchik visited the site and reviewed the wetland delineation on May 3, 4, 5 and 11, 2022. Several revisions were requested.

Both originally delineated and revised wetland and water boundaries are shown on this plan.

The Study Area measures 929.565 acres, including the approximately 870-acre project site plus a 50-foot buffer.

71.902 acres of wetlands and 0.193 acres of waters (outside of wetlands) have been delineated in the Study Area. The remaining 857.470 acres are uplands.

Resource boundaries, associated buffers, and jurisdictional status are based on Kimley-Horn's best professional judgement and are subject to verification by regulatory agencies.

FIGURE 6 WETLAND AND WATER DELINEATION PLAN

REVISION 1 - JUNE 20, 2022

MORA SOLAR, LLC

KIDDER TOWNSHIP CARBON COUNTY PENNSYLVANIA

