

March 13, 2025

Town of Reading
Conservation Dept.
16 Lowell Street
Reading, MA 01867

**Re: 695 Pearl Street, Reading
ANRAD filing
DEP File No. 270-0795**

Conservation Dept;

Per the MassDEP technical comments in regards to this application, I am providing a written narrative and BVW data sheets for the record.

Narrative:

695 Pearl Street, Reading is a 4.5 acre site located on the easterly side of Pearl Street and is referenced as Tax Map 57 Lot 7+64. The site is predominately wooded and is improved with an existing single family house and paved driveway. On 11/7/2023 Norse Environmental Services was onsite to delineate the wetland resource areas. A BVW A-series wetland line (Flags 1A-27A) was established mid-site. An isolated wetland was identified and delineated as a B-series consisting of 4,457 s.f of area. On the westerly side of Pearl Street an 18 inch drain discharges to a drain ditch. This drainage ditch has been delineated as a C-series bank.

The ANRAD plan shows property boundaries, 2 foot contours, existing structures on the property, utilities in Pearl Street, the wetland boundaries, the 25 and 35 foot local protective buffers and the 100 wetland buffer zone.

There are no designated Flood Zones associated with this site based on the latest Flood Insurance Map. Furthermore, there are no estimated or priority habitat areas associated with this site based on Natural Heritage data.

The applicant is seeking to have the wetland boundaries reviewed and approved.

BVW Data Sheets:

See Attached.

If you have any additional questions please feel free to contact me.

Very Truly Yours,


Jack Sullivan, PE

Cc: DEP Northeast Regional Office (by mail)

Attachments: BVW data sheets

BORDERING VEGETATED WETLAND DETERMINATION FORM

Project/Site: _____ City/Town: _____ Sampling Date: _____

Applicant/Owner: _____ Sampling Point or Zone: _____

Investigator(s): _____ Latitude / Longitude: _____

Soil Map Unit Name: _____ NWI or DEP Classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? (If yes, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc.

Wetland vegetation criterion met?	Yes _____ No _____	Is the Sampled Area within a Wetland?	Yes _____ No _____
Hydric Soils criterion met?	Yes _____ No _____		
Wetlands hydrology present?	Yes _____ No _____		
Remarks, Photo Details, Flagging, etc.:			

HYDROLOGY

Field Observations:		
Surface Water Present?	Yes _____ No _____	Depth (inches) _____
Water Table Present?	Yes _____ No _____	Depth (inches) _____
Saturation Present (including capillary fringe)?	Yes _____ No _____	Depth (inches) _____
Wetland Hydrology Indicators		
Reliable Indicators of Wetlands Hydrology	Indicators that can be Reliable with Proper Interpretation	Indicators of the Influence of Water
<input type="checkbox"/> Water-stained leaves <input type="checkbox"/> Evidence of aquatic fauna <input type="checkbox"/> Iron deposits <input type="checkbox"/> Algal mats or crusts <input type="checkbox"/> Oxidized rhizospheres/pore linings <input type="checkbox"/> Thin muck surfaces <input type="checkbox"/> Plants with air-filled tissue (aerenchyma) <input type="checkbox"/> Plants with polymorphic leaves <input type="checkbox"/> Plants with floating leaves <input type="checkbox"/> Hydrogen sulfide odor	<input type="checkbox"/> Hydrological records <input type="checkbox"/> Free water in a soil test hole <input type="checkbox"/> Saturated soil <input type="checkbox"/> Water marks <input type="checkbox"/> Moss trim lines <input type="checkbox"/> Presence of reduced iron <input type="checkbox"/> Woody plants with adventitious roots <input type="checkbox"/> Trees with shallow root systems <input type="checkbox"/> Woody plants with enlarged lenticels	<input type="checkbox"/> Direct observation of inundation <input type="checkbox"/> Drainage patterns <input type="checkbox"/> Drift lines <input type="checkbox"/> Scoured areas <input type="checkbox"/> Sediment deposits <input type="checkbox"/> Surface soil cracks <input type="checkbox"/> Sparsely vegetated concave surface <input type="checkbox"/> Microtopographic relief <input type="checkbox"/> Geographic position (depression, toe of slope, fringing lowland)
Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):		

This form is only for BVW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

VEGETATION – Use both common and scientific names of plants.

<u>Tree Stratum</u>		Plot size _____					
				Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indicator? (yes/no)
Common name		Scientific name					
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
				_____ = Total Cover			
<u>Shrub/Sapling Stratum</u>		Plot size _____					
				Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indicator? (yes/no)
Common name		Scientific name					
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
				_____ = Total Cover			
<u>Herb Stratum</u>		Plot size _____					
				Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indicator? (yes/no)
Common name		Scientific name					
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
				_____ = Total Cover			

VEGETATION – continued.

