

August 23, 2022

W-6250

Deerfield Conservation Commission
Attention: Alex Herchenreder
Deerfield Municipal Offices
8 Conway Street
South Deerfield, MA 01373

RE: DEP File No 142-0231, SunnyDayz ANRAD Filing

VIA EMAIL

Dear Conservation Commissioners:

The DEP Western Region Office commented in their review of the ANRAD Filing that the Eastern Hemlock trees (*Tsuga canadensis*) are Wetlands Plants as specifically identified in the Wetlands Protection Act and should be included as such on the DEP Field Data Forms. They advised that *“the Commission should review the Field Data Forms and boundary delineations in light of the fact that eastern hemlock is considered a wetlands indicator plant under the Act.”*

In response to this comment, I reviewed the information and I concur with the DEP comment. The eastern hemlock is classified as being Facultative Upland (FAC-UP) plant per the “U.S. Fish and Wildlife Service, National List of Plant Species that Occur in Wetlands: Massachusetts. For Army Corps Wetlands purposes this is generally not a wetland plant, however, it is specifically listed as a wetland species under the Wetlands Protection Act.

To address this, I have revised the DEP Field Data Forms for data plots T1-P1, T1-P2 and T3-P1 which included eastern hemlock, to change the status as a wetland indicator. These revised forms are attached.

For this delineation I used the methodology of vegetation, soils, and signs of hydrology to determine whether the data plots were wetland or upland. In all three cases, the conclusion of data did not change from the original filing.

Please include this information in this filing and provide this to the Peer Reviewer when that person is chosen for their review. Contact me if you have any questions on the included material.

Sincerely,

DGT Associates

Fredric W. King

Fredric W. King, P.E.
Senior Wetland Specialist

Attachments: Revised DEP Filed Data Forms

CC: Ken Bouquillon
Mass. DEP Western Region, Thomas Grizkos

DEP Bordering Vegetated Wetlands (310 CMR 10.55) Delineation Field Data Form

Applicant: Ken Bouquilin Prepared by: Fred King Project location: Greenfield Rd. DEP File #: _____

Check all that apply: Deerfield, MA

- Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
[X] Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
Method other than dominance test used (attach additional information)

Section I. Vegetation Observation Plot Number: P1 Transect Number: T1 Date of Delineation: 4/28/2022

Table with 5 columns: A. Sample Layer and Plant Species (by common/scientific name), B. Percent Cover (or basal area), C. Percent Dominance, D. Dominant Plant (yes or no), E. Wetland Indicator Category*

Trees

Table rows for Trees: Eastern Hemlock (Tsuga canadensis) 5, 8" (69 sq in, 14.3%, No, FACU*), Red Maple (Acer rubrum) 23" (413 sq in, 85.7%, Yes, FAC)

Shrub/Sapling/Vine

Table rows for Shrub/Sapling/Vine: Eastern Hemlock (Tsuga canadensis) (10.5, 77.7%, Yes, FACU*), Red Maple (Acer rubrum) (3.0, 22.3%, Yes, FAC)

Ground Cover

Table row for Ground Cover: Hay Scented Fern (Dennstaedtia punctilobula) (10.5, 100.0%, Yes, UPL)

* Tsuga canadensis is a Wetland Plant per the WPA.

* Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; plants listed as FAC, FAC+, FACW-, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptations next to the asterisk.

Vegetation conclusion: Number of dominant wetland indicator plants: 3 Number of dominant non-wetland indicator plants: 1 Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes X No

If vegetation alone is presumed adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent.

