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): October 29, 2021

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: NAE-2021-00600 GRAVEL PIT SOLAR for Stream 1 and Wetland 1 (Rose)

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State:Connecticut County/parish/borough: Hartford City: East Windsor
Center coordinates of site (lat/long in degree decimal format): Lat. 41.883681° **N**, Long. -72.554889° **W**.
Universal Transverse Mercator:
Name of nearest waterbody: Ketch Brook
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Scantic River
Name of watershed or Hydrologic Unit Code (HUC): 01080205

☒ 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: 3 March 2021
☒ Field Determination. Date(s): 23 July 2021

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** *"waters of the U.S."* within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: linear feet: 10,700 width (ft) and/or acres.
      Wetlands: 35.5 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **Established by OHWM.**
      Elevation of established OHWM (if known): Roughly 88 feet.

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: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW
Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW
Summarize rationale supporting conclusion that wetland is "adjacent": .

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

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

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

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

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

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

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

(ii) Physical Characteristics:
(a) Relationship with TNW:
☐ 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: .

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

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

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

Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: feet
Average depth: feet
Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):

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

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

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

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

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

Tributary has (check all that apply):
☐ Bed and banks
☐ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

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

(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: .

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

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

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**

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

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

Summarize overall biological, chemical and physical functions being performed: .

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):

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: Stream 1, also known as Ketch Brook, is a perennial tributary which discharges to the traditionally navigable Scantic River. The Scantic River is 24.6 miles in total of which 15.1 miles is considered navigable with the limit of navigability upstream of the confluence with Ketch Brook (near the Massachusetts state border in proximity of Hazardville, CT). In addition to being mapped as a USGS perennial waterway in the National Hydrography Database, Ketch Brook is known for its high-quality cold-water habitat stretches of gravel bottom stream, undercut banks, and pools and riffles that support spawning populations of brook trout. The presence of high quality fish habitat is an ecological indicator of flow

continuously year-round. Flow within Ketch Brook Ketch Brook flows from the western boundary of the project site via culvert in a westerly direction under Rye Street for approximately 2500 linear feet where it then intersects with the Scantic River. From the Scantic River confluence the conjoined waterway flows south and west in a natural sinuous configuration for approximately 3.2 miles where it is conveyed under U.S. State Route 5 just south of Bancroft Airport at East Windsor Hill. From this point the watercourse flows northwesterly approximately 1 more mile to a confluence with the tidal, navigable Connecticut River (Section 10). The USGS StreamStats watershed regression analysis identifies a watershed upstream of the review area site boundary of approximately 5.68 sq. miles. This basin area is well over 5 times the expected watershed area for a perennial waterway and the flow duration calculation identifies a spring (May) median flow of 8.3 cubic feet per second which demonstates its perennial nature.

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☐ 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: **10,700** linear feet **25**width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. Non-RPWs[8] that flow directly or indirectly into TNWs.

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

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

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

☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☒ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: Wetland 1 is a large PSS/PFO system associated with the riparian corridor of the perennial stream system identified as Ketch Brook (also known as Stream 1). The wetland consists of floodplain wetland possessing poorly and very poorly drained soils on terrace deposits coincident with alluvial soils along the brook. A majority of Wetland 1 is configured outside of the AJD review areas on independently owned parcels. Altohough federal wetland delineation forms were not submitted for this feature, the information submitted by the wetland scientist provides sufficient evidence to document that the feature possesses hydrology, hydric soils and hydrophytic vegetation and thus would be considered a wetland. Vegetation commonly dominant along the riparian wetland corridor included hydric FAC, FACW and OBL species Acer rubrum, Tsuga canadensis, Lindera benzoin, Impatiens capensis and Symplocarpus foetidus. The hydrological assessment describes variable wetland hydrology ranging from seasonally saturated to temporarily flooded in very poorly drained soil. The wetland area is bordering and contiguous with the Ketch Brook throughout the portion of the stream within the review area.

☐ 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: **35.5** 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.

[8]See Footnote # 3.

☐ 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: .

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.

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

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

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

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:Phased gravel pit development compilation plan prepared by J.R. Russo Associates dated 1-23-2004 last revised through 11-8-2019; No Permit Required Request from VHB, Inc. dated February 18, 2021 submitted on March 1, 2021 including related Wetland Delineation figures 1-7 dated May 7, 2020, other figures, photographs, aerial photographs, topographic maps and associated chronologies; VHB Soil Scientists Report for Apothecaries Hall Road, Windsorville Road, Plantation Road and Wapping Road, East Windsor dated July 21, 2020 submitted on March 1, 2021; Figure No. 29 Prepared by VHB depicting CT DEEP 2016 Lidar Survey data for Apothecaries Hall Road Gravel Pit submitted on March 1, 2021.

