Est. 2003

ECOSYSTEM SOLUTIONS INC

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Whit Griswold, Chair
West Tisbury Conservation Commission
1059 State Road
West Tisbury, MA 02575

Project no. W23-1814

RE: Notice of Intent
274 Indian Hill Rd / Map 15, Lot 1
West Tisbury, Massachusetts

Chair Griswold,

On behalf of Christopher Cottrell (Applicant), Ecosystem Solutions, Inc. (ESI) respectfully submits this Notice of Intent (NOI) for the above-referenced property (Property). ESI has completed a site investigation for wetlands and wetland jurisdictional areas on and in the close vicinity of the Property. The investigation of wetlands and other resource areas was performed on April 2, 2023 in accordance with the Massachusetts Wetlands Protection Act (M.G.L. c. 131, §40) (WPA), the Massachusetts Wetlands Regulations (310 CMR 10.00), the Town of West Tisbury Conservation By-Law and Wetlands Protection Regulations (Bylaw). In this packet you will find:

- Two (2) complete copies of the MassDEP WPA Form 3- *Notice of Intent*
- Two (2) copies of the site plan
- WPA Form 3
- Check made out to the Town of West Tisbury in the amount of $67.50 (1/2 the $110 WPA total town fee + $12.50). The fee category is Category1(g)- new agricultural project;
- Separate check made out to the Town of West Tisbury in the amount of $25.00, per the fee schedule for a Notice of Intent per the Schedule of Fee.
- Copy of the check for the state WPA fee of $42.50;
- Affidavit of Service with certified abutters list & copy of the abutter notification letter;
- USGS Topographic Map

By way of this application, a copy of this package has also been mailed to the Massachusetts Department of Environmental Management, Southeast Region in Lakeville, MA.

Property Description

The Property is a 6.82 acre parcel of land on the west side of Indian Hill Rd., approximately 650 feet south of its intersection with Luce Farm Road. It has approximately 700 feet of frontage on Indian Hill Road. The Property is developed with three buildings: a garage that used to be the original 1756 farm house, a 'custom' style house built in 2019, and a Cape-style house built in 2020 per the W. Tisbury property card. It is the northern portion of the Property that is developed with structures, with a gravel drive leaving the dwelling area and hugging the north Property line as it travels westerly/southwesterly. At the end of the gravel drive is a gardening area that is currently not in use due to a Notice of Violation issued to Mr. Cottrell on March 1, 2023. It is this letter that served as the catalyst for this NOI. The remaining portions of the Property are forested, with two wetland areas present within those forested areas. Fieldstone walls are present all around the Property's perimeter, with an interior wall present on the south side of the dwellings and garage, which also serves as the limit of the lawn.

Topography on-site is similar to an amphitheater, with high points along the edges and lowering into a 'bowl' along Indian Town Road. Indian Town Road itself is raised above the natural grade of the surrounding landscape for at least the southern 550 feet of frontage the Property has on the road. It is our opinion that Indian Town Road therefore acts like a kind of dam, or levee/dike for near-surface water making its way down the hill. Water is allowed to exit under the road via a culvert under the road that is located approximately 150' north of the Property's southeast corner.

Background

Mr. Cottrell took possession of the Property since 2019. Since that time, he has made many improvements to the Property, including construction of the new dwellings and renovation of the original 1756 farm house. However, he also constructed the access drive to the western end of the site where the gardening area is. Additionally, he installed a shed and a subsurface drain along the eastern Property boundary. Portions of the access drive, the subsurface drain, and the shed are located within the Buffer Zone of the IVW. This led the Conservation Commission (Commission) to declare that the site was out of compliance with the 2019 Order of Conditions, issued to Mr. Cottrell on February 1, 2019 under DEP file no. 079-0395. The minutes of the February 14, 2023 meeting state as follows:

> In 2019, an Order of Conditions was issued for site work in the buffer zone in connection with the renovation of an existing antique house on Indian Hill Road, a new septic system and guest house all outside the Buffer Zone. A temporary construction access was required because the existing driveway was too tight. This area is now a gravel parking area that was not approved as part of a landscaping plan.
>
> The 2019 project plan showed a clear limit of work. The Order contains the following conditions:
>
> - *No construction activities, storage of equipment or materials or stockpiling of excavated fill shall occur outside the limit of work as shown on the Project Plan.*
> - *In accordance with the provisions of 310 CMR 10.53 (1), where previous development of the Buffer Zone is extensive, the Issuing Authority may consider measures such as the restoration of natural vegetation adjacent to a Resource Area. Therefore, the stone wall shown on the project plan shall serve as the limit of approved mowing within the Buffer Zone. The area beyond the stone wall to the south and south west to the edge of the*

wetland shall be left undisturbed in order to allow the disturbed vegetation in the Inner Buffer Zone and the Bordering Vegetated Wetland to grow back. This is an ongoing condition that does not expire with the issuance of a Certificate of Compliance.

