Wetland Delineation Report

Winston Farm Augusta Savage Road Town of Saugerties Ulster County, NY

February 14, 2024 Revised December 8, 2024

Prepared by:

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1.0 INTRODUCTION	3
2.0 EXISTING CONDITIONS/SITE CHARACTERISTICS	5
3.0 FUNCTIONAL EVALUATION	7
4.0 SUMMARY	10
5.0 PHOTOGRAPHS	11
Figure 1 Location Map Figure 2 NYSDEC Wetland Map Figure 3 Soils Map	14

SUBJECT SITE: Winston Farm Site Augusta Savage Road Town of Saugerties, Ulster County

DATE: December 30, 2023

1.0 INTRODUCTION

A Federal and New York State Department of Environmental Conservation (NYSDEC) wetland delineation was completed during October 2022 and June 2023 for the Winston Farm site consisting of 840 (+-) acres in the Town of Saugerties, Ulster County, New York. The wetland delineation is shown in the location map (*Figure 1*). The NYSDEC confirmed that wetlands H, H2, and HH are currently regulated by the NYSDEC.

Site Coordinates - The center of the site is approximately at Latitude 042 degrees - 05 minutes – 29.33 seconds North and Longitude 073 degrees - 59 minutes – 08.55 seconds West.

Site Owners/Applicants - The Site Owners/Applicants are Saugerties Farm, LLC, c/o John Mullen, Tony Montano, Randy Richers, PO Box 683, Saugerties, NY 12477.

Project Consultant – The wetlands were delineated by Michael Nowicki of Ecological Solutions, LLC. Address information is 121 Leon Stocker Drive, Stratton, VT 05360 – Phone Number is 203-910-4716.

Distance to Navigable Waters - The site contains 19 wetlands and 4 watercourses that are located throughout the site with the main watercourse (Beaver Kill) flowing off the site to Esopus Creek and to the Hudson River. The distance from all of the jurisdictional wetlands on the site to the Hudson River is approximately 2.5 miles.

Substrate material – Substrate in the wetlands are all clay/silt loam. Substrate material in the watercourses on the site are all consistent and are best described as silty substrate with gravel and some shale present in the bed of each watercourse. The average annual precipitation is 40.72 inches.

Purpose of Request - The methodology used for this delineation review consisted of the Routine Onsite Determination Method prescribed in the 1987 USACE Wetlands Delineation Manual¹ and supplement. A baseline, Augusta Savage Road, was established, and 5 transects were traversed (field investigated) throughout the site. Vegetation was sampled along these transects at 100' intervals or observation points where applicable. Dominant vegetation was noted at each point, and hydrophytic (wetland) vegetation was considered to be present when 50% or more of the vegetation throughout the strata of each plant community was classified as either facultative, facultative wet, or obligate wet. Hydrophytic vegetation was also positively identified based on the presence of secondary characteristics including morphological adaptations for occurrence in wetlands. Adaptations noted include: adventitious roots, shallow root

¹Environmental Laboratory. 1987. "Corps of Engineers Wetlands Delineation Manual," TR y-87-1, US Waterways Experiment Station, Vicksburg, Miss.

systems where surface rock was not apparent, buttressed trunks, and hypertrophied lenticels. Soils were then sampled where facultative or facultative wet vegetation was dominant. Soils were not determined where the dominant vegetation was obligate wet. These points were classified as Federal wetland without further investigation.

Soil samples were taken with a dutch slotted auger to a depth of 18" of the soil profile where possible. Hydric soil indicators noted include: presence of seasonal high water table, inundation, presence of hydrogen sulfide, soil chroma of 1(without mottles) or 2 (with mottles) as per the Munsell Soil Color Chart, gleying, iron and manganese concretions, and oxidized rhizospheres. Hydric soils were determined to be present when any one of these indicators was recognized.

