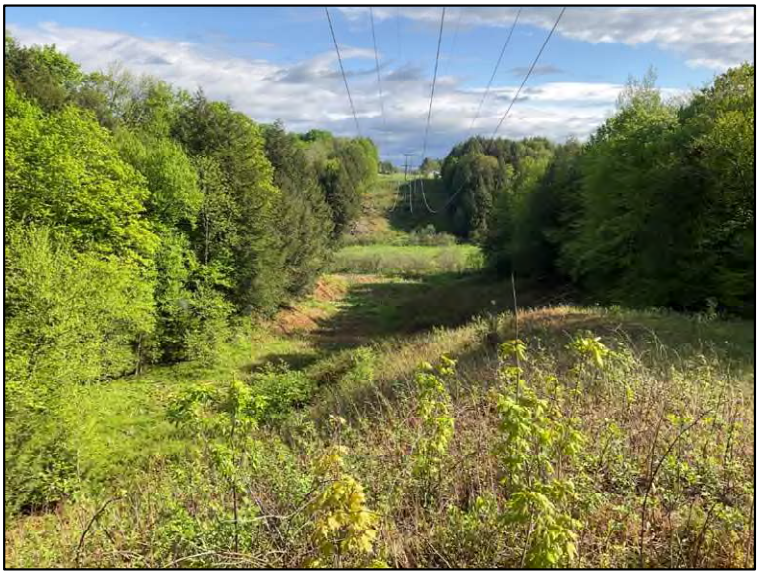
APPENDIX C



Franklin County Line Upgrade Photographs: May-August 2022 and June-July 2023

PROJECT NUMBER

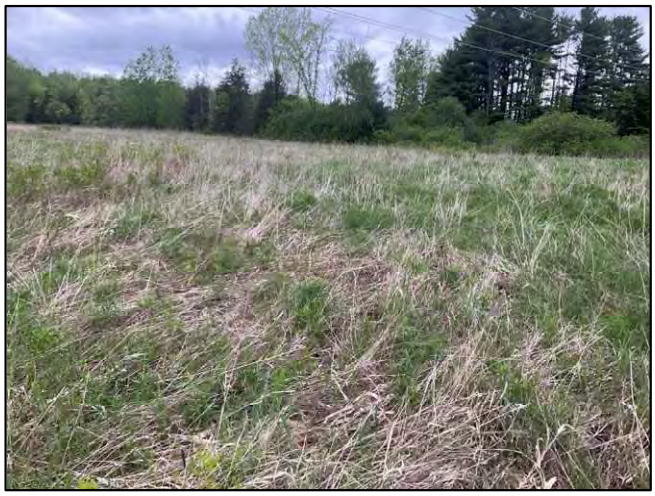
58789.00

Georgia, St. Albans, Swanton, and Highgate Vermont

Vermont Transco, LLC (VELCO)

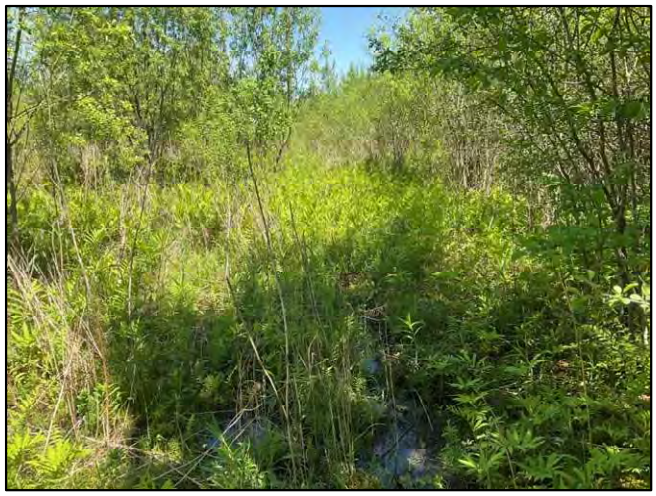
366 Pinnacle Ridge Road

Rutland, Vermont 05701



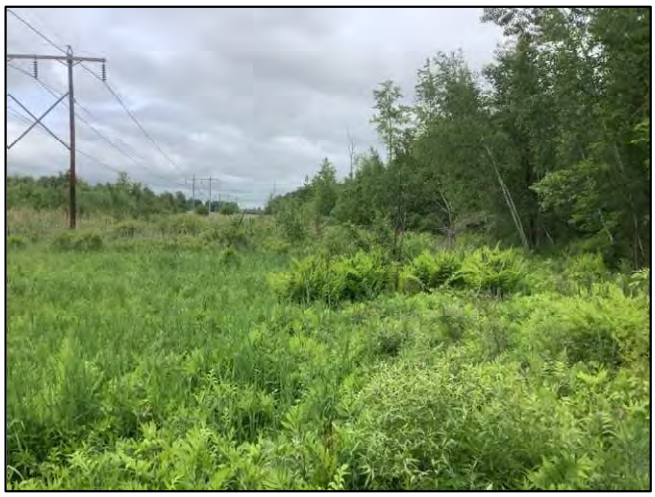
NO. 1 / 05.17.2022

A representative photograph of Palustrine Emergent ("PEM") wetland GE-106(II).



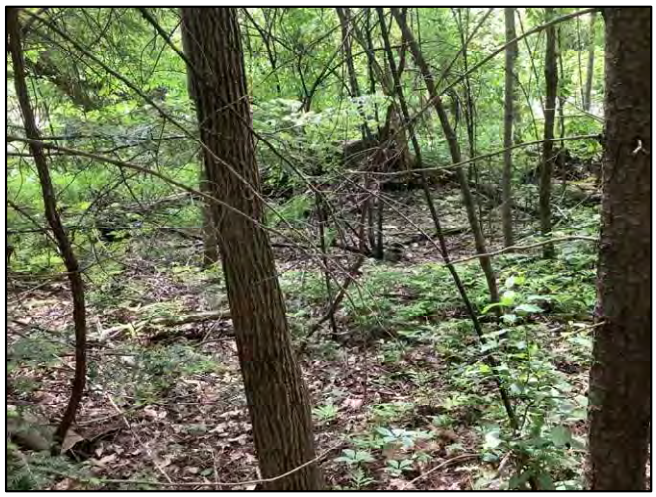
NO. 2 / 05.18.2022

A representative photograph of Palustrine Scrub Shrub ("PSS") wetland SA-7(II).



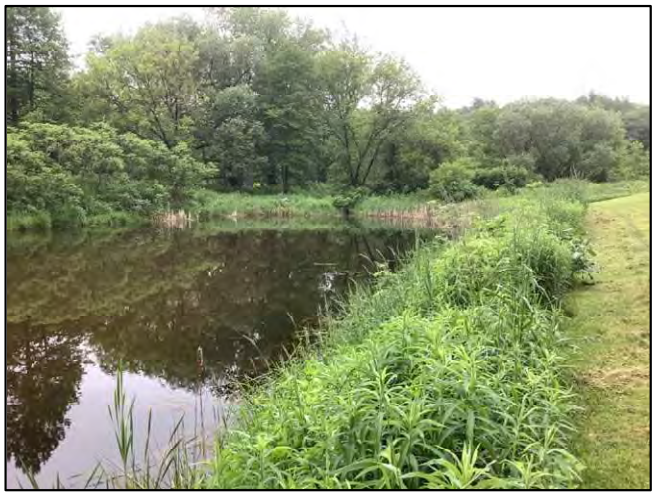
NO. 3 / 06.02.2022

Representative photograph of PEM wetland SW-13(II).



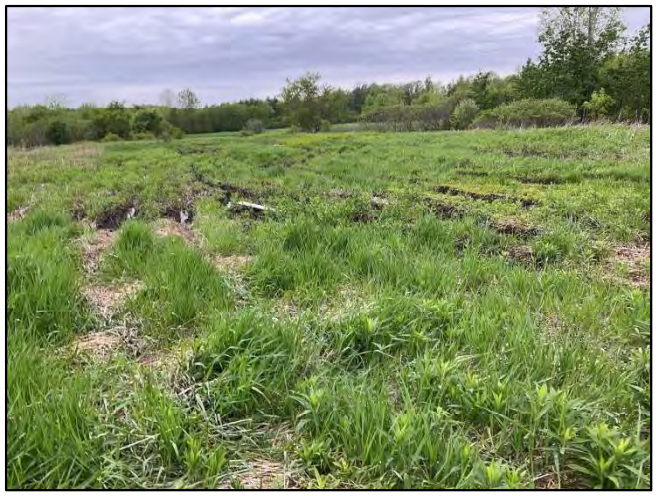
NO. 4 / 06.07.2022

Representative photograph of Palustrine Forested ("PFO") wetland HI-113(III).



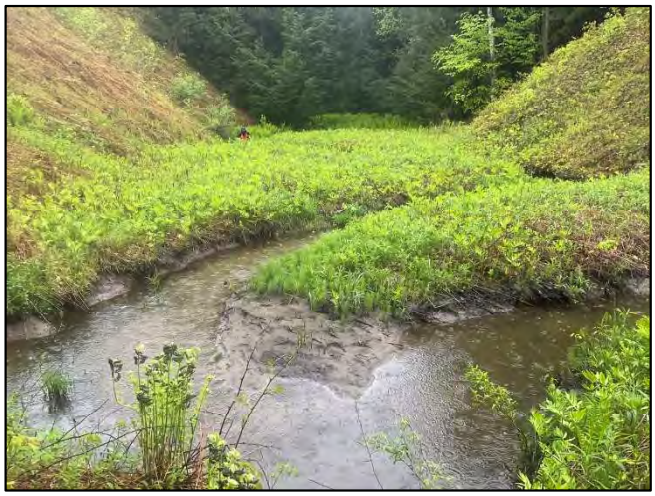
NO. 5 / 06.02.2022

Representative photograph of PEM/palustrine open water "(POW)" wetland HI-6 (II).



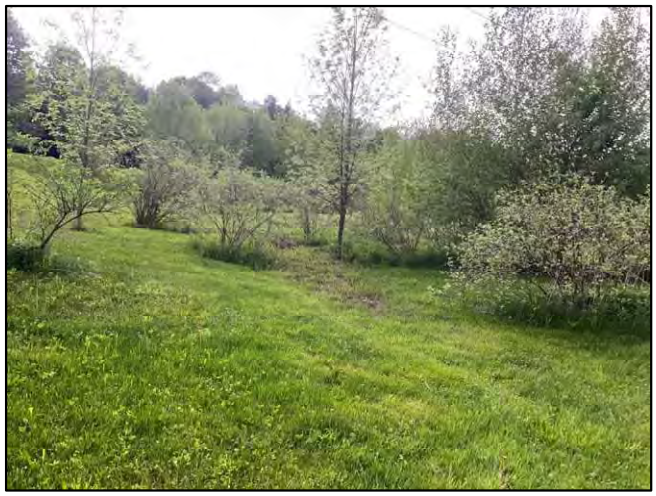
NO. 6 / 05.19.2022

Representative photograph of PEM/PSS wetland SA-15 (II) which is in an agricultural field.



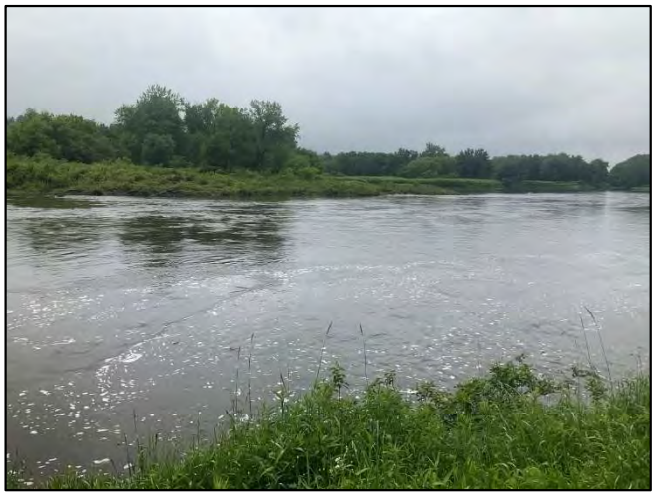
NO. 7 / 06.02.2022

Representative photograph of PEM wetland HI-100(II) associated with a incised stream 2022-HI-SC-5.



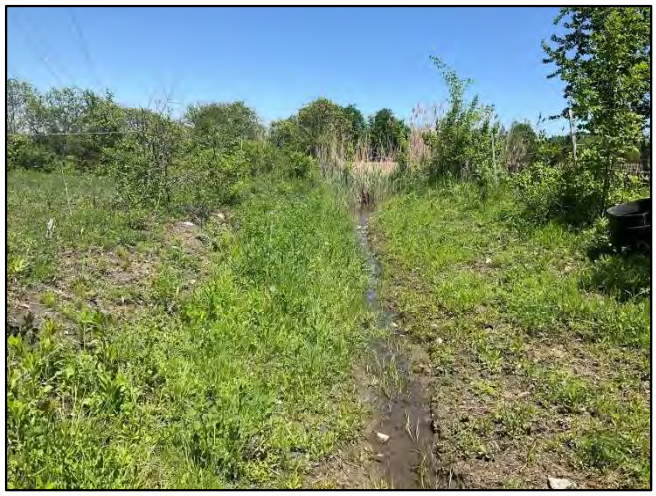
NO. 8 / 05.17.2022

Representative photograph of PSS wetland GE-101(III).



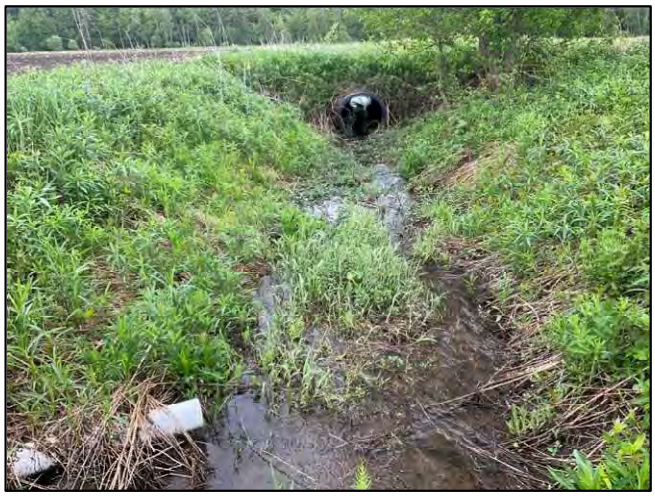
NO. 9 / 06.02.2022

The perennial Missisquoi River S-HI-2 where it crosses the Study Area.



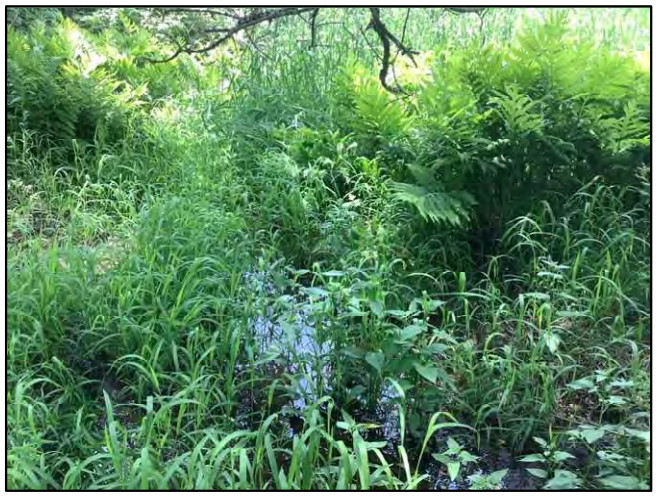
NO. 10 / 05.18.2022

Representative photograph of a jurisdictional ditch SA-211.



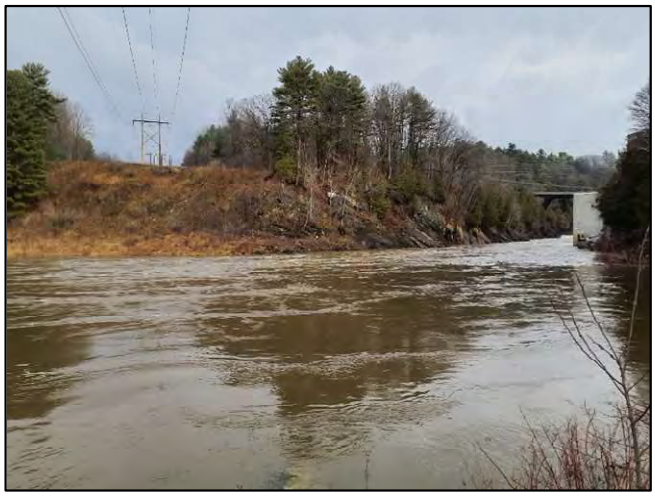
NO. 11 / 05.17.2022

Representative photograph of intermittent stream S-GE-311.