☐ 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: Report on the Navigable Status of the Scantic River Connecticut, 1972 prepared for USACE..

☒ 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:USGS 1944, 1964, 2021 historical topographic maps accessed from topoview, various scales.

☒ USDA Natural Resources Conservation Service Soil Survey. Citation:USDA Web Soil Survey Report accessed on 2 February 2021.

☒ National wetlands inventory map(s). Cite name:USFWS NWI accessed on 16 August 2021.

☒ State/Local wetland inventory map(s):Town of South Windsor GIS.

☒ FEMA/FIRM maps: .

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

☒ Photographs: ☒ Aerial (Name & Date):See appended list of aerial photographs reviewed.
or ☒ Other (Name & Date): .

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

☐ Applicable/supporting case law: .

☐ Applicable/supporting scientific literature: .

☒ Other information (please specify):

Corps staff relied on a variety of digital remote resources to conduct this review combined with site-specific delineation information submitted by the environmental consultant. In addition to the items specifically called out above we referred to 1) State of Connecticut, UCONN Magic, CT DCO 2016 Lidar Elevation data and maps, 2) USGS 1944, 1964 historical topographic maps accesed from USGS Topoview, 3) USACE Regulatory Viewer, USGS StreamStats Watershed Regression Analysis for the State of Connecticut accessed on 16 August 2021. Aerial photographs we reviewed and evaluated for our reviewed, included, but are not limited to:

* Spring 1934 CTECO/CT State Library
* 1962 NETROnline Historic Aerials
* 1963 NETROnline Historic Aerials
* 1970 CT State Library
* 1986 CT DEEP/CT State Library
* April 22, 1990 USGS
* April 25, 1995 CT State Library
* August 30, 2003 Google Earth, Maxar
* December 31, 2003, USGS
* Spring 2004 CT State Library
* December 30, 2005, Google Earth, Maxar
* July 2008 USDA NRCS
* March 2012 CT ECO/State of Connecticut
* 2014 CT ECO/State of Connecticut
* April 20, 2016 CT ECO/State of Connecticut
* September 23, 2017
* June 16, 2018 CT ECO/State of Connecticut
* September 18, 2019 CT ECO/State of Connecticut