Each observation point was also examined to determine if wetland hydrology was present at some time during the growing season. Indicators of wetland hydrology noted at the site include: soil saturation within the test hole or at the soil surface, inundation, positive drainage patterns, and watermarks on tree trunks or waterstained leaves on the ground.

When an observation point contained all three wetland parameters: hydrophytic vegetation, hydric soils, and evidence of seasonal hydrology, the point was determined to be wetland and corresponded with the flags placed in the field. The area surrounding the observation point was then investigated to determine the upland boundary via the same methodology. The delineation was confirmed in this manner.

2.0 EXISTING CONDITIONS/SITE CHARACTERISTICS

The site consists of 840(+-) acres including developed area, mixed upland forest, fields, and wetlands.

The results of the site inspection indicate that total of 19 wetlands а (A,AA,B,C,D,E,F,G,H,HH,H2,I,J,K,L,M,P,R, and S) exhibiting wetland hydrology, soils, and vegetation are present on the site. Isolated or potentially non-jurisdictional federal wetlands identified on the site include Wetlands (C,D,F,G,I,J,S, and R).

Wetland A is 14.16 acres and is a floodplain of the Beaver Kill, which extends offsite to the north from Augusta Savage Road. Dominant herbs include broadleaf cattail, reed canary grass, common reed, sweet flag, purple loosestrife, tussock sedge, skunk cabbage and purple-stemmed aster. Soil is Wayland silt loam.

Wetland AA is 10.45 acres and is a floodplain of the Beaver Kill, which extends offsite to the south from Augusta Savage Road. Dominant herbs include broadleaf cattail, reed canary grass, common reed, sweet flag, purple loosestrife, tussock sedge, skunk cabbage and purple-stemmed aster. Soil is Wayland silt loam.

Wetland B is 8.90 acres and is a mid-section wetland/watercourse system and drains several tributaries and wetland area to the Beaver Kill in Wetland A. Dominant emergent and riparian herbs include reed canary grass, skunk cabbage, spotted jewelweed, purple loosestrife, water speedwell, field horsetail, fox sedge green bulrush. Soil is Madalin silt loam.

Wetland C - 1.13 acres, D - 0.59 acres, F - 2.84 acres, G - 1.35 acres, I - 3.11 acres and J - 0.54 acres are separate wetlands that do not flow off the site. These wetlands are generally forested and dominant trees include red maple, yellow birch, swamp white oak, and pin oak. Dominant shrubs are northern arrowwood, spicebush, silky dogwood and winterberry. Dominant herbs include skunk cabbage, sensitive fern, cinnamon fern, and spotted jewelweed. These are shallow, relatively short-lived, isolated seasonal vernal pools. Soil is Madalin silt loam.

Wetland E is 3.38 acres and is separated from Wetland B by a farm road crossing. Wetland E is forested and dominant trees include red maple, yellow birch, swamp white oak, and pin oak. Dominant shrubs are northern arrowwood, spicebush, silky dogwood and winterberry. Dominant herbs include skunk cabbage, sensitive fern, cinnamon fern, and spotted jewelweed. Soil is Madalin silt loam.

Wetland H, HH, and H2 totals 19.87 acres and is part of NYSDEC Wetland S-1 which is generally a marsh and open water body as well as possibly an old quarry area in the vicinity of a power line easement. Dominant herbs include broadleaf cattail, reed canary grass, common reed, sweet flag, purple loosestrife, tussock sedge, skunk cabbage and purple-stemmed aster. Soil is Palms muck.

Wetland L is 11.66 acres and forested and contains a tributary that flows off site. This wetland is forested and also contains red maple, yellow birch, swamp white oak, and pin oak. Dominant shrubs are northern

arrowwood, spicebush, silky dogwood and winterberry. Dominant herbs include skunk cabbage, sensitive fern, cinnamon fern, and spotted jewelweed. Soil is Madalin silt loam.