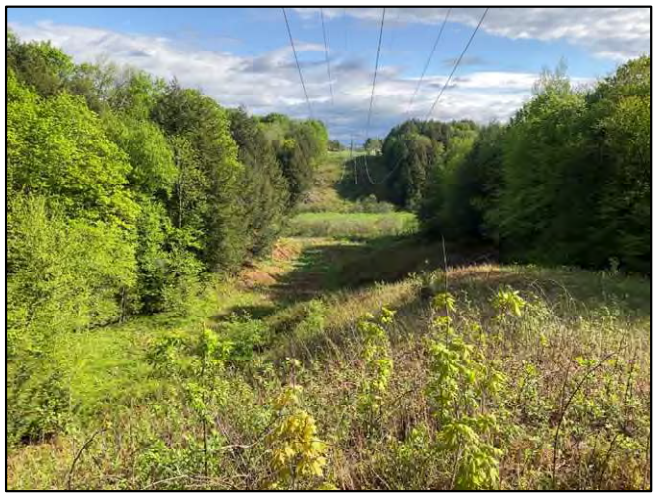
NO. 12 / 06.07.2022

Representative photograph of intermittent stream S-SW-2.



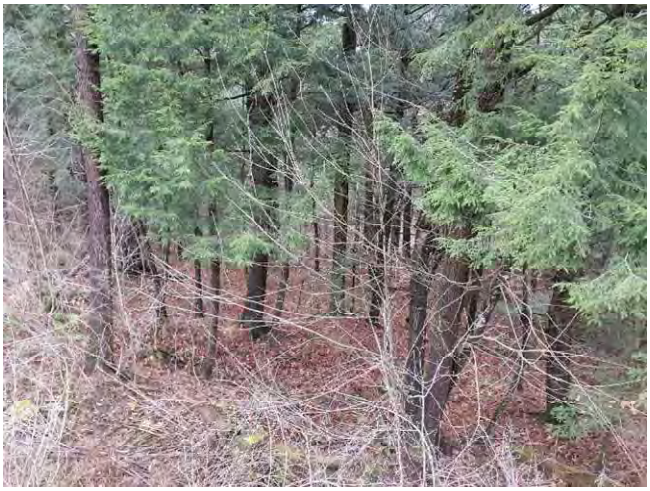
NO. 13 / 12.08.2022

Photograph of the Riverside Outcrop natural community at the Missisquoi River.



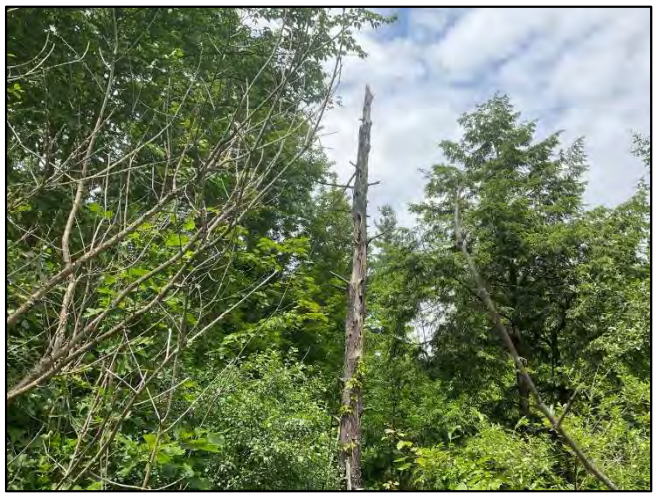
NO. 14 / 04.18.2023

Representative view of northern hardwood forest adjacent to ROW in Georgia.



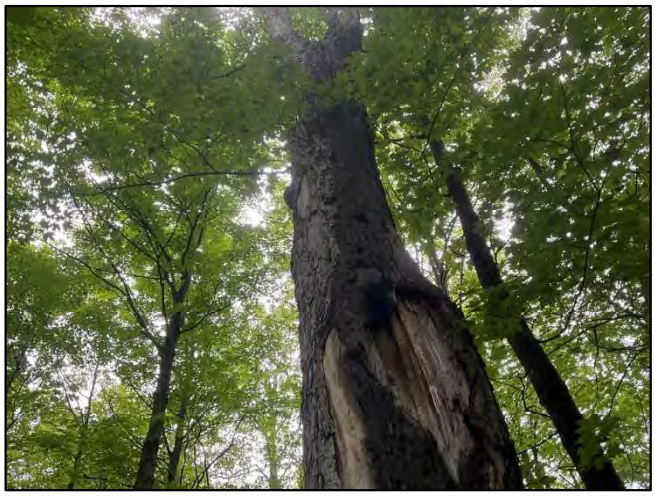
NO. 15 / 12.08.2022

View of deer wintering adjacent to the ROW.



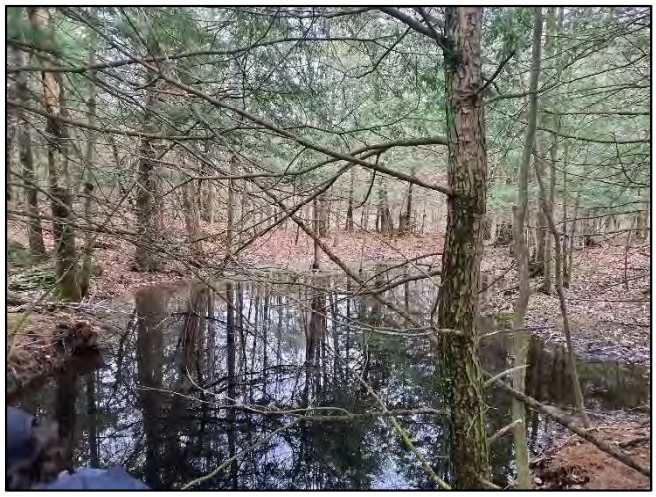
NO. 16 / 5.22.2022

An example of a dead standing potential roost tree ("PRT") with cavities that is adjacent to the ROW.



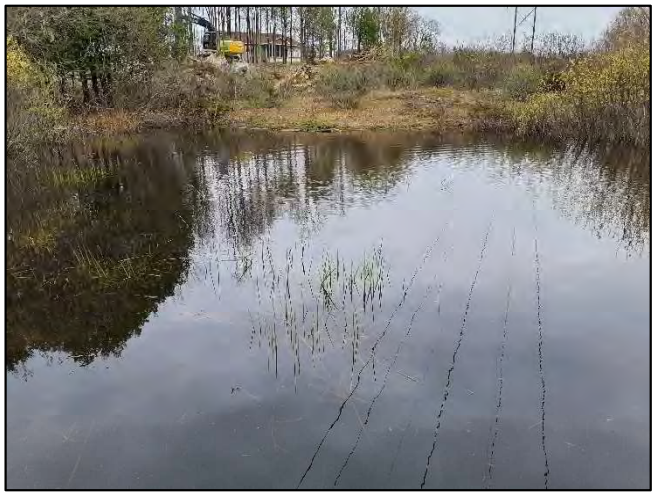
NO. 17 / 06.23.2022

Representative photograph of a living PRT with a cavity.



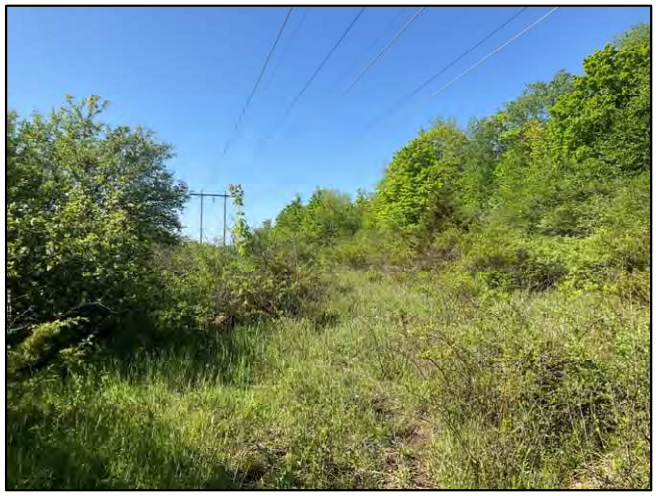
NO. 18 / 4.18.2023

Representative photograph of Vernal Pool 2023-1.



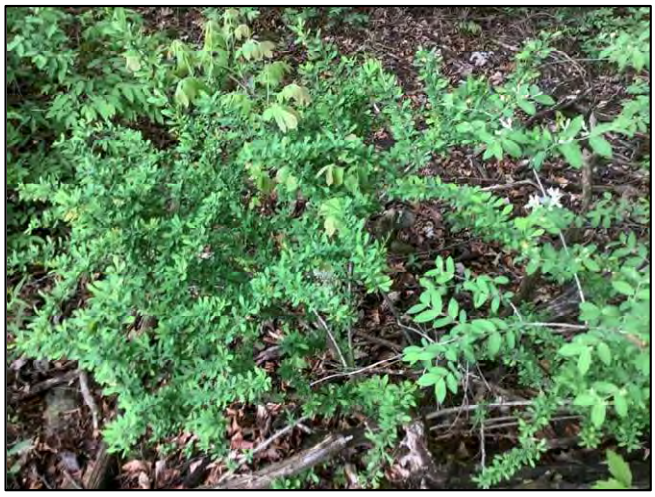
NO. 19 / 04.18.2023

Representative photograph of SW-102(5) with evidene of breeding amphibians. Does not meet forested definition of vernal pool.



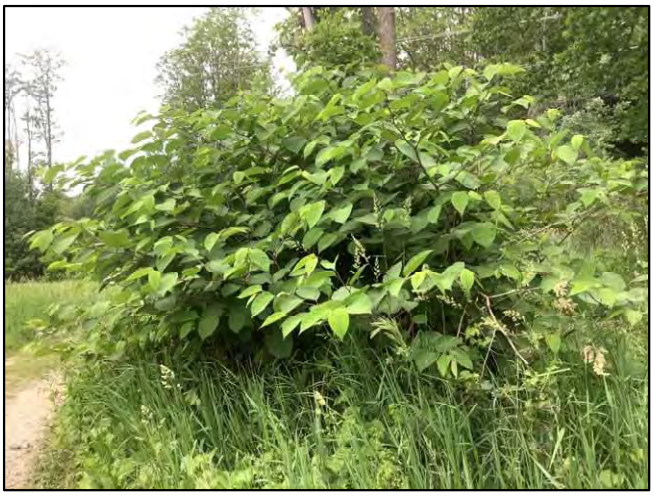
NO. 20 / 05.18.2022

A representative photograph of the non native invasive species ("NNIS") present in the ROW such as multifloral rose (*Rosa multifora)* and Morrows Honeysuckle (*Lonicera morrowii)*.



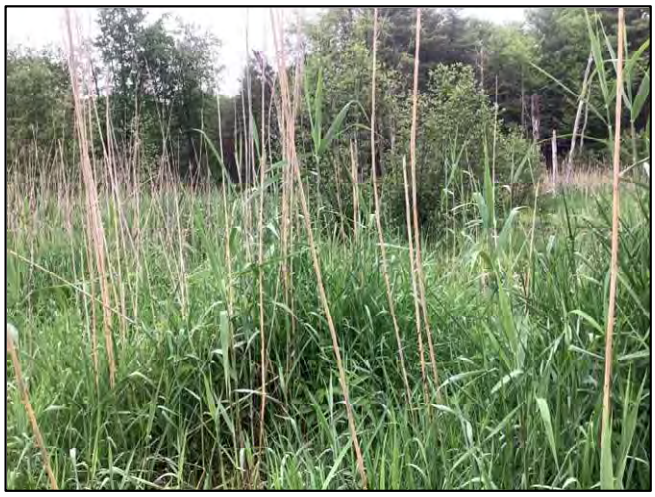
NO. 21 / 05.17.2022

An example of a NNIS species Japanese barberry (*Berberis thunbergii)* present in the ROW.



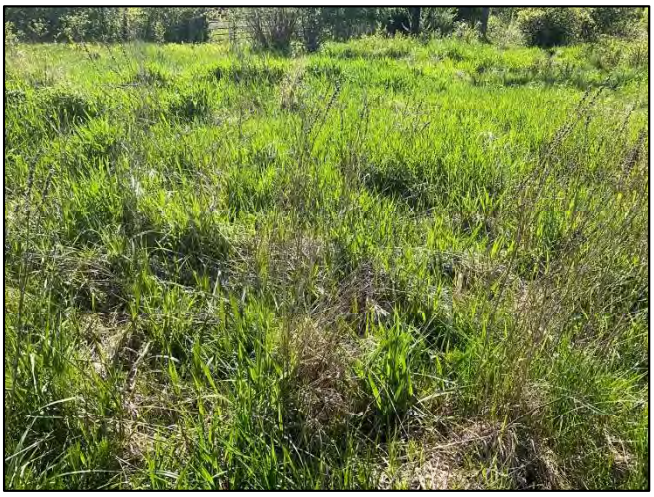
NO. 22 / 06.07.2022

An example of a NNIS species Japanese knotweed (*Fallopia japonica)* present in the ROW.



NO. 23 / 06.02.2022

An example of a NNIS species common reed (*Phragmites australis)* present in the ROW.



NO. 24 / 05.18.2022

An example of a NNIS species purple loosestrife (*Lythrum salicaria)* present in the ROW.

APPENDIX D

Summary of Delineated Wetlands
Project: Franklin County Line Upgrade Project
Client: Vermont Electric Power Company ("VELCO")
Location: Georgia to Highgate, Vermont
Prepared By: VHB (B. Galligan, K. Maines) August 3, 2023**, Updated September 15, 2023**
Delineation Date(s): Summer 2022, June 2023

VHB Delineated Wetlands												
					Vermont Wetland Rules Classification							
Wetland ID	Delineated Area (Square Feet)[1]	Cowardin Classification[2]	Hydrology Indicator	Hydric Soil Indicator	Contiguous to a VSWI-mapped Wetland?	Riparian Wetland Contiguous to Stream Channel? (Flow Regime)[3]	VWR Section 4.6 Categorical Class II Wetlands[4]	VWR Section 5 Functional Criteria Presence / Significance		VHB-Proposed VWR Classification[6]	Typical Vegetation	Comments
								Type[5]	VHB-Presumed Significant?			
GA-1	311,826	PEM, PSS	Surface Water (A1), Saturation (A3), Water Marks (B1), Oxidized Rhizospheres on Living Roots (C3)	Redox Dark Surface (F6), Depleted Matrix (F3)	Yes	Yes (Perennial)	4.6a, b	5.1(H), 5.2(H), 5.3(P), 5.4(P), 5.10(H)	Yes	II	*Phalaris arundinacea, Alnus incana, Impatiens capensis*	Large wetland system associated with Stone Bridge Brook.
GE-302	47,984	PEM, PSS	Oxidized Rhizospheres on Living Roots (C3), Saturation (A3)	Redox Dark Surface (F6)	Yes	Yes (Perennial)	4.6a, b	5.1(P) 5.2(P) 5.3(P), 5.10(P)	Yes	II	*Phalaris arundinacea, Solidago rugosa, Spiraea alba*	Wetland system associated with a stream.
GE-303	44,398	PEM, PSS, POW	Surface Water (A1), Aquatic Fauna (B13), Oxidized Rhizospheres on Living Roots (C3), Saturation (A3)	Redox Dark Surface (F6), Depleted Matrix (F3)	No	No	4.6a	5.1(P) 5.2(P)	Yes	II	*Phragmites australis, Taraxacum officinale, Phalaris arundinacea, Onoclea sensibilis*	Wetland system associated with a feature within managed agricultural land.
GE-305	8,315	PEM	Oxidized Rhizospheres on Living Roots (C3), Saturation (A3)	Redox Dark Surface (F6)	No	Yes (Intermittent)	4.6a, b	5.1(P) 5.2(P), 5.10 (P)	Yes	II	*Phalaris arundinacea, Typha latifolia, Acorus calamus*	Wetland swale adjacent to managed agricultural land.
GE-1	2,217	PEM	Saturation (A3), Surface Soil Cracks (B6)	Depleted Matrix (F3)	No	No	-	5.1(L), 5.2(L)	No	III	*Glyceria grandis*	Small swale feature adjacent to managed agricultural land.
GE-306	18,172	PEM	Oxidized Rhizospheres on Living Roots (C3)	Redox Dark Surface (F6)	No	No (Ditch)	4.6a	5.1(P), 5.2(P)	Yes	II	*Phalaris arundinacea, Ranunculus repens*	Wetland swale adjacent to managed agricultural land.
GE-307	6,726	PEM/PSS	Oxidized Rhizospheres on Living Roots (C3), Microtopographic Relief (D4)	Redox Dark Surface (F6), Depleted Matrix (F3)	No	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Typha latifolia, Salix sericea, Onoclea sensibilis*	Wetland feature that extends outside of Study Area.
GE-308	5,649	PEM/PSS	Oxidized Rhizospheres on Living Roots (C3), Microtopographic Relief (D4)	Redox Dark Surface (F6), Depleted Matrix (F3)	No	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Typha latifolia, Salix sericea, Onoclea sensibilis*	Wetland feature that extends outside of Study Area.
GE-309	11,699	PEM/PSS	Surface Water (A1), High Water Table (A2), Saturation (A3), Water-Stained Leaves (B9), Presence of Reduced Iron (C4), Microtopographic Relief (D4)	Depleted Matrix (F3)	No	No	-	5.1(L), 5.2(L)	No	III	*Spiraea tomentosa, Onoclea sensibilis, Calamagrostis canadensis*	Small isolated feature that extends slightly outside of Study Area.
GE-109	35,385	PEM/PSS	Surface Water (A1), High Water Table (A2), Saturation (A3), Water-Stained Leaves (B9), Presence of Reduced Iron (C4), Microtopographic Relief (D4)	Depleted Matrix (F3)	No	No	4.6a	5.1(P), 5.2(P)	No	II	*Spiraea tomentosa, Onoclea sensibilis, Calamagrostis canadensis*	Wetland feature that extends outside of Study Area.
GE-310	25,709	PEM	Oxidized Rhizospheres on Living Roots (C3), Geomorphic Position (D2)	Redox Dark Surface (F6)	Yes	Yes (Perennial)	4.6a, b	5.1(P), 5.2(P), 5.3(P), 5.4(P) 5.10(P)	Yes	II	*Phalaris arundinacea, Onoclea sensibilis*	Wetland system associated with Mill River. Wetland is adjacent to managed agricultural fields.
GE-312	71,084	PSS, PEM	Surface Water (A1), Saturation (A3), Water-Stained Leaves (B9), Oxidized Rhizospheres on Living Roots (C3), Geomorphic Position (D2)	Histic Epipedon (A2), Depleted Matrix (F3), Redox Dark Surface (F6)	Yes	Yes (Perennial)	4.6a, b	5.1(P), 5.2(P), 5.3(P), 5.4(H), 5.10(P)	Yes	II	*Carex lacustris, Alnus incana, Onoclea sensibilis*	Wetland system associated with Mill River. Wetland is adjacent to managed agricultural fields.
GE-108	3,304	PEM	Surface Water (A1), Water-Stained Leaves (B9), Oxidized Rhizospheres on Living Roots (C3), Geomorphic Position (D2)	Redox Dark Surface (F6), Depleted Matrix (F3)	No	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Solanum dulcamara, Fraxinus pennsylvanica, Phalaris arundinacea*	Wetland swale associated with larger feature. Connects outside of Study Area.
GE-313	63,722	PEM	Oxidized Rhizospheres on Living Roots (C3), Saturation (A3)	Redox Dark Surface (F6), Depleted Matrix (F3)	No	No (Ditch)	4.6a,b	5.1(P), 5.2(P), 5.10(L)	Yes	II	*Onoclea sensibilis, Phalaris arundinacea, Solidago gigantea*	Wetland extends outside of the Study Area and is associated with a stream. Ditch has intermittent flow.
2022-GE-151	1	PEM	Saturation (A3), Water-Stained Leaves (B9), Oxidized Rhizospheres on Living Roots (C3)	Redox Dark Surface (F6)	No	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Phalaris arundinacea, Persicaria pensylvanica*	Wetland feature extends outside of Study Area.

