

March 26, 2025

Aaron Holder
20704 Spinning Wheel Place
Germantown, MD 20874

Re: Mount Ephraim Road Property
Frederick County, MD
Tax ID 07-193874

Subject: Flooding Soils Evaluation and Wetland Delineation

Dear Mr. Holder:

Acorn Environmental, Inc. completed a field investigation on March 7, 2025 to identify and delineate flooding soils and/or wetlands in the area of a recently constructed gravel driveway on the subject property. The Frederick County Soils Atlas indicates that a portion of the driveway is located within “flooding soils”, as defined in Chapter 1-19-9 of the County Code. The Frederick County Floodplain District includes streams, FEMA floodplains, flooding soils, wetlands, and associated setbacks.

Potential wetland areas were evaluated in accordance with the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (Version 2.0). A forested wetland was identified on the property in the area where the gravel driveway meets Mt. Ephraim Road. The limit of disturbance (silt fence) for the driveway stops at a culvert that provides drainage under Mt. Ephraim Road.

It is likely that a small section of the driveway was built in wetlands; however, a soil test pit was not excavated in the driveway to confirm if the soils under the gravel were hydric (i.e., wetland). The boundary of the wetland was delineated with pink flagging for future survey by others. See attached map for approximate location of the wetland and the regulated area that was disturbed.

Site Description

The project area is located within the Lower Monocacy River watershed (HUC 02140302) and is drained by Bear Branch. The watershed for Bear Branch is designated as Class III-P, which includes Native Trout Waters and Public Water Supply. Forested wetlands are mapped in the riparian area of Bear Branch (Exhibit 1). A groundwater seep emerges from a rock outcrop on the adjacent property and drains to Bear Creek through a culvert under Mt. Ephraim Road. The groundwater seep is the hydrologic source for the forested wetlands on the property. Photographs of the property are attached.

Soils in the project area include the following mapping units (Exhibit 2):

- HdA – Hatboro-Codorus silt loams, 0 to 3 percent slopes
- MnB – Mt. Zion-Rohrersville complex, 3to 8 percent slopes
- SuF – Stumptown-Bagtown-Rock outcrop complex, 25 to 65 percent slopes

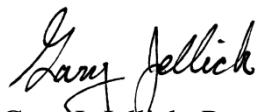
Hatboro and Codorus soils are associated with floodplains, and Hatboro is classified as a hydric (wetland) soil. The observed soils more closely resemble Lantz silt loam, a hydric soil that is subject to ponding. Lantz soils are very poorly drained and have a water table within 6 inches of the surface for long duration. The soils meet Hydric Soil Field Indicator F3 (depleted matrix), as described on the attached wetland data form.

One wetland area was delineated in the project area as shown on Exhibit 3. Dominant vegetation includes yellow birch (FAC), red maple (FAC), American beech (FACU), skunk cabbage (OBL) and common greenbrier (FAC).