Wetland M is 0.58 acres and drains underground to Wetland A. This wetland is forested and also contains red maple, and pin oak. Dominant shrubs are spicebush, winterberry. Dominant herbs include skunk cabbage, sensitive fern, and spotted jewelweed. Soil is Wayland silt loam.

Wetland P is 2.51 acres and forested and contains a tributary that flows off site to the north. This wetland is forested and also contains red maple, yellow birch, swamp white oak, and pin oak. Dominant shrubs are northern arrowwood, spicebush, silky dogwood and winterberry. Dominant herbs include skunk cabbage, sensitive fern, cinnamon fern, and spotted jewelweed. Soil is Madalin silt loam.

Wetland R is 0.45 acres and is a swale that drains south and is separated from Wetland P by a farm road crossing. Soil is Madalin silt loam.

Wetland S is 1.64 acres and is a swale wetland that is forested and that drains south and generally connects to Wetland R but disappears underground. Soil is Madalin silt loam.

3.0 FUNCTIONAL EVALUATION

An assessment of wetland functions and values was conducted on the 19 wetlands that were identified and delineated on the site. Using a widely accepted method for wetland functions and values assessment developed by the New England District, U.S. Army Corps of Engineers, 13 distinct wetland functions and values were assessed for the delineated wetlands on the site. This method yielded an objective, descriptive quality index of each wetland rather than a subjective quantified rating of each wetland. This assessment had two major objectives:

- 1. Objectively identify the functions and values provided by each of the 19 wetlands identified on the site.
- 2. Provide baseline data with which the Applicant could work in planning land uses, and against which the Applicant could assess potential impacts of proposed development of the site

The descriptive quality index of each wetland, based on this methodology, is summarized in this report.

Wetlands are legally protected because of the functions they perform and the benefits that society reaps from those functions. Wetland functions are chemical, physical, and biological processes that wetlands naturally perform as a matter of course, such as absorption of nutrients or floodwaters, or provision of habitat for fish and wildlife. Wetland values are the benefits that society derives from wetland functions, such as flood abatement, or water quality maintenance.

The functions and values assessment conducted on the site was based on the method outlined in *The Highway Methodology Workbook Supplement: Wetland Functions and Values, A Descriptive Approach*, by the U.S. Army Corps of Engineers New England District (November 1995). This method was selected over an arbitrary numeric quantifying assessment scheme because it provides an objective, descriptive approach to functions and values assessment based on professional observation and judgment rather than a simple numeric value rating system. Quantified functions and values assessments do not always provide for descriptive information about wetlands and therefore may overlook important aspects of wetland functions and values.

The Highway Method provides for assessment of each wetland for thirteen defined functions and values. Of these, the first eight are considered wetland functions, and the last five are considered to be wetland values. These are:

- 1. **Groundwater Recharge/Discharge** the potential for a wetland to serve as a recharge area for an aquifer or as a surface discharge point for groundwater.
- 2. **Floodflow Attenuation** A wetland's ability to store and attenuate floodwaters during prolonged precipitation events, thereby reducing or preventing flood damage.
- 3. **Fish and Shellfish Habitat** The ability of permanent or temporary water bodies to provide suitable habitat for fish or shellfish.