Summary of Delineated Wetlands
Project: Franklin County Line Upgrade Project
Client: Vermont Electric Power Company ("VELCO")
Location: Georgia to Highgate, Vermont
Prepared By: VHB (B. Galligan, K. Maines) August 3, 2023**, Updated September 15, 2023**
Delineation Date(s): Summer 2022, June 2023

VHB Delineated Wetlands													
Wetland ID	Delineated Area (Square Feet)[1]	Cowardin Classification[2]	Hydrology Indicator	Hydric Soil Indicator	Vermont Wetland Rules Classification						Typical Vegetation	Comments
					Contiguous to a VSWI-mapped Wetland?	Riparian Wetland Contiguous to Stream Channel? (Flow Regime)[3]	VWR Section 4.6 Categorical Class II Wetlands[4]	VWR Section 5 Functional Criteria Presence / Significance		VHB-Proposed VWR Classification[6]		
								Type[5]	VHB-Presumed Significant?			
GE-152	26,478	PEM/PSS	Surface Water (A1), High Water Table (A2), Saturation (A3), Water-Stained Leaves (B9), Aquatic Fauna (B13), Oxidized Rhizospheres on Living Roots (C3), Presence of Reduced Iron (C4)	Redox Dark Surface (F6), Depleted Matrix (F3)	Yes	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Typha latifolia, Phalaris arundinacea, Salix bebbiana*	Large wetland system that extends into off-ROW access Study Area.
GE-317	6,630	PEM	Surface Water (A1), Saturation (A3), Oxidized Rhizospheres on Living Roots (C3)	Depleted Matrix (F3)	No	No	-	5.1(L), 5.2(L)	No	III	*Phalaris arundinacea, Salix bebbiana*	Ponded wetland due to shallow bedrock at a high point in a field.
GE-106	22,595	PEM/PSS	Surface Water (A1), Water-Stained Leaves (B9)	Histic Epipedon (A2)	No	No	4.6a, c	5.1(P), 5.2(P)	Yes	II	*Spiraea alba, Typha latifolia*	Wetland extends outside of the Study Area and is within managed agricultural area.
GE-105	139,220	PEM	Oxidized Rhizospheres on Living Roots (C3), Microtopographic Relief (D4)	Sandy Redox (S5), Redox Dark Surface (F6), Depleted Matrix (F3)	No	No	4.6a	5.1(P), 5.2(P)	No	II	*Juncus effusus, Iris versicolor, Euthamia graminifolia*	Large wetland system that extends outside of ROW and includes managed agricultural lands.
GE-103	246	PEM	Water-Stained Leaves (B9), Saturation Visible on Aerial (C9), Oxidized Rhizospheres on Living Roots (C3)	Sandy Redox (S5)	No	No	-	5.1(L), 5.2(L)	No	III	*Phalaris arundinacea, Iris versicolor, Onoclea sensibilis*	Isolated feature that extends outside of ROW.
GE-102	7,854	PEM	Water-Stained Leaves (B9), Saturation Visible on Aerial (C9), Oxidized Rhizospheres on Living Roots (C3)	Sandy Redox (S5)	No	No	-	5.1(L), 5.2(L)	No	III	*Phalaris arundinacea, Iris versicolor, Onoclea sensibilis*	Isolated feature located within Study Area.
GE-101	4,036	PSS	Water-Stained Leaves (B9), Oxidized Rhizospheres on Living Roots (C3)	Depleted Matrix (F3), Redox Dark Surface (F6)	No	No	-	5.1(L), 5.2(L)	No	III	*Lysimachia nummularia, Salix nigra, Cornus alba*	Isolated feature that extends outside of ROW.
GE-100	3,728	PEM	Water-Stained Leaves (B9), Oxidized Rhizospheres on Living Roots (C3)	Redox Dark Surface (F6)	No	No	-	5.1(L), 5.2(L)	No	III	*Typha angustifolia, Solanum dulcamara*	Small disconnected swale feature.
GE-1(2)	66,799	PEM/PSS/POW	Surface Water (A1), High Water Table (A2), Saturation (A3)	Redox Dark Surface (F6)	No	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Thuja occidentalis, Onoclea sensibilis, Equisetum arvense, Chamaecyparis thyoides, Typha latifolia*	Managed cedars within ROW, with a constructed pond and other fill evident within the active horse pasture.
SA-5	22,756	PSS	Surface Water (A1), Saturation (A3), Water-Stained Leaves (B9)	Redox Dark Surface (F6)	No	No	-	5.1(P), 5.2(P)	Yes	II	*Salix bebbiana, Onoclea sensibilis, Phalaris arundinacea*	Wetlands extends outside of Study Area and connects to a larger feature.
SA-300	15,060	PEM/PSS	Saturation (A3), Oxidized Rhizospheres on Living Roots (C3)	Depleted Matrix (F3)	No	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Onoclea sensibilis, Salix bebbiana, Galium palustre*	Wetlands extends outside of Study Area and connects to a larger feature.
SA-4	3,712	PSS	Surface Water (A1), Saturation (A3), Water-Stained Leaves (B9)	Depleted Matrix (F3)	No	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Salix bebbiana, Onoclea sensibilis, Phalaris arundinacea*	Wetlands extends outside of Study Area and connects to a larger feature.
SA-3	16,277	PEM/PSS	Saturation (A3), High Water Table (A2), Surface Water (A1), Oxidized Rhizospheres on Living Roots (C3)	Redox Dark Surface (F6)	No	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Caltha palustris, Phalaris arundinacea, Viola cucullata, Thelypteris palustris*	Wetlands extends outside of Study Area and connects to a larger feature.
SA-2	10,205	PEM	Saturation (A3), Oxidized Rhizospheres on Living Roots (C3)	Depleted Matrix (F3)	Yes	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Equisetum palustre, Onoclea sensibilis, Galium palustre, Taraxacum officinale*	Wetlands extends outside of Study Area and connects to a larger feature. Associated with a pond.
SA-1	3,360	PEM	Surface Water (A1), High Water Table (A2), Saturation (A3), Oxidized Rhizospheres on Living Roots (C3)	Depleted Matrix (F3)	No	No	-	5.1(L), 5.2(L)	No	III	*Typha angustifolia*	Wetland consists of maintained pond constructed from upland.

Summary of Delineated Wetlands
Project: Franklin County Line Upgrade Project
Client: Vermont Electric Power Company ("VELCO")
Location: Georgia to Highgate, Vermont
Prepared By: VHB (B. Galligan, K. Maines) August 3, 2023**, Updated September 15, 2023**
Delineation Date(s): Summer 2022, June 2023

VHB Delineated Wetlands												
					Vermont Wetland Rules Classification							
Wetland ID	Delineated Area (Square Feet)[1]	Cowardin Classification[2]	Hydrology Indicator	Hydric Soil Indicator	Contiguous to a VSWI-mapped Wetland?	Riparian Wetland Contiguous to Stream Channel? (Flow Regime)[3]	VWR Section 4.6 Categorical Class II Wetlands[4]	VWR Section 5 Functional Criteria Presence / Significance		VHB-Proposed VWR Classification[6]	Typical Vegetation	Comments
								Type[5]	VHB-Presumed Significant?			
SA-2(2)	14,799	PEM/PSS	Surface Water (A1), High Water Table (A2), Saturation (A3), Water Marks (B1), Oxidized Rhizospheres on Living Roots (C3)	Histosol (A1)	No	No	4.6a	5.1(P), 5.2(P), 5.10(L)	Yes	II	*Salix bebbiana, Onoclea sensibilis, Equisetum arvense, Lythrum salicaria*	Wetland extends outside of ROW and associated with a small stream.
SA-3(2)	13,148	PEM/PSS	Saturation (A3), High Water Table (A2)	Depleted Matrix (F3)	No	Yes (Perennial)	4.6a, b	5.1(P), 5.2(P), 5.3(P), 5.4(P), 5.10(P)	Yes	II	*Typha angustifolia, Salix bebbiana, Onoclea sensibilis*	Wetland extends outside of ROW and associated with perennial stream.
SA-4(2)	23,072	PEM/PFO	Surface Water (A1)	Redox Dark Surface (F6)	No	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Equisetum fluviatile, Phragmites australis*	Wetland extends outside of ROW.
SA-5(2)	49,719	PEM/PSS	Surface Water (A1), Water-Stained Leaves (B9), Geomorphic Position (D2)	Redox Dark Surface (F6), Depleted Dark Surface (F7)	No	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Equisetum fluviatile, Thelypteris palustris, Onoclea sensibilis, Cornus racemosa*	Wetlands extends outside of Study Area and connects to a larger feature. Partially consists of maintained field.
SA-6	1,868	PEM	Saturation (A3), Water-Stained Leaves (B9), Drainage Patterns (B10), Geomorphic Position (D2), Shallow Aquitard (D3)	Redox Dark Surface (F6)	No	No	-	5.1(L), 5.2(L)	No	III	*Phalaris arundinacea, Equisetum arvense*	Isolated feature entirely within ROW.
SA-7	18,935	PEM/PSS	Surface Water (A1), Water-Stained Leaves (B9), Saturation (A3), Oxidized Rhizospheres on Living Roots (C3), Drainage Patterns (B10)	Redox Dark Surface (F6)	No	No(Ditch)	4.6a	5.1(P), 5.2(P)	Yes	II	*Onoclea sensibilis, Salix bebbiana*	Wetland extends outside of the Study Area.
SA-402	3,602	PEM/PSS	Saturation (A3), Water-Stained Leaves (B9), Drainage Patterns (B10), Oxidized Rhizospheres on Living Roots (C3)	Redox Dark Surface (F6)	No	No(Ditch)	-	5.1(L), 5.2(L)	No	III	*Salix nigra, Onoclea sensibilis*	Wetland extends outside of Study Area but is isolated.
SA-402(2)	6,575	PEM	Saturation (A3), Microtopographic Relief (D4)	Redox Dark Surface (F6)	No	No(Ditch)	-	5.1(L), 5.2(L)	No	III	*Phalaris arundinacea, Cornus alba*	Wetland extends outside of Study Area but is isolated.
SA-8	24,307	PEM	Saturation (A3), Water-Stained Leaves (B9), Oxidized Rhizospheres on Living Roots (C3)	Redox Dark Surface (F6)	No	Yes (Perennial)	4.6a, b	5.1(P), 5.2(P), 5.3(P), 5.4(P), 5.10(P)	Yes	II	*Typha latifolia, Phalaris arundinacea*	Wetland feature associated with a stream.
SA-403	2,707	PEM	Saturation (A3), Oxidized Rhizospheres on Living Roots (C3), Water-Stained Leaves (B9)	Redox Dark Surface (F6)	No	No	-	5.1(L), 5.2(L)	No	III	*Phalaris arundinacea, Symphyotrichum novae-angliae*	Isolated feature entirely within Study Area.
SA-404	950	PEM/PSS	Surface Water (A1), Geomorphic Position (D2), Oxidized Rhizospheres on Living Roots (C3)	Depleted Matrix (F3)	No	No	-	5.1(L), 5.2(L)	No	III	*Fraxinus pennsylvanica, Populus deltoides*	Isolated feature entirely within Study Area.
SA-9	30,192	PEM/PSS	High Water Table (A2), Surface Water (A1)	Redox Dark Surface (F6), Depleted Dark Surface (F7)	No	Yes (Perennial)	4.6a, b	5.1(P), 5.2(P), 5.3(P), 5.4(P), 5.10(P)	Yes	II	*Phalaris arundinacea, Onoclea sensibilis*	Wetland feature extends outside of the Study Area and is associated with a stream.
SA-10	26,433	PEM/PSS	High Water Table (A2), Water-Stained Leaves (B9), Geomorphic Position (D2)	Histic Epipedon (A2), Redox Dark Surface (F6)	No	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Phalaris arundinacea, Alnus incana*	Wetland feature extends outside of the Study Area.
SA-11	16,253	PEM/PSS	Surface Water (A1), Water-Stained Leaves (B9), Oxidized Rhizospheres on Living Roots (C3), Geomorphic Position (D2), Drainage Patterns (B10)	Redox Dark Surface (F6)	No	Yes (Perennial)	4.6a, b	5.1(P), 5.2(P), 5.3(P), 5.4(P), 5.10(P)	Yes	II	*Cornus amomum, Mentha aquatica*	Wetland feature extends outside of the Study Area and is associated with a stream.
SA-405	7,002	PEM	Saturation (A3), Oxidized Rhizospheres on Living Roots (C3)	Redox Dark Surface (F6), Depleted Matrix (F3)	No	No	-	5.1(L), 5.2(L)	No	III	*Phalaris arundinacea, Alnus incana*	Isolated feature entirely within ROW.