- *Any new landscaping within the Buffer Zone and outside the existing stone walls requires the submission of a landscape plan for review and written approval from the Commission.*

As a result of this conversation, it was voted to issue a Notice of Violation was issued to Mr. Cottrell at the February 28, 2023 public meeting. Brandon Faneuf of ESI attended an on-site meeting with the Commission on July 20, 2023 to discuss the issues that have led to this NOI. However, the pressing issues at the moment involve unauthorized work in the Buffer Zone of the IVW including, but not necessarily limited to vegetative clearing, erection of a shed, creation of a gardening area, and installation of a subsurface drainage system with filter fabric and two clean-outs. All of these areas, including the wetlands and Buffer Zones are located on the site plan attached to this NOI package.

Wetland Resources

This Property has been delineated at least twice before in the past; once in the early 00's, around 2002, and again in 2020. ESI is not aware of what person or entity performed those delineations. Regardless, visit was conducted by an ESI Professional Wetland Scientist on April 2, 2022 to determine the presence of wetland resource areas on-site and a delineation was performed. Two wetland areas were observed on-site by ESI at that time: a Bordering Vegetated Wetland (BVW) abutting Indian Hill Road, and a much smaller Isolated Vegetated Wetland in the western portion of the land, adjacent to the currently non-active garden area.

A summary of wetland types and locations is found in Table 1 below:

Table 1. Delineated Wetlands

Flag Series	Classification / Protection	Approx. Location
A1 – A30 (pink flags)	Bordering Vegetated Wetland w/ 100' Buffer Zone per 310 CMR 10.00 and the Bylaw, as well as a 25' no-touch and 50' no-build zone under the Bylaw.	Mostly runs parallel to Indian Town Rd. with a finger extension running 90 degrees to the road. The wetland finger is associated with an old, abandoned farmer's ditch.
B1 – B8	Isolated Vegetated Wetland w/ 100' Buffer Zone, 25' no-touch, and 50' no-build zone under the Bylaw only. Isolated wetlands are not protected on the State or Federal level after the May 2023 'Sackett v. EPA' SCOTUS case.	Western portion of the Property, just south of the access drive and just east of the gardening area.

Wetland delineation data forms are included near the end of this application package.

Other Resources

A search of other critical resources within the project area was conducted using GIS software and data available through various governmental agencies (FEMA, NHESP, DEP and others). The results of our search are listed in Table 2 below:

Table 2. Critical Areas

Mapped Resource On or Within Proximity to Site	Yes	No
Area of Critical Environmental Concern		✓
NHESP Certified Vernal Pool		✓
NHESP Potential Vernal Pool		✓
NHESP Estimated Habitat of Rare Wildlife		✓
NHESP Priority Habitat of Rare species		✓
DFW Cold Water Fisheries Resources		✓
Outstanding Resource Waters		✓
FEMA Flood Zones		✓
Surface Water Protection Area		✓
Interim Wellhead Protection Area		✓
Zone I Wellhead Protection Area		✓
Zone II Wellhead Protection Area		✓

Disturbance/Alterations

Mr. Cottrell admits that he has performed unauthorized activities within the Buffer Zone of the IVW, which is protected under the West Tisbury Wetland Protection Bylaw and Regulations. This includes clearing and storing of wood chips, as well as partial placement of a shed within the 25' zone of the B-series IVW. Further, a portion of the gardening area is located within the 50' zone of the B-series IVW. Finally, Mr. Cottrell installed a sub-surface drain that begins near the southwestern Property corner and runs in an easterly, southeasterly direction along the southern Property line. This drain is partially located within the 100' Buffer Zone of the B-series IVW. However, the drain is located very close to the outer limits of the Buffer Zone, at least 85' away from the wetland. It daylights in the woods outside of the Buffer Zones of either the A or B-series wetlands. *It is ESI's opinion that this drain has not and will not in the future alter the hydrology of the wetlands on-site.*

Restoration

As part of this NOI, Mr. Cottrell proposes to restore areas of the Buffer Zone within 50' of the B-series IVW. This area is depicted on the site plan as a green-hashed line. As part of this, the shed will be relocated to an area >50' from the IVW, the wood chips removed down to original ground, and the area revegetated *with native plants*. We do not believe that any topsoil was removed from the site. The revegetation plan is as follows:

Plant shrubs 8-10' on-center within the affected 50' Buffer Zone including but not necessarily limited to

- Highbush blueberry (*Vaccinium corymbosum*)
- American hazelnut (Corylus americana*)*
- Witch hazel (*Hamamelis virginiana*)

Planting in hold until spring per applicant R.P.

- Northern arrowwood (*Viburnum dentatum*)
- Nannyberry *(Viburnum lentago*)
- Winterberry (*Ilex verticillata*)
- Spicebush (*Lindera benzoin*)

New work for the DOT

Plan for New Agriculture

The primary project purpose, from the beginning, as been to prepare the site for new agriculture. Mr. Cottrell intends to create a farm in which he will be able to raise and sell a commodity or commodities including vegetables, fruit, eggs, honey, meat, and perhaps other products as well. It may include goats or sheep. In order to work toward this goal, a site plan has been developed by Vineyard Land Surveying & Engineering, Inc. On the plan you will find that with the exception of a 50' vegetative buffer along Indian Hill Rd., Mr. Cottrell wishes to selectively cut trees and shrubs within the 50-100' Buffer Zone (while leaving the inner 50' Buffer Zone alone except where it is to be restored). A fence will be erected throughout this area, especially along the 50' line adjacent to wetlands to ensure that encroachment will not occur in the future.