- 4. **Sediment/Toxicant/Pathogen Retention** The effectiveness of the wetland in trapping sediments, toxicants or pathogens, thereby protecting water quality.
- 5. **Nutrient Removal/Retention/Transformation** The effectiveness of the wetland at absorbing, retaining, and transforming or binding excess nutrients, thereby protecting water quality.
- 6. **Production Export** The wetland's ability to produce food or usable products for humans or other living organisms.
- 7. **Sediment/Shoreline Stabilization** The wetland's ability to prevent erosion and sedimentation by stabilizing soils along stream banks or the shorelines of water bodies.
- Wildlife Habitat The ability of wetlands to provide food, water, cover, or space for wildlife populations typically associated with wetlands or their adjacent areas, both resident and migratory.
- Recreation The value placed on a wetland by society for providing consumptive and nonconsumptive as well as active or passive recreational opportunities such as canoeing/boating, fishing, hunting, bird/wildlife watching, hiking, etc.
- 10. Education/Scientific Value The value placed on a wetland by society for providing subjects for scientific study or research or providing a teaching resource for schools.
- 11. **Uniqueness/Heritage** The value placed on a wetland by society for having unique characteristics such as archaeological sites or sites of historical events, unusual aesthetic qualities, or unique plants, animals, or geologic features, etc.
- 12. Visual Quality/Aesthetics The value placed on a wetland by society for having visual and/or other aesthetic qualities.
- 13. **Threatened or Endangered Species Habitat** The value placed on a wetland by society for effectively harboring or providing habitat for threatened or endangered species.

Each function or value in the list has a set list of qualifiers for identifying which functions and values are performed or provided by each wetland. The qualifiers are referenced by number on a standard evaluation form to document the functions and values assessment. In addition to outlining qualifying rationale for each function and value, the data forms also document information on each wetland's size, distance to nearest road or other development, adjacent land uses, position in the watershed, impacts from human activity, tributaries, cover types, connectivity to other wetlands, and general condition. All of these elements factor into the functions and values assessment. Assessments were performed on 19 wetlands on the site. Findings of the assessment are outlined below.

Wetlands A,AA,B,C,D,E,F,G,H,HH,H2,I,J,K,L,M,P,R, and S receive water primarily through surface water and overland sheet flow, and are connected to the Esopus Creek and Hudson River by relatively permanent waters (RPW) watercourses. Hydrological indicators identified within the wetlands included soil saturation, watermarks, drift lines, drainage patterns, and water stained leaves. These wetlands are typically broad-leafed deciduous forested wetland (PFO1E). These are red maple-spicebush dominated swamps with dense understory of skunk cabbage (*Syplocarpus foetidus*) that is seasonally inundated. These systems are surrounded by undeveloped upland mature second-growth forest and agricultural fields. Functions and values provided by these wetlands include groundwater recharge, floodflow attenuation, sediment trapping, nutrient removal, production export, shoreline stabilization, wildlife habitat, recreation, educational/scientific resources, uniqueness/heritage, and visual quality. Of these, the most significant functions based on extent of rationale in identifying functions and values, are floodflow attenuation, sediment trapping, and wildlife habitat.

Wildlife useage noted in these wetlands is consistent with deer tracks observed in the substrate as well as raccoon tracks and other mammals. Bird species would also be prevalent with many old nests observed in the vegetation in the wetlands. In addition there is good potential for spotted salamander, wood frogs, green frogs, and other amphibians typical of Ulster County.

Wetlands C,D,F,G,I,J,S, and R receive water primarily through surface sheet flow. Pooled water was identified in portions of these wetlands. Hydrologic indicators identified included inundation, watermarks and water stained leaves. Functions and values include floodflow attenuation, sediment trapping, nutrient removal, and wildlife habitat.

Wildlife useage most likely will include spotted salamander, wood frogs, green frogs, and other amphibians typical of Ulster County since these species tend to utilize smaller wetlands such as vernal pools.

Specific wildlife and threatened and endangered species studies have been conducted on the site and the results are available in a separate report prepared by North Country Ecological Services.

4.0 SUMMARY

The wetlands delineated at the site meet the criteria to be defined as Federal wetland. A general functional evaluation was completed and is provided.

Jurisdictional Wetlands A,AA,B,C,D,E,F,G,H,HH,H2,I,J,K,L,M,P,R, and S contain perennial RPW's that flow approximately 2-3 miles into the Hudson River.