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Delineation Date(s): Summer 2022, June 2023

VHB Delineated Wetlands												
Wetland ID	Delineated Area (Square Feet)[1]	Cowardin Classification[2]	Hydrology Indicator	Hydric Soil Indicator	Vermont Wetland Rules Classification						Typical Vegetation	Comments
					Contiguous to a VSWI-mapped Wetland?	Riparian Wetland Contiguous to Stream Channel? (Flow Regime)[3]	VWR Section 4.6 Categorical Class II Wetlands[4]	VWR Section 5 Functional Criteria Presence / Significance		VHB-Proposed VWR Classification[6]		
								Type[5]	VHB-Presumed Significant?			
SA-1000(2)	457	PEM/PSS	Water-Stained Leaves (B9), Drainage Patterns (B10), Oxidized Rhizospheres on Living Roots (C3)	Redox Dark Surface (F6)	No	No	-	5.1(L), 5.2(L)	No	III	*Impatiens capensis, Fraxinus pennsylvanica*	Isolated feature observed along off-ROW access.
SA-13	35,737	PEM/PSS	Surface Water (A1), Saturation (A3), Oxidized Rhizospheres on Living Roots (C3)	Redox Dark Surface (F6)	No	No	4.6a	5.1(P), 5.2(P)	No	II	*Onoclea sensibilis, Phalaris arundinacea, Lythrum salicaria*	Large feature within maintained agricultural field that extends beyond the ROW.
SA-14	10,057	PEM/PSS	Surface Water (A1), Saturation (A3), Oxidized Rhizospheres on Living Roots (C3)	Redox Dark Surface (F6)	No	Yes (Intermittent)	4.6a, b	5.1(P), 5.2(P) 5.10(P)	Yes	II	*Onoclea sensibilis, Phalaris arundinacea, Lythrum salicaria*	Wetland features extends outside of the Study Area and is associated with a stream.
SA-15	96,187	PEM/PSS	Saturation (A3), Water-Stained Leaves (B9), Oxidized Rhizospheres on Living Roots (C3)	Redox Dark Surface (F6), Depleted Matrix (F3)	No	Yes (Intermittent)	4.6a, b	5.1(P), 5.2(P), 5.3(P), 5.4(P), 5.10(P)	Yes	II	*Phalaris arundinacea, Solidago gigantea*	Wetland extends outside of Study Area and generally associated with managed agricultural fields.
SW-107	3,459	-	Surface Water (A1), High Water Table (A2), Saturation (A3), Water-Stained Leaves (B9), Oxidized Rhizospheres on Living Roots (C3)	Histic Epipedon (A2), Redox Dark Surface (F6)	No	No	-	5.1(L), 5.2(L)	No	III	*Typha latifolia, Solanum dulcamara, Onoclea sensibilis*	Isolated swale feature adjacent to railroad embankment.
SW-2	683	-	Saturation (A3), Oxidized Rhizospheres on Living Roots (C3)	Redox Dark Surface (F6)	No	No (Ditch)	-	5.1(L), 5.2(L)	No	III	*Salix bebbiana, Typha latifolia, Phalaris arundinacea*	Isolated feature within Study Area
SW-3	205	PFO/PUB	Surface Water (A1), High Water Table (A2), Saturation (A3), Water-Stained Leaves (B9), Inundation Visible on Aerial (B7), Oxidized Rhizospheres on Living Roots (C3), Shallow Aquitard (D3)	Histic Epipedon (A2), Redox Dark Surface (F6)	No	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Typha latifolia, Populus deltoides*	Wetland associated with a man made pond,
SW-4	3,323	-	Surface Water (A1), High Water Table (A2), Saturation (A3), Oxidized Rhizospheres on Living Roots (C3), Shallow Aquitard (D3)	Redox Dark Surface (F6)	No	No	-	5.1(L), 5.2(L)	No	III	*Spiraea tomentosa, Onoclea sensibilis, Salix eriocephala*	Isolated feature entirely within Study Area.
SW-102(5)	6,086	PEM/PUB	High Water Table (A2), Saturation (A3), Surface Water (A1), Inundation Visible on Aerial (B7), Sparsely Vegetated Concave Surface (B8), Water-Stained Leaves (B9), Aquatic Fauna (B13), Shallow Aquitard (D3)	Depleted Matrix (F3)	No	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Salix SP, Phalaris arundinacea*	Breeding amphibians observed within wetland, but does not meet Vernal Pool criteria,
SW-6	2,097	PEM	Surface Water (A1), High Water Table (A2), Saturation (A3), Water-Stained Leaves (B9), Presence of Reduced Iron (C4)	Depleted Matrix (F3)	No	No	-	5.1(L), 5.2(L)	No	III	*Phalaris arundinacea, Juncus effusus, Scirpus atrovirens*	Isolated feature entirely within Study Area.
SW-100	470	-	Oxidized Rhizospheres on Living Roots (C3), Saturation (A3), High Water Table (A2), Surface Water (A1)	Depleted Matrix (F3), Redox Dark Surface (F6)	No	No	-	5.1(L), 5.2(L)	No	III	*Galium palustre, Poa palustris*	Isolated feature entirely within Study Area.
SW-7	4,991	PEM/PSS	Surface Water (A1), High Water Table (A2), Saturation (A3), Water-Stained Leaves (B9), Oxidized Rhizospheres on Living Roots (C3), Presence of Reduced Iron (C4)	Redox Dark Surface (F6)	No	No	-	5.1(L), 5.2(L)	No	III	*Equisetum arvense, Typha latifolia, Phalaris arundinacea*	Isolated feature that extends outside of Study Area.
SW-8	25,723	PEM/PSS	Saturation (A3)	Redox Dark Surface (F6)	No	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Onoclea sensibilis, Salix bebbiana, Spiraea alba*	Wetlands extends outside of Study Area.
SW-9	72,412	PSS	Saturation (A3), Surface Water (A1)	Depleted Dark Surface (F7)	Yes	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Onoclea sensibilis, Phalaris arundinacea*	Wetlands extends outside of Study Area.

Summary of Delineated Wetlands
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Delineation Date(s): Summer 2022, June 2023

VHB Delineated Wetlands												
Wetland ID	Delineated Area (Square Feet)[1]	Cowardin Classification[2]	Hydrology Indicator	Hydric Soil Indicator	Vermont Wetland Rules Classification						Typical Vegetation	Comments
					Contiguous to a VSWI-mapped Wetland?	Riparian Wetland Contiguous to Stream Channel? (Flow Regime)[3]	VWR Section 4.6 Categorical Class II Wetlands[4]	VWR Section 5 Functional Criteria Presence / Significance		VHB-Proposed VWR Classification[6]		
								Type[5]	VHB-Presumed Significant?			
SW-110	21,263	PEM/PSS	Saturation (A3), Surface Water (A1)	Depleted Matrix (F3)	Yes	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Typha latifolia, Onoclea sensibilis, Salix bebbiana, Spiraea latifolia*	Wetlands extends outside of Study Area and is located within highway median.
SW-10	7,361	PEM/PSS	Oxidized Rhizospheres on Living Roots (C3), Saturation (A3)	Redox Dark Surface (F6)	No	Yes (Intermittent)	4.6a, b	5.1(P), 5.2(P), 5.3(P), 5.4(P), 5.10(P)	Yes	II	*Typha latifolia, Onoclea sensibilis, Salix bebbiana*	Wetland extends outside of Study Area and generally associated with highway embankment.
SW-11	3,153	PEM	Surface Water (A1), Saturation (A3)	Depleted Matrix (F3)	Yes	No	-	5.1(L), 5.2(L)	No	III	*Onoclea sensibilis, Spiraea alba, Solidago rugosa*	Isolated feature entirely within Study Area.
SW-12	12,753	PSS	Surface Water (A1), Saturation (A3)	Redox Dark Surface (F6)	No	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Onoclea sensibilis, Typha latifolia*	Wetland extends outside of Study Area.
SW-13	164,523	PEM/PSS	Surface Water (A1), Saturation (A3)	Depleted Below Dark Surface (A11)	Yes	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Salix bebbiana, Osmunda spectabilis, Onoclea sensibilis, Osmunda claytoniana*	Large wetland feature. Evidence of recent ditching and drainage work observed near the northern extent of the wetland.
SW-15	12,918	PEM	Saturation (A3)	Depleted Matrix (F3)	No	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Phalaris arundinacea, Onoclea sensibilis, Typha latifolia*	Wetland extends outside of the Study Area.
SW-303	4,118	PEM	Surface Water (A1)	Redox Dark Surface (F6)	No	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Juncus effusus, Phalaris arundinacea*	Wetland extends outside of the Study Area and connects to a larger mapped VSWI.
SW-107/407	19,693	PEM/PSS	Saturation (A3), Surface Water (A1)	Redox Dark Surface (F6)	No	Yes (Perennial)	4.6a, b	5.1(P), 5.2(P), 5.10(P)	Yes	II	*Equisetum arvense, Phalaris brachystachys, Onoclea sensibilis*	Wetland extends outside of Study Area.
SW-302	30,084	PEM/PSS	Surface Water (A1)	Depleted Matrix (F3)	No	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Spiraea alba, Thelypteris palustris*	Wetland extends outside of the Study Area and connects to a larger mapped VSWI.
SW-301	17,635	PEM	Surface Water (A1), Oxidized Rhizospheres on Living Roots (C3)	Depleted Dark Surface (F7)	No	No	4.6a	5.1(P), 5.2(P), 5.4(P)	Yes	II	*Iris versicolor, Phalaris arundinacea*	Wetland extends outside of Study Area.
HI-104	431	PEM/OW	Surface Water (A1)	Histosol (A1)	No	No	4.6a	5.1(P), 5.2(P), 5.4(P)	Yes	II	-	Wetland is likely part of past work at the adjacent gravel pit.
HI-9	694	PUB	Water-Stained Leaves (B9), Saturation (A3), Oxidized Rhizospheres on Living Roots (C3)	Redox Dark Surface (F6), Loamy Gleyed Matrix (F2), Depleted Dark Surface (F7)	No	Yes (Perennial)	4.6b	5.1(P), 5.2(P), 5.3(P), 5.4(P), 5.10(P)	Yes	II	*Carex crinita, Solidago gigantea, Equisetum arvense*	Adjacent to stream located outside of the Study Area.
2022-HI-100	8,142	PEM	Saturation (A3), Geomorphic Position (D2), Oxidized Rhizospheres on Living Roots (C3)	Redox Dark Surface (F6)	No	Yes (Perennial)	4.6b	5.1(P), 5.2(P), 5.3(P), 5.4(P), 5.10(P)	Yes	II	*Onoclea sensibilis, Carex gynandra, Solidago canadensis*	Wetland extends outside of Study Area and is associated with a stream.
HI-8	51,452	PEM	Saturation (A3), Geomorphic Position (D2), Oxidized Rhizospheres on Living Roots (C3)	Redox Dark Surface (F6)	No	Yes (Perennial)	4.6a, b	5.1(P), 5.2(P), 5.10(P)	Yes	II	*Carex scarbatta, Equisetum sylvaticum*	Wetland extends outside of Study Area and is associated with Hungerford Brook.
HI-101	338	-	Surface Water (A1), Oxidized Rhizospheres on Living Roots (C3), Thin Muck Surface (C7), Iron Deposits (B5)	Redox Dark Surface (F6), Depleted Dark Surface (F7)	No	No	-	5.1(L), 5.2(L)	No	III	*Spiraea tomentosa, Carex gynandra*	Isolated feature within the Study Area.
HI-111	3,663	PEM/PSS	Saturation (A3)	Depleted Matrix (F3)	No	No	-	5.1(L), 5.2(L)	No	III	*Onoclea sensibilis, Equisetum arvense, Solidago rugosa, Matteuccia struthiopteris*	Isolated feature along off-ROW access.

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VHB Delineated Wetlands												
					Vermont Wetland Rules Classification							
Wetland ID	Delineated Area (Square Feet)[1]	Cowardin Classification[2]	Hydrology Indicator	Hydric Soil Indicator	Contiguous to a VSWI-mapped Wetland?	Riparian Wetland Contiguous to Stream Channel? (Flow Regime)[3]	VWR Section 4.6 Categorical Class II Wetlands[4]	VWR Section 5 Functional Criteria Presence / Significance		VHB-Proposed VWR Classification[6]	Typical Vegetation	Comments
								Type[5]	VHB-Presumed Significant?			
HI-112	1,153	PEM	Oxidized Rhizospheres on Living Roots (C3), Water-Stained Leaves (B9)	Depleted Matrix (F3)	No	No	-	5.1(L), 5.2(L)	No	III	*Matteuccia struthiopteris, Onoclea sensibilis, Phragmites australis*	Isolated feature along off-ROW access.
HI-113	109	PEM/PFO	Water-Stained Leaves (B9)	Depleted Matrix (F3)	No	No	-	5.1(L), 5.2(L)	No	III	*Matteuccia struthiopteris, Onoclea sensibilis, Phragmites australis*	Isolated feature along off-ROW access.
HI-6	213,668	PEM/PSS	Saturation (A3), Surface Water (A1), Oxidized Rhizospheres on Living Roots (C3)	Depleted Matrix (F3)	Yes	Yes (Perennial)	4.6a, b	5.1(P), 5.2(P), 5.3(P), 5.4(P), 5.10(P)	Yes	II	*Onoclea sensibilis, Phragmites australis, Spiraea alba,*	Wetland feature extends outside of Study Area and is partially associated with man-made pond, constructed from wetland.
HI-103	3,157	PEM/PSS	Saturation (A3), Surface Water (A1)	Depleted Matrix (F3)	No	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Alnus incana, Onoclea sensibilis, Solidago rugosa*	Wetland extends outside of Study Area.
HI-101(4)	479	PEM	Surface Water (A1), Saturation (A3)	Surface Water (A1), Saturation (A3)	No	No	-	5.1(L), 5.2(L)	No	III	*Onoclea sensibilis, Eupatorium perfoliatum, Juncus effusus*	Isolated feature within Study Area
HI-4	1,506	PEM	Surface Water (A1), Saturation (A3)	Depleted Dark Surface (F7)	No	No	-	5.1(L), 5.2(L)	No	III	*Onoclea sensibilis, Spiraea alba*	Isolated feature within Study Area
HI-3	543	PEM	Surface Water (A1), Saturation (A3)	Depleted Matrix (F3)	No	No	-	5.1(L), 5.2(L)	No	III	*Onoclea sensibilis, Spiraea alba, Osmunda claytoniana, Solidago rugosa*	Isolated feature, previously reviewed by ANR in 2020.
HI-102	17,736	PEM, PSS	Surface Water (A1), Saturation (A3)	Depleted Matrix (F3)	No	Yes (Intermittent)	4.6a, b	5.1(P), 5.2(P), 5.3(P), 5.4(P), 5.10(P)	Yes	II	*Alnus incanca, Onoclea sensibilis, Phalaris arundinacea*	Wetland extends outside of the Study Area.
HI-105	343	PEM, PSS	Surface Water (A1), Saturation (A3)	Depleted Matrix (F3)	No	No	-	5.1(L), 5.2(L)	No	III	*Alnus incanca, Onoclea sensibilis, Phalaris arundinacea*	Small wetland adjacent to existing access road. Isolated feature.
2020-3	36,826	PEM,PSS	Surface Water (A1), Saturation (A3)	Depleted Matrix (F3)	No	Yes (Intermittent)	4.6a, b	5.1(P), 5.2(P), 5.3(P), 5.4(P), 5.10(P)	Yes	II	*Alnus incanca, Onoclea sensibilis, Phalaris arundinacea*	Fringe wetland system associated with Stream 2020-SC1
2020-W1	36,649	PEM	Saturation (A3), Geomorphic Position (D2)	Depleted Matrix (F3)	No	No	4.6a	5.1(P), 5.2(P)	Yes	II	*Phragmites australis, Equisetum arvense*	A wetland in a depression between the Highgate substation and the road.

Notes:
[1]All wetlands field delineated per the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northeast and North Central Region. U.S. Army Corps of Engineers. 2011; Delineated Wetlands that extend outside the Study Area are denoted with **bold** text.
[2]Classification follows Cowardin, L.M., Carter, V., Golet, F.C. and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitat of the United States. U.S. Fish and Wildlife Service. FWS/OBD-79/31. 103pp.

[3]Wetland contiguity to streams as defined in the Vermont ANR (2005) *Guidance for Agency Act 250 and Section 248 Comments Regarding Riparian Buffers* and confirmed if a delineated perennial or intermittent stream channel inflows, through flows, and outflows from a delineated wetland (ephemeral channels not typically being subject to ANR Riparian Buffer Guidance). The vegetative assemblage or natural community type is used when determining riparian vegetation function. Flow regime determined based on qualitative observations of instream hydrology indicators and geomorphic characteristic and are subject to professional judgment (P=perennial, I=intermittent, E=ephemeral).

[4]Alpha-numeric codes correspond with Section 4.6 Presumptions of the 2023 Vermont Wetland Rules.

[5]VWR Section 5: Functional Criteria for Evaluating a Wetland's Significance: 5.1=Water Storage for Flood Water and Storm Runoff, 5.2=Surface and Groundwater Protection, 5.3=Fish Habitat, 5.4=Wildlife Habitat, 5.5=Exemplary Wetland Natural Community, 5.6=Rare, Threatened or Endangered Species Habitat, 5.7=Education and Research in Natural Sciences, 5.8=Recreational Value and Economic Benefits, 5.9=Open Space and Aesthetics, 5.10=Erosion Control Through Binding and Stabilizing the Soil. (P)= Present, (H)=High, (L)=Low; Correspond to observed level of functionality.

