AKRF

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Memorandum

To:	Nicole Emmons (HH)
From:	Chris Robbins (AKRF)
Date:	November 21, 2012
Re:	EPT Concord Resort – Route 17 Exit #106 – Wetland Investigation and Delineation
cc:	J. Nash (AKRF), N. Bourne (AKRF)

Summary:

This memorandum presents the results of a wetland delineation conducted by AKRF on November 7, 2012 at the site of the proposed NYS Route 17 Exit #106 modifications for the EPT Concord Resort Project. The investigation area included tax parcels 23-2-33, 23-2-32, and 23-2-31. Wetlands were identified and delineated in accordance with the U.S. Army Corps of Engineers (USACE) delineation methodology.[1]

One wetland area was identified located within tax parcel 23-2-33 (Parcel 33). The upland/wetland boundary of this onsite wetland was flagged in the field numbered sequentially WA-1 to WA-26. An upland exclusion area within northwest portion of the wetland was also flagged (flags UA-1 to UA-5). The attached sketch (Figure 1) shows the approximate location of these flags for the surveyors to survey-locate in the field. Once surveyed, this wetland will be added to the wetland map for the project and submitted to the USACE in the Jurisdictional Determination (JD) package so that the USACE may approve and re-authorize the Federal wetland map for the Project.

The wetland area identified on Parcel 33 is a mix of forested, scrub/shrub and emergent wetland habitats. Culverts at the southwest and southeast corners of this wetland convey water way from it under the driveway easement on the parcel and then under Cimarron Road.

A concrete foundation/box measuring roughly eight feet by six feet is located in the south central portion of this wetland. The top of this structure is nearly at grade and is nearly full of water (Photograph 1).

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[1] Environmental Laboratory. 1987. "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, US Army Engineer Waterways Experiment Station, Vicksburg, Miss.;

U.S. Army Corps of Engineers. 2011. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar, C. V. Noble, and J. F. Berkowitz. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

A drainage swale/ditch on the west side of Towner Road, fed by multiple culverts, conveys water along its eastern edge (Photograph 4). The southern end of this drainage, before it enters the southeastern culvert (Photograph 7), would likely be considered a "Relatively Permanent Water" (RPW) because it conveys flows during non-storm events. Because the vegetated wetlands found on Parcel 33 are adjacent/contiguous to this RPW, these wetlands are likely to be regulated under Section 404 of the Clean Water Act. Should the USACE assume jurisdiction over this wetland, disturbance within its bounds would require a permit from the Corps, the Federal agency empowered to enforce Section 404 of the Clean Water Act.

Wetland Description:

Dominant vegetation observed within the delineated wetland includes common cattail, highbush blueberry, sensitive fern, wool grass, softrush, red maple and gray birch.

Soils within the wetland meet multiple indicators including TF2: Red Parent Material.

Hydrology indicators include surface water, high water table, and soil saturation.

NWI Mapped Wetlands:

As shown in Figure 2, the wetland investigation area contains no wetland areas mapped by the U.S. Fish and Wildlife Service's National Wetlands Inventory (NWI). Nor is this site mapped as wetland by the NYSDEC.

Site inspection confirms that Federally-regulated wetlands may occur on Parcel 33. Both the USFWS and NYSDEC wetland maps show only known wetland areas. Therefore, it is not unusual for additional, regulated wetlands to occur despite being unmapped by these agencies. Whether mapped or not, the presence of wetland areas meeting the 3-parameter approach are regulated at the Federal level by the USACE, provided they are connected to other waters of the United States.

NRCS Mapped Soils:

As shown in Figure 3, soils within the wetland area are principally mapped as "WeB: Wellsboro gravelly loam, 3 to 8 percent slopes" with a smaller are of "WeC: Wellsboro gravelly loam 8 to 12 percent slopes". The drainage class of these soil types is "moderately well drained." Small portions of the wetland area are also mapped as "MrA: Morris loam 0 to 3 percent slopes" (northeast) and "SeB: Scriba and Morris loams, gently sloping, extremely stony" (southwest). These are both "somewhat poorly drained" soils.