Three greenhouses are proposed between 50 and 100' from the B-series IVW, while 'turkey trailers' are proposed between 50 and 100' from the A-series BVW. A water trough and shelter are proposed between these two areas in order to water plants within the greenhouses, and for drinking water for animals. In order to provide a water source, an underground water line is proposed leading from the existing well near the houses, down the gravel drive, through a proposed break in the interior stone wall (where a gate will be located), and into the fenced-in area. No part of the water line will be within wetlands jurisdiction.

In the rear of the Property, along the western Property line, a new configuration for a garden is proposed. It will hug the 50' Buffer Zone of the B-series IVW. The shed will be relocated to be right along the 100' Buffer Zone boundary near the southwest Property corner.

Mr. Cottrell also asks that the portions of the gravel drive (between 50 and 100' of the B-series IVW) that have been constructed be allowed to remain.

Subsurface Drain

As mentioned above, there is a subsurface drain that begins near the southwest Property corner and leads in an overall easterly direction. Although the drain begins outside of jurisdiction, it clips the 100' Buffer Zone of the IVW before once again exiting jurisdiction. Based on observations obtained on-site, as well knowledge of soils and hydrology, ESI does not believe that any water being drained will adversely affect either wetland on-site. We believe that the filter fabric is necessary and presents no long-term danger to the wetland resource areas on-site. At no time did we actually observe signs of where water exited the drainage system. There is no channel or even sign of leaves being moved aside below the end of the pipe. Therefore, we believe that this is a de minimum impact and request that it remain in its entirety.

Walking Paths

There are a number of walking paths on-site, some of which are within wetlands jurisdiction. That said, these paths are what I would refer to as 'rake-and-ride' paths where leaves and branches were pushed

aside. No soil disturbance was created and we believe this to be a de minimum impact. Indeed, many of these areas are already filling back in with leaves and fallen branches. In the end, however, these areas will be located within the selectively cut pasture if allowed in an Order of Conditions.

Conclusion

The Applicant has proposed a restoration plan for work unauthorized work that will help to remedy issues outlined in the Notice of Violation issued by the Commission. At the same time, Mr. Cottrell has hired professionals to identify wetland resources on-site, and prepare a well thought out plan for future work that will transform the Property into a working farm.

Sincerely,
Ecosystem Solutions, Inc.
Brandon B. Faneuf, MSc, Principal
PWS, RPSS, CWB, CPESC

BF/bf

Native plant restoration:
No enhancement planting or seeding of native species to restore areas with desirable species as per monitoring requirement.

Wetland impact:
There has been no identifiable impact to the wetland resulting from the work of this project.

Recommended further actions:
Continue manual cutting and/or removal of invasive species with hand tools as invasive species regrow, using the above listed techniques.

Plant native plants in areas where invasive species have been removed.

Overseed meadows in the winter months to add diversity to the existing plant community.

Sequencing Plan:

BVW Determination Form

Bordering Vegetated Wetland Determination Form

Project Site: 274 Indian Hill Road | City/Town: West Tisbury | Sampling Date: 4/2/2023

Applicant/Owner: | Sampling Point or Zone: WETLAND A15

Invesigators: Brandon Faneuf | Lat/Long: 41.423043,-70.685155

Soil Map Unit Name: 88A- Ridgebury Variant vstfsl, 0-3% | NWI/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**	***Is the Sampled Area within a wetland?***	**YES**
Hydric Soils criterion met?	**NO**		
Wetlands hydrology present?	**YES**		

Remarks, Photo Details, Flagging, etc.:

Wetland flag series A1 through A30

HYDROLOGY

Field Observation:

Surface Water Present?	Yes ☐ No ☑	Depth (inches):
Water Table Present?	Yes ☑ No ☐	Depth (inches): 0"
Saturation Present (including capillary fringe)?	Yes ☑ No ☐	Depth (inches): 0"

Wetland Hydrology Indicators

Reliable Indicators of Wetlands Hydrology	Indicators that can be Reliable with Proper Interpretation	Indicators of the Influence of Water
☑ Water-stained Leaves	☐ Hydrological records	☐ Direct observation of inundation
☐ Evidence of aquatic fauna	☑ Free water in a soil test hole	☑ Drainage patterns
☐ Iron deposits	☑ Saturated soil	☐ Drift lines
☐ Algal mats or crusts	☐ Water marks	☐ Scoured areas
☐ Oxidized rhizospheres/pore linings	☐ Moss trim lines	☐ Sediment deposits
☐ Thin muck surfaces	☐ Presence of reduced iron	☐ Surface soil cracks
☐ Plants with air-filled tissue(aerenchyma)	☐ Woody plants with adventitious roots	☐ Sparsely vegetated concave surface
☐ Plants with polymorphic leaves	☑ Trees with shallow root systems	☐ Microtopographic relief
☐ Plants with floating leaves	☐ Woody plants with enlarged lenticels	☐ Geographic position (depression, toe of slope, fringing lowland)
☐ Hydrogen sulfide odor		

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

Italics denotes autocalculated field

BVW Determination Form

Sampling Point: WETLAND A15

VEGETATION - Use both common and scientific names of plants.