5.0 PHOTOGRAPHS

Wetland A



Wetland H



Wetland B









Figure 2 NYSDEC Wetland Map - source - Environmental Resource Mapper

Source: https://gisservices.dec.ny.gov/eafmapper/



Figure 3 Soils Map - source - Passero Associates

Source: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

Map Unit Symbol	Map Unit Name
RD	Arnot-Lordstown-Rock outcrop complex, moderately steep
nC	Bath-Nassau complex, 8 to 25 percent slopes
DD	Bath-Nassau-Rock outcrop complex, hilly
d	Canandaigua silt Ioam, till substratum
nB	Chenango gravelly silt loam, 3 to 8 percent slopes
в	Hudson silt loam, 3 to 8 percent slopes
JC	Hudson silt loam, 8 to 15 percent slopes
wD	Hudson and Schoharie soils, 15 to 25 percent slopes
oc	Lordstown-Arnot-Rock outcrop complex, sloping
a	Madalin silty clay loam
gB	Mardin-Nassau complex, 3 to 8 percent slopes
тв	Morris-Tuller complex, gently sloping, very bouldery
BF	Nassau-Bath-Rock outcrop complex, very steep
3	Palms muck
U	Quarry
hA	Rhinebeck silt loam, 0 to 3 percent slopes
rD	Stockbridge-Farmington-Rock outcrop complex, hilly
	Water
b	Wayland soils complex, non- calcareous substratum, 0 to 3 percent slopes, frequently flooded

W

APPENDIX 1 Transect Map





APPENDIX 2 Wetland Determination Data Form

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region
Project/Site: Wigston FARM City/County: Stanger fires / Ulster sampling Date: 10/22, 6/23
Applicant/Owner: Sorveyerfies FARM, UL State: NY Sampling Point: A-SC19)
Investigator(s): My the Newichi Section Township Bange:
Landform (hillslope terrace etc.):
Subregion (I BB or MI BA): $1/1/2$ Lat: $42^{\circ}05'$ $18.99''N$ Long: $77^{\circ}58' 47.61''W$ Datum:
Soil Man Unit Name:
Are Vicestation Call call delana classificantly distributed 0
Are vegetation, soil, or Hydrology significantly disturbed? Are Normal Circumstances present? Yes No
Are vegetation, Soli, 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 No Is the Sampled Area within a Wetland? Yes No Hydric Soil Present? Yes Yes No If yes, optional Wetland? Yes No Wetland Hydrology Present? Yes Yes No If yes, optional Wetland Site ID: If yes, optional Wetland Site ID: Remarks: (Explain alternative procedures here or in a separate report.) Wetland S A - S generally some conditions
HYDROLOGY
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)
Surface Water (A1) Water-Stained Leaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16)
Saturation (A3) Man Deposits (B15) Dry-Season Water Lable (C2)
Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8) FAC-Neutral Test (D5)
Surface Water Present? Yes No Depth (inches): 12+
Water Table Present? Yes No Depth (inches): 0-18
Saturation Present? Yes No Depth (inches): O-B Wetland Hydrology Present? Yes No No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks:
In pended wears solfaire water quinter of the

VEGETATION - Use scientific names of plants.

Sampling Point: A-S(19)