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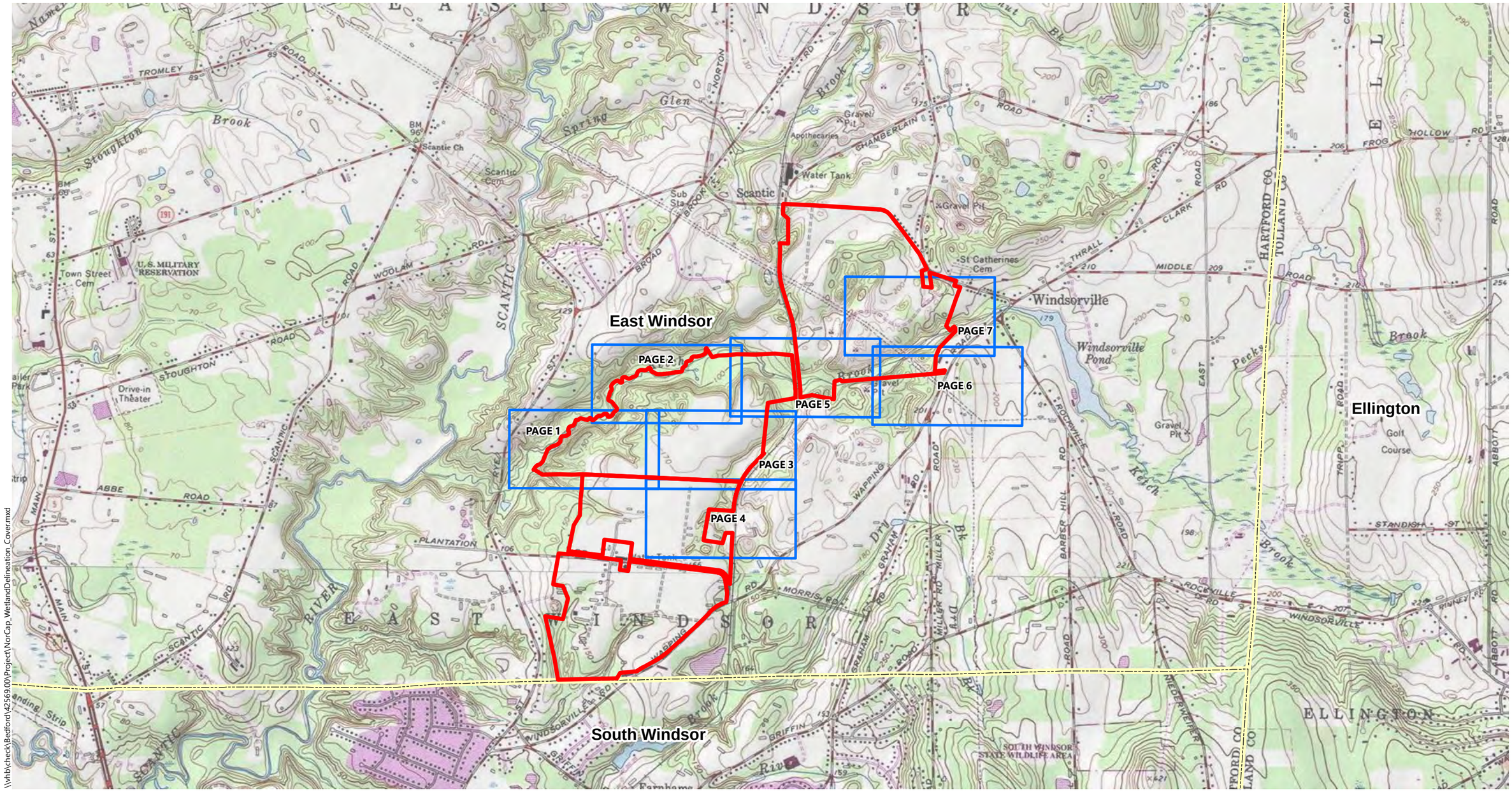
B. ADDITIONAL COMMENTS TO SUPPORT JD: The project area identified on the submitted documents consists of seven parcels totalling 737.24 acres. The subject properties straddle both sides of a railroad corrider and are bounded by multiple local roadways (Cumberland Road, Apothecaries Hall Road, Plantation Road, Morris Road, Wapping Road and Rye Street). Parcel 048-65-007 has an eversource right-of-way bisecting it in a northwest to southeast direction. A perennial waterway, Ketch Brook (identified as Stream 1) flows in a easterly direction through parcels 025-49-017A and 048-65-007. Majority of parcel 048-65-007 consists of an active gravel mine with some wooded upland in the southeast corner of the parcel adjacent to Ketch Brook. The other parcels within the review area are dominated by agricultural fields mapped as Farmland Soils of Statewide Importance and undisturbed wooded corridor adjacent to Ketch Brook. The

AJD prepared herein is associated with installation of a large photovoltaic project which will result in the clearing of approximately 82.5 acres of forested upland, installation of access roads, equipment pads and electrical substations. The project may also include installation of a cable via horizontal directional drill under Ketch Brook.

The parcels reviewed included a total of of 19 potential aquatic resource areas that were reviewed for potential federal Clean Water Act jurisdiction. This Approved Jurisdictional Determination Form in only for one stream and one wetland area (Ketch Brook/Stream 1 and Wetland 1). Eleven wetland areas (Wetlands 2-9, 12 and 13, and Wetland 16) and one potential watercourse (IWC-1) were included under a separate, but related, Preliminary Jurisdictional Determination. Six additional resource areas (Wetlands 10, 11, 15, Ditch 1, Phase 9A and Process Pond 1) were evaluated and presented in a separate, but related Approved Jurisdictional Determination .



