

# BASBANES WETLAND CONSULTING

39 Hardy St.  
Dunstable, MA 01827

## Delineation Report

March 14 2023

The following is a report on the delineation of the wetland resource areas at 78 Mountain Rd Burlington, MA. The delineation was done February 27 2023. The jurisdictional wetland resource areas present on or near the property may include: 310 10.54 Bank, 310 CMR 10.55 Bordering Vegetated Wetland, 310 10.56 Land under Waterways and Water Bodies, and 310 CMR 10:58 Riverfront.

Little Brook, shown as perennial on the USGS map flow southerly. This stream is off property, but the Riverfront Area does fall within the property lines. There is a very small area flagged as bordering vegetated wetland associated with the stream in this area. Also, across the roadway there is another area of BVW that has been delineated.

### Delineation Method

A wetland delineation is done by visual survey of topography, evidence of hydrology, and identification of plant species. A determination is made for each plant species as to their indicator status as referenced in the "National List of Plant Species that Occur in Wetlands", published by the Fish and Wildlife Service. The boundary of the wetland is then determined to be where 50% or more of the vegetation community consists of wetland indicator species with a status of FAC or wetter. Where there is a dominance of wetland plants species, evidence of hydrology is looked for, i.e. water stained leaves, drainage patterns, morphological adaptations, and hydric soils. Typically, hydric soils are determined by digging or augering a pit 20" deep and observing the horizons for color and features. Determinations are made referencing "Field Indicators for Identifying Hydric Soils in New England" and color matched to the Munsell Soil Color Charts.

The Bank or Mean Annual High Water Line is determined by the line that is apparent from visible markings or changes in the character of soils or vegetation due to the prolonged presence of water and that distinguishes between predominantly aquatic and predominantly terrestrial land. This is typically the first observable break in slope. However, in some river reaches, characterized by features such as a low gradient, meanders, oxbows, histosols, a low-flow channel, or poorly-defined or nonexistent banks, the MAHW line will be evidenced by some combination of the bankfull field indicators i.e. changes in vegetation (usually changes in vegetative community), stain lines, top of point bars (depositional features), changes in slope, changes in bank material, and bank undercuts.

### Flagging Series

The wetland resource area is delineated by the flagging series 1A-4A BVW, 1B-7B Bank, 1C-3C BVW.

### Vegetation

The vegetation along the delineated area consists of the following dominant species:

Black Cherry <i>Prunus serotina</i>	FACU
Elm <i>Ulmus americana</i>	FACW
Maple, Red <i>Acer rubrum</i>	FAC

Maple, Norway <i>Acer platanoides</i>	NI
Buckthorn, European <i>Rhamnus frangula</i>	FAC
Fern Cinnamon <i>Osmunda cinnamomea</i>	FACW
Bittersweet <i>Celastrus orbiculata</i>	UPL
Multiflora Rose <i>Rosa multiflora</i>	FACU

**Soils**

As referenced to the NRCS Soil Survey, the soils on the subject property are the Charlton series. The Charlton series consists of very deep, well drained loamy soils formed in till. They are nearly level to very steep soils on till plains and hills. Slope ranges from 0 to 50 percent. They formed in glacial till, have a surface layer of very friable, fine sandy loam about 4" thick, subsoil is fine sandy loam about 7" thick with angular cobblestones, and substratum is gravelly fine sandy loam to a depth of 60" with angular cobblestones. Permeability is moderately rapid, available water capacity is moderate. This soil is considered good for woodland wildlife, and very poor for wetland wildlife

The typical soil profiles observed were:

<u>SP upland</u>		<u>SP hydric</u>	
O	<1"	O	<1"
A	0" – 8" 10YR 2/2	A	0" – 12" 10YR 2/1
B	8"-18" 10YR 4/4	B	12"-18" 10YR 4/2 redox

**Indicators of hydrology**

Along with the presence of hydric soil conditions other indicators of hydrology were observed. Those indicators include: water-stained leaves.