Tree Stratum Plot size: 30' radius

Common Name	Scientific Name	*Indicator Status*	Absolute % Cover	*Dominant?*	*Wetland Indicator?*
Red Maple	Acer rubrum	FAC	85.5	YES	YES

85.5 = *Total Cover*

Shrub/Sapling Stratum Plot size: 15' radius

Common Name	Scientific Name	*Indicator Status*	Absolute % Cover	*Dominant?*	*Wetland Indicator?*
Common Winterberry	Ilex verticillata	FACW	20.5	YES	YES
American Holly	Ilex opaca	FACU	10.5	NO	NO
Northern Spicebush	Lindera benzoin	FACW	10.5	NO	YES

41.5 = *Total Cover*

Herb Stratum Plot size: 5' radius

Common Name	Scientific Name	*Indicator Status*	Absolute % Cover	*Dominant?*	*Wetland Indicator?*

0 = *Total Cover*

Italics denotes autocalculated field

BVW Determination Form

Sampling Point: WETLAND A15

Woody Vine Stratum Plot size: 30' radius

Common Name	Scientific Name	*Indicator Status*	Absolute % Cover	*Dominant?*	*Wetland Indicator?*

0 = *Total Cover*

Rapid Test: Do all dominant species have an indicator status of OBL or FACW?			**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 species?*			
		YES			
Prevalence Index:	Total % Cover (all strata)		Result		
OBL species	0	1	0		
FACW species	31	2	62		
FAC species	85.5	3	256.5		
FACU species	10.5	4	42		
UPL species	0	5	0		
Column Totals	127		360.5		
Prevalence Index:	2.54		*Is the Prevalence Index ≤ 3.0?*		
			YES		
Wetland vegetation criterion met?	**YES**				

Definitions of Vegetation Strata

Tree - Woody plants 3in. (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 fs (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

OBL

FAC

FAW

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%

Italics denotes autocalculated field

BVW Determination Form

Sampling Point: WETLAND A15

SOIL 88A- Ridgebury Variant vstfsl, 0-3%

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type1	Location2		
0-8	10YR 4/3	92	5YR 3/4	8	C	M	fsl	Prominent
8-20	2.5Y 6/4	88	5YR 3/4	12	C	M	sil	Prominent

1Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains 2Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratisfied Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8)
- ☐ Thin Dark Surface (S9)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F7)
- ☐ Depleted Dark Surface (F8)

Indicators for Problematic Hydric Soils

- ☐ 2 cm Muck (A10)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8)
- ☐ Thin Dark Surface (S9)
- ☐ Iron-Manganese Masses (F12)
- ☐ Mesic Spodic (A17)
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Include Explanation in Remarks)

Restrictive Layer if observed) Type: Depth (inches):

Remarks:

Hydric Soils criterion met? **NO**

Italics denotes autocalculated field

BVW Determination Form

Sampling Point: UPLAND A15

Woody Vine Stratum — Plot size: 30' radius

Common Name	Scientific Name	*Indicator Status*	Absolute % Cover	*Dominant?*	*Wetland Indicator?*
Horsebrier	Smilax rotundifolia	FAC	10.5	NO	YES
Fox Grape	Vitis labrusca	FACU	3	NO	NO
				NO	NO
				NO	NO

13.5 = *Total Cover*

Rapid Test: Do all dominant species have an indicator status of OBL or FACW?			**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 species?*			
		YES			
Prevalence Index:	Total % Cover (all strata)		Result		
OBL species	0	1	0		
FACW species	10.5	2	21		
FAC species	58.5	3	175.5		
FACU species	122	4	488		
UPL species	0	5	0		
Column Totals	191		684.5		
Prevalence Index:	3.82		*Is the Prevalence Index ≤ 3.0?*		
			NO		
Wetland vegetation criterion met?	**YES**				

Definitions of Vegetation Strata

Tree - Woody plants 3in. (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 fs (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

OBL

FAC

FAW

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%

Italics denotes autocalculated field

BVW Determination Form

Sampling Point: UPLAND A15

SOIL 181C- Chilmark vstsl, 8-15%

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type1	Location2		
0-12	10YR 4/3						sil	
12-18	10YR 6/8						sil	
18-20	10YR 6/6	95	7.5YR 4/6	5	C	M	sil	Prominent

1Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains 2Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratisfied Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8)
- ☐ Thin Dark Surface (S9)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F7)
- ☐ Depleted Dark Surface (F8)

Indicators for Problematic Hydric Soils

- ☐ 2 cm Muck (A10)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8)
- ☐ Thin Dark Surface (S9)
- ☐ Iron-Manganese Masses (F12)
- ☐ Mesic Spodic (A17)
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Include Explanation in Remarks)

Restrictive Layer if observed) Type: Depth (inches):

Remarks:

Hydric Soils criterion met? **NO**

Italics denotes autocalculated field

BVW Determination Form

Bordering Vegetated Wetland Determination Form

Project Site: 274 Indian Hill Road | City/Town: West Tisbury | Sampling Date: 4/2/2023