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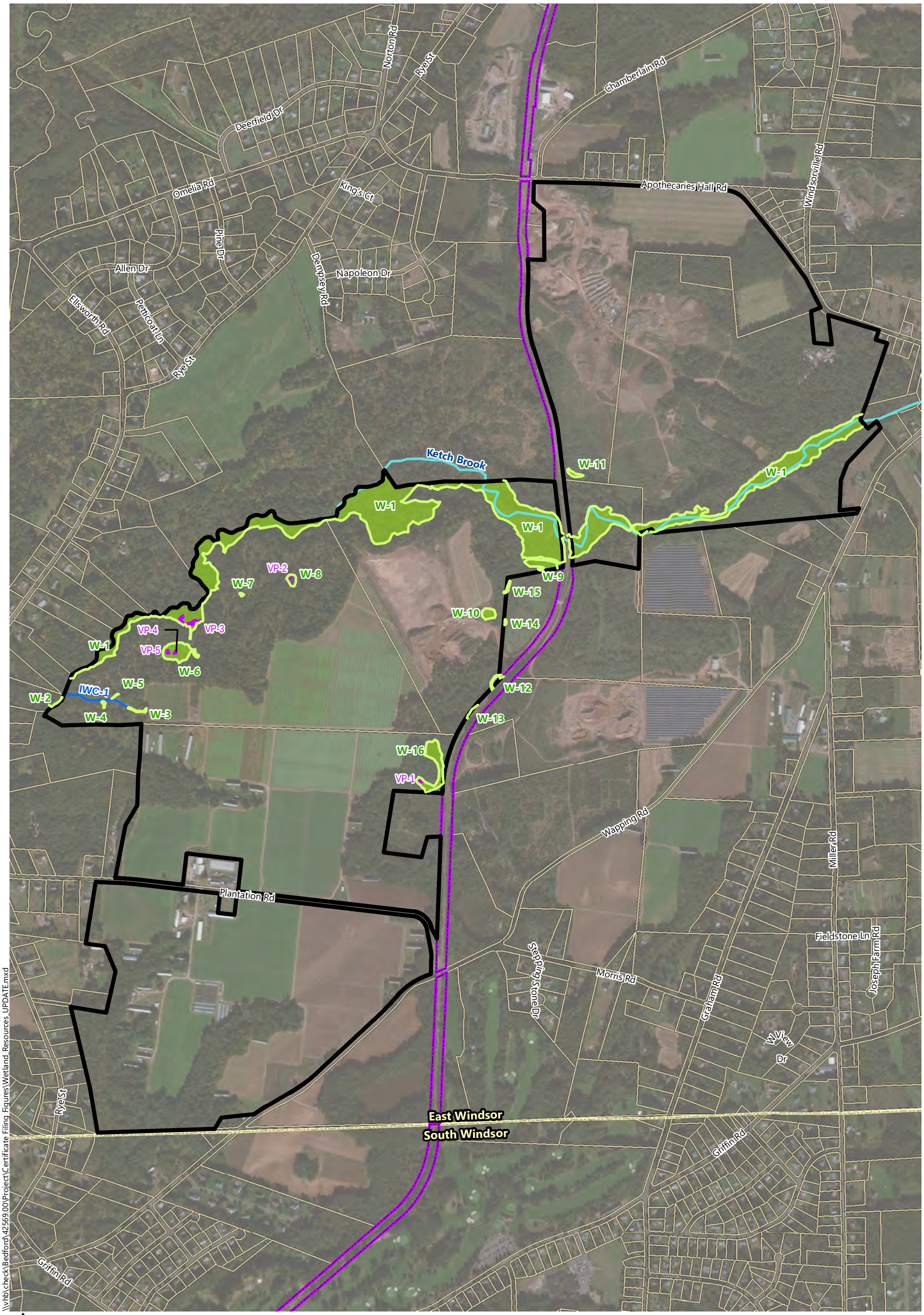
Gravel Pit Solar | East Windsor, Connecticut

Wetland Delineation

Page Index Map

Source: CTDEEP, VHB, Eversource

May 15, 2020



\\vhb\check\Bedford\42569.00\Project\Certificate Filing Figures\Wetland_Resources_UPDATE.mxd

0 500 1000 2000 Feet

Property Boundary
Adjacent Parcels
Town Boundary
Approximate Railroad ROW
Connecticut Inland Wetlands
Delineated Wetland Edge
Vernal Pool
Stream/River
Delineated Intermittent Watercourse