Additional Information from JD Checklist:

- *Description of any current and/or historic land uses on the site:*

  The investigation area consists of an undeveloped lot bordered on the north and west by three separate building lots on which single family homes are located. To the east lies Towner Road on to the south is a dirt driveway that provides access tot eh single family homes to the west. The parcel on which the wetland was located is 2.44 acres in size and flanked by Towner Road to the east and north and Cimarron Road to the south. NYS Route 17 is approximately 500 feet to the south of this parcel. Past land use likely included agricultural/grazing prior to construction of NYS Route 17.

- *Discussion of whether tributaries (streams) on the site are TNWs, perennial RPWs, seasonal RPWs, or non-RPWs. Include a description of general flow patterns, volume and frequency:*

As shown in Figure 4, the investigation area is located within a subwatershed of the Neversink River (TNW), which is tributary to the Delaware River (TNW). Water within the wetland discharges southward through two Smooth Interior Corrugated Polyethylene Pipes (SICPP), one 24" in diameter and the other 18" in diameter. These convey flows from the wetland area beneath Cimmaron Road. These flows combine with additional surface runoff in the region of two detention basins constructed on the north side of NYS Route 17, then flow via a 36" reinforced concrete pipe (RCP) beneath NYS Route17 and then into two large surface ponds south of NYS Route 17 (Photograph 8). The distance from the wetland investigation area discharge point (at NYS Route 17) to the Neversink River (TNW) is approximately four miles. From that point, the Neversink flows southwards an additional 33 miles until its confluence with the Delaware river (TNW).

- *Description of whether each wetland on the site either abuts or is adjacent to a tributary, identify which tributary (e.g. Wetland A directly abuts an unnamed tributary to Kayaderosseras Creek), and provide a discussion of the justification for this determination.*

  The wetland within the investigation area is bordered on the east by a narrow drainage/ditch/swale that conveys flows seasonally or perennially and therefore is likely and PRW. Therefore the wetland delineated onsite is adjacent/abutting this RPW and is presumed to be subject to USACE regulations.

- *Description of tributary connections to a TNW for each aquatic resource on the site, including a discussion of wetland and/or other connections* . Description of tributary substrate composition (e.g. silts, sands, gravel, etc.)

  The wetlands delineated in the investigation area consist of forested, scrub/shrub and emergent wetland portions. This stream discharges through the two culverts under the dirt driveway and Cimarron Road. Here the flows discharge southwards, eventually conveying runoff to an unnamed stream that is tributary to the Neversink River.

Figures:

1. Approximate Wetland Flag Locations
2. NWI Mapped Wetlands
3. NRCS Mapped Soils
4. Tributaries and Drainage Map
5. Representative Site Photos

If you have any questions please don't hesitate to call.