Summary of Delineated Streams
Project: Franklin County Line Upgrade Project
Client: Vermont Electric Power Company ("VELCO")
Location: Georgia to Highgate, Vermont
Prepared By: VHB (B. Galligan, K. Maines) August 3, 2023, Updated September 15, 2023
Delineation Date(s): Summer 2022, June 2023

VHB Delineated Streams												
Stream ID	**Stream Name**	**Associated Wetlands**	**Average Ordinary High Water Width (Feet)[1]**	**Dominant Substrate**	**Water Depth (Inches)**	**Bank Height (Feet)**	**Flow Regime (Ephemeral, Intermittent, or Perennial)[2]**	**ANR-Mapped River Corridor? (Yes/No)**	**VHB-Proposed River Corridor (Yes/No)**	**Watershed Size (Square Miles)[3]**	**VWQS Classification (2022)[4]**	**Comments**
2020-SC1	-	2020-3	3.0	Clay	4	1.0	Intermittent	No	Yes	0.1	B	A stream that cuts across the study area.
S-SA-211	-	SA-402(2)	2.0	Silt	1	1.5	Ditch (Intermittent)	No	No	<0.05	B	A ditch associated with agriculture that crosses the Study Area.
S-GE-1	Mill River	-	30.0	Sand	4	2.0	Perennial	Yes	Yes	22.1	B	Mill River intersects the Study Area.
S-GE-101	-	GE-308	0.5	Silt	1	2.0	Ditch (Intermittent)	No	No	<0.05	B	A jurisdictional ditch that drains 2022-GE-308 to S-GE-307
S-GE-302	Stone Bridge Brook	GA-1	6.5	Silt	42	1.0	Perennial	Yes	Yes	5.57	B	A stream that crosses the Study Area through wetland GA-1
S-GE-303	-	GE-302	2.0	Organic	3	3.0	Perennial	No	Yes	1.28	B	A stream that crosses the Study Area through wetland GE-302
S-GE-305	-	GE-305	0.5	Silt	2	2.0	Ditch (Intermittent)	No	No	.18	B	A stream that drains GE-305.
S-GE-JD-306	-	GE-306	0.5	Silt	4	2.0	Ditch (Ephemeral)	No	No	<0.05	B	Feature extends beyond Study Area.
S-GE-307	-	-	20.0	Silt	12	4.0	Perennial	Yes	Yes	2.71	B	A stream that crosses the Study Area.
S-GE-308	Mill River	GE-310, 312	16.5	Boulders	9	8.5	Perennial	Yes	Yes	6.83	B	The Mill River crossing the Study Area.
S-GE-310	-	2022-GE-313	5.0	Organic	3	4.0	Ditch (Intermittent)	No	No	0.064	B	Jurisdictional ditch associated with GE-313. The ditch also crosses the nearby access road.
S-GE-311	-	-	6.0	Sand	1	5.0	Intermittent	No	No	0.15	B	A stream crossing the Study area associated with agriculture field.
S-HI-100		HI-102	3.0	Clay	2	3.0	Intermittent	No	No	<0.05	B	A small stream draining wetland HI-102

Summary of Delineated Streams
Project: Franklin County Line Upgrade Project
Client: Vermont Electric Power Company ("VELCO")
Location: Georgia to Highgate, Vermont
Prepared By: VHB (B. Galligan, K. Maines) August 3, 2023, Updated September 15, 2023
Delineation Date(s): Summer 2022, June 2023

VHB Delineated Streams												
Stream ID	**Stream Name**	**Associated Wetlands**	**Average Ordinary High Water Width (Feet)[1]**	**Dominant Substrate**	**Water Depth (Inches)**	**Bank Height (Feet)**	**Flow Regime (Ephemeral, Intermittent, or Perennial)[2]**	**ANR-Mapped River Corridor? (Yes/No)**	**VHB-Proposed River Corridor (Yes/No)**	**Watershed Size (Square Miles)[3]**	**VWQS Classification (2022)[4]**	**Comments**
S-HI-101	-	HI-6	4.0	Organic	1	2.0	Non-Jurisdictional Ditch (Ephemeral)	No	No	<0.05	B	NJD associated with drainage pipe from overland flow.
S-HI-110	-	-	3.0	Organic	1	3.0	Non-Jurisdictional Ditch (Ephemeral)	No	No	<0.05	B	NJD associated with a access road.
S-HI-2	Missisquoi River	-	125.0	Bedrock	48+	10.0	Perennial	Yes	Yes	817	B	Also mapped as TOS for the Missisquoi River
S-HI-3		HI-6	1.0	Silt	2	0.5	Intermittent and Perennial segments	No	No	<0.05	B	A stream associated with HI-6
S-HI-30		HI-6	4.0	Sand	2	7.0	Perennial	No	Yes	<0.05	B	A stream draining ponded wetland HI-6
S-HI-4	Hungerford Brook	HI-8	20.0	Cobble	5	24.0	Perennial	Yes	Yes	19.4	B	The Hungerford Brook that bisects the Study Area and drains to the Missisquoi River.
S-HI-5		HI-100, 9	4.0	Sand	14	0.5	Perennial	No	Yes	0.69	B	A stream that crosses the Study Area associated with 2022-HI-100,9
S-SA-1	-	SA-3(2)	5.0	Sand	5	2.0	Perennial	No	Yes	1.41	B	A stream that crosses the Study Area and is associated with SA-3(2).
S-SA-1000	-	-	2.5	Silt	1	6.0	Ditch (Intermittent)	No	No	.27	B	A jurisdictional ditch across a access road.
S-SA-2	-	SA-8	3.0	Sand	8	1.0	Perennial	No	Yes	.93	B	A stream associated with SA-8
S-SA-200	-	2022-SA-2(2)	2.0	Sand	1	0.3	Ephemeral	No	No	<0.05	B	Small ephemeral seep stream in wetland SA-2(2)
S-SA-210	-	2022-SA-7	2.0	Clay	-	1.0	Ditch (Intermittent)	No	No	<0.05	B	Ditch draining to 2022-SA-7 and 402 adjacent to residential yards.
S-SA-3	-	SA-9	3.0	Silt	8	0.3	Perennial	No	Yes	.33	B	A small stream associated with wetland SA-9

Summary of Delineated Streams
Project: Franklin County Line Upgrade Project
Client: Vermont Electric Power Company ("VELCO")
Location: Georgia to Highgate, Vermont
Prepared By: VHB (B. Galligan, K. Maines) August 3, 2023, Updated September 15, 2023
Delineation Date(s): Summer 2022, June 2023

VHB Delineated Streams												
Stream ID	**Stream Name**	**Associated Wetlands**	**Average Ordinary High Water Width (Feet)[1]**	**Dominant Substrate**	**Water Depth (Inches)**	**Bank Height (Feet)**	**Flow Regime (Ephemeral, Intermittent, or Perennial)[2]**	**ANR-Mapped River Corridor? (Yes/No)**	**VHB-Proposed River Corridor (Yes/No)**	**Watershed Size (Square Miles)[3]**	**VWQS Classification (2022)[4]**	**Comments**
S-SA-4	Stevens Brook	SA-11	25.0	Cobble	9	3.5	Perennial	Yes	Yes	7.1	B	Stevens Brook intersects the Study Area.
S-SA-400	-	SA-7	2.0	Clay	-	1.0	Ditch (Intermittent)	No	No	<0.05	B	Ditch draining to 2022-SA-7 and 402 adjacent to residential yards.
S-SA-5	-	SA-14	1.0	Sand	10	0.5	Intermittent	No	No	.1	B	A stream that bisects the Study Area associated with SA-14
S-SA-6	-	SA-15	0.5	Sand	4	0.3	Intermittent	No	No	.08	B	A stream that bisects the Study Area associated with SA-15
S-SW-1	-	SW-2	1.0	Sand	4	2.0	Ditch (Intermittent)	No	No	<0.05	B	Small jurisdictional ditch associated with wetland SW-2
S-SW-JD-101	-	-	4.0	Sand	4	4.0	Ditch (Perennial)	No	No	<0.05	B	A jurisdictional ditch across a access road.
S-SW-102	-	-	4.0	Sand	3	3.0	Ditch (Perennial)	No	No	<0.06	B	A jurisdictional ditch across a access road.
S-SW-2	-	SW-10	3.0	Silt	7	1.0	Intermittent	No	No	.72	B	A stream adjacent to the highway associated with SW-10.
SW-302	-	SW-107/407	2.0	Organic	3	9.0	Perennial	No	Yes	0.07	B	A stream that bisects the Study Area and access road associated with wetlands 406
S-SW-510	-	-	-	Organic	-	-	Ditch (Ephemeral)	No	No	<0.05	B	A Jurisdictional ditch through farmland.

Notes:

[1] U.S. Army Corps of Engineers. 2005. *Regulatory Guidance Letter. Subject: Ordinary High Water Mark Identification. No. 05-05.*

[2] Stream flow regime determined based on qualitative observations of in stream hydrology indicators and geomorphic characteristic and are subject to professional judgment.

[3] Watershed size determined from Vermont Agency of Natural Resources ("ANR") Stream Alteration Regulatory Program mapping or USGS Stream Stats

[4] From ANR. 2022. *Vermont Water Quality Standards. 303(d) Assessment of the Condition of Vermont Waters. Priority Listing of Vermont Waters. Vermont Department of Environmental Conservation.*

[5] List of River Corridors from the ANR Atlas.

[6] Determined through guidance from Vermont ANR (2005) *Guidance for Agency Act 250 and Section 248 Comments Regarding Riparian Buffers.*

APPENDIX E

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-GA-1Up

Project Site:	K42	City/County:	Georgia/Franklin	Samp. Date:	5/17/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-GA-1Up
Investigator(s):	LK	Section, Township, Range:	Georgia		
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	Convex	Slope (%):	0-2
Subregion (LRR or MLRA):	LRR R	Lat: 44.716447	Long: -73.153055	Datum:	NAD 83
Soil Map Unit:	Rumney Variant silt loam			NWI Class:	Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No — Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No — (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	NO	Is This Sample Area Within a Wetland? NO
Hydric Soil Present?	YES	
Wetland Hydrology Present?	NO	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?		Depth (inches):	
Water Table Present?		Depth (inches):	
Saturation Present?		Depth (inches):	

Wetland Hydrology Present? NO

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

0.39" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22 Near normal(NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100					SILT LOAM	
3-14	10YR 6/1	98	10YR 5/3	2	C	M	SILT LOAM	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified 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) (LRR R, MLRA 149B)
- ___ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- ___ Thin Dark Surface (S9) (LRR R, MLRA 149B)
- ___ Loamy Mucky Mineral (F1) (LRR K, L)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ___ Coast Prairie Redox (A16) (LRR K, L, R)
- ___ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ___ Dark Surface (S9) (LRR K, L, M)
- ___ Polyvalue Below Surface (S8) (LRR K, L)
- ___ Thin Dark Surface (S9) (LRR K, L)
- ___ Iron-Manganese Masses (F12) (LRR K, L, R)
- ___ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ___ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Bedrock

Depth (inches): 14"

Hydric Soil Present? YES

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-GA-1Up**

	Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size: **30' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: **5' RAD**)			
1. **Rubus idaeus**	65	X	FACU
2. **Rubus allegheniensis**	3		FACU
3. **Equisetum sylvaticum**	3		FACW
4. **Fallopia scandens**	3		FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	74	= Total Cover	
Woody Vines (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Dominance Test Worksheet:

Dominants OBL, FACW, FAC: _____ (A)

Dominants across all strata: **1** (B)

% Dominants OBL, FACW, FAC: _____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	x 1 =	
FACW **3**	x 2 =	**6**
FAC **3**	x 3 =	**9**
FACU **68**	x 4 =	**272**
UPL	x 5 =	
Sum: **74** (A)		**287** (B)

Prevalence Index = B/A = **3.88**

Hydrophytic Vegetation Indicators:

_____ Dominance Test is > 50%

_____ Prevalence Index is <= 3.0

_____ Problematic Hydrophytic Vegetation[1] (explain)

_____ Rapid Test for Hydrophytic Vegetation

_____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **No**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-GA-1Wet

Project Site: K42 City/County: Georgia/Franklin Samp. Date: 5/17/2022

Applicant/Owner: Velco State: Vermont Sampling Point: 2022-GA-1Wet

Investigator(s): RS Section, Township, Range: Georgia

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR or MLRA): LRR R Lat: 44.716501 Long: -73.153122 Datum: NAD 83

Soil Map Unit: Rumney Variant silt loam NWI Class: PEM

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	Is This Sample Area Within a Wetland? Yes
Hydric Soil Present?	YES	
Wetland Hydrology Present?	YES	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

	Surface Water (A1)	Water-Stained Leaves (B9)
X	High Water Table (A2)	Aquatic Fauna (B13)
X	Saturation (A3)	Marl Deposits (B13)
	Water Marks (B1)	Hydrogen Sulfide Odor (C1)
	Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)
	Drift Deposits (B3)	Presence of Reduced Iron (C4)
	Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)
	Iron Deposits (B5)	Thin Muck Surface (C7)
	Inundation Visible on Aerial (B7)	Other (Explain in Remarks)
	Sparsely Vegetated Concave Surface (B8)	

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)
X	Drainage Patterns (B10)
	Moss Trim Lines (B16)
	Dry-Season Water Table (C2)
	Crayfish Burrows (C8)
	Saturation Visible on Aerial (C9)
	Stunted or Stressed Plants (D1)
	Geomorphic Position (D2)
	Shallow Aquitard (D3)
	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Depth (inches):

Water Table Present? X Depth (inches): Surface

Saturation Present? Depth (inches):

Wetland Hydrology Present? YES

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

0.39" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22 Near normal(NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1	100					MUCKY LOAM	
2-8	5y 4/1	100					MUCKY LOAM	
8-14	5y5/1	100						

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X	Histosol (A1)	Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
X	Histic Epipedon (A2)	Thin Dark Surface (S9) (LRR R, MLRA 149B)
	Black Histic (A3)	Loamy Mucky Mineral (F1) (LRR K, L)
	Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)
	Stratified Layers (A5)	X Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)
	Thick Dark Surface (A12)	Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)	Redox Depressions (F8)
	Sandy Gleyed Matrix (S4)	
	Sandy Redox (S5)	
	Stripped Matrix (S6)	
	Dark Surface (S7) (LRR R, MLRA 149B)	

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

Indicators for Problematic Hydric Soils[3]:

	2 cm Muck (A10) (LRR K, L, MLRA 149B)
	Coast Prairie Redox (A16) (LRR K, L, R)
	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
	Dark Surface (S9) (LRR K, L, M)
	Polyvalue Below Surface (S8) (LRR K, L)
	Thin Dark Surface (S9) (LRR K, L)
	Iron-Manganese Masses (F12) (LRR K, L, R)
	Piedmont Floodplain Soils (F19) (MLRA 149B)
	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
	Red Parent Material (F21)
	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? YES

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-GA-1Wet**

		Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size: **30' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)				
1.	**Spiraea alba**	**15**	**X**	**FACW**
2.				
3.				
4.				
5.				
6.				
7.				
		15 = Total Cover		
Herb Stratum (Plot size: **5' RAD**)				
1.	**Onoclea sensibilis**	**38**	**X**	**FACW**
2.	**Impatiens capensis**	**38**	**X**	**FACW**
3.	**Typha latifolia**	**38**	**X**	**OBL**
4.	**Calamagrostis canadensis**	**15**		**OBL**
5.	**Juncus effusus**	**15**		**OBL**
6.	**Solidago rugosa**	**15**		**FAC**
7.	**Stellaria borealis**	**3**		**FACW**
8.	**Epilobium hirsutum**	**3**		**FACW**
9.	**Persicaria sagittata**	**3**		**OBL**
10.				
11.				
12.				
		168 = Total Cover		
Woody Vines (Plot size:)				
1.				
2.				
3.				
4.				
5.				
		= Total Cover		

Dominance Test Worksheet:

# Dominants OBL, FACW, FAC:	**4**	(A)
# Dominants across all strata:	**4**	(B)
% Dominants OBL, FACW, FAC:	**100%**	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	**71** x 1 =	**71**
FACW	**97** x 2 =	**194**
FAC	**15** x 3 =	**45**
FACU	x 4 =	
UPL	x 5 =	
Sum:	**183** (A)	**310** (B)

Prevalence Index = B/A = **1.69**

Hydrophytic Vegetation Indicators:

- **X** Dominance Test is > 50%
- **X** Prevalence Index is <= 3.0
- ____ Problematic Hydrophytic Vegetation[1] (explain)
- ____ Rapid Test for Hydrophytic Vegetation
- ____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **YES**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-GE-304-Up

Project Site:	K42	City/County:	Georgia/Franklin	Samp. Date:	5/18/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-GE-304-Up
Investigator(s):	LK	Section, Township, Range:	Georgia		
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	Convex	Slope (%):	0-6
Subregion (LRR or MLRA):	LRR R	Lat: 44.726293	Long: -73.149254	Datum:	NAD 83
Soil Map Unit:	Enosburg Loamy fine sand			NWI Class:	Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	NO	Is This Sample Area Within a Wetland? NO
Hydric Soil Present?	NO	
Wetland Hydrology Present?	NO	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?		Depth (inches):	
Water Table Present?		Depth (inches):	
Saturation Present?		Depth (inches):	