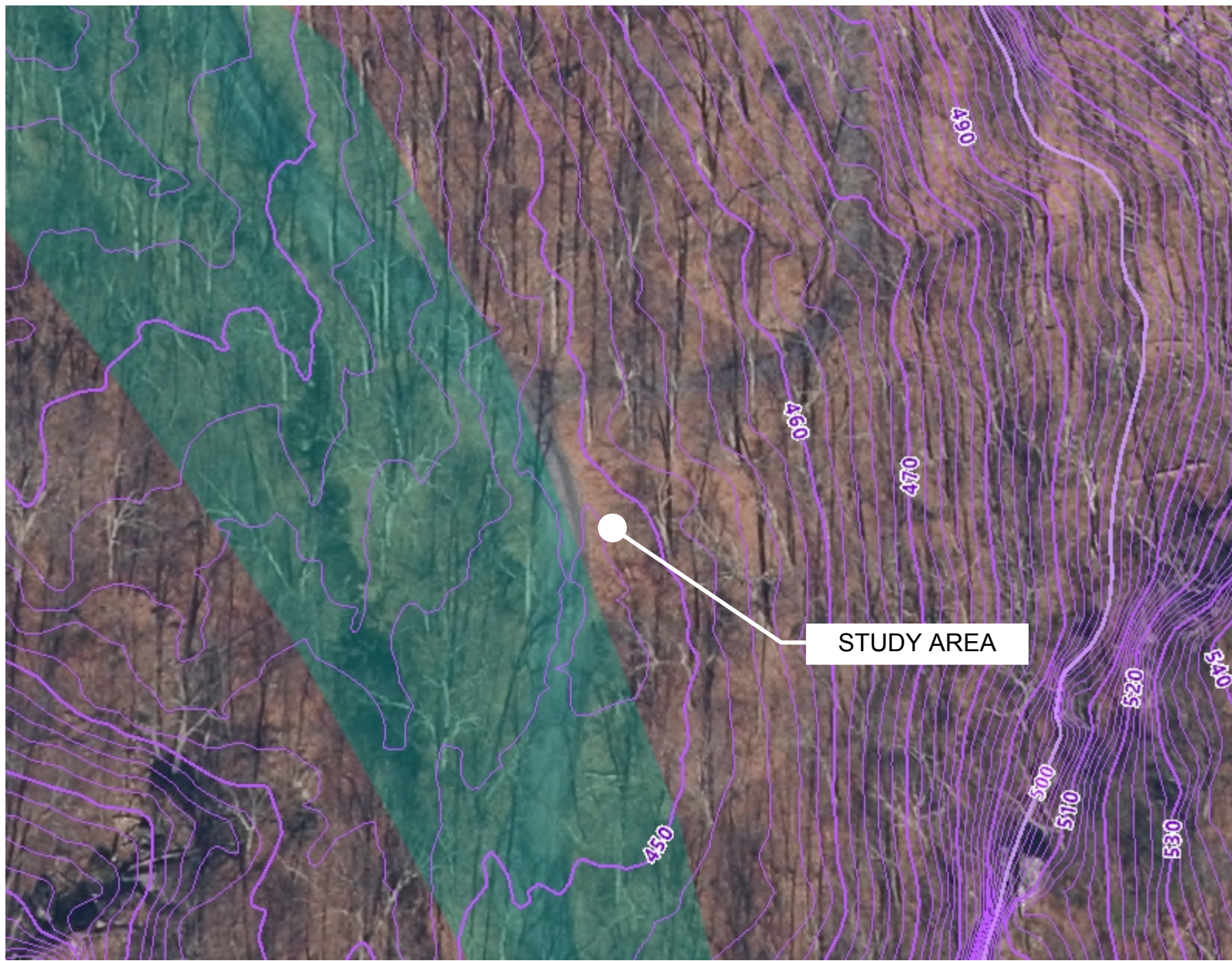
We estimate that approximately 250 square feet of wetlands have been filled and 696 square feet of the 25-buffer have been cleared, subject to a survey of the wetland boundary flags. An "after the fact" permit will be needed from the Maryland Department of the Environment and the Frederick County Department of Permits and Inspections.











If you have any questions concerning this report, please feel free to contact me at 410-274-0622.

Sincerely,
Acorn Environmental, Inc.



Gary J. Jellick, President
Certified Professional Soil Scientist
SSSA #1717



-  Wetlands (DNR)
- Wetlands (NWI)**
 -  Freshwater Emergent Wetland
 -  Freshwater Forested/Shrub Wetland
 -  Freshwater Pond
 -  Lake
 -  Other
 -  Riverine
-  Frederick County Boundary
- Surrounding Counties**
 -  Maryland
 -  <all other values>

