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**TO:** Gina L. Wolfman, Senior Project Developer, Clean Focus Renewables  
**FROM:** Megan B. Raymond, MS, PWS, Senior Project Manager, Environmental Science  
**RE:** Elmridge Golf Course Vernal Pool Impact Assessment  
**DATE:** May 21, 2020  
**MMI #:** 6763-10-02

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At your request, Milone & MacBroom, Inc. (MMI) conducted a vernal pool investigation within targeted portions of wetland systems in two locations on the Elmridge Golf Course in Stonington, Connecticut. Vernal pools are wetland areas that provide unique habitat attributes beyond basic wetland functions. In Connecticut, the working definition of a vernal pool is as follows: *"vernal pool means a seasonal watercourse in a defined depression or basin, that lacks a fish population and supports or is capable of supporting breeding and development of amphibian or invertebrate species recognized in such watercourses. These species include spotted salamander, Jefferson salamander complex marbled salamander, wood frog, and fairy shrimp"* (CAWS website).

As you are aware, in the fall of 2019 and early winter 2020, MMI delineated wetlands and watercourses within two study areas on the Elmridge site totaling approximately 52 acres. During the course of these investigations, MMI identified two areas within delineated wetland boundaries as potential vernal pools. The potential habitat areas were identified in Wetland 1, east of North Anguilla Road, and Wetland 2, west of North Anguilla Road (Figure 1). These areas were identified based upon morphological features, e.g., depressions, and hydrologic indicators indicating persistent standing water, such as stained leaves. To verify whether these areas provide functional vernal pool habitat, MMI visited the wetlands three times in spring 2020 during active wetland obligate amphibian breeding period. In summary, neither potential vernal pool provided obligate wetland amphibian development.

MMI conducted site evaluations on March 25, April 20, and May 19, 2020, to evaluate indicators of vernal pool activity. MMI scientists investigated the target wetlands, noting edaphic, hydrologic, and biologic characteristics. MMI employed direct observation techniques as well as dip nets to evaluate aquatic biota within all wetland environments containing surface water. During the first site evaluation in March, water depths in both wetlands were between 12" and 18". No obligate wetland amphibian breeding indicators were observed within Wetland 1, though in Wetland 2, one wood frog (*Lithobates sylvaticus*) egg mass was observed. No wood frog chorusing or other indirect indicators of vernal pool activity were noted. Dip netting each wetland area did not reveal significant macroinvertebrate populations. The second site evaluation took place on April 20 and both of the target areas were directly evaluated using a dip net. The water level in each area had dropped to between 6" and 12". No wood frog tadpoles were observed within Wetland 2. Mayflies and mosquito larvae were observed within both systems. No characteristic facultative vernal pool species such as fingernail clams or caddisfly larvae were observed in either system. The third site evaluation took place on May 19, 2020. Water levels within each area dropped to between 0 to 2". Given the minimal water column, dip net observations were not gathered.



Vernal pool investigation area within Wetland 1. Photo taken May 19, 2020.

The results of the seasonal investigation reveal these wetlands are not active vernal pool systems. The surficial hydrology does not allow for sufficient ephemeral water columns to support both breeding and development. The one wood frog egg mass observed within Wetland 2 is likely attributable to a first breeding season wood frog pair that selected an area of standing that did not yield metamorphs.

Thank you for the opportunity to assist you. If you should have any questions or comments, please do not hesitate to contact me.

Very truly yours,

MILONE & MACBROOM, INC.

