

Thunderchase Environmental LLC

Lightning Fast Environmental Consulting Services



October 23, 2023

Becky Daniels
6 Evergreen Way
Medfield, MA 02052

Michelle Lederhos
10 Evergreen Way
Medfield, MA 02052

c/o "Hardinghood Neighbors": 6 Evergreen Way, Medfield, MA 02052

Re: ABBREVIATED NOTICE OF RESOURCE AREA DELINEATION APPLICATION
Junction Street, Dover, Massachusetts 02030
Wetland Scientist Consulting Services Review Memorandum

Dear Hardinghood Neighbors:

Thunderchase Environmental LLC (Thunderchase) understands that you have indicated to us that you have organized the Hardinghood Neighbors, a Ten Citizen Group, and located in Medfield, Massachusetts. Thunderchase also understands that "Abutter"(s), defined in 310 CMR 10.04, as "the same as owner of land abutting the activity", are represented by and included both individually, and as a citizen in this Ten Citizen Group.

Thunderchase understands that LEC Environmental Consultants, Inc. (LEC) submitted an Abbreviated Notice of Resource Area Delineation (ANRAD) Application (dated August 24, 2023) to the Dover Conservation Commission (DCC), pertaining to a Subject Property, identified by LEC as "Junction Street, Assessor's Map 20; Lots 5, 9, 10 & 11; Dover, Massachusetts" (the "Property").

Thunderchase is aware of the following three (3) documents, which may have been provided to the DCC.

- Abbreviated Notice of Resource Area Delineation; Junction Street, Assessor's Map 20; Lots 5, 9, 10 & 11; Dover, Massachusetts; by LEC Environmental Consultants, Inc.; 102 Grove Street, Worcester, MA; dated August 24, 2023. [the "ANRAD"]
- Abbreviated Notice of Resource Area Delineation; Pulte Homes; Junction Street; Map 20; Lots 5, 11, 10 & 9; Town of Dover, Norfolk County; Commonwealth of Massachusetts, by Control Point Associates, Inc.; dated 8-17-23 with Revision No. 2 "Revised Per Client comments" dated 10-11-2023 (DWG No. 1 of 1) [the "Revised Drawing"]

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“Wetland Resource Areas associated with the site are limited to BVW”, LEC may not have considered the presence or absence of these MassMapper shown Hydrologic Connections on the Property.

Page 23 of 52 of the PDF cites that “the BVW boundaries were demarcated in the field with sequentially-numbered, blaze orange surveyors’ tape embossed with the text “LEC Resource Area Boundary” and numbered **1 through 93**, and **1A through 43A**. LEC flagging stations U1 through U14 delineate the boundary of an upland island contained within the BVW within the central portion of the site.”

Thunderchase understands that the ANRAD indicates that Nicole M. Ferrara, Wetland Specialist, may have placed a total of 150 “WLF” (presumed to be an acronym for wetland flag) on the Property and completed two sampling points for the 150 “WLF”, as per information provided on the included Bordering Vegetated Wetland Determination Form, during **one day**, July 27, 2023, and representing a linear distance of **3,315+ feet**.

It is important to note that the August 2023 Drawing (on Page 52 of 52) in the ANRAD identifies the points as “WLF#1” to “WLF#94” and “WLF#1A” through “WLF#43A”.

Page 27 of 52 of the PDF cites that “scattered pockets of standing water and saturation to the surface were observed within the BVW at the time of LEC’s site evaluation. Flagging stations 1 through 94 delineate the eastern property boundary, while flagging stations 1A through 43A delineate the western BVW boundary.”

Thunderchase notes that the August 2023 Drawing provided on page 52 of 52 of the PDF does not appear to show that “flagging stations 1 through 94” DELINEATE the eastern property boundary. Similarly, the August 2023 Drawing provided on page 52 of 52 of the PDF does not appear to show that “flagging stations 1A through 43A” DELINEATE the western property boundary.