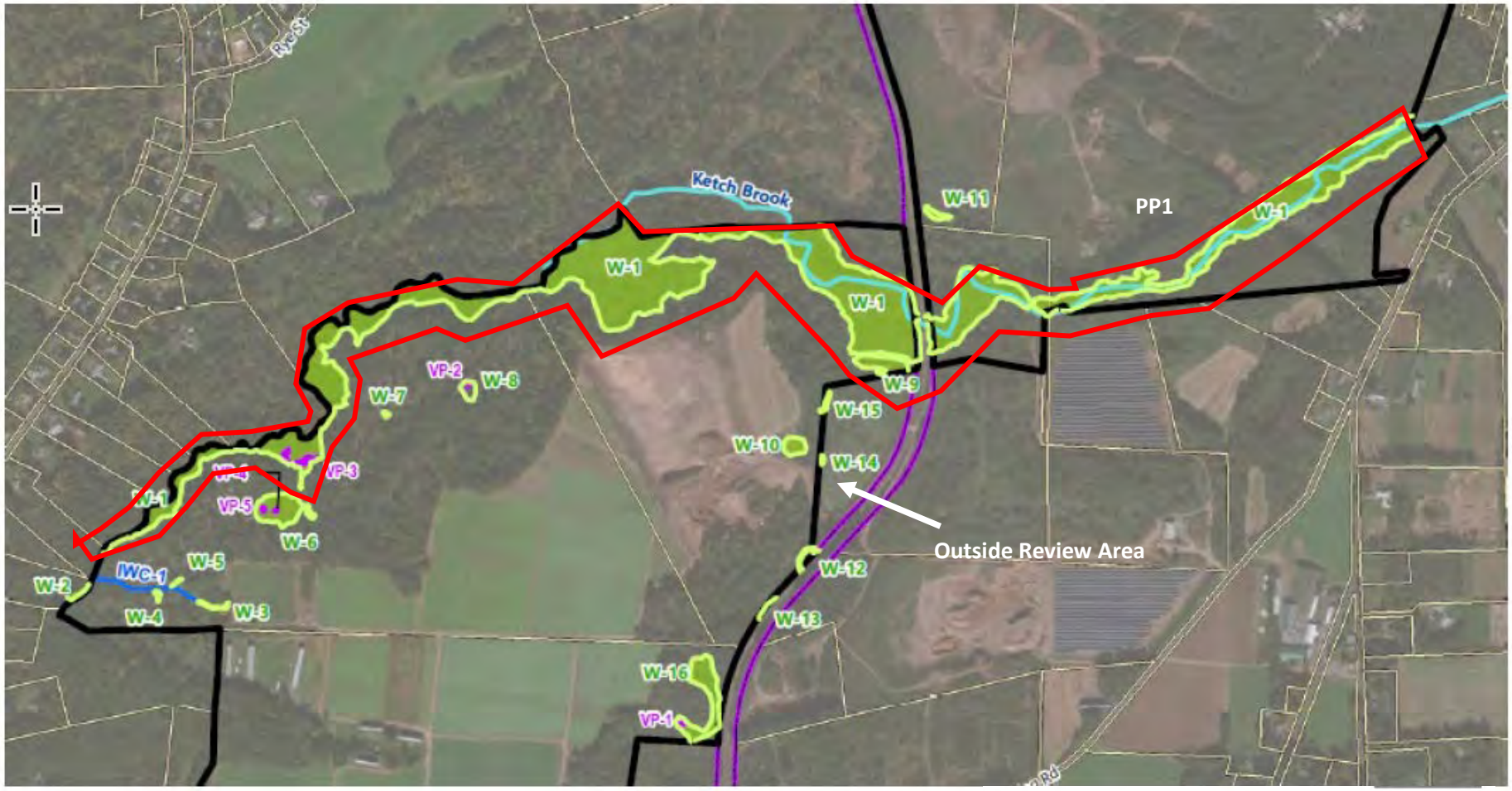
Gravel Pit Solar

East Windsor, Connecticut

Wetland Delineation Map

Source: VHB, CTDEEP, ESRI

GRAVEL PIT SOLAR LLC NAE-2021-00600 –A3 WATERS AND A7 WETLAND KEY TO AJD



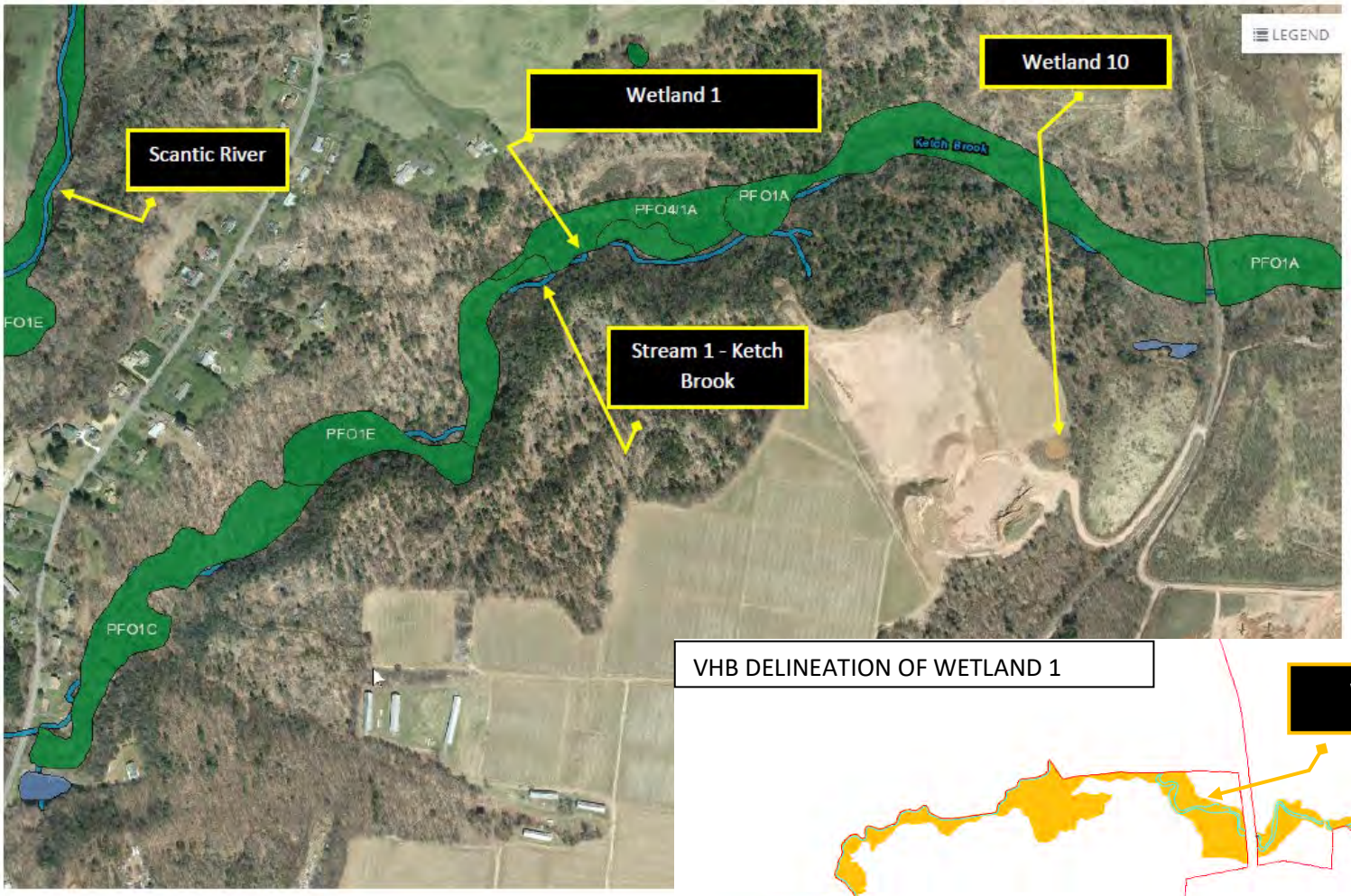
APPROVED JURISDICTIONAL DETERMINATION

Property Boundary
Adjacent Parcels