Applicant/Owner: | Sampling Point or Zone: UPLAND B2

Invesigators: Brandon Faneuf | Lat/Long: 41.423043,-70.685155

Soil Map Unit Name: 181C- Chilmark vstsl, 8-15% | NWI/DEP Classification: WS1

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** | ***Is the Sampled Area within a wetland?*** **NO**

Hydric Soils criterion met? **NO**

Wetlands hydrology present? **NO**

Remarks, Photo Details, Flagging, etc.:

Wetland flag series B1 through B8

HYDROLOGY

Field Observation:

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
☐ Water-stained Leaves	☐ Hydrological records	☐ Direct observation of inundation
☐ Evidence of aquatic fauna	☐ Free water in a soil test hole	☐ Drainage patterns
☐ Iron deposits	☐ Saturated soil	☐ Drift lines
☐ Algal mats or crusts	☐ Water marks	☐ Scoured areas
☐ Oxidized rhizospheres/pore linings	☐ Moss trim lines	☐ Sediment deposits
☐ Thin muck surfaces	☐ Presence of reduced iron	☐ Surface soil cracks
☐ Plants with air-filled tissue(aerenchyma)	☐ Woody plants with adventitious roots	☐ Sparsely vegetated concave surface
☐ Plants with polymorphic leaves	☐ Trees with shallow root systems	☐ Microtopographic relief
☐ Plants with floating leaves	☐ Woody plants with enlarged lenticels	☐ Geographic position (depression, toe of slope, fringing lowland)
☐ Hydrogen sulfide odor		

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

Italics denotes autocalculated field

BVW Determination Form

Sampling Point: UPLAND B2

VEGETATION - Use both common and scientific names of plants.

Tree Stratum — Plot size: 30' radius

Common Name	Scientific Name	*Indicator Status*	Absolute % Cover	*Dominant?*	*Wetland Indicator?*
Northern Red Oak	Quercus rubra	FACU	10.5	NO	NO
Northern White Oak	Quercus alba	FACU	10.5	NO	NO
Black Tupelo	Nyssa sylvatica	FAC	10.5	NO	YES

31.5 = *Total Cover*

Shrub/Sapling Stratum — Plot size: 15' radius

Common Name	Scientific Name	*Indicator Status*	Absolute % Cover	*Dominant?*	*Wetland Indicator?*
American Beech	Fagus grandifolia	FACU	10.5	NO	NO
Maleberry	Lyonia ligustrina	FACW	20.5	YES	YES
Highbush Blueberry	Vaccinium corymbosum	FACW	10.5	NO	YES

41.5 = *Total Cover*

Herb Stratum — Plot size: 5' radius

Common Name	Scientific Name	*Indicator Status*	Absolute % Cover	*Dominant?*	*Wetland Indicator?*

0 = *Total Cover*

Italics denotes autocalculated field

BVW Determination Form

Sampling Point: UPLAND B2

SOIL 181C- Chilmark vstsl, 8-15%

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type1	Location2		
0-14	10YR 4/3	100					fsl	
14-20	10YR 5/6	100					fsl	

1Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains 2Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratisfied Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8)
- ☐ Thin Dark Surface (S9)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F7)
- ☐ Depleted Dark Surface (F8)

Indicators for Problematic Hydric Soils

- ☐ 2 cm Muck (A10)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8)
- ☐ Thin Dark Surface (S9)
- ☐ Iron-Manganese Masses (F12)
- ☐ Mesic Spodic (A17)
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Include Explanation in Remarks)

Restrictive Layer if observed) Type: Depth (inches):

Remarks:

Hydric Soils criterion met? **NO**

Italics denotes autocalculated field

JVW Determination Form

Sampling Point: UPLAND B2

Woody Vine Stratum Plot size: 30' radius

Common Name	**Scientific Name**	***Indicator Status***	**Absolute % Cover**	***Dominant?***	***Wetland Indicator?***
Horsebrier	Smilax rotundifolia	FAC	10.5	NO	YES

10.5 = *Total Cover*

Rapid Test: Do all dominant species have an indicator status of OBL or FACW?			**YES**		
Dominance Test: Number of dominant species	Number of dominant species that are wetland indicator plants	*Do wetland indicator plants make up ≥ 50% of dominant species?*			
		YES			
Prevalence Index:	Total % Cover (all strata)		Result		
OBL species	0	1	0		
FACW species	31	2	62		
FAC species	10.5	3	31.5		
FACU species	31.5	4	126		
UPL species	0	5	0		
Column Totals	73		219.5		
Prevalence Index:	1.46		*Is the Prevalence Index ≤ 3.0?*		
			YES		
Wetland vegetation criterion met?	**YES**				

Definitions of Vegetation Strata

Tree - Woody plants 3in. (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 fs (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

OBL

FAC

FAW

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%

Italics denotes autocalculated field

BVW Determination Form

Bordering Vegetated Wetland Determination Form

Project Site: 274 Indian Hill Road | City/Town: West Tisbury | Sampling Date: 4/2/2023

Applicant/Owner: | Sampling Point or Zone: WETLAND B2

Invesigators: Brandon Faneuf | Lat/Long: 41.423043,-70.685155

Soil Map Unit Name: 88A- Ridgebury Variant vstfsl, 0-3% | NWI/DEP Classification: WS1

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** | ***Is the Sampled Area within a wetland?*** **YES**