Chris Robbins

Technical Director

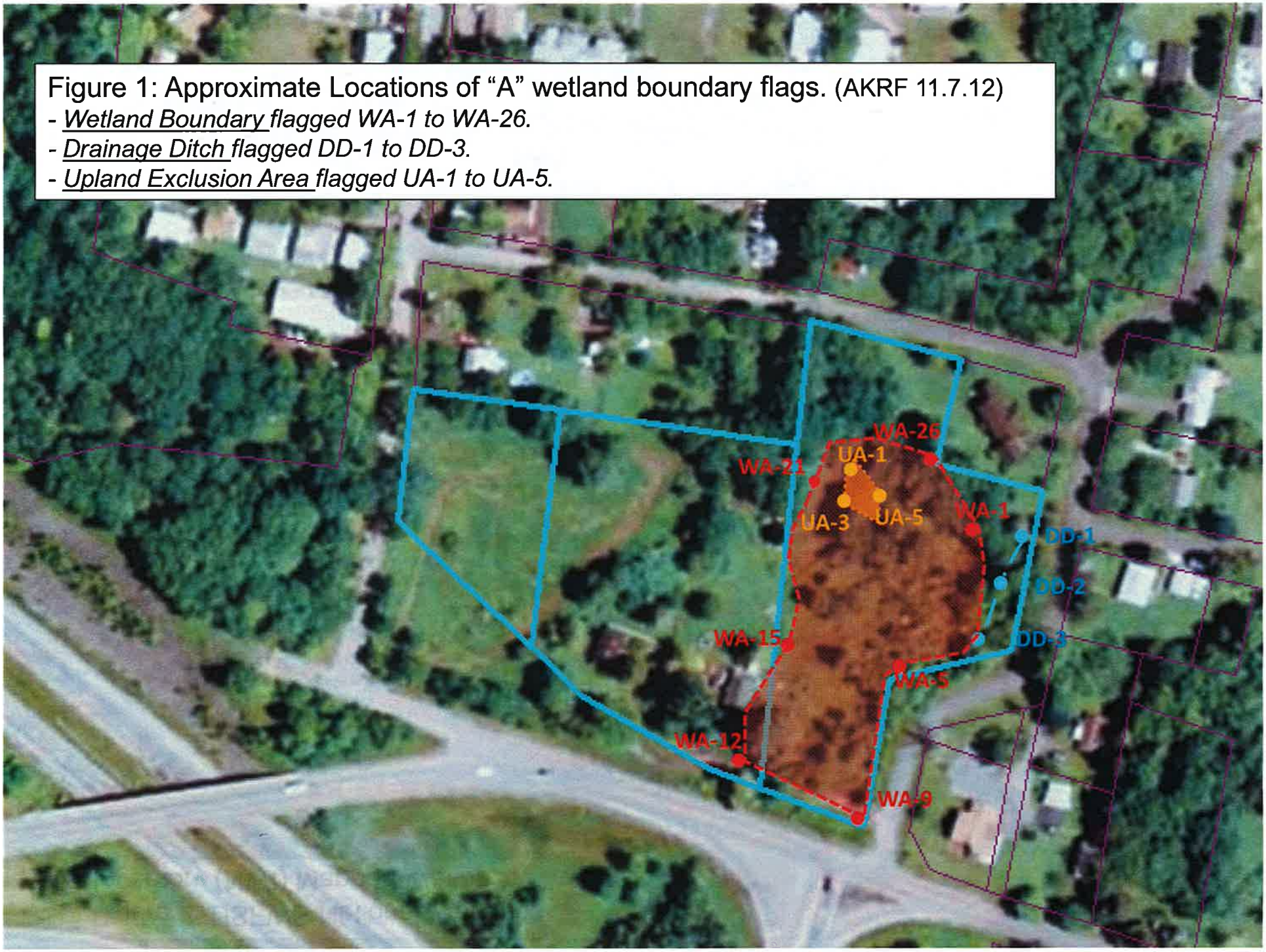

Figure 1: Approximate Locations of "A" wetland boundary flags. (AKRF 11.7.12)

- *Wetland Boundary flagged WA-1 to WA-26.*
- *Drainage Ditch flagged DD-1 to DD-3.*
- *Upland Exclusion Area flagged UA-1 to UA-5.*