- interal	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 10 × 10)	% Cover	Species?	Status	Number of Dominant Species
1. Acer consom	- 25		Hor	That Are OBL, FACW, or FAC: (A)
2. Quercos palostris			FACI	Total Number of Dominant
3. Quercus hicolor	10		Ma	Species Across All Strata: (B)
4. Ulmus Americaner	10		Ann	Percent of Dominant Species
5	_			That Are OBL, FACW, or FAC: (A/B)
6				Provolance Index worksheets
7				Total % Cover of Multiply by:
	100	= Total Cov	/er	OBI species $55 \times 1 = 55$
Sapling/Shrub Stratum (Plot size: 10 x (10)		rotai oo		FACW species $155 \times 2 = 310$
1 Flex service Net	15		FACIO	FAC species $25 \times 3 = 75$
2 VAR LOUA CA CHANDELLO	20		GALI	FACU species x 4 =
2. Vicuntometer johnson	20		har. i)	UPL species x 5 =
3. Under a new con			Gand	Column Totals: (A) (B)
4. Corthis stilon, fer			THU	Broundance Index = PIA = 1 + 7
5				Prevalence index = $B/A = 1 = 7 = 0.7$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	-75	= Total Cov	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size: 10 × 10)		/		3 - Prevalence index is ≤3.0
1. Onochen sensibilis	25		Paris	data in Remarks or on a separate sheet)
2. Juncus efficis	20		FACN	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Convex strictu	20		OBL	
4. By MOLOCANDUS FORFLIUS	20		OBL	¹ Indicators of hydric soil and wetland hydrology must
5 Typhu anguit folice/ attention	15		OBL	
				Definitions of vegetation Strata:
7				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7	-	·	·	at breast height (DBH), regardless of height.
8		·		Sapling/shrub – Woody plants less than 3 in. DBH
9		•	·	and greater than of equal to 0.20 it (111) tail.
10				Herb – All herbaceous (non-woody) plants, regardless
11				
12			·	Woody vines – All woody vines greater than 3.28 ft in height.
	100	= Total Co	ver	
Woody Vine Stratum (Plot size:)				
1				
2				
3				Hydrophytic
4.				Vegetation Present? Ves No
		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			

C	0	1	
0	U	1	L

		1-5	1 10.
Sampling	Point:	H-	CM

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix	0/	Color (moist)	ox Feature	Tunol	1.002	Texture	Pomoria	
0-6	1041417	610		/0				i du class	
1 10	1070-110		and the					Scitty cing	
6-12	1071241)		1041614		1/14	M			
12-18	10115/1	1		-				0	
				-					
		· ·			·				
				_	_				
					-				
					- 				
1Turne: C=Ce		ation DM	Dadward Matrix M	C-Maaka			21 acetican DI		
Hydric Soil I	ndicators:	elion, RIVI=	Reduced Matrix, M	5=Maske	u sand Gr	ains.	Indicators for Pr	ore Lining, M=Ma	Soils ³ :
Histosol	(A1)		Polyvalue Belo	w Surface	(S8) (LR	RR,	2 cm Muck (A	10) (LRR K, L, M	LRA 149B)
Histic Ep	ipedon (A2)		MLRA 1498	3)			Coast Prairie	Redox (A16) (LRI	R K, L, R)
Black His	stic (A3)		Thin Dark Surf	ace (S9) (LRR R, M	LRA 149B) 5 cm Mucky F	Peat or Peat (S3) ((LRR K, L, R)
Stratified	Layers (A5)		Loamy Gleved	Matrix (F2	1) (LKK P 2).	, L)	Polyvalue Be	ow Surface (S8) (LRR K, L)
Depleted	Below Dark Surface	e (A11)	Depleted Matri	x (F3)			Thin Dark Su	face (S9) (LRR K	, L)
Thick Da	rk Surface (A12)		Redox Dark Si	urface (F6))		Iron-Mangane	ese Masses (F12)	(LRR K, L, R)
Sandy M	leved Matrix (S4)		Depleted Dark Redox Depres	sions (F8)	-7)		Pleamont Flo	(TA6) (MLRA 144	4A. 145. 149B)
Sandy R	edox (S5)						Red Parent M	laterial (F21)	
Stripped	Matrix (S6)						Very Shallow	Dark Surface (TF	12)
Dark Sur	face (S7) (LRR R, N	ILRA 149E	3)				Other (Explai	n in Remarks)	
³ Indicators of	hydrophytic vegetat	ion and we	tland hydrology mu	ist be pres	ent, unles	s disturbed	d or problematic.		
Restrictive L	ayer (if observed):							/	/
Туре:									
Depth (inc	ches):						Hydric Soil Prese	nt? Yes	No
Remarks:									
	Some Palas	mock.	also present	tivo	the met	nd			
			1						
	1								