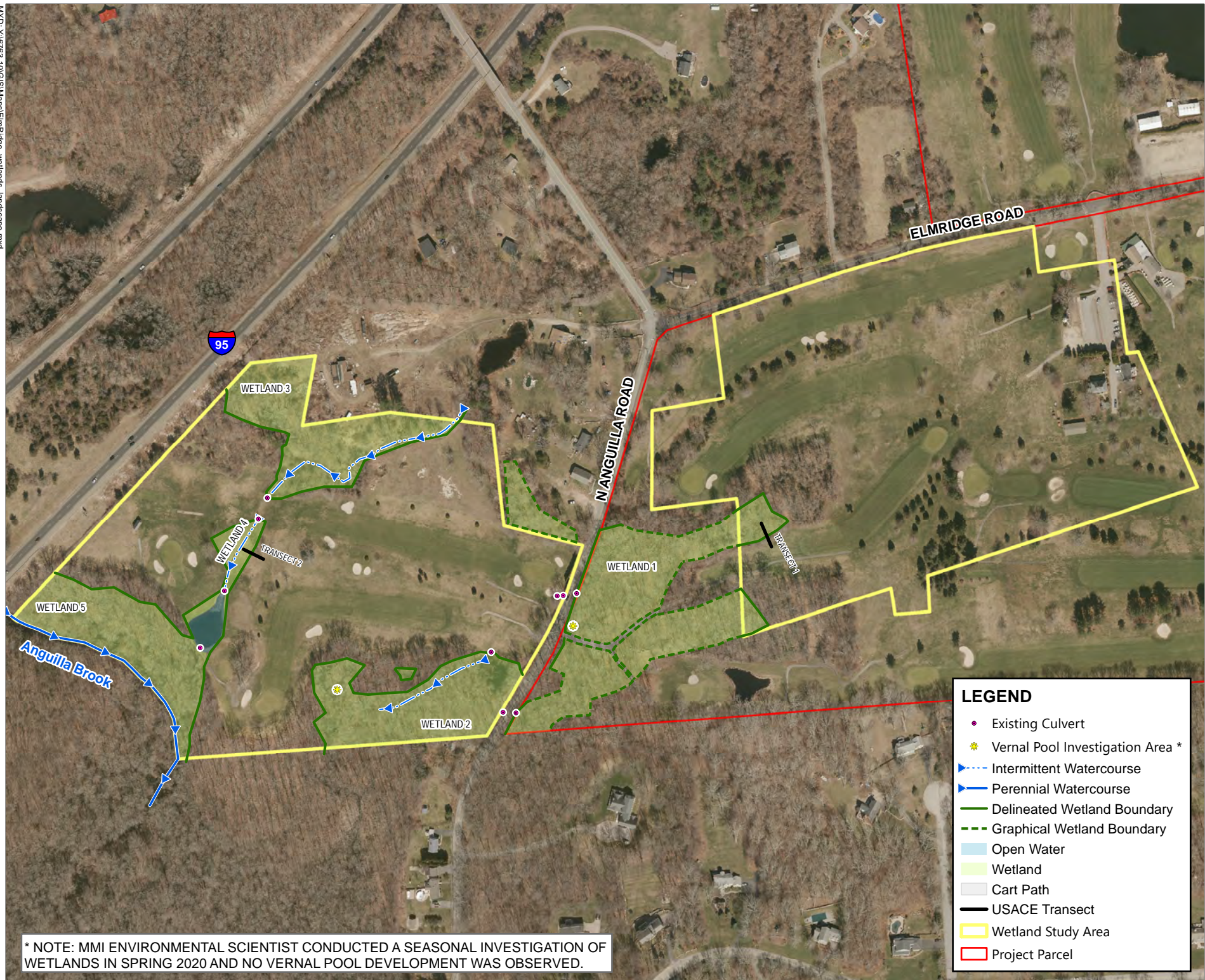
A handwritten signature in blue ink, appearing to read "Megan B. Raymond".

Megan B. Raymond, MS, PWS  
Senior Project Manager, Environmental Science

Enclosures

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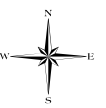




\* NOTE: MMI ENVIRONMENTAL SCIENTIST CONDUCTED A SEASONAL INVESTIGATION OF WETLANDS IN SPRING 2020 AND NO VERNAL POOL DEVELOPMENT WAS OBSERVED.

### LEGEND

- Existing Culvert
- ☀ Vernal Pool Investigation Area \*
- Intermittent Watercourse
- Perennial Watercourse
- Delineated Wetland Boundary
- - - Graphical Wetland Boundary
- Open Water
- Wetland
- Cart Path
- USACE Transect
- Wetland Study Area
- Project Parcel



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AYO	AYO	MBR
PROJECT	DATE	DATE
SCALE 1"=350'		
DATE 20 MAY 2020		
PROJECT NUMBER 6763-10		

**FIGURE 1**  
 SHEET NAME