Town Boundary
Approximate Railroad ROW
Connecticut Inland Wetlands
Delineated Wetland Edge
Vernal Pool
Stream/River
Delineated Intermittent Watercourse

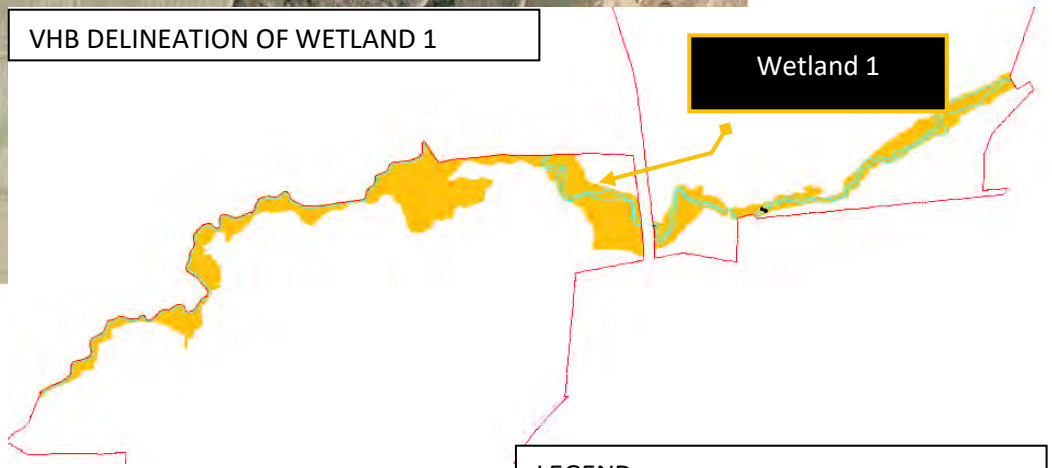
ATTACHMENT IDENTIFIES AQUATIC RESOURCES WITHIN THE REVIEW AREA INCLUDED IN THIS APPROVED JURISDICTIONAL DETERMINATION