100.2 0 50.08 100.2 Feet

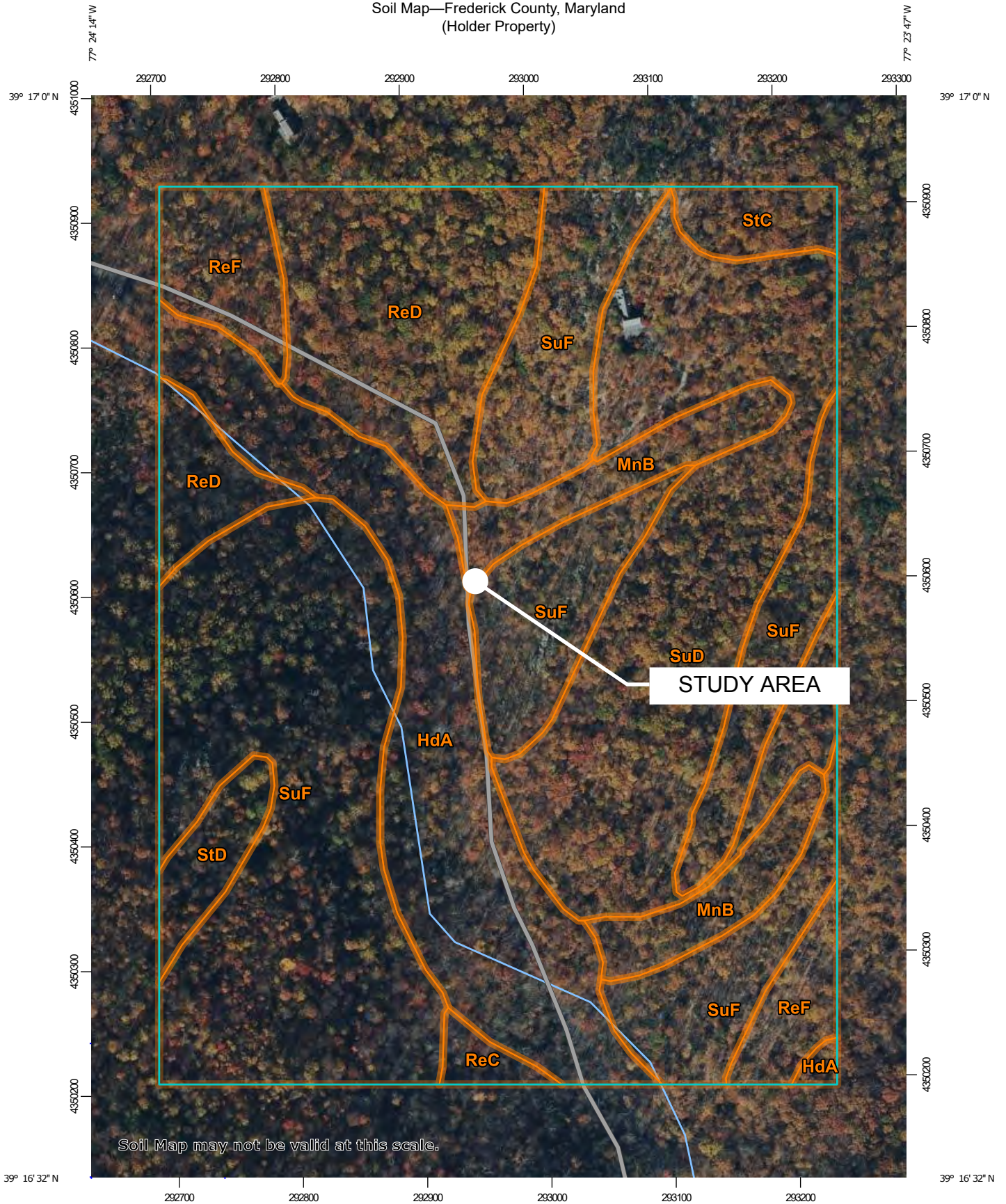
1: 601



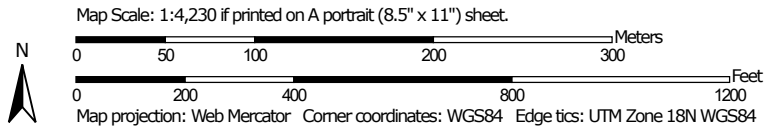
NAD_1983_StatePlane_Maryland_FIPS_1900_Feet

While efforts have been made to ensure the accuracy of this map, Frederick County accepts no liability or responsibility for errors, omissions, or positional inaccuracies in the content of this map. Reliance on this map is at the risk of the user. This map is for illustration purposes only and should not be used for surveying, engineering, or site-specific analysis.

Soil Map—Frederick County, Maryland
(Holder Property)