Page 35 of 52 of the PDF indicates on the Bordering Vegetated Wetland Determination Form for NONWET 1 that “test pit excavated **17’ downgradient** of BVW Flag 20” and “observed soil profile is generally consistent with the NRCS soil description”.

Thunderchase notes that on the Revised Drawing, WLF#21 and WLF#22, which are sequential to the WLF#20 location appear to have been adjusted. Furthermore, it may be expected that a “NONWET” point would have been positioned by LEC “upgradient” of “BVW Flag 20”, instead of downgradient.

In addition, LEC indicates that the “plot size” for each of the vegetation layers is [50’]. Though it is not clear whether this plot size referenced by LEC refers to radius or diameter, the following document {Jackson, S.D., D.J. Henson, D. Hilgeman, M. McHugh, and L. Rhodes, 2022. *Massachusetts Handbook for Delineation of Bordering Vegetated Wetlands, Second Edition, Massachusetts Department of Environmental Protection, Bureau of Water Resources, Wetlands Program, Boston, Massachusetts*} cites “in general, it is recommended that for small observation plots, the Tree Stratum and Woody Vine Stratum be sampled in a 30-foot radius plot, the Sapling/Shrub Stratum be sampled





to describe these Bg Horizons as having a matrix color of 10YR 3/2 (very dark gray) or 10YR 5/2 (grayish brown).

The *Massachusetts Handbook for Delineation of Bordering Vegetated Wetlands, Second Edition* cites that “gleyed is a soil condition resulting from gleization which is characterized by the presence of neutral gray, bluish, or greenish colors in the soil matrix or in mottles among other colors. **There are also special pages for “gleyed” soils, which are very gray wetland soils. These pages are arranged differently than the rest of the Munsell Soil Color Book, with all of the color chips on these special pages being either a 1 or 2 chroma, and each column representing a different spectral hue.**”

The *Massachusetts Handbook for Delineation of Bordering Vegetated Wetlands, Second Edition* cites that “a gleyed matrix exists when the matrix color of a horizon is a depleted matrix whose color occurs on one of the Gley pages in the Munsell Soil Color Book. In gleyed soils, iron has either been chemically reduced, dissolved, and removed from the soil, or in conditions of persistent saturation with stagnant water, the iron has been preserved in a chemically reduced state in the soil. Gley colors include: **1. Hues of 10Y, 5GY, 10GY, 10G, 5BG, 10BG, 5B, 10B, or 5PB with value 4 or more and chroma is 1; or 2. Hue of 5G with value 4 or more and chroma is 1 or 2; or 3. Neutral hue and chroma (N) with value 4 or more.**”

The *Massachusetts Handbook for Delineation of Bordering Vegetated Wetlands, Second Edition* cites that “gleyed soils are soils that are predominantly neutral gray, or occasionally greenish or bluish gray in color (the Munsell Soil Color Book has special pages for gleyed soils” and that when these occur “within 6 in. from the soil surface for sandy soils (Indicator S4)”, and “within 12 in. from the soil surface for fine-textured soils (Indicators A11 and F2)”.

Therefore, with a matrix color of 10YR 3/2 (very dark gray) or 10YR 5/2 (grayish brown) in WET1, it is not clear that the condition represented in italics bold directly above, is applicable to the description. Furthermore, it is not clear that the “hydric soil indicator” for this “sandy loam” texture, as represented by LEC as A11 “depleted below dark surface”, is present considering that A11 related to fine-textured soils.

In addition, whereas LEC cites that “observed soil profile is generally consistent with the NRCS soil description”, it is noted that LEC indicates the following:

- A – 0-4 inches: sandy loam
- Bg1 – 4-7 inches: sandy loam
- Bg2 – 7-18 inches: sandy loam
- C – 18-22+ inches: sandy loam



However, NRCS cites the following typical profile for Ridgebury fine sandy loam, 3 to 8 percent slopes, extremely stony:

Oe – 0 to 1 inches: moderately decomposed plant material

A – 1 to 6 inches: fine sandy loam

Bw – 6 to 10 inches: sandy loam

Bg – 10 to 19 inches: gravelly sandy loam

Cd – 19 to 66 inches: gravelly sandy loam

Page 43 of 52 of the PDF indicates on the Bordering Vegetated Wetland Determination Form for NONWET 2 that the “test pit excavated roughly **10' up-gradient of BVW Flag 11A**” and that “observed soil profile is generally not consistent with the NRCS Soil Series Descriptions.”