SOURCE: VHB, CTDEEP, FEMA, ArcGIS Online
CREATED ON: 8/16/21
CREATED BY: Cori M. Rose, USACE

GRAVEL PIT SOLAR LLC NAE-2021-00600 – NWI FOR GRAVEL PIT SOLAR KETCH BROOK & WETLAND 1



VHB DELINEATION OF WETLAND 1



SOURCE: USFWS, CTCOG, CT DEEP and VHB
CREATED ON: 8/16/21
CREATED BY: Cori M. Rose, USACE

LEGEND
Wetland 1
Ketch Brook

GPS Solar NAE-2021-00600 KETCH BROOK CONNECTIVITY

0 0.5 1 2
mi

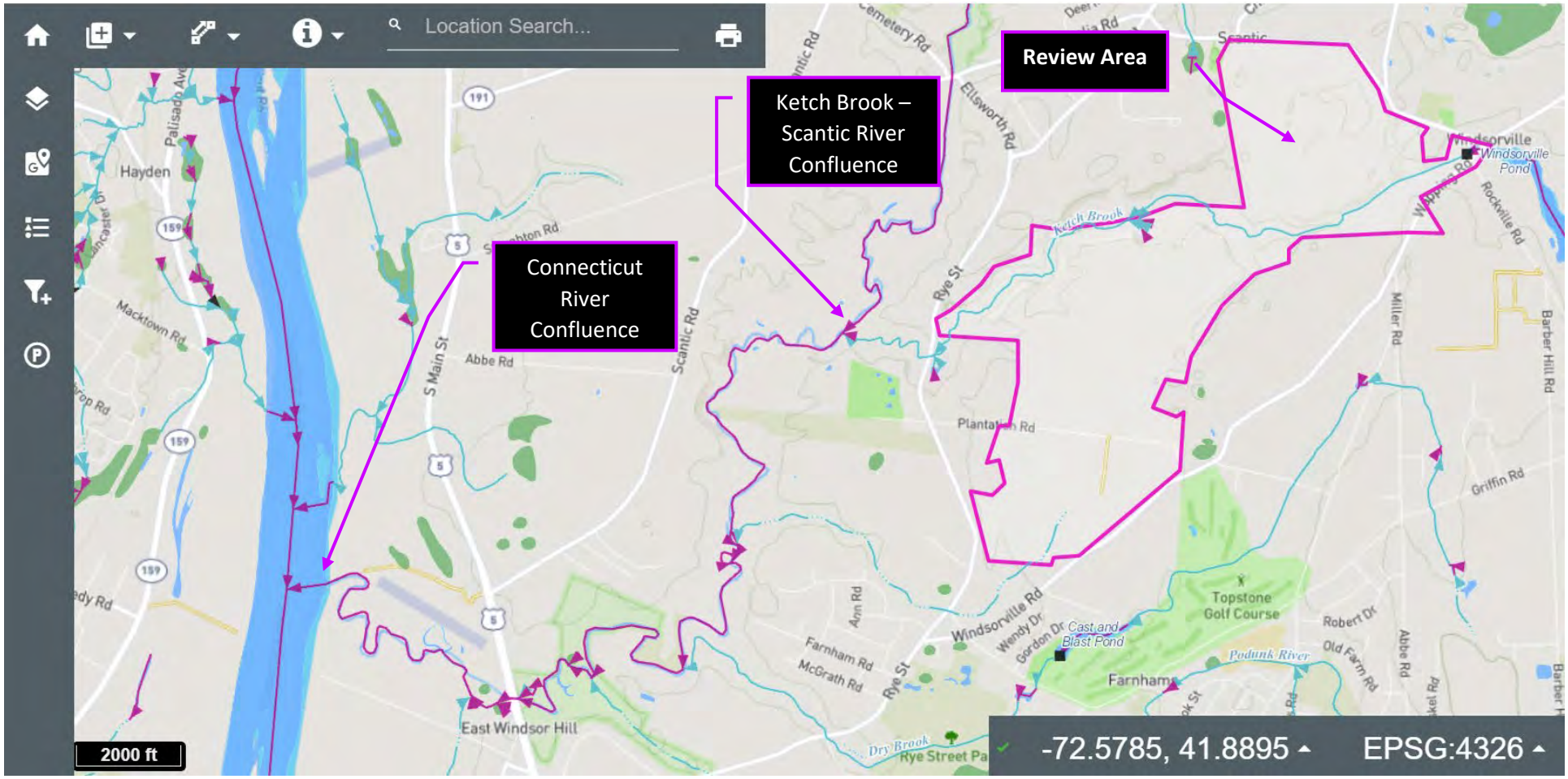
Map Center: 72.571021°W 41.874612°N

Map Created by: Cori M. Rose

Date: 6/25/2021

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
Projection: Mercator Auxiliary Sphere