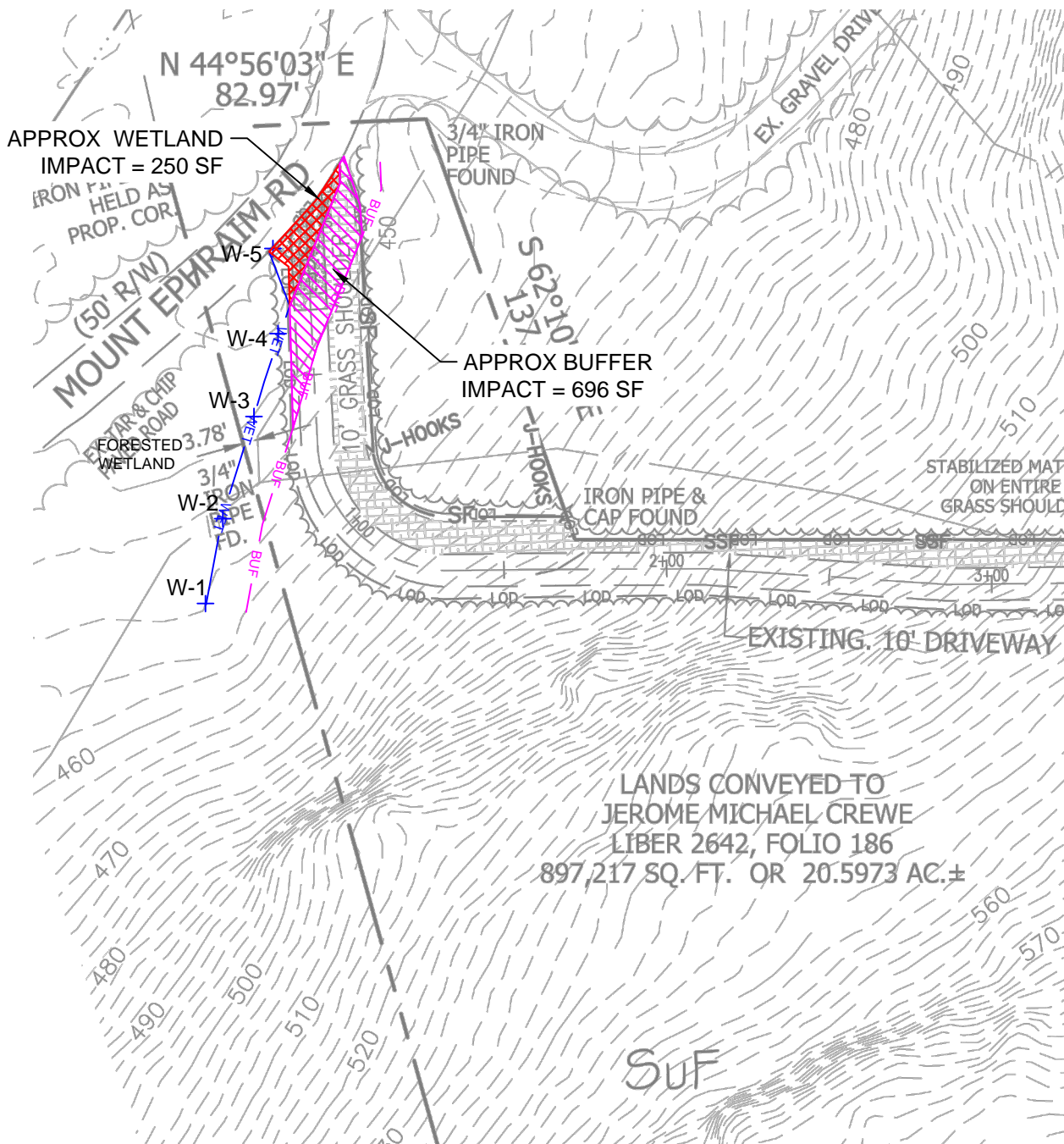


Soil Map may not be valid at this scale.



Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HdA	Hatboro-Codorus silt loams, 0 to 3 percent slopes	14.6	15.0%
MnB	Mt. Zion-Rohrersville complex, 3 to 8 percent slopes	5.2	5.3%
ReC	Ravenrock-Highfield-Rock outcrop complex, 8 to 15 percent slopes	0.7	0.7%
ReD	Ravenrock-Highfield-Rock outcrop complex, 15 to 25 percent slopes	12.0	12.3%
ReF	Ravenrock-Highfield-Rock outcrop complex, 25 to 65 percent slopes	4.7	4.8%
StC	Stumptown-Rock outcrop complex, 8 to 15 percent slopes	1.7	1.8%
StD	Stumptown-Rock outcrop complex, 15 to 25 percent slopes	1.8	1.9%
SuD	Stumptown-Bagtown-Rock outcrop complex, 15 to 25 percent slopes	20.0	20.5%
SuF	Stumptown-Bagtown-Rock outcrop complex, 25 to 65 percent slopes	36.8	37.8%
Totals for Area of Interest		97.4	100.0%