The DCC may wish to request that LEC provide the Issuing Authority with the location of the center point for each of the observation plots used for vegetative analyses, relative to “BVW Flag 11A”.

In addition, whereas LEC cites that “observed soil profile is generally consistent with the NRCS soil description”, it is noted that LEC indicates the following:

OA – 0-3 inches: sapric

E – 3-5 inches: sandy loam

Bh – 5-16 inches: sandy loam

Bw – 16-22 inches: sandy loam

However, NRCS cites the following typical profile for Woodbridge fine sandy loam, 0 to 3 percent slopes:

Ap – 0 to 7 inches: fine sandy loam

Bw1 – 7 to 18 inches: fine sandy loam

Bw2 – 18 to 30 inches: fine sandy loam

Cd— 30 to 65 inches: *gravelly fine sandy loam*

Page 47 of 52 of the PDF indicates on the Bordering Vegetated Wetland Determination Form for WET 2 that “test pit excavated roughly **10' downgradient of BVW Flag 11A**” and that “observed soil profile is generally consistent with the NRCS Soil Series Descriptions”.

The DCC may wish to request that LEC provide the Issuing Authority with the location of the center point for each of the observation plots used for vegetative analyses, relative to “BVW Flag 11A”.

In addition, whereas LEC cites that “observed soil profile is generally consistent with the NRCS soil description”, it is noted that LEC indicates the following:

Oe – 0-3 inches: hemic

A – 3-7 inches: sandy loam

Bq – 5-16 inches: sandy loam

Cd – 19 to 66 inches: gravelly sandy loam

The August 2023 Drawing depicts points labeled as WLF#U-1 to WLF#U-14 on Map 20, Lot 5, and includes a description “upland island”. As these points are modified by “WLF” but identified as “upland island”, it is not clear whether the ANRAD seeks to confirm the



accuracy of these “upland island” points, or whether these points have been included by LEC for information purposes.

The August 2023 Drawing depicts points labeled as WLF#1 to WLF#4 on Map 20, Lot 9.

The August 2023 Drawing depicts points labeled as WLF#5 to WLF#41 on Map 20, Lot 10.

The August 2023 Drawing depicts the term “Gravel Path” and “Approximate Location of Right of Way”. This identified “Gravel Path” appears to pass through a labeled “Wetland” from the west at WLF#22A and from the east at WLF#69. The DCC may wish to consider whether the “Gravel” cited by Control Point Associates within the LEC-identified wetland was previously permitted under an Order of Conditions by the Issuing Authority.

For information purposes, Thunderchase notes that the August 2023 Drawing depicts a line style identified as “100’ Wetland Buffer”, which is also discontinuous on the August 2023 Drawing.

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The Revised Drawing

Thunderchase notes that the Revised Drawing adds a legend which identifies what appears to be a solid gray line, a solid orange line, and a solid light blue line, as follows:

| | |
|---|---|
|  | WETLAND BOUNDARY UNDER MASSACHUSETTS WETLANDS PROTECTION ACT (WPA) AND DOVER WETLANDS BYLAW (BYLAW) |
|  | WETLAND BOUNDARY UNDER WETLANDS PROTECTION ACT ONLY |
|  | WETLAND BOUNDARY UNDER BYLAW ONLY |

Thunderchase notes the following of what it understands to be the details on the Revised Drawing:

Points WLF#1A.1 to WLF#1A.7 were added and connected with a solid orange line on Map 20, Lot 4. Points WLF#BL A1.3 (connects to WLF# 1A.2) to WLF#BL A1.5 (connects to WLF #1A.5) were added and connected with a solid light blue line on Map 20, Lot 4. The Revised Drawing indicates that Map 20, Lot 4 represents “Lands of the Dover-Sherborn Regional School District”.