Wetland Hydrology Present? NO

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

0.39" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22 near normal (NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/2	100					SILT LOAM	
12-14	10YR 3/4	80	10YR 3/6	20	C	M	SILT LOAM	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified 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) (LRR R, MLRA 149B)
- ___ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- ___ Thin Dark Surface (S9) (LRR R, MLRA 149B)
- ___ Loamy Mucky Mineral (F1) (LRR K, L)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ___ Coast Prairie Redox (A16) (LRR K, L, R)
- ___ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ___ Dark Surface (S9) (LRR K, L, M)
- ___ Polyvalue Below Surface (S8) (LRR K, L)
- ___ Thin Dark Surface (S9) (LRR K, L)
- ___ Iron-Manganese Masses (F12) (LRR K, L, R)
- ___ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ___ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? NO

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-GE-304-Up**

Tree Stratum (Plot size: **30' RAD**)	Absolute % Cover	Dom. Sp?	Indicator Status
1. **Pinus strobus**	**3**	**X**	**FACU**
2.			
3.			
4.			
5.			
6.			
7.			
	3	= Total Cover	
Sapling Stratum (Plot size: **15' RAD**)			
1. **Acer rubrum**	**15**	**X**	**FAC**
2. **Pinus strobus**	**3**		**FACU**
3.			
4.			
5.			
6.			
7.			
	18	= Total Cover	
Shrub Stratum (Plot size: **15' RAD**)			
1. **Spiraea alba**	**3**	**X**	**FACW**
2. **Cornus racemosa**	**3**	**X**	**FAC**
3.			
4.			
5.			
6.			
7.			
	6	= Total Cover	
Herb Stratum (Plot size: **5' RAD**)			
1. **Anthoxanthum odoratum**	**35**	**X**	**FACU**
2. **Poa pratensis**	**35**	**X**	**FACU**
3. **Galium mollugo**	**35**	**X**	**FACU**
4. **Asclepias syriaca**	**3**		**UPL**
5. **Potentilla simplex**	**3**		**FACU**
6. **Fragaria virginiana**	**3**		**FACU**
7.			
8.			
9.			
10.			
11.			
12.			
	114	= Total Cover	
Woody Vines (Plot size:)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Dominance Test Worksheet:

Dominants OBL, FACW, FAC: **3** (A)

Dominants across all strata: **7** (B)

% Dominants OBL, FACW, FAC: **43%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	x 1 =	
FACW **3**	x 2 =	**6**
FAC **18**	x 3 =	**54**
FACU **117**	x 4 =	**468**
UPL **3**	x 5 =	**15**
Sum: **141** (A)		**543** (B)

Prevalence Index = B/A = **3.85**

Hydrophytic Vegetation Indicators:

_____ Dominance Test is > 50%

_____ Prevalence Index is <= 3.0

_____ Problematic Hydrophytic Vegetation[1] (explain)

_____ Rapid Test for Hydrophytic Vegetation

_____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **NO**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-GE-304-Wet

Project Site:	K42	City/County:	Georgia/Franklin	Samp. Date:	5/18/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-GE-304-Wet
Investigator(s):	LK	Section, Township, Range:	Georgia		
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	Concave	Slope (%):	0-6
Subregion (LRR or MLRA):	LRR R	Lat: 44.726411	Long: -73.149368	Datum:	NAD 83
Soil Map Unit:	Enosburg Loamy fine sand			NWI Class:	PEM

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	YES	Is This Sample Area Within a Wetland? YES
Hydric Soil Present?	YES	
Wetland Hydrology Present?	YES	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

	Surface Water (A1)		Water-Stained Leaves (B9)
	High Water Table (A2)		Aquatic Fauna (B13)
X	Saturation (A3)		Marl Deposits (B13)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)
	Iron Deposits (B5)		Thin Muck Surface (C7)
	Inundation Visible on Aerial (B7)		Other (Explain in Remarks)
	Sparsely Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)
	Drainage Patterns (B10)
	Moss Trim Lines (B16)
	Dry-Season Water Table (C2)
	Crayfish Burrows (C8)
	Saturation Visible on Aerial (C9)
	Stunted or Stressed Plants (D1)
	Geomorphic Position (D2)
	Shallow Aquitard (D3)
	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?		Depth (inches):			
Water Table Present?		Depth (inches):		Wetland Hydrology Present?	YES
Saturation Present?	X	Depth (inches):	4		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

0.39" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22 near normal (NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5y 5/2	96	10YR 3/4	4	c	pl	SILT LOAM	
8-16	5y 5/2	95	10yr 3/4	5	c	m	SILT LOAM	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

	Histosol (A1)		Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
	Histic Epipedon (A2)		Thin Dark Surface (S9) (LRR R, MLRA 149B)
	Black Histic (A3)		Loamy Mucky Mineral (F1) (LRR K, L)
	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
	Stratified Layers (A5)	X	Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)		Redox Depressions (F8)
	Sandy Gleyed Matrix (S4)		
	Sandy Redox (S5)		
	Stripped Matrix (S6)		
	Dark Surface (S7) (LRR R, MLRA 149B)		

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

Indicators for Problematic Hydric Soils[3]:

2 cm Muck (A10) (LRR K, L, MLRA 149B)
Coast Prairie Redox (A16) (LRR K, L, R)
5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Dark Surface (S9) (LRR K, L, M)
Polyvalue Below Surface (S8) (LRR K, L)
Thin Dark Surface (S9) (LRR K, L)
Iron-Manganese Masses (F12) (LRR K, L, R)
Piedmont Floodplain Soils (F19) (MLRA 149B)
Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Red Parent Material (F21)
Very Shallow Dark Surface (TF12)
Other (Explain in Remarks)

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? YES

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-GE-304-Wet**

		Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size: **30' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)				
1.	**Spiraea tomentosa**	**15**	**X**	**FACW**
2.				
3.				
4.				
5.				
6.				
7.				
		15	= Total Cover	
Herb Stratum (Plot size: **5' RAD**)				
1.	**Phalaris arundinacea**	**63**	**X**	**FACW**
2.	**Onoclea sensibilis**	**32**	**X**	**FACW**
3.	**Equisetum arvense**	**3**		**FAC**
4.	**Poa palustris**	**3**		**FACW**
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		101	= Total Cover	
Woody Vines (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
			= Total Cover	

Dominance Test Worksheet:

# Dominants OBL, FACW, FAC:	**3**	(A)
# Dominants across all strata:	**3**	(B)
% Dominants OBL, FACW, FAC:	**100%**	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	x 1 =	
FACW **113**	x 2 =	**226**
FAC **3**	x 3 =	**9**
FACU	x 4 =	
UPL	x 5 =	
Sum: **116** (A)		**235** (B)
Prevalence Index	= B/A =	**2.03**

Hydrophytic Vegetation Indicators:

- **X** Dominance Test is > 50%
- **X** Prevalence Index is <= 3.0
- ____ Problematic Hydrophytic Vegetation[1] (explain)
- ____ Rapid Test for Hydrophytic Vegetation
- ____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **YES**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-GE-308-Up

Project Site:	K42	City/County:	Georgia/Franklin	Samp. Date:	5/18/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-GE-308-Up
Investigator(s):	LK	Section, Township, Range:	Georgia		
Landform (hillslope, terrace, etc.):	Hillslope	Local relief (concave, convex, none):	Convex	Slope (%):	0-6
Subregion (LRR or MLRA):	LRR R	Lat: 44.740553	Long: -73.144483	Datum:	NAD 83
Soil Map Unit:	Massena extremely stony loam			NWI Class:	Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	NO	Is This Sample Area Within a Wetland? NO
Hydric Soil Present?	NO	
Wetland Hydrology Present?	NO	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?		Depth (inches):	
Water Table Present?		Depth (inches):	
Saturation Present?		Depth (inches):	

Wetland Hydrology Present? NO

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

0.39" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22 near normal (NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10yr 3/2	100					SILT LOAM	
10-16	10yr 5/4	90	10YR 3/2	10	c	m	SILT LOAM	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified 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) (LRR R, MLRA 149B)
- ___ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- ___ Thin Dark Surface (S9) (LRR R, MLRA 149B)
- ___ Loamy Mucky Mineral (F1) (LRR K, L)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ___ Coast Prairie Redox (A16) (LRR K, L, R)
- ___ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ___ Dark Surface (S9) (LRR K, L, M)
- ___ Polyvalue Below Surface (S8) (LRR K, L)
- ___ Thin Dark Surface (S9) (LRR K, L)
- ___ Iron-Manganese Masses (F12) (LRR K, L, R)
- ___ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ___ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? NO

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-GE-308-Up**

	Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size: **30' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: **5' RAD**)			
1. **Solidago canadensis**	63	X	FACU
2. **Rubus idaeus**	15		FACU
3. **Carex brevior**	15		FAC
4. **Poa palustris**	3		FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	96 = Total Cover		
Woody Vines (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Dominance Test Worksheet:

Dominants OBL, FACW, FAC: _____ (A)

Dominants across all strata: **1** (B)

% Dominants OBL, FACW, FAC: _____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	x 1 =	
FACW **3**	x 2 =	**6**
FAC **15**	x 3 =	**45**
FACU **78**	x 4 =	**312**
UPL	x 5 =	
Sum: **96** (A)		**363** (B)

Prevalence Index = B/A = **3.78**

Hydrophytic Vegetation Indicators:

_____ Dominance Test is > 50%

_____ Prevalence Index is <= 3.0

_____ Problematic Hydrophytic Vegetation[1] (explain)

_____ Rapid Test for Hydrophytic Vegetation

_____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **NO**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-GE-308-Wet

Project Site:	K42	City/County:	Georgia/Franklin	Samp. Date:	5/18/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-GE-308-Wet
Investigator(s):	LK	Section, Township, Range:	Georgia		
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	Concave	Slope (%):	0-6
Subregion (LRR or MLRA):	LRR R	Lat: 44.740509	Long: -73.144381	Datum:	NAD 83
Soil Map Unit:	Massena extremely stony loam			NWI Class:	PEM

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	YES	Is This Sample Area Within a Wetland? YES
Hydric Soil Present?	YES	
Wetland Hydrology Present?	YES	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

	Surface Water (A1)	X	Water-Stained Leaves (B9)
X	High Water Table (A2)		Aquatic Fauna (B13)
	Saturation (A3)		Marl Deposits (B13)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)
	Iron Deposits (B5)		Thin Muck Surface (C7)
	Inundation Visible on Aerial (B7)		Other (Explain in Remarks)
	Sparsely Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)
	Drainage Patterns (B10)
	Moss Trim Lines (B16)
	Dry-Season Water Table (C2)
	Crayfish Burrows (C8)
	Saturation Visible on Aerial (C9)
X	Stunted or Stressed Plants (D1)
	Geomorphic Position (D2)
	Shallow Aquitard (D3)
	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?		Depth (inches):		Wetland Hydrology Present?	YES
Water Table Present?		Depth (inches):			
Saturation Present?	X	Depth (inches):	1		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

0.39" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22 near normal (NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-30							MUCK	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X	Histosol (A1)		Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
	Histic Epipedon (A2)		Thin Dark Surface (S9) (LRR R, MLRA 149B)
	Black Histic (A3)		Loamy Mucky Mineral (F1) (LRR K, L)
	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
	Stratified Layers (A5)		Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)		Redox Depressions (F8)
	Sandy Gleyed Matrix (S4)		
	Sandy Redox (S5)		
	Stripped Matrix (S6)		
	Dark Surface (S7) (LRR R, MLRA 149B)		

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

Indicators for Problematic Hydric Soils[3]:

	2 cm Muck (A10) (LRR K, L, MLRA 149B)
	Coast Prairie Redox (A16) (LRR K, L, R)
	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
	Dark Surface (S9) (LRR K, L, M)
	Polyvalue Below Surface (S8) (LRR K, L)
	Thin Dark Surface (S9) (LRR K, L)
	Iron-Manganese Masses (F12) (LRR K, L, R)
	Piedmont Floodplain Soils (F19) (MLRA 149B)
	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
	Red Parent Material (F21)
	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? YES

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-GE-308-Wet**

	Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size: **30' RAD**)			
1. **Salix nigra**	**35**	**X**	**OBL**
2.			
3.			
4.			
5.			
6.			
7.			
	35	= Total Cover	
Sapling Stratum (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Shrub Stratum (Plot size: **15' RAD**)			
1. **Cornus sericea**	**3**	**X**	**FACW**
2.			
3.			
4.			
5.			
6.			
7.			
	3	= Total Cover	
Herb Stratum (Plot size: **5' RAD**)			
1. **Phalaris arundinacea**	**63**	**X**	**FACW**
2. **Impatiens capensis**	**15**		**FACW**
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	78	= Total Cover	
Woody Vines (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Dominance Test Worksheet:

# Dominants OBL, FACW, FAC:	**3**	(A)
# Dominants across all strata:	**3**	(B)
% Dominants OBL, FACW, FAC:	**100%**	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	**35** x 1 =	**35**
FACW	**81** x 2 =	**162**
FAC	x 3 =	
FACU	x 4 =	
UPL	x 5 =	
Sum:	**116** (A)	**197** (B)

Prevalence Index = B/A = **1.70**

Hydrophytic Vegetation Indicators:

- **X** Dominance Test is > 50%
- **X** Prevalence Index is <= 3.0
- ____ Problematic Hydrophytic Vegetation[1] (explain)
- ____ Rapid Test for Hydrophytic Vegetation
- ____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **YES**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-GE-313-Up

Project Site:	K42	City/County:	Georgia/Franklin	Samp. Date:	5/17/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-GE-313-Up
Investigator(s):	LK	Section, Township, Range:	Georgia		
Landform (hillslope, terrace, etc.):	Hillslope	Local relief (concave, convex, none):	Convex	Slope (%):	0-3
Subregion (LRR or MLRA):	LRR R	Lat: 44.759309	Long: -73.137170	Datum:	NAD 83
Soil Map Unit:	Scantic silt loam			NWI Class:	Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No — Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No — (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	NO	Is This Sample Area Within a Wetland? NO
Hydric Soil Present?	YES	
Wetland Hydrology Present?	NO	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?		Depth (inches):	
Water Table Present?		Depth (inches):	
Saturation Present?		Depth (inches):	

Wetland Hydrology Present? NO

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

0.39" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22 near normal(NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10yr 3/2	100					SILT LOAM	
3-8	10yr 5/3	100					FINE SANDY LOAM	
8-16	10YR 5/1	95	10yr 5/4	5	c	m	FINE SANDY LOAM	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified 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) (LRR R, MLRA 149B)
- ___ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- ___ Thin Dark Surface (S9) (LRR R, MLRA 149B)
- ___ Loamy Mucky Mineral (F1) (LRR K, L)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ___ Coast Prairie Redox (A16) (LRR K, L, R)
- ___ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ___ Dark Surface (S9) (LRR K, L, M)
- ___ Polyvalue Below Surface (S8) (LRR K, L)
- ___ Thin Dark Surface (S9) (LRR K, L)
- ___ Iron-Manganese Masses (F12) (LRR K, L, R)
- ___ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ___ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? YES

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-GE-313-Up**

		Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size: **30' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Herb Stratum (Plot size: **5' RAD**)				
1.	**Rubus idaeus**	**35**	**X**	**FACU**
2.	**Solidago canadensis**	**35**	**X**	**FACU**
3.	**Claytonia virginica**	**15**		**FACU**
4.	**Phalaris arundinacea**	**3**		**FACW**
5.	**Euthamia graminifolia**	**3**		**FAC**
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		91 = Total Cover		
Woody Vines (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
		= Total Cover		

Dominance Test Worksheet:

Dominants OBL, FACW, FAC: _____ (A)

Dominants across all strata: **2** (B)

% Dominants OBL, FACW, FAC: _____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	x 1 =	
FACW **3**	x 2 =	**6**
FAC **3**	x 3 =	**9**
FACU **85**	x 4 =	**340**
UPL	x 5 =	
Sum: **91** (A)		**355** (B)

Prevalence Index = B/A = **3.90**

Hydrophytic Vegetation Indicators:

_____ Dominance Test is > 50%

_____ Prevalence Index is <= 3.0

_____ Problematic Hydrophytic Vegetation[1] (explain)

_____ Rapid Test for Hydrophytic Vegetation

_____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **NO**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-GE-313-Wet

Project Site:	K42	City/County:	Georgia/Franklin	Samp. Date:	5/17/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-GE-313-Wet
Investigator(s):	LK	Section, Township, Range:	Georgia		
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	Concave	Slope (%):	0-3
Subregion (LRR or MLRA):	LRR R	Lat: 44.759413	Long: -73.137084	Datum:	NAD 83
Soil Map Unit:	Scantic silt loam			NWI Class:	PEM

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	YES	Is This Sample Area Within a Wetland? YES
Hydric Soil Present?	YES	
Wetland Hydrology Present?	YES	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