LANDS CONVEYED TO
 JEROME MICHAEL CREWE
 LIBER 2642, FOLIO 186
 897,217 SQ. FT. OR 20.5973 AC.±

SUF

ACORN ENVIRONMENTAL, INC.
 708 Laurel Lane
 Severna Park, MD 21146
 410-274-0622

HOLDER PROPERTY
WETLAND DELINEATION
 SITUATED ON MT. EPHRAIM ROAD
 FREDERICK COUNTY, MARYLAND
 TAX ID: 07-193874

EXHIBIT 3
 DATE: MARCH 7, 2025


WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MY EPACAIM RD DRIVEWAY City/County: FREESTON CO. Sampling Date: 3-7-25
 Applicant/Owner: ARON KODER State: MD Sampling Point: DP1
 Investigator(s): G. JELLY Section, Township, Range: TAX ID 07-193874
 Landform (hillslope, terrace, etc.): HILL SLOPE Local relief (concave, convex, none): CONCAVE Slope (%): 5
 Subregion (LRR or MLRA): LLR 5 Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: HATBORO NWI 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? Are "Normal Circumstances" present? Yes _____ No
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: <u>SAMPLE POINT IS ADJACENT TO NEW GRAVEL DRIVE ON SOUTH SIDE. CONSTRUCTION APPEARS TO HAVE DISTURBED WETLANDS ASSOCIATED WITH GROUND WATER SEEP THAT ORIGINATES ON ADJACENT PROPERTY</u>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ True Aquatic Plants (B14) <input checked="" type="checkbox"/> High Water Table (A2) ___ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Water Marks (B1) ___ Presence of Reduced Iron (C4) ___ Sediment Deposits (B2) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Drift Deposits (B3) ___ Thin Muck Surface (C7) ___ Algal Mat or Crust (B4) ___ Other (Explain in Remarks) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9) ___ Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage-Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>6"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: 1

Tree Stratum (Plot size: 30x30)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>BETULA ALLEGHANIENSIS</u>	<u>30</u>	<u>X</u>	<u>FAC</u>
2. <u>ACER RUBRUM</u>	<u>30</u>	<u>X</u>	<u>FAC</u>
3. <u>FAGUS GRANDIFOLIA</u>	<u>25</u>	<u>X</u>	<u>FACU</u>
4.			
5.			
6.			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

85 = Total Cover

50% of total cover: 42 20% of total cover: 17

Sapling Stratum (Plot size: 30x30)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>ACER RUBRUM</u>	<u>20</u>	<u>X</u>	<u>FAC</u>
2. <u>FAGUS GRANDIFOLIA</u>	<u>20</u>	<u>X</u>	<u>FACU</u>
3. <u>BETULA ALLEGHANIENSIS</u>	<u>10</u>	<u>X</u>	<u>FAC</u>
4.			
5.			
6.			

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by:

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 = _____

50 = Total Cover

50% of total cover: 25 20% of total cover: 10

Shrub Stratum (Plot size: _____)

	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

_____ = Total Cover

50% of total cover: _____ 20% of total cover: _____

Herb Stratum (Plot size: 15x15)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>SYMPLOCARPUS FOETIDUS</u>	<u>25</u>	<u>X</u>	<u>OBL</u>
2. <u>DRYOPTERIS MARCENIACUS</u>	<u>10</u>	<u>X</u>	<u>FACU</u>
3. <u>SMILAX ROTUNDIFOLIA</u>	<u>10</u>	<u>X</u>	<u>FAC</u>
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

45 = Total Cover

50% of total cover: 23 20% of total cover: 9

Woody Vine Stratum (Plot size: _____)

	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

SEE ATTACHED PHOTOS

SOIL

Sampling Point: 1

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)	%	Type ¹	Loc ²		
0-3	7.5YR 4/2		—		—		S1	
3-5	5YR 5/2		—		—		L	
5-8	10YR 5/2		5YR 4/4	10%	C	M	L	
8-16	10YR 5/1		5YR 4/4	20%	C	M	CSL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) (LRR N)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) (MLRA 147, 148)
- Thin Dark Surface (S9) (MLRA 147, 148)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- Umbric Surface (F13) (MLRA 136, 122)
- Piedmont Floodplain Soils (F19) (MLRA 148)
- Red Parent Material (F21) (MLRA 127, 147)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (MLRA 147)
- Coast Prairie Redox (A16) (MLRA 147, 148)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

South View



North View



**WETLAND DELINEATION
HOLDER PROPERTY**

Mt. Ephraim Road , Frederick County

DATE: 3/7/2025