It is not clear if LEC is seeking approval by the Issuing Authority of “WLF” points which may occur on land which may not be under the control of the Applicant or the Property Owner.

Points WLF#BL 20A (connects to WLF#19A and WLF#21A) were added and connected with a solid light blue line or a solid orange line (for WLF#20A) on Map 20, Lot 5.



The Agent Consultant indicated that he “also conducted walking transect inspections of the remaining portions of the site delineated by LEC as upland, to search for possible additional (undelineated) wetland areas.”

It is not clear what is meant by and what methodologies would be utilized to characterize a Property as a “site **delineated** by LEC as **upland**”.

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Additional Information – 310 CMR 10.00

For information purposes, it is understood that 310 CMR 10.05 (a) 2. Cites that “applicants may use the Abbreviated Notice of Resource Area Delineation to confirm the boundaries of resource areas and the buffer zone.” In addition, it is understood that 310 CMR 10.05 4 (b) 2. Cites that “to establish the extent of bordering vegetated wetland and/or other resource areas on land subject to protection under M.G.L. c. 131, § 40, applicants may use the Abbreviated Notice of Resource Area Delineation for the confirmation of a delineated boundary of bordering vegetated wetlands and/or other resource areas on the site, prior to filing a Notice of Intent for proposed work.”

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Additional Information – Chapter 263. Rules and Regulations for the Dover Wetlands Protection Bylaw

For information purposes, according to § 263-3. Application and permit procedures; Paragraph C. Permit Application (NOI, **ANRAD**, Amendment, etc.); (2) **Information Required:** it is noted that for [3], the Existing Conditions Site Plan(s), to be stamped by a professional engineer or land surveyor registered in Massachusetts (for any project which normally requires this degree of professional expertise in the judgment of the Commission), which includes, at a minimum, the following items:

[f] All trees which are located within the proposed work area and have a diameter of four (4) inches or greater at four feet above ground level.

The Revised Drawing does not appear to include this “required” item.

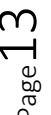
[h] Locations of major vegetation changes (-e.g., field, woodland, etc.)

The Revised Drawing does not appear to include this “required” item.

[j] Delineation and labeling of Groundwater Protection Districts.

The Revised Drawing does not appear to include this “required” item.

For information purposes, according to § 263-3. Application and permit procedures; Paragraph C. Permit Application (NOI, **ANRAD**, Amendment, etc.); (2) **Information Required:** it is noted that for [5], a “narrative description of Wetland Resource Areas, DEP Wetland Delineation Forms, including vegetation types and the resource area designations, as defined under the Bylaw and



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As per the Agent Consultant Review, it is understood that the “person who delineated the boundary” **was not present** during the date (October 3, 2023) and time that the Agent Consultant was on the Property.

Section 5.5.2 Reviewing Boundary Delineations continues and cites “if agreement with the applicant cannot be reached, the Issuing Authority may need to determine the location of the BVW boundary. In these circumstances, the Issuing Authority should adjust the delineation by hanging flags in the field or making notes on the plans (e.g., flag A-12, moved 15 ft. up gradient). The applicant should submit a revised site plan showing the Issuing Authority’s BVW boundary.”

As per the Agent Consultant Review, which may not have described the methodologies and details for how points may have showed “where revisions and additions to the wetland boundary” may have occurred; and as per the Revised Drawing, which may not indicate the specific changes through notes on the Revised Drawing, the DCC may wish to consider whether the information presented on the Revised Drawing represents “all the information submitted by the applicant or that is otherwise available”.

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Please feel comfortable having the Hardinghood Neighbors, a Ten Citizen Group, and/or any Abutter contact me directly should there be any questions regarding our Wetland Scientist Consulting Services Review Memorandum for the Property.

Sincerely,

Thunderchase Environmental LLC

Dave Gorden, CPSS | CWS | BCES
Manager of Thunderchase Environmental LLC