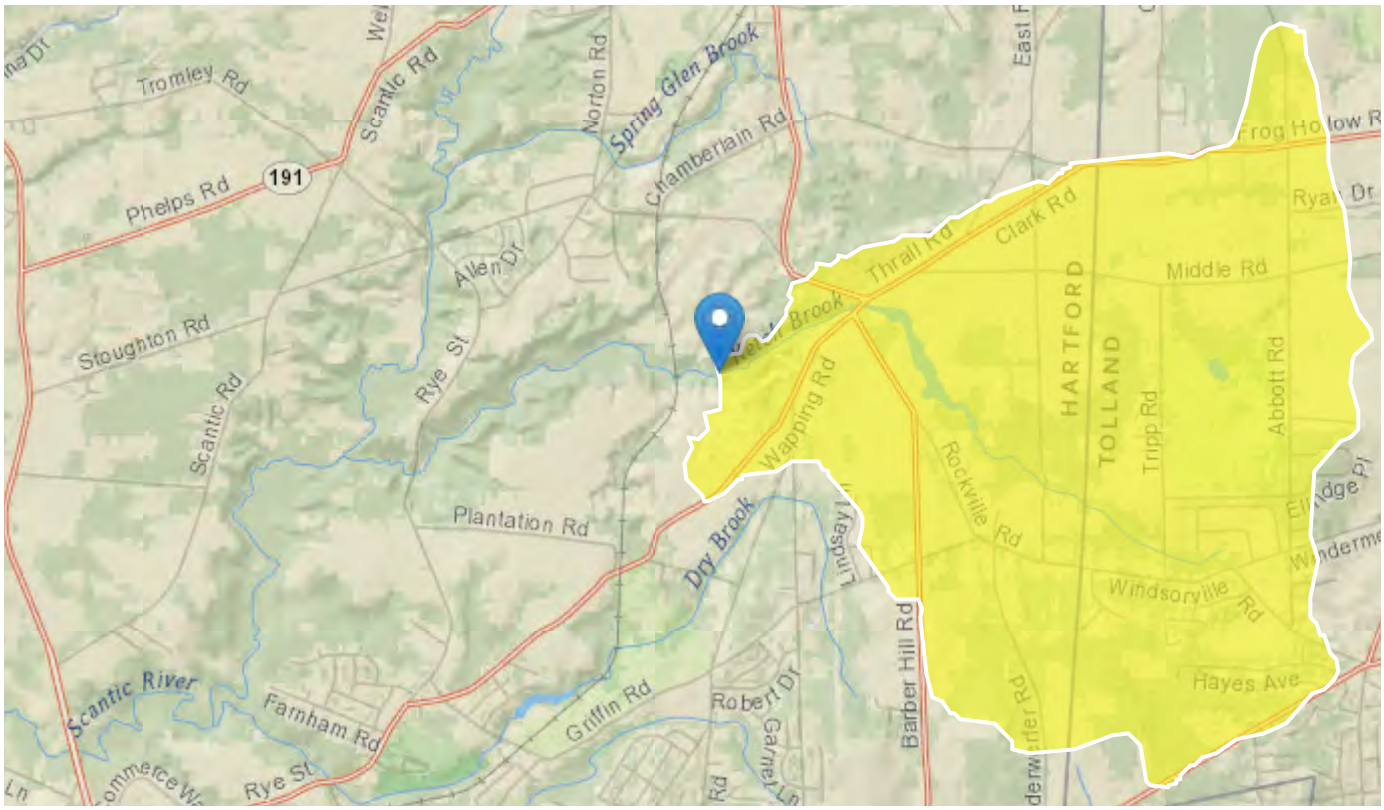
GRAVEL PIT SOLAR – SCANTIC RIVER NAE-2021-00600



Source: USACE, ORM2, USGS
Accessed: March 30, 2021
Created by: Cori M. Rose, USACE

StreamStats Report for Gravel Pit Solar - Ketch Brook NAE-2021-00600

Region ID: CT
Workspace ID: CT20210827145630951000
Clicked Point (Latitude, Longitude): 41.88611, -72.54822
Time: 2021-08-27 10:56:50 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	5.68	square miles
I24H2Y	Maximum 24-hour precipitation that occurs on average once in 2 years - Equivalent to precipitation intensity index	2.85	inches
SSURGOCCDD	Percentage of area with hydrologic soil types C, D, or C/D from SSURGO	0.2389	percent