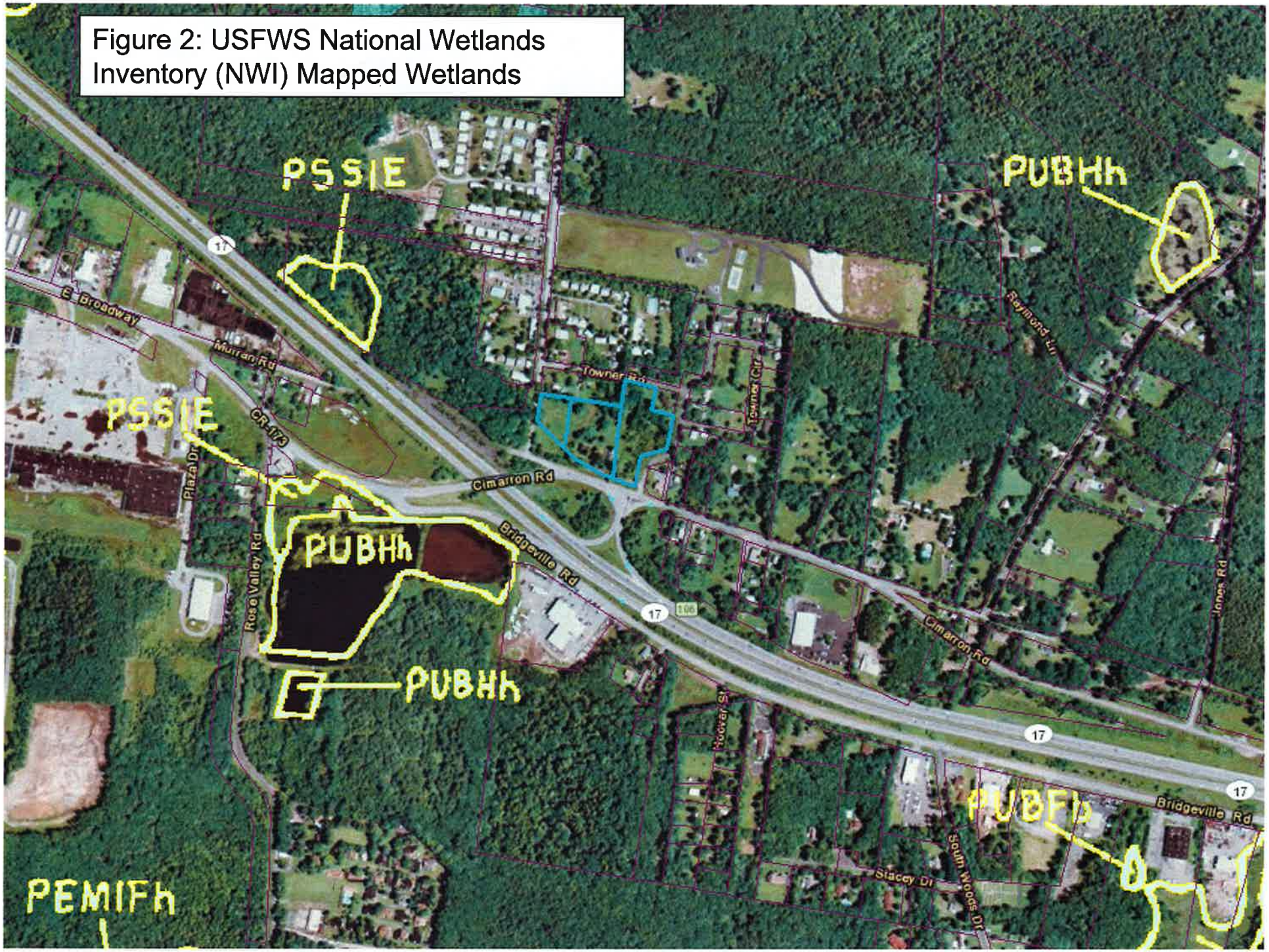

Figure 2: USFWS National Wetlands Inventory (NWI) Mapped Wetlands

Figure 3: NRCS Mapped Soils

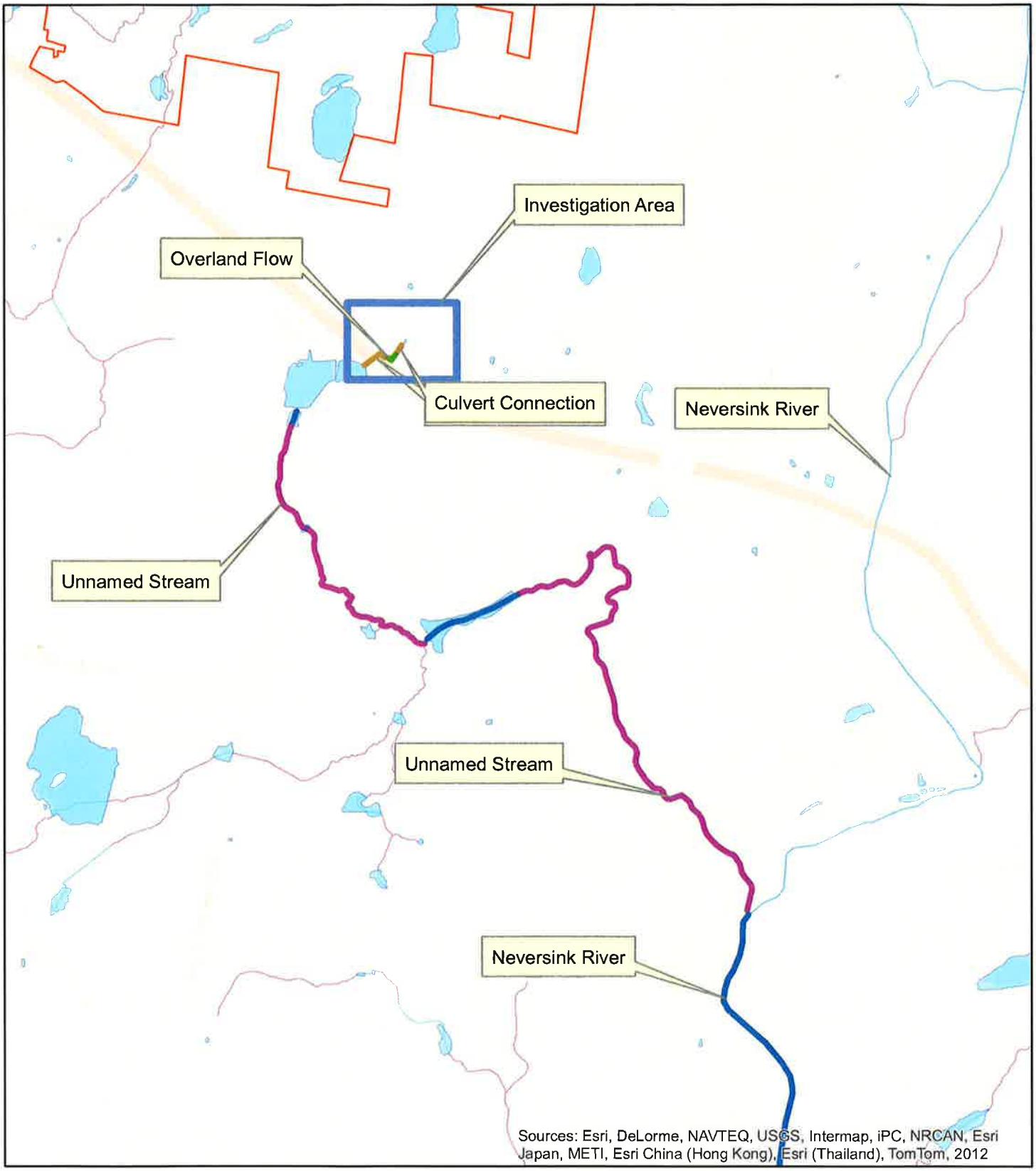

Figure 4

Wetland Investigation Area Connection to Downstream Waters of the U.S.

Photograph 1: Flooded well structure within onsite wetland.

Photograph 2: Onsite Wetland

Photograph 3: Onsite Wetland

Photograph 4: Stream/Rivulet within onsite wetland.

Photograph 5: Onsite Wetland.

Photograph 6: Onsite Wetland showing Cimarron Road.

Photograph 7: Culvert discharging to onsite wetland.

Photograph 8: Offsite Ponds immediately south of Route 17 to which the onsite wetland flows .