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? Yes No

title/date: Soil Survey of Franklin County, Mass
Date 1967
map number:
soil type mapped: Raynham 30A
hydric soil inclusions: Birdsall 9A

Are field observations consistent with soil survey? Yes
Remarks: The low area within this map appears to be Birdsall soil.
Upland appears consistent with Raynham soil

2. Soil Description

Horizon	Depth	Matrix Color	Mottles Color
A - FSL	0 - 6"	10 YR 2/2	None
B - LFS	6-14"	10 YR 3/6	10 YR 5/8 few Begin @ 8"
C - LFS	14-20"	10 YR 4/6	10 YR 5/8 Com

Remarks: Saturated at 18" > 12"

3. Other: Soils too bright for Hydric

Conclusion: Is soil hydric? Yes No

Other Indicators of Hydrology: (check all that apply and describe)

- Site inundated: _____
- Depth to free water in observation hole: _____
- Depth to soil saturation in observation hole: _____
- Water marks: _____
- Drift lines: _____
- Sediment deposits: _____
- Drainage patterns in BVW: _____
- Oxidized rhizospheres: _____
- Water-stained leaves: _____
- Recorded data (stream, lake, or tidal gauge; aerial photo; other): _____
- Other: _____

Vegetation and Hydrology Conclusion		Yes	No
Number of wetland indicator plants	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
≥ number of non-wetland indicator plants			
Wetland hydrology present:			
hydric soil present	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
other indicators of hydrology			
Present	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample location is in a BVW	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

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DEP Bordering Vegetated Wetlands (310 CMR 10.55) Delineation Field Data Form

Applicant: Ken Bouquilin Prepared by: Fred King Project location: Greenfield Rd. DEP File #: _____

Check all that apply: Deerfield, MA

- Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
- Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- Method other than dominance test used (attach additional information)

Section I. Vegetation Observation Plot Number: P2 Transect Number: T1 Date of Delineation: 4/28/2022

A. Sample Layer and Plant Species (by common/scientific name)	B. Percent Cover (or basal area)	C. Percent Dominance	D. Dominant Plant (yes or no)	E. Wetland Indicator Category*
Trees				
Eastern Hemlock (<i>Tsuga canadensis</i>) 5, 6"	48 sq in	6.4	No	FACU*
Red Maple (<i>Acer rubrum</i>) 21"	347 sq in	46.8	Yes	FAC
Red Oak (<i>Quercus rubra</i>) 21"	347 sq in	46.8	Yes	FACU-
Shrub/Sapling/Vine				
Eastern Hemlock (<i>Tsuga canadensis</i>)	10.5	100	Yes	FACU*

Ground Cover

None

* *Tsuga canadensis* is a Wetland Plant per the WPA.

* Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus *Sphagnum*; plants listed as FAC, FAC+, FACW-, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptations next to the asterisk.

Vegetation conclusion:

Number of dominant wetland indicator plants: 2 Number of dominant non-wetland indicator plants: 1

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes X No

If vegetation alone is presumed adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent.

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? Yes No

title/date: Soil Survey of Franklin County, Mass
Date 1967
map number:
soil type mapped: Raynham 30A
hydric soil inclusions: Birdsall 9A

Are field observations consistent with soil survey? Yes
Remarks: The low area within this map appears to be Birdsall soil.
Upland appears consistent with Raynham soil

2. Soil Description

Horizon	Depth	Matrix Color	Mottles Color
A - FSL	0 - 6"	10 YR 2/1	None
B - LFS	6-14"	10 YR 5/3	10 YR 5/8 Many Begin @ 6"
C - LFS	14-20"	10 YR 4/4	Too wet to view

Remarks: Saturated at 7", water at 8"

3. Other:

Conclusion: Is soil hydric? Yes No

Other Indicators of Hydrology: (check all that apply and describe)

- Site inundated: _____
- Depth to free water in observation hole: 8"
- Depth to soil saturation in observation hole: 7"
- Water marks: _____
- Drift lines: _____
- Sediment deposits: _____
- Drainage patterns in BVW: _____
- Oxidized rhizospheres: _____
- Water-stained leaves: Yes
- Recorded data (stream, lake, or tidal gauge; aerial photo; other): _____
- Other: _____