Hydric Soils criterion met? **YES**

Wetlands hydrology present? **NO**

Remarks, Photo Details, Flagging, etc.:

Wetland flag series B1 through B8

HYDROLOGY

Field Observation:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☑	No ☐	Depth (inches): 16"
Saturation Present (including capillary fringe)?	Yes ☑	No ☐	Depth (inches): 12"

Wetland Hydrology Indicators

Reliable Indicators of Wetlands Hydrology	Indicators that can be Reliable with Proper Interpretation	Indicators of the Influence of Water
☐ Water-stained Leaves	☐ Hydrological records	☐ Direct observation of inundation
☐ Evidence of aquatic fauna	☐ Free water in a soil test hole	☐ Drainage patterns
☐ Iron deposits	☐ Saturated soil	☐ Drift lines
☐ Algal mats or crusts	☐ Water marks	☐ Scoured areas
☐ Oxidized rhizospheres/pore linings	☐ Moss trim lines	☐ Sediment deposits
☐ Thin muck surfaces	☐ Presence of reduced iron	☐ Surface soil cracks
☐ Plants with air-filled tissue(aerenchyma)	☐ Woody plants with adventitious roots	☐ Sparsely vegetated concave surface
☐ Plants with polymorphic leaves	☐ Trees with shallow root systems	☐ Microtopographic relief
☐ Plants with floating leaves	☐ Woody plants with enlarged lenticels	☐ Geographic position (depression, toe of slope, fringing lowland)
☐ Hydrogen sulfide odor		

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

Italics denotes autocalculated field

BVW Determination Form

Sampling Point: WETLAND B2

VEGETATION - Use both common and scientific names of plants.

Tree Stratum — Plot size: 30' radius

Common Name	Scientific Name	*Indicator Status*	Absolute % Cover	*Dominant?*	*Wetland Indicator?*
Red Maple	Acer rubrum	FAC	38	YES	YES
Black Tupelo	Nyssa sylvatica	FAC	38	YES	YES

76 = *Total Cover*

Shrub/Sapling Stratum — Plot size: 15' radius

Common Name	Scientific Name	*Indicator Status*	Absolute % Cover	*Dominant?*	*Wetland Indicator?*
Highbush Blueberry	Vaccinium corymbosum	FACW	38	YES	YES
Maleberry	Lyonia ligustrina	FACW	20.5	YES	YES
American Holly	Ilex opaca	FACU	10.5	NO	NO

69 = *Total Cover*

Herb Stratum — Plot size: 5' radius

Common Name	Scientific Name	*Indicator Status*	Absolute % Cover	*Dominant?*	*Wetland Indicator?*
Cinnamon Fern	Osmundastrum cinnamomeum	FACW	10.5	NO	YES

10.5 = *Total Cover*

Italics denotes autocalculated field

BVW Determination Form

Sampling Point: WETLAND B2

Woody Vine Stratum Plot size: 30' radius

Common Name	Scientific Name	*Indicator Status*	Absolute % Cover	*Dominant?*	*Wetland Indicator?*

0 = *Total Cover*

Rapid Test: Do all dominant species have an indicator status of OBL or FACW?			**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 species?*			
		YES			
Prevalence Index:	Total % Cover (all strata)		Result		
OBL species	0	1	0		
FACW species	69	2	138		
FAC species	76	3	228		
FACU species	10.5	4	42		
UPL species	0	5	0		
Column Totals	155.5		408		
Prevalence Index:	3.11		*Is the Prevalence Index ≤ 3.0?*		
			NO		
Wetland vegetation criterion met?	**YES**				

Definitions of Vegetation Strata

Tree - Woody plants 3in. (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 fs (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

OBL

FAC

FAW

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%

Italics denotes autocalculated field

BVW Determination Form

Sampling Point: WETLAND B2

SOIL 88A- Ridgebury Variant vstfsl, 0-3%

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type1	Location2		
0-12	10YR 3/2	100					fsl	
12-16	10YR 4/3	100					sil	
16-20	2.5Y 6/1	90	7.5YR 4/6	10	C	M	sil	Prominent

1Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains 2Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratisfied Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8)
- ☐ Thin Dark Surface (S9)
- ☐ Loamy Mucky Mineral (F1)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F7)
- ☐ Depleted Dark Surface (F8)

Indicators for Problematic Hydric Soils

- ☐ 2 cm Muck (A10)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8)
- ☐ Thin Dark Surface (S9)
- ☐ Iron-Manganese Masses (F12)
- ☐ Mesic Spodic (A17)
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Include Explanation in Remarks)

Restrictive Layer if observed) Type: Depth (inches):

Remarks:

Hydric Soils criterion met? **YES**

Italics denotes autocalculated field

BVW Determination Form

Sampling Point: UPLAND A15

VEGETATION - Use both common and scientific names of plants.