**Rare Species**

Under MESA and 310 CMR 10:59 Estimated Habitats of Rare Wildlife, any work proposed, regardless of wetlands, within an Estimated or Priority habitat shall be reviewed by the NHESP as well as the Conservation Commission. The site is not located within an Estimated or Priority Habitat

**Vernal Pools**

There are no certified vernal pools on the property per the most recently NHESP map.

**FEMA**

As referenced to the FEMA flood data maps, the property is not located within a regulatory flood zone.

If you have any questions please do not hesitate to contact me. Thank you.

Sincerely,



Leah D. Basbanes, M.A.  
Wetland Consultant/Biologist

The wetland resource areas were delineated/reviewed in the keeping with the Massachusetts Wetland Protection Act and were done so to the best of our abilities. Considering all the variables (seasonal growth

form of vegetation, soils conditions, topography, weather, etc.) involved in such an effort, please be advised that despite the best effort, no wetland delineation is considered definitive until verified and approved by the final issuing authority.

## **BASBANES WETLAND CONSULTING**

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Dunstable, MA 01827

Alternative Analysis  
for Riverfront Area  
78 Mountain Rd Burlington, MA

March 16 2023

Per 310 CMR 10.58, an alternative analysis is required for work in the Riverfront Area. The following addresses the site conditions, proposed work and conclusion that the work will not have a significant negative impact on the resource areas and that no other practicable alternative is feasible.

### **Property Description**

The lot is a 20,130 s.f. residential lot located on Mountain Rd created in 1981. The parcel is surrounded by development including other residential and commercial properties. The subject property is presently altered in part by the parking lot at the rear of the lot (within the easement) and in part by the removal of the vegetation on the remaining area. The lot is located within 200' of Little Brook, a perennial stream. Because of its small, size, location and current condition, the property does not provide any important wildlife habitat.

### **Proposed Work**

The applicant has submitted a Notice of Intent to construct a single-family house with deck, associated driveway and grading on the property. The proposed work, a total of 4500 s.f. of alteration, is within the Riverfront Area (total area of 19,680 s.f.). The work is limited the outer riparian zone. No work will occur in the 100' buffer zone or the 100' inner riparian zone.

The proposed work meets the requirement of the allowable alteration by being less than 5000 s.f for lots recorded before October 6, 1997 (it was recorded in 1981).

The building envelope is very constrained due to riverfront setback, the lot size & configuration, and easement that is on the lot. The activity is limited as much as possible within that envelope to have minimal impact on the riverfront and meet the <5000 s.f. alteration limit.

Constructed stone trenches will be installed to capture roof and driveway runoff and thus prevent erosion and provide water infiltration.

Erosion control will be installed around the limit of work prior to construction and maintained until the site is fully stabilized.

The house will be serviced by town water and sewer thus allowing for less site work to occur.

### **Alternatives**

There are essentially no practicable and substantially equivalent economic alternatives for this site. The option of not developing the lot is not an economically feasible one and not preferred by the property owner.

Changing the location of the structure on the lot is not feasible either due to the site constraints and the existing structure protected by the easement.

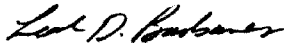
Reducing the size of the proposed house is not feasible and it has been designed to be as small as possible and yet still maintain the economic value.

The project has been designed to have as little impact as possible. Restoration of altered areas will be done to the extent feasible considering the easement constraints. Unfortunately, the inner riparian zone has already been permanently altered with the construction of the abutting house, but mitigative plantings may be provided to improve conditions on this lot.

It is our opinion that the work meets the regulations of the Riverfront Area and that there are no other feasible practicable or economic alternatives for a project on this lot. As proposed, the project intended to have no significant adverse impact on the resources area or the interests identified in MGL c.131 s.40.

If you have any questions, please do not hesitate to contact me at [lbasbanes@gmail.com](mailto:lbasbanes@gmail.com).  
Thank you.

Sincerely,



Leah D. Basbanes, M.A.  
Wetland Consultant/Biologist