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February 16, 2022

Town of Coventry  
Inland Wetlands & Watercourses  
Coventry, CT.

Re : Plan Prepared for Jesse Clarke Pucker St, Coventry, CT. File # 2021-127 Prepared by Bushnell Associates LLC. and dated 1/18/2022

Dear Commissioners:

I have conducted a wetland delineation and prepared a wetland report to address the potential impacts to the wetlands associated with the proposed development shown on the above referenced plan. This report will address the soils as well as the functions and values associated with the identified wetlands.

**Existing Conditions**

An existing wetland crossing located at the southeastern corner of the larger field has been used historically for farming use over the life of the hay fields. This crossing spans the wetland at the narrowest point on the property. No prudent and feasible alternatives exist for the improvement of this crossing. This current crossing requires entry to the southernmost field through a very muddy wet section of wetland soil. The proposed improvements will create a greatly improved crossing at wetland flags WB13 , WB14 and WB 22 – WB25.

A wetland exists up gradient of this proposed crossing to the northwest. A larger wetland exists down gradient of the proposed crossing.

The wetlands primarily consist of a Ridgebury poorly drained soils. Much of the proposed activity is proposed within the Town of Coventry 75 foot Upland Regulated area. The soils within the Regulated area are considered disturbed soils as a result of past and present activities.

## **Proposed activity**

Improvements to the driveway include widening and a cut at the entrance ( mostly completed at the time of the delineation ) and the installation of 30LF of an 18” RCP culvert pipe as well as filling at the existing wetland crossing.

## **Wetlands**

The wetland boundary is accurately shown as WB1 to WB 25.

The Ridgebury series consists of very deep, somewhat poorly and poorly drained soils formed in lodgment till derived mainly from granite, gneiss and/or schist. They are commonly shallow to a densic contact. They are nearly level to gently sloping soils in depressions in uplands. They also occur in drainageways in uplands, in toeslope positions of hills, drumlins, and ground moraines, and in till plains

TAXONOMIC CLASS: Loamy, mixed, superactive, acid, mesic, shallow Aeric Endoaquepts

The wetlands have been field delineated in accordance with the standards of the National Cooperative Soil Survey and the definition of wetlands as found in the Connecticut General Statutes, Chapter 440, Section 22A-38 and the Federal wetland criteria.

This delineation is not intended to be used for soil mapping but to identify the wetland soils relative to the development and management of this parcel. The wetland boundaries have been marked with pink and blue flagging as shown on plan.

## **Wetland Functions and Values**

The wetland complex was inspected to determine wetland functions and values utilizing the Army Corps. of Engineers methodology as outlined in “The Highway Methodology Workbook Supplement”. These wetlands exhibited the following wetland functions and values with the corresponding rationale:

**Ground water recharge and discharge:** potential for public or private wells occur downstream of the wetland, wetland is underlain by sandy soils present in or adjacent to the wetland. This wetland contributes to the ground water system. Area shows signs of variable water levels.

**Flood flow alteration:** Effective flood storage existents within the complex. Wetland contains hydric soils which are able to absorb and detain water, wetland exists in a relatively flat area that has flood storage potential, wetland has ponded water, and signs are present of variable water level, wetland receives and retains overland or sheet flow runoff from surrounding uplands. In the event of a large

storm, this wetland receives and detains excessive flood waters and provides storage which can minimize flooding to the surrounding area.

**Sediment/toxicant retention:** potential sources of sediment may be in the watershed above the wetland, opportunity for sediment trapping by slow moving water and deep water habitat are present in this wetland, fine grained mineral or organic soils are present, long duration water retention time is present in this wetland, public or private water sources occur downstream, effective floodwater storage in wetland is occurring, areas of impounded open water are present, channelized flows have visible velocity decreases in the wetland, diffuse water flows are present in the wetland, wetland has a high degree of water and vegetation interspersion, and dense vegetation provides opportunity for sediment trapping and/or signs of sediment accumulation by dense vegetation is present.

**Nutrient removal:** Shallow water and limited open water habitat exists within the complex beyond the watercourse. Overall potential for sediment trapping exists in the same areas. Saturated soils exist for most of the season, ponded water may be present in the wetland, organic/sediment deposits are present, dense vegetation is present with emergent vegetation and/or dense woody stems dominant, water retention/detention time in this wetland is increased by thick vegetation and other dense herbaceous and shrub vegetation in wetlands utilize and immobilize excess nutrients transported/deposited by developed areas upstream.

**Production export:** Wildlife food sources grow within the wetland beyond the watercourse, evidence of limited wildlife use found within this wetland, higher trophic level consumers may be utilizing this wetland, a few high vegetation density species are present, wetland exhibits moderate degree of plant community structure/species diversity, wetland contains flowering plants that are used by nectar-gathering insects.

**Wildlife habitat:** Wetland is fragmented by significant development both upstream and downstream, however, upland immediately surrounding this wetland is undeveloped and will remain so after completion of this project. No significant animal signs observed (tracks, scats, nesting areas, etc.), wetland contains a population of insects and amphibian populations.

The wetlands were also examined for wetland values (recreational, educational/scientific, visual/aesthetic, or uniqueness/heritage values) and the following values were noted with their rationale:

**Educational/scientific value:** There are a diversity of wetland classes present, any wetland is considered valuable wildlife habitat, there is potential for education within this site.

**Visual/aesthetic value:** There are acres of wetlands and a diversity of vegetative species in view from primary viewing locations, wetland is not easily accessed but considered to be valuable wildlife habitat.

**Conclusions:**

In summary, it is my opinion that the wetland area to the northwest and the wetland area down gradient proposed crossing are functioning wetland ecosystems that exhibit six wetland functions and two wetland values.

The wetland areas warrant significant protective measures during construction and until complete stabilization has been established post construction.

Geotextile silt fence and / or hay bales are proposed down gradient of the proposed activity associated with the existing driveway. Proper installation and maintenance will adequately protect the wetland resources.

In my opinion, as long as adequate sediment controls are in place during construction, no substantial adverse wetland impact will result from the proposed activity represented on this plan.

If you have any questions concerning the wetland function assessment or this report, please feel free to contact me.

Sincerely,

Richard Zulick  
Certified Forester and Soil Scientist  
Member SSSNE