Vegetation and Hydrology Conclusion		
	Yes	No
Number of wetland indicator plants ≥ number of non-wetland indicator plants	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wetland hydrology present: hydric soil present	<input checked="" type="checkbox"/>	<input type="checkbox"/>
other indicators of hydrology Present	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample location is in a BVW	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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Applicant: Ken Bouquilin Prepared by: Fred King Project location: Greenfield Rd. DEP File #: _____

Check all that apply: Deerfield, MA

- Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
- Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- Method other than dominance test used (attach additional information)

Section I. Vegetation Observation Plot Number: P1 Transect Number: T3 Date of Delineation: 4/28/2022

A. Sample Layer and Plant Species (by common/scientific name)	B. Percent Cover (or basal area)	C. Percent Dominance	D. Dominant Plant (yes or no)	E. Wetland Indicator Category*
Trees				
American Beech (<i>Fagus grandifolia</i>) 5"	20 sq in	3.3	No	FACU
Red Maple (<i>Acer rubrum</i>) 12"	114 sq in	18.5	No	FAC
Red Oak (<i>Quercus rubra</i>) 17, 18"	482 sq in	78.2	Yes	FACU-
Shrub/Sapling/Vine				
Eastern Hemlock (<i>Tsuga canadensis</i>)	10.5	77.8	Yes	FACU*
Rosebay Rhododendron (<i>Rhododendron maximum</i>)	3.0	11.1	No	FAC
Highbush Blueberry (<i>Vaccinium corymbosum</i>)	3.0	11.1	No	FACW-
Ground Cover				
White Pine seedlings (<i>Pinus strobus</i>)	3.0	7.6	No	FACU
Princess Pine moss (<i>Lycopodium coscurum</i>)	3.0	7.6	No	FACU
Rosebay Rhododendron (<i>Rhododendron maximum</i>)	20.5	51.1	Yes	FAC
Cinnamon Fern (<i>Osmunda cinnamomea</i>)	10.5	26.2	Yes	FACW
Chokeberry (<i>Aronia melanocarpa</i>)	3.0	7.6	No	FAC

* *Tsuga Canadensis* is a Wetland Plant per the WPA.

* Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus *Sphagnum*; plants listed as FAC, FAC+, FACW-, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptations next to the asterisk.

Vegetation conclusion:

Number of dominant wetland indicator plants: 3 Number of dominant non-wetland indicator plants: 1

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? Yes X No

If vegetation alone is presumed adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent.

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? Yes No

title/date: Soil Survey of Franklin County, Mass
Date 1967
map number:
soil type mapped: Sudbury 260A
hydric soil inclusions: Birdsall 9A

Are field observations consistent with soil survey? Yes
Remarks: The low area within this map appears to be Birdsall soil.
Upland appears consistent with Sudbury soil

2. Soil Description

Horizon	Depth	Matrix Color	Mottles Color
A - FSL	0 - 5"	10 YR 2/2	None
B - LFS	5-16"	10 YR 3/4	None
C - LFS	16 - 20"	10 YR 4/6	7.5 YR 5/8 Many

Remarks: Saturated at 16"

3.

Conclusion: Is soil hydric? Yes No

Other Indicators of Hydrology: (check all that apply and describe)

- Site inundated: _____
- Depth to free water in observation hole: _____
- Depth to soil saturation in observation hole: _____
- Water marks: _____
- Drift lines: _____
- Sediment deposits: _____
- Drainage patterns in BVW: I _____
- Oxidized rhizospheres: _____
- Water-stained leaves: _____
- Recorded data (stream, lake, or tidal gauge; aerial photo; other): _____

- Other: _____

Vegetation and Hydrology Conclusion		Yes	No
Number of wetland indicator plants	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
≥ number of non-wetland indicator plants			
Wetland hydrology present:			
hydric soil present	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
other indicators of hydrology			
Present	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample location is in a BVW	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

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