Surface Water (A1)	X	Water-Stained Leaves (B9)
High Water Table (A2)		Aquatic Fauna (B13)
Saturation (A3)		Marl Deposits (B13)
Water Marks (B1)		Hydrogen Sulfide Odor (C1)
Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)
Drift Deposits (B3)		Presence of Reduced Iron (C4)
Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)
Iron Deposits (B5)		Thin Muck Surface (C7)
Inundation Visible on Aerial (B7)		Other (Explain in Remarks)
Sparsely Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?		Depth (inches):	
Water Table Present?		Depth (inches):	Wetland Hydrology Present? YES
Saturation Present?		Depth (inches):	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

0.39" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22 near normal(NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/1	100					MUCKY LOAM	
8-12	10YR 5 /2	90	10yr 5/6	10	c	m	SILT LOAM	
8-16	10y 5/1	85	10YR 5/6	15	c	m	SILT LOAM	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
X Histic Epipedon (A2)		Thin Dark Surface (S9) (LRR R, MLRA 149B)
Black Histic (A3)		Loamy Mucky Mineral (F1) (LRR K, L)
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	X	Depleted Matrix (F3)
Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)
Thick Dark Surface (A12)		Depleted Dark Surface (F7)
Sandy Mucky Mineral (S1)		Redox Depressions (F8)
Sandy Gleyed Matrix (S4)		
Sandy Redox (S5)		
Stripped Matrix (S6)		
Dark Surface (S7) (LRR R, MLRA 149B)		

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

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S9) (LRR K, L, M)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? YES

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-GE-313-Wet**

		Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size: **30' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)				
1.	**Fraxinus pennsylvanica**	**3**	**X**	**FACW**
2.				
3.				
4.				
5.				
6.				
7.				
		3 = Total Cover		
Shrub Stratum (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Herb Stratum (Plot size: **5' RAD**)				
1.	**Onoclea sensibilis**	**35**	**X**	**FACW**
2.	**Phalaris arundinacea**	**35**	**X**	**FACW**
3.	**Solidago canadensis**	**15**		**FACU**
4.	**Scirpus atrovirens**	**15**		**OBL**
5.	**Fragaria vesca**	**3**		**UPL**
6.	**Lysimachia thyrsiflora**	**1**		**OBL**
7.				
8.				
9.				
10.				
11.				
12.				
		104 = Total Cover		
Woody Vines (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
		= Total Cover		

Dominance Test Worksheet:

# Dominants OBL, FACW, FAC:	**3**	(A)
# Dominants across all strata:	**3**	(B)
% Dominants OBL, FACW, FAC:	**100%**	(A/B)

Prevalence Index Worksheet:

Total % Cover of:			Multiply By:
OBL	**16**	x 1 =	**16**
FACW	**73**	x 2 =	**146**
FAC		x 3 =	
FACU	**15**	x 4 =	**60**
UPL	**3**	x 5 =	**15**
Sum:	**107** (A)		**237** (B)

Prevalence Index = B/A = **2.21**

Hydrophytic Vegetation Indicators:

- **X** Dominance Test is > 50%
- **X** Prevalence Index is <= 3.0
- ___ Problematic Hydrophytic Vegetation[1] (explain)
- ___ Rapid Test for Hydrophytic Vegetation
- ___ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **YES**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-GE-1Up

Project Site: K42 | City/County: Georgia/Franklin | Samp. Date: 5/17/2022
Applicant/Owner: Velco | State: Vermont | Sampling Point: 2022-GE-1Up
Investigator(s): LK | Section, Township, Range: Georgia
Landform (hillslope, terrace, etc.): Terrace | Local relief (concave, convex, none): Convex | Slope (%): 0-8
Subregion (LRR or MLRA): LRR R | Lat: 44.780044 | Long: -73.130455 | Datum: NAD 83
Soil Map Unit: Georgia extremely stony loam | NWI Class: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? No | Normal Circumstances? Yes
Are Vegetation, Soil, or Hydrology naturally problematic? No | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	No	Is This Sample Area Within a Wetland? NO
Hydric Soil Present?	YES	
Wetland Hydrology Present?	NO	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? ___ Depth (inches): ___
Water Table Present? ___ Depth (inches): ___
Saturation Present? ___ Depth (inches): ___

Wetland Hydrology Present? NO

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
0.39" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22 near normal(NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/3	100					SANDY LOAM	
6-16	10YR 3/2	98	10yr 3/6	2	C	M	FINE SANDY LOAM	

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified 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) (LRR R, MLRA 149B)
- ___ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- ___ Thin Dark Surface (S9) (LRR R, MLRA 149B)
- ___ Loamy Mucky Mineral (F1) (LRR K, L)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ___ Coast Prairie Redox (A16) (LRR K, L, R)
- ___ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ___ Dark Surface (S9) (LRR K, L, M)
- ___ Polyvalue Below Surface (S8) (LRR K, L)
- ___ Thin Dark Surface (S9) (LRR K, L)
- ___ Iron-Manganese Masses (F12) (LRR K, L, R)
- ___ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ___ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):
Type: Bedrock
Depth (inches): 14"

Hydric Soil Present? YES

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-GE-1Up**

	Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size: **30' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: **5' RAD**)			
1. **Rubus idaeus**	32	X	FACU
2. **Rubus allegheniensis**	67	X	FACU
3. **Equisetum sylvaticum**	67	X	FACW
4. **Fallopia scandens**	21		FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	187	= Total Cover	
Woody Vines (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Dominance Test Worksheet:

Dominants OBL, FACW, FAC: **1** (A)

Dominants across all strata: **3** (B)

% Dominants OBL, FACW, FAC: **33%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	x 1 =	
FACW **67**	x 2 =	**134**
FAC **21**	x 3 =	**63**
FACU **99**	x 4 =	**396**
UPL	x 5 =	
Sum: **187** (A)		**593** (B)

Prevalence Index = B/A = **3.17**

Hydrophytic Vegetation Indicators:

_____ Dominance Test is > 50%

_____ Prevalence Index is <= 3.0

_____ Problematic Hydrophytic Vegetation[1] (explain)

_____ Rapid Test for Hydrophytic Vegetation

_____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **NO**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-GE-1Wet

Project Site: K42 | City/County: Georgia/Franklin | Samp. Date: 5/17/2022

Applicant/Owner: Velco | State: Vermont | Sampling Point: 2022-GE-1Wet

Investigator(s): RS | Section, Township, Range: Georgia

Landform (hillslope, terrace, etc.): Swale | Local relief (concave, convex, none): Concave | Slope (%): 0-8

Subregion (LRR or MLRA): LRR R | Lat: 44.780225 | Long: -73.130427 | Datum: NAD 83

Soil Map Unit: Georgia extremely stony loam | NWI Class: PEM

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No | Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	YES	Is This Sample Area Within a Wetland? YES
Hydric Soil Present?	YES	
Wetland Hydrology Present?	YES	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

				Secondary Indicators (minimum of two required)	
X	Surface Water (A1)	X	Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
X	High Water Table (A2)		Aquatic Fauna (B13)	X	Drainage Patterns (B10)
X	Saturation (A3)		Marl Deposits (B13)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)		Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible on Aerial (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsely Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? ____ Depth (inches): ____

Water Table Present? ____ Depth (inches): ____

Saturation Present? ____ Depth (inches): ____

Wetland Hydrology Present? YES

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

0.39" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22 near normal(NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6		100					MUCK	
6-16	2.5y 5/2	90	2.5Y 6/6	10	C	M	SANDY CLAY	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

	Histosol (A1)		Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
	Histic Epipedon (A2)		Thin Dark Surface (S9) (LRR R, MLRA 149B)
	Black Histic (A3)		Loamy Mucky Mineral (F1) (LRR K, L)
	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
	Stratified Layers (A5)	X	Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)		Redox Depressions (F8)
	Sandy Gleyed Matrix (S4)		
	Sandy Redox (S5)		
	Stripped Matrix (S6)		
	Dark Surface (S7) (LRR R, MLRA 149B)		

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

Indicators for Problematic Hydric Soils[3]:

	2 cm Muck (A10) (LRR K, L, MLRA 149B)
	Coast Prairie Redox (A16) (LRR K, L, R)
	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
	Dark Surface (S9) (LRR K, L, M)
	Polyvalue Below Surface (S8) (LRR K, L)
	Thin Dark Surface (S9) (LRR K, L)
	Iron-Manganese Masses (F12) (LRR K, L, R)
	Piedmont Floodplain Soils (F19) (MLRA 149B)
	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
	Red Parent Material (F21)
	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: ____

Depth (inches): ____

Hydric Soil Present? YES

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-GE-1Wet**

	Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size: **30' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)			
1. **Alnus incana**	15	X	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	15 = Total Cover		
Herb Stratum (Plot size: **5' RAD**)			
1. **Onoclea sensibilis**	38	X	FACW
2. **Impatiens capensis**	38	X	FACW
3. **Caltha palustris**	10		OBL
4. **Phalaris arundinacea**	5		FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	91 = Total Cover		
Woody Vines (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Dominance Test Worksheet:

Dominants OBL, FACW, FAC: **3** (A)

Dominants across all strata: **3** (B)

% Dominants OBL, FACW, FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	**10** x 1 =	**10**
FACW	**96** x 2 =	**192**
FAC	x 3 =	
FACU	x 4 =	
UPL	x 5 =	
Sum:	**106** (A)	**202** (B)

Prevalence Index = B/A = **1.91**

Hydrophytic Vegetation Indicators:

- **X** Dominance Test is > 50%
- **X** Prevalence Index is <= 3.0
- ____ Problematic Hydrophytic Vegetation[1] (explain)
- ____ Rapid Test for Hydrophytic Vegetation
- ____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **YES**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-SA-1-Up

Project Site:	K42	City/County:	St Albans /Franklin	Samp. Date:	5/17/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-SA-1-Up
Investigator(s):	RS	Section, Township, Range:	St Albans		
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	Convex	Slope (%):	
Subregion (LRR or MLRA):	LRR R	Lat: 44.780048	Long: -73.130455	Datum:	NAD 83
Soil Map Unit:				NWI Class:	Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	NO	Is This Sample Area Within a Wetland? NO
Hydric Soil Present?	NO	
Wetland Hydrology Present?	NO	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?		Depth (inches):	
Water Table Present?		Depth (inches):	
Saturation Present?		Depth (inches):	

Wetland Hydrology Present? NO

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

0.39" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22 near normal(NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/3	100					FINE SANDY LOAM	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified 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) (LRR R, MLRA 149B)
- ___ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- ___ Thin Dark Surface (S9) (LRR R, MLRA 149B)
- ___ Loamy Mucky Mineral (F1) (LRR K, L)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ___ Coast Prairie Redox (A16) (LRR K, L, R)
- ___ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ___ Dark Surface (S9) (LRR K, L, M)
- ___ Polyvalue Below Surface (S8) (LRR K, L)
- ___ Thin Dark Surface (S9) (LRR K, L)
- ___ Iron-Manganese Masses (F12) (LRR K, L, R)
- ___ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ___ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 6

Hydric Soil Present? NO

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-SA-1-Up**

	Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size: **30' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)			
1. **Berberis thunbergii**	15	X	FACU
2. **Lonicera morrowii**	15	X	FACU
3. **Thuja occidentalis**	15	X	FACW
4. **Rubus idaeus**	15	X	FACU
5.			
6.			
7.			
	60	= Total Cover	
Herb Stratum (Plot size: **5' RAD**)			
1. **Galium mollugo**	38	X	FACU
2. **Tussilago farfara**	15	X	FACU
3. **Thalictrum pubescens**	15	X	FACW
4. **Asclepias syriaca**	15	X	UPL
5. **Fragaria virginiana**	15	X	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	98	= Total Cover	
Woody Vines (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Dominance Test Worksheet:

Dominants OBL, FACW, FAC: **2** (A)

Dominants across all strata: **9** (B)

% Dominants OBL, FACW, FAC: **22%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	x 1 =	
FACW **30**	x 2 =	**60**
FAC	x 3 =	
FACU **113**	x 4 =	**452**
UPL **15**	x 5 =	**75**
Sum: **158** (A)		**587** (B)

Prevalence Index = B/A = **3.72**

Hydrophytic Vegetation Indicators:

_____ Dominance Test is > 50%

_____ Prevalence Index is <= 3.0

_____ Problematic Hydrophytic Vegetation[1] (explain)

_____ Rapid Test for Hydrophytic Vegetation

_____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **NO**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-SA-1-wet

Project Site:	K42	City/County:	St Albans /Franklin	Samp. Date:	5/17/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-SA-1-wet
Investigator(s):	BG	Section, Township, Range:	St Albans		
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	Concave	Slope (%):	
Subregion (LRR or MLRA):	LRR R	Lat: 44.780228	Long: -73.130423	Datum:	NAD 83
Soil Map Unit:				NWI Class:	PEM

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	YES	Is This Sample Area Within a Wetland? YES
Hydric Soil Present?	YES	
Wetland Hydrology Present?	YES	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
High Water Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)
X Saturation (A3)	Marl Deposits (B13)	Moss Trim Lines (B16)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Crayfish Burrows (C8)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Saturation Visible on Aerial (C9)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Thin Muck Surface (C7)	Geomorphic Position (D2)
Inundation Visible on Aerial (B7)	Other (Explain in Remarks)	Shallow Aquitard (D3)
Sparsely Vegetated Concave Surface (B8)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present?	X	Depth (inches):	Surface	Wetland Hydrology Present? YES
Water Table Present?		Depth (inches):		
Saturation Present?	X	Depth (inches):	Surface	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

0.39" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22 near normal(NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/2	100					LOAM	
3-9	10YR 5/1	75	10YR 4/6	25	C	M	CLAY LOAM	
9-16	5Y 6/2	95	10YR 4/6	5	C	M	CLAY LOAM	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)	Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)	Thin Dark Surface (S9) (LRR R, MLRA 149B)	Coast Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3)	Loamy Mucky Mineral (F1) (LRR K, L)	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Dark Surface (S9) (LRR K, L, M)
Stratified Layers (A5)	X Depleted Matrix (F3)	Polyvalue Below Surface (S8) (LRR K, L)
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	Thin Dark Surface (S9) (LRR K, L)
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Gleyed Matrix (S4)		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Redox (S5)		Red Parent Material (F21)
Stripped Matrix (S6)		Very Shallow Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA 149B)		Other (Explain in Remarks)

Indicators for Problematic Hydric Soils[3]:

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? YES

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-SA-1-wet**

		Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size: **30' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Herb Stratum (Plot size: **5' RAD**)				
1.	**Phalaris arundinacea**	**32**	**X**	**FACW**
2.	**Equisetum arvense**	**15**	**X**	**FAC**
3.	**Onoclea sensibilis**	**15**	**X**	**FACW**
4.	**Viola cucullata**	**3**		**OBL**
5.	**Thelypteris palustris**	**3**		**FACW**
6.	**Vicia cracca L.**	**3**		**UPL**
7.	**Lythrum salicaria**	**3**		**OBL**
8.	**Eupatorium perfoliatum**	**3**		**FACW**
9.				
10.				
11.				
12.				
		77	= Total Cover	
Woody Vines (Plot size:)				
1.				
2.				
3.				
4.				
5.				
		= Total Cover		

Dominance Test Worksheet:

# Dominants OBL, FACW, FAC:	**3**	(A)
# Dominants across all strata:	**3**	(B)
% Dominants OBL, FACW, FAC:	**100%**	(A/B)

Prevalence Index Worksheet:

Total % Cover of:			Multiply By:
OBL	**6**	x 1 =	**6**
FACW	**53**	x 2 =	**106**
FAC	**15**	x 3 =	**45**
FACU		x 4 =	
UPL	**3**	x 5 =	**15**
Sum:	**77** (A)		**172** (B)

Prevalence Index = B/A = **2.23**

Hydrophytic Vegetation Indicators:

- **X** Dominance Test is > 50%
- **X** Prevalence Index is <= 3.0
- ____ Problematic Hydrophytic Vegetation[1] (explain)
- ____ Rapid Test for Hydrophytic Vegetation
- ____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **YES**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-SA-3-Up

Project Site: K42 City/County: St Albans /Franklin Samp. Date: 5/17/2022
Applicant/Owner: Velco State: Vermont Sampling Point: 2022-SA-3-Up
Investigator(s): RS Section, Township, Range: St Albans
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 0-6
Subregion (LRR or MLRA): LRR R Lat: 44.810787 Long: -73.1176662 Datum: NAD 83
Soil Map Unit: Massena extremely stony loam NWI Class: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? No Normal Circumstances? Yes
Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present? NO
Hydric Soil Present? NO
Wetland Hydrology Present? NO
Is This Sample Area Within a Wetland? NO

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? Depth (inches):
Water Table Present? Depth (inches):
Saturation Present? Depth (inches):
Wetland Hydrology Present? NO

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
0.39" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22 near normal(NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10yr 3/3	100					SANDY LOAM	
6-14	10YR 3/6	100					SAND	