<u>Woody Vine Stratum</u>		Plot size _____		Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indicator? (yes/no)
Common name		Scientific name					
1.							
2.							
3.							
4.							
				_____ = Total Cover			

Rapid Test: Do all dominant species have an indicator status of OBL or FACW? Yes _____ No _____				
Dominance Test:	Number of dominant species	Number of dominant species that are wetland indicator plants		Do wetland indicator plants make up ≥ 50% of dominant plant species? Yes _____ No _____
Prevalence Index:		Total % Cover (all strata)	Multiply by:	Result
	OBL species		X 1	=
	FACW species		X 2	=
	FAC species		X 3	=
	FACU species		X 4	=
	UPL species		X 5	=
	Column Totals	(A)		(B)
Prevalence Index		B/A =		Is the Prevalence Index ≤ 3.0? Yes _____ No _____
Wetland vegetation criterion met? Yes _____ No _____				

Definitions of Vegetation Strata

- Tree - Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height
- Shrub / Sapling - Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall
- Herb - All herbaceous (non-woody plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall
- Woody vines - All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.0 %
6-15 %	10.5 %
15-25 %	20.5 %
26-50 %	38.0 %
51-75 %	63.0 %
76-95 %	85.5 %
96-100 %	98.0 %

BORDERING VEGETATED WETLAND DETERMINATION FORM

Project/Site: 695 Pearl Street City/Town: Reading Sampling Date: 11/7/23

Applicant/Owner: Sullivan Engineering Group, LLC Sampling Point or Zone: SP-2

Investigator(s): Norse Environmental Services, Inc. - Maureen Herald Latitude / Longitude: 42.55655 / -71.10112

Soil Map Unit Name: Deerfield NWI or DEP Classification: DEP

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks)

Are Vegetation , Soil , or Hydrology significantly disturbed? (If yes, explain in Remarks)

Are Vegetation , Soil , or Hydrology naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc.

Wetland vegetation criterion met?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydic Soils criterion met?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Wetlands hydrology present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Remarks, Photo Details, Flagging, etc.:			

HYDROLOGY

Field Observations:		
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/> Depth (inches) _____
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/> Depth (inches) _____
Saturation Present (including capillary fringe)?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/> Depth (inches) _____
Wetland Hydrology Indicators		
Reliable Indicators of Wetlands Hydrology <input type="checkbox"/> Water-stained leaves <input type="checkbox"/> Evidence of aquatic fauna <input type="checkbox"/> Iron deposits <input type="checkbox"/> Algal mats or crusts <input type="checkbox"/> Oxidized rhizospheres/pore linings <input type="checkbox"/> Thin muck surfaces <input type="checkbox"/> Plants with air-filled tissue (aerenchyma) <input type="checkbox"/> Plants with polymorphic leaves <input type="checkbox"/> Plants with floating leaves <input type="checkbox"/> Hydrogen sulfide odor	Indicators that can be Reliable with Proper Interpretation <input type="checkbox"/> Hydrological records <input type="checkbox"/> Free water in a soil test hole <input type="checkbox"/> Saturated soil <input type="checkbox"/> Water marks <input type="checkbox"/> Moss trim lines <input type="checkbox"/> Presence of reduced iron <input type="checkbox"/> Woody plants with adventitious roots <input type="checkbox"/> Trees with shallow root systems <input type="checkbox"/> Woody plants with enlarged lenticels	Indicators of the Influence of Water <input type="checkbox"/> Direct observation of inundation <input type="checkbox"/> Drainage patterns <input type="checkbox"/> Drift lines <input type="checkbox"/> Scoured areas <input type="checkbox"/> Sediment deposits <input type="checkbox"/> Surface soil cracks <input type="checkbox"/> Sparsely vegetated concave surface <input type="checkbox"/> Microtopographic relief <input type="checkbox"/> Geographic position (depression, toe of slope, fringing lowland)
Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):		

This form is only for BVW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

VEGETATION – Use both common and scientific names of plants.

<u>Tree Stratum</u>		Plot size <u>30'</u>				
		Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indicator? (yes/no)	
Common name		Scientific name				
1.	White Pine	Pinus strobus	FACU	25.0	Yes	No
2.	Red Maple	Acer rubrum	FAC	30.0	Yes	Yes
3.	Swamp White Oak	Quercus bicolor	FACW	20.0	Yes	Yes
4.						
5.						
6.						
7.						
8.						
9.						
			<u>75.0</u> = Total Cover			
<u>Shrub/Sapling Stratum</u>		Plot size <u>10'</u>				
		Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indicator? (yes/no)	
Common name		Scientific name				
1.	Glossy Buckthorn	Rhamnus frangula	FAC	20.0	Yes	Yes
2.	Highbush Blueberry	Vaccinium corymbosum	FACW	15.0	Yes	Yes
3.						
4.						
5.						
6.						
7.						
8.						
9.						
			<u>35.0</u> = Total Cover			
<u>Herb Stratum</u>		Plot size <u>5'</u>				
		Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indicator? (yes/no)	
Common name		Scientific name				
1.	Cinnamon Fern	Osmunda cinnamomea	FACW	30.0	Yes	Yes
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
			<u>30.0</u> = Total Cover			

VEGETATION – continued.

<u>Woody Vine Stratum</u>		Plot size <u>None</u>		Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indicator? (yes/no)
Common name		Scientific name					
1.							
2.							
3.							
4.							
				0.0 = Total Cover			

Rapid Test: Do all dominant species have an indicator status of OBL or FACW?			Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Dominance Test:	Number of dominant species	Number of dominant species that are wetland indicator plants	Do wetland indicator plants make up ≥ 50% of dominant plant species?	
	6	5	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Prevalence Index:		Total % Cover (all strata)	Multiply by:	Result
	OBL species		X 1	= 0.00
	FACW species	65	X 2	= 130.00
	FAC species	50	X 3	= 150.00
	FACU species	25	X 4	= 100.00
	UPL species		X 5	= 0.00
	Column Totals	(A) 140		(B) 380
Prevalence Index		B/A = 2.71		Is the Prevalence Index ≤ 3.0?
				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Wetland vegetation criterion met?			Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

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15-25 %	20.5 %
26-50 %	38.0 %
51-75 %	63.0 %
76-95 %	85.5 %
96-100 %	98.0 %