Tree Stratum — Plot size: 30' radius

Common Name	Scientific Name	*Indicator Status*	Absolute % Cover	*Dominant?*	*Wetland Indicator?*
Northern Red Oak	Quercus rubra	FACU	38	YES	NO
Red Maple	Acer rubrum	FAC	38	YES	YES
Eastern Red-Cedar	Juniperus virginiana	FACU	10.5	NO	NO
				NO	NO
				NO	NO
				NO	NO
				NO	NO
				NO	NO
				NO	NO
				NO	NO

86.5 = *Total Cover*

Shrub/Sapling Stratum — Plot size: 15' radius

Common Name	Scientific Name	*Indicator Status*	Absolute % Cover	*Dominant?*	*Wetland Indicator?*
Red Maple	Acer rubrum	FAC	20.5	YES	YES
American Holly	Ilex opaca	FACU	10.5	NO	NO
Highbush Blueberry	Vaccinium corymbosum	FACW	10.5	NO	YES
				NO	NO
				NO	NO
				NO	NO
				NO	NO
				NO	NO
				NO	NO

41.5 = *Total Cover*

Herb Stratum — Plot size: 5' radius

Common Name	Scientific Name	*Indicator Status*	Absolute % Cover	*Dominant?*	*Wetland Indicator?*
Smooth Blue American-Aster	Symphyotrichum laeve	FACU	63	YES	NO
				NO	NO
				NO	NO
				NO	NO
				NO	NO
				NO	NO
				NO	NO
				NO	NO
				NO	NO

63 = *Total Cover*

Italics denotes autocalculated field

BVW Determination Form

Bordering Vegetated Wetland Determination Form

Project Site: 274 Indian Hill Road | City/Town: West Tisbury | Sampling Date: 4/2/2023

Applicant/Owner: | Sampling Point or Zone: UPLAND A15

Invesigators: Brandon Faneuf | Lat/Long: 41.423043,-70.685155

Soil Map Unit Name: 181C- Chilmark vstsl, 8-15% | NWI/DEP Classification: WS1

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** | ***Is the Sampled Area within a wetland?*** **NO**

Hydric Soils criterion met? **NO**

Wetlands hydrology present? **NO**

Remarks, Photo Details, Flagging, etc.:

Wetland flag series A1 through A30

HYDROLOGY

Field Observation:

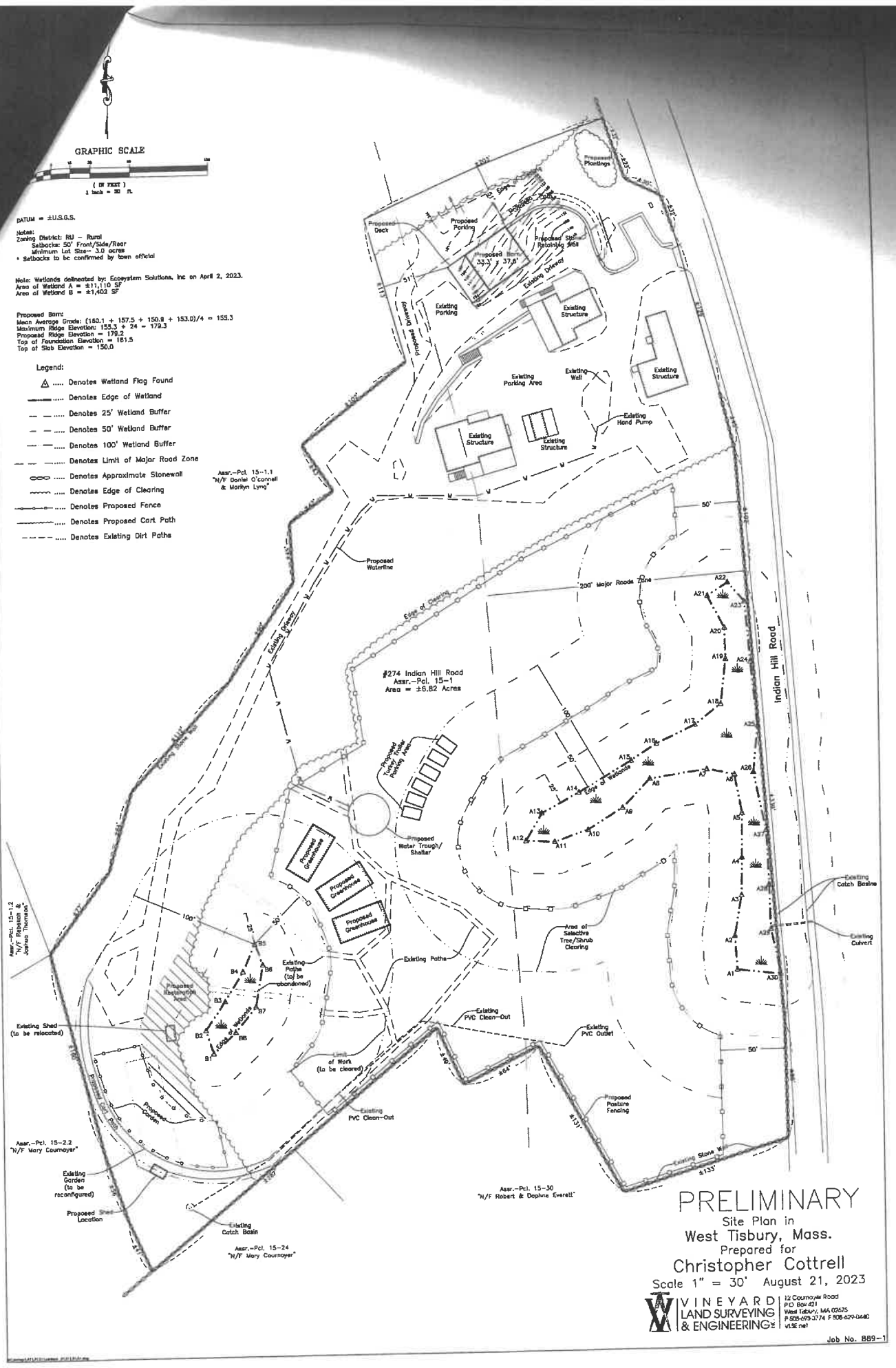
Surface Water Present?	Yes ☐ No ☑	Depth (inches):
Water Table Present?	Yes ☐ No ☑	Depth (inches):
Saturation Present (including capillary fringe)?	Yes ☐ No ☑	Depth (inches):