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

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified 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) (LRR R, MLRA 149B)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

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

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S9) (LRR K, L, M)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

Restrictive Layer (if observed):
Type:
Depth (inches):
Hydric Soil Present? NO

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-SA-3-Up**

		Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size: **30' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)				
1.	**Frangula alnus**	**15**	**X**	**FAC**
2.	**Lonicera morrowii**	**15**	**X**	**FACU**
3.	**Rhus hirta**	**15**	**X**	**FACU**
4.				
5.				
6.				
7.				
		45 = Total Cover		
Herb Stratum (Plot size: **5' RAD**)				
1.	**Solidago canadensis**	**38**	**X**	**FACU**
2.	**Solidago rugosa**	**38**	**X**	**FAC**
3.	**Pastinaca sativa**	**15**		**UPL**
4.	**Rubus idaeus**	**15**		**FACU**
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		106 = Total Cover		
Woody Vines (Plot size:)				
1.				
2.				
3.				
4.				
5.				
		= Total Cover		

Dominance Test Worksheet:

Dominants OBL, FACW, FAC: **2** (A)

Dominants across all strata: **5** (B)

% Dominants OBL, FACW, FAC: **40%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	x 1 =	
FACW	x 2 =	
FAC **53**	x 3 =	**159**
FACU **83**	x 4 =	**332**
UPL **15**	x 5 =	**75**
Sum: **151** (A)		**566** (B)

Prevalence Index = B/A = **3.75**

Hydrophytic Vegetation Indicators:

_____ Dominance Test is > 50%

_____ Prevalence Index is <= 3.0

_____ Problematic Hydrophytic Vegetation[1] (explain)

_____ Rapid Test for Hydrophytic Vegetation

_____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **NO**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-SA-3-wet

Project Site:	K42	City/County:	St Albans /Franklin	Samp. Date:	5/17/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-SA-3-wet
Investigator(s):	RS	Section, Township, Range:	St Albans		
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	Concave	Slope (%):	0-6
Subregion (LRR or MLRA):	LRR R	Lat: 44.810901	Long: -73.11772	Datum:	NAD 83
Soil Map Unit:	Massena extremely stony loam			NWI Class:	PEM

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	YES	Is This Sample Area Within a Wetland? YES
Hydric Soil Present?	YES	
Wetland Hydrology Present?	YES	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

	Surface Water (A1)	Water-Stained Leaves (B9)
	High Water Table (A2)	Aquatic Fauna (B13)
X	Saturation (A3)	Marl Deposits (B13)
	Water Marks (B1)	Hydrogen Sulfide Odor (C1)
	Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)
	Drift Deposits (B3)	Presence of Reduced Iron (C4)
	Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)
	Iron Deposits (B5)	Thin Muck Surface (C7)
	Inundation Visible on Aerial (B7)	Other (Explain in Remarks)
	Sparsely Vegetated Concave Surface (B8)	

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)
	Drainage Patterns (B10)
	Moss Trim Lines (B16)
	Dry-Season Water Table (C2)
	Crayfish Burrows (C8)
	Saturation Visible on Aerial (C9)
	Stunted or Stressed Plants (D1)
	Geomorphic Position (D2)
	Shallow Aquitard (D3)
	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?		Depth (inches):			
Water Table Present?	X	Depth (inches):	Surface	Wetland Hydrology Present?	YES
Saturation Present?		Depth (inches):			

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

0.39" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22 near normal(NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2	100					FINE SANDY LOAM	
6-12	10YR 6/1	100					FINE SANDY LOAM	
12-18	2.5Y 5/2	90	2.5y 6/6	10	C	M	FINE SANDY LOAM	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

	Histosol (A1)	Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
	Histic Epipedon (A2)	Thin Dark Surface (S9) (LRR R, MLRA 149B)
	Black Histic (A3)	Loamy Mucky Mineral (F1) (LRR K, L)
	Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)
	Stratified Layers (A5)	Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)
	Thick Dark Surface (A12)	Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)	Redox Depressions (F8)
	Sandy Gleyed Matrix (S4)	
	Sandy Redox (S5)	
	Stripped Matrix (S6)	
	Dark Surface (S7) (LRR R, MLRA 149B)	

X = Depleted Matrix (F3)

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

Indicators for Problematic Hydric Soils[3]:

	2 cm Muck (A10) (LRR K, L, MLRA 149B)
	Coast Prairie Redox (A16) (LRR K, L, R)
	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
	Dark Surface (S9) (LRR K, L, M)
	Polyvalue Below Surface (S8) (LRR K, L)
	Thin Dark Surface (S9) (LRR K, L)
	Iron-Manganese Masses (F12) (LRR K, L, R)
	Piedmont Floodplain Soils (F19) (MLRA 149B)
	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
	Red Parent Material (F21)
	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? YES

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-SA-3-wet**

	Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size: **30' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)			
1. **Salix bebbiana**	32	X	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	32 = Total Cover		
Herb Stratum (Plot size: **5' RAD**)			
1. **Onoclea sensibilis**	63	X	FACW
2. **Equisetum arvense**	38	X	FAC
3. **Galium palustre**	32	X	OBL
4. **Solidago rugosa**	15		FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	148 = Total Cover		
Woody Vines (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Dominance Test Worksheet:

# Dominants OBL, FACW, FAC:	4	(A)
# Dominants across all strata:	4	(B)
% Dominants OBL, FACW, FAC:	100%	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	32	x 1 = 32
FACW	95	x 2 = 190
FAC	53	x 3 = 159
FACU		x 4 =
UPL		x 5 =
Sum:	180 (A)	381 (B)

Prevalence Index = B/A = **2.12**

Hydrophytic Vegetation Indicators:

- X Dominance Test is > 50%
- X Prevalence Index is <= 3.0
- Problematic Hydrophytic Vegetation[1] (explain)
- Rapid Test for Hydrophytic Vegetation
- Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **YES**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-GE-104-Up

Project Site: K42 | City/County: Georgia/Franklin | Samp. Date: 5/17/2022
Applicant/Owner: Velco | State: Vermont | Sampling Point: 2022-GE-104-Up
Investigator(s): RS | Section, Township, Range: Georgia
Landform (hillslope, terrace, etc.): Terrace | Local relief (concave, convex, none): Convex | Slope (%): 0-3
Subregion (LRR or MLRA): LRR R | Lat: 44.771755 | Long: -73.132578 | Datum: NAD 83
Soil Map Unit: Scantic silt loam | NWI Class: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? No | Normal Circumstances? Yes
Are Vegetation, Soil, or Hydrology naturally problematic? No | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	NO	Is This Sample Area Within a Wetland? NO
Hydric Soil Present?	YES	
Wetland Hydrology Present?	YES	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

Surface Water (A1)	Water-Stained Leaves (B9)	
High Water Table (A2)	Aquatic Fauna (B13)	
Saturation (A3)	Marl Deposits (B13)	
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	
Sediment Deposits (B2)	X Oxidized Rhizospheres on Living Roots (C3)	
Drift Deposits (B3)	Presence of Reduced Iron (C4)	
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	
Iron Deposits (B5)	Thin Muck Surface (C7)	
Inundation Visible on Aerial (B7)	Other (Explain in Remarks)	
Sparsely Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

Surface Soil Cracks (B6)
Drainage Patterns (B10)
Moss Trim Lines (B16)
Dry-Season Water Table (C2)
Crayfish Burrows (C8)
Saturation Visible on Aerial (C9)
Stunted or Stressed Plants (D1)
Geomorphic Position (D2)
Shallow Aquitard (D3)
Microtopographic Relief (D4)
FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? | Depth (inches):
Water Table Present? | Depth (inches):
Saturation Present? | Depth (inches):
Wetland Hydrology Present? YES

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
0.39" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22 near normal(NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10yr 4/1	99	10yr 3/4	1	C	pl	SANDY LOAM	
8-16	2.5y 5/3	70	2.5Y 5/6	30	c	m	SANDY LOAM	

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

Hydric Soil Indicators:

Histosol (A1)	Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	
Histic Epipedon (A2)	Thin Dark Surface (S9) (LRR R, MLRA 149B)	
Black Histic (A3)	Loamy Mucky Mineral (F1) (LRR K, L)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	
Stratified Layers (A5)	X Depleted Matrix (F3)	
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	
Sandy Gleyed Matrix (S4)		
Sandy Redox (S5)		
Stripped Matrix (S6)		
Dark Surface (S7) (LRR R, MLRA 149B)		

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

Indicators for Problematic Hydric Soils[3]:

2 cm Muck (A10) (LRR K, L, MLRA 149B)
Coast Prairie Redox (A16) (LRR K, L, R)
5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Dark Surface (S9) (LRR K, L, M)
Polyvalue Below Surface (S8) (LRR K, L)
Thin Dark Surface (S9) (LRR K, L)
Iron-Manganese Masses (F12) (LRR K, L, R)
Piedmont Floodplain Soils (F19) (MLRA 149B)
Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Red Parent Material (F21)
Very Shallow Dark Surface (TF12)
Other (Explain in Remarks)

Restrictive Layer (if observed):
Type:
Depth (inches):
Hydric Soil Present? YES

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-GE-104-Up**

		Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size: **30' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Herb Stratum (Plot size: **5' RAD**)				
1.	**Solidago canadensis**	**65**	**X**	**FACU**
2.	**Fragaria virginiana**	**35**	**X**	**FACU**
3.	**Solidago gigantea**	**15**		**FACW**
4.	**Trifolium pratense**	**15**		**FACU**
5.	**Solidago rugosa**	**3**		**FAC**
6.	**Anthoxanthum odoratum**	**3**		**FACU**
7.	**Ranunculus acris**	**3**		**FAC**
8.				
9.				
10.				
11.				
12.				
		139 = Total Cover		
Woody Vines (Plot size:)				
1.				
2.				
3.				
4.				
5.				
		= Total Cover		

Dominance Test Worksheet:

Dominants OBL, FACW, FAC: _____ (A)

Dominants across all strata: **2** (B)

% Dominants OBL, FACW, FAC: _____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	x 1 =	
FACW **15**	x 2 =	**30**
FAC **6**	x 3 =	**18**
FACU **118**	x 4 =	**472**
UPL	x 5 =	
Sum: **139** (A)		**520** (B)

Prevalence Index = B/A = **3.74**

Hydrophytic Vegetation Indicators:

_____ Dominance Test is > 50%

_____ Prevalence Index is <= 3.0

_____ Problematic Hydrophytic Vegetation[1] (explain)

_____ Rapid Test for Hydrophytic Vegetation

_____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **NO**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-GE-104-Wet

Project Site:	K42	City/County:	Georgia/Franklin	Samp. Date:	5/17/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-GE-104-Wet
Investigator(s):	RS	Section, Township, Range:	Georgia		
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	Concave	Slope (%):	0-3
Subregion (LRR or MLRA):	LRR R	Lat: 44.77187	Long: -73.132492	Datum:	NAD 83
Soil Map Unit:	Scantic silt loam			NWI Class:	PEM

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No — Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No — (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	YES	Is This Sample Area Within a Wetland? YES
Hydric Soil Present?	YES	
Wetland Hydrology Present?	YES	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

Surface Water (A1)	Water-Stained Leaves (B9)	
High Water Table (A2)	Aquatic Fauna (B13)	
Saturation (A3)	Marl Deposits (B13)	
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	
Sediment Deposits (B2)	X Oxidized Rhizospheres on Living Roots (C3)	
Drift Deposits (B3)	Presence of Reduced Iron (C4)	
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	
Iron Deposits (B5)	Thin Muck Surface (C7)	
Inundation Visible on Aerial (B7)	Other (Explain in Remarks)	
Sparsely Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

Surface Soil Cracks (B6)	
Drainage Patterns (B10)	
Moss Trim Lines (B16)	
Dry-Season Water Table (C2)	
Crayfish Burrows (C8)	
X Saturation Visible on Aerial (C9)	
Stunted or Stressed Plants (D1)	
Geomorphic Position (D2)	
Shallow Aquitard (D3)	
Microtopographic Relief (D4)	
FAC-Neutral Test (D5)	

Field Observations:

Surface Water Present?		Depth (inches):	
Water Table Present?		Depth (inches):	
Saturation Present?		Depth (inches):	

Wetland Hydrology Present? YES

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

0.39" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22 near normal(NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/1	100					MUCKY LOAM	
5-10	10YR 6/1	100					SANDY LOAM	
10-18	2.5Y 5/1	90	10YR 3/6	10	C	M	SANDY LOAM	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)	Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	
Histic Epipedon (A2)	Thin Dark Surface (S9) (LRR R, MLRA 149B)	
Black Histic (A3)	Loamy Mucky Mineral (F1) (LRR K, L)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	
Stratified Layers (A5)	X Depleted Matrix (F3)	
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	
Sandy Gleyed Matrix (S4)		
Sandy Redox (S5)		
Stripped Matrix (S6)		
Dark Surface (S7) (LRR R, MLRA 149B)		

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

Indicators for Problematic Hydric Soils[3]:

2 cm Muck (A10) (LRR K, L, MLRA 149B)
Coast Prairie Redox (A16) (LRR K, L, R)
5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Dark Surface (S9) (LRR K, L, M)
Polyvalue Below Surface (S8) (LRR K, L)
Thin Dark Surface (S9) (LRR K, L)
Iron-Manganese Masses (F12) (LRR K, L, R)
Piedmont Floodplain Soils (F19) (MLRA 149B)
Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Red Parent Material (F21)
Very Shallow Dark Surface (TF12)
Other (Explain in Remarks)

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? YES

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-GE-104-Wet**

		Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size: **30' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Herb Stratum (Plot size: **5' RAD**)				
1.	**Iris versicolor**	**65**	**X**	**OBL**
2.	**Juncus effusus**	**15**		**OBL**
3.	**Ranunculus acris**	**15**		**FAC**
4.	**Symphyotrichum lanceolatum**	**15**		**FACW**
5.	**Onoclea sensibilis**	**3**		**FACW**
6.	**Scutellaria lateriflora**	**3**		**OBL**
7.	**Viola labradorica**	**3**		**FAC**
8.	**Oxalis stricta**	**1**		**FACU**
9.				
10.				
11.				
12.				
		120 = Total Cover		
Woody Vines (Plot size:)				
1.				
2.				
3.				
4.				
5.				
		= Total Cover		

Dominance Test Worksheet:

# Dominants OBL, FACW, FAC:	**1**	(A)
# Dominants across all strata:	**1**	(B)
% Dominants OBL, FACW, FAC:	**100%**	(A/B)

Prevalence Index Worksheet:

Total % Cover of:			Multiply By:
OBL	**83**	x 1 =	**83**
FACW	**18**	x 2 =	**36**
FAC	**18**	x 3 =	**54**
FACU	**1**	x 4 =	**4**
UPL		x 5 =	
Sum:	**120** (A)		**177** (B)

Prevalence Index = B/A = **1.48**

Hydrophytic Vegetation Indicators:

- **X** Dominance Test is > 50%
- **X** Prevalence Index is <= 3.0
- ____ Problematic Hydrophytic Vegetation[1] (explain)
- ____ Rapid Test for Hydrophytic Vegetation
- ____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **YES**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-SA-4-Up

Project Site:	K42	City/County:	St Albans /Franklin	Samp. Date:	5/18/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-SA-4-Up
Investigator(s):	MCJ	Section, Township, Range:	St Albans		
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	Convex	Slope (%):	15-60
Subregion (LRR or MLRA):	LRR R	Lat: 44.826097	Long: -73.114401	Datum:	NAD 83
Soil Map Unit:	Farmington Rock outcrop complex			NWI Class:	Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	NO	Is This Sample Area Within a Wetland? NO
Hydric Soil Present?	NO	
Wetland Hydrology Present?	NO	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?		Depth (inches):	
Water Table Present?		Depth (inches):	
Saturation Present?		Depth (inches):	

Wetland Hydrology Present? NO

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

0.39" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22 near normal(NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10yr 3/4	100					LOAM	
6-12	10yr 4/4	95	10yr 4/6	5	c	m	LOAM	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified 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) (LRR R, MLRA 149B)
- ___ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- ___ Thin Dark Surface (S9) (LRR R, MLRA 149B)
- ___ Loamy Mucky Mineral (F1) (LRR K, L)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ___ Coast Prairie Redox (A16) (LRR K, L, R)
- ___ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ___ Dark Surface (S9) (LRR K, L, M)
- ___ Polyvalue Below Surface (S8) (LRR K, L)
- ___ Thin Dark Surface (S9) (LRR K, L)
- ___ Iron-Manganese Masses (F12) (LRR K, L, R)
- ___ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ___ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: rock

Depth (inches): 12

Hydric Soil Present? NO

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-SA-4-Up**

		Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size: **30' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)				
1.	**Juniperus virginiana**	**38**	**X**	**FACU**
2.	**Acer saccharum**	**5**		**FACU**
3.	**Berberis thunbergii**	**5**		**FACU**
4.	**Frangula alnus**	**5**		**FAