Martin Brogie, Inc.
ENVIRONMENTAL SERVICES

• Environmental Site Investigations
• Building Contaminant Surveys
• Wetlands Consulting
• Remediation Contract Management

August 12, 2024

Ryan E. Thompson, PE, LS
Principal Engineer & Land Surveyor
RCL Thompson LLC

RE: Wetlands Assessment and Response to Comments
Proposed Single Family Home
339 Chesterfield Road
Oakdale, Connecticut

Dear Mr. Thompson:

Martin Brogie, Inc. (MBI) is pleased to submit the following information in response to project comments received from the reviewing consultant (CLA Engineers) regarding specific aspects of the proposed construction and the nature of the abutting and affected wetland resources.

The project consists of the removal of an existing residence along Chesterfield Road, just west of the entrance driveway and the construction of a new single-family home north of the primary wetland resource in the area of an existing clearing and outbuilding. The project requires the use of an existing dirt access road extending from the current driveway, through a disturbed wetland area (road) and along the northwest side of the primary wetland resource. Direct wetland impacts will occur along the existing dirt road through the wetlands for the installation of drainage pipes and road improvements.

Functions and Values

A qualitative review of the functions and values of the on-site wetlands was performed to assist in determining wetland impacts resulting from the project. Wetland functions consistent with U.S. Army Corps of Engineers methodology were assessed and are summarized below.

Groundwater Recharge/Discharge – This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area. Recharge should relate to the potential for the wetland to contribute water to an aquifer. Discharge should relate to the potential for the wetland to serve as an area where groundwater can be discharged to the surface. The onsite wetlands system is complex and

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includes areas of exfiltration along the topographic side slopes and along the brook. Opportunities for both infiltration and recharge exists throughout the system.

Floodflow Alteration - (Storage & Desynchronization) - This function considers the effectiveness of the wetland in reducing flood damage by attenuation of floodwaters for prolonged periods following precipitation events. The wetland is broad, flat and includes organic soils and dense vegetation. It provides significant opportunities for floodwater retention to exist throughout the system.

Sedimentation/Shoreline Stabilization – This function relates to the effectiveness of a wetland to stabilize streambanks and shorelines against erosion. No stream corridors were observed in the wetland system and as such, this function is not present.

Sediment/Toxicant Retention and Nutrient Removal/Retention/Transformation – Some stormwater enters the site associated with the nearby roadway via a culvert, but the majority of the wetland is isolated from "urban" run-off. Although the system is well-suited for sediment/toxicant removal it provides this function on only a limited basis.

Production Export – This function relates to the effectiveness of the wetland to produce food or usable products for humans or other living organisms. The wetland offers wildlife food sources including nut-producing trees, berry-producing shrubs, edible herbaceous plants, amphibians, small mammals, possibly fish and insects. Given its size, diversity and relatively pristine condition, good production export is expected.

Fish and Shellfish Habitat – This function considers the effectiveness of seasonal or permanent waterbodies associated with the wetland in question for fish and shellfish habitat. This function was not specifically evaluated through fieldwork although given the likely depth of interior portions of the pond, the presence of fish and freshwater shellfish is likely.

Wildlife Habitat - This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species are considered. The wetland offers extensive wildlife habitat functions due to its size, the presence of various wetland classes, the presence of open water, and the relatively undisturbed, surrounding forested habitat. It is likely that the wetland is utilized for amphibian breeding habitat although this function was not specifically evaluated through fieldwork.

Endangered Species Habitat – The Connecticut Department of Energy and Environmental Protection (CTDEEP) Natural Diversity Database does not depict any mapped State or Federal Listed Species or Significant Natural Communities on or adjacent to the Property.

Visual Quality/Aesthetics – The wetland offers strong visual qualities/aesthetics associated with the pond and diverse wetland and upland plant species present throughout. perennial stream entering the site although the disturbed eastern edge of the wetlands has resulted in the presence of significant invasives species.

Educational/Scientific Value, Recreation, and Uniqueness Heritage – The onsite wetlands does offer educational and scientific value given its diversity and size, although lack of public access limits this value as well as recreational value.

Overall, the functions and values of the site wetland area are primarily associated with wildlife habitat and diversity given its size, various wetland classes and abundance of undisturbed surrounding uplands. The wetland also offers extensive flood storage/attenuation factors although it does not appear to serve any at risk, downstream structures of development.

Given the re-use of the existing access drive to the proposed house location and the limited area of direct wetland impacts along a portion of that drive, the overall wetland impacts associated with the project are minimal. Cut and fill along a portion of the driveway to the new house are in the upland review area adjacent to the wetland and the proposed house is in an area that has been partially cleared and includes an outbuilding. The proposed project is not expected to have any impact on the wetland wildlife functions considering the footprint of the development over existing disturbed areas and the substantial size of the wetland resource and the extensive, remaining adjacent forested uplands.

UPLAND AND WETLAND RESTORATION AREAS

Comments received called for specific restoration plans for disturbed areas along the wetlands and uplands to be disturbed in association with the project. As such we offer the following mixes taken from *New England Wetland Plants*, a local, trusted source I have utilized/recommended for many projects.

House Lot After Demolition

Once the existing residence has been demolished, including removal of the foundation and other associated features, the area should be filled and graded and topped with a suitable thickness of good quality topsoil. The following New England Conservation/Wildlife Mix is recommend for the area:

Virginia Wild Rye (Elymus virginicus), Little Bluestem (Schizachyrium scoparium), Big Bluestem (Andropogon gerardii), Red Fescue (Festuca rubra), Switch Grass (Panicum virgatum), Partridge Pea (Chamaecrista fasciculata), Panicledleaf Tick Trefoil (Desmodium paniculatum), Indian Grass (Sorghastrum nutans), Blue Vervain (Verbena hastata), Butterfly Milkweed (Asclepias tuberosa), Black Eyed Susan (Rudbeckia hirta), Common Sneezeweed (Helenium autunale), Heath Aster (Asterpilosus/Symphyotrichum pilosum), Early Goldenrod (Solidago juncea), Upland Bentgrass (Agrostis perennans).

Wetland Crossing

Construction along the existing driveway through a portion of the delineated wetland will require disturbance of wetlands along either side of the driveway. Once construction is complete and the disturbed area graded the following seed mix is recommended for application:

New England Wetmix
Fox Sedge (Carex vulpinoidea), Lurid Sedge (Carex lurida), Blunt Broom Sedge (Carex scoparia), Blue Vervain (Verbena hastata), Fowl Bluegrass (Poa palustris), Hop Sedge (Carex lupulina), Green Bulrush (Scirpus atrovirens), Creeping Spike Rush (Eleocharis palustris), Fringed Sedge (Carex crinita), Soft Rush (Juncus effusus), Spotted Joe Pye Weed (Eupatorium maculatum), Rattlesnake Grass (Glyceria canadensis), Swamp aster (Aster puniceus), Blueflag (Iris versicolor), Swamp Milkweed (Asclepias incarnata), Square stemmed Monkey Flower (Mimulus ringens).

Upper Driveway Area

The cut slope along the north side of the drive toward the house as well as the fill slope along the south side of the driveway should be seeded with the referenced conservation mix.

Please contact the undersigned at 860-208-0360 is you have any questions or require further information. Thank you for the opportunity to be of service.

Sincerely,

Martin Brogie, LEP
Soil Scientist