Wetland Hydrology Indicators

Reliable Indicators of Wetlands Hydrology	Indicators that can be Reliable with Proper Interpretation	Indicators of the Influence of Water
☐ Water-stained Leaves	☐ Hydrological records	☐ Direct observation of inundation
☐ Evidence of aquatic fauna	☐ Free water in a soil test hole	☐ Drainage patterns
☐ Iron deposits	☐ Saturated soil	☐ Drift lines
☐ Algal mats or crusts	☐ Water marks	☐ Scoured areas
☐ Oxidized rhizospheres/pore linings	☐ Moss trim lines	☐ Sediment deposits
	☐ Presence of reduced iron	☐ Surface soil cracks
☐ Thin muck surfaces	☐ Woody plants with adventitious roots	☐ Sparsely vegetated concave surface
☐ Plants with air-filled tissue(aerenchyma)	☐ Trees with shallow root systems	☐ Microtopographic relief
	☐ Woody plants with enlarged lenticels	☐ Geographic position (depression, toe of slope, fringing lowland)
☐ Plants with polymorphic leaves		
☐ Plants with floating leaves		
☐ Hydrogen sulfide odor		

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

Italics denotes autocalculated field


GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.
DATUM = ±U.S.G.S.
Notes:
Zoning District: RU – Rural
Setbacks: 50' Front/Side/Rear
Minimum Lot Size= 3.0 acres
* Setbacks to be confirmed by town official
Note: Wetlands delineated by: Ecosystem Solutions, Inc on April 2, 2023.
Area of Wetland A = ±11,110 SF
Area of Wetland B = ±1,402 SF
Proposed Barn:
Mean Average Grade: (160.1 + 157.5 + 150.8 + 153.0)/4 = 155.3
Maximum Ridge Elevation: 155.3 + 24 = 179.3
Proposed Ridge Elevation = 179.2
Top of Foundation Elevation = 161.5
Top of Slab Elevation = 150.0
Legend:
Denotes Wetland Flag Found
Denotes Edge of Wetland
Denotes 25' Wetland Buffer
Denotes 50' Wetland Buffer
Denotes 100' Wetland Buffer
Denotes Limit of Major Road Zone
Denotes Approximate Stonewall
Denotes Edge of Clearing
Denotes Proposed Fence
Denotes Proposed Cart Path
Denotes Existing Dirt Paths
#274 Indian Hill Road
Assr.–Pcl. 15–1
Area = ±6.82 Acres
Indian Hill Road
200' Major Roads Zone
Proposed Barn
33.3' x 37.6'
Proposed Deck
Proposed Plantings
Proposed Parking
Proposed Stone Retaining Wall
Existing Driveway
Existing Parking
Existing Structure
Existing Parking Area
Existing Well
Existing Hand Pump
Proposed Driveway
Proposed Waterline
Edge of Clearing
Proposed Horse Riding Area
Proposed Water Trough/ Shelter
Proposed Greenhouse
Proposed Greenhouse
Proposed Greenhouse
Existing Paths
Existing Path (to be abandoned)
Proposed Restoration Area
Existing Shed (to be relocated)
Existing Wetlands
Area of Selective Tree/Shrub Clearing
Existing Catch Basins
Existing Culvert
Existing PVC Clean-Out
Existing PVC Outlet
Limit of Work (to be cleared)
Proposed Pasture Fencing
Existing Stone Wall
Proposed Garden
Existing Garden (to be reconfigured)
Proposed Shed Location
Existing Catch Basin
Assr.–Pcl. 15–1.1 "N/F Daniel O'connell & Marilyn Lyng"
Assr.–Pcl. 15–1.2 "N/F Rebecca & Joshua Thomson"
Assr.–Pcl. 15–2.2 "N/F Mary Cournoyer"
Assr.–Pcl. 15–24 "N/F Mary Cournoyer"
Assr.–Pcl. 15–30 "N/F Robert & Daphne Everett"
PRELIMINARY
Site Plan in
West Tisbury, Mass.
Prepared for
Christopher Cottrell
Scale 1" = 30' August 21, 2023
VINEYARD LAND SURVEYING & ENGINEERING
12 Cournoyer Road
P.O. Box 421
West Tisbury, MA 02575
P 508-693-2774 F 508-629-0440
vlse.net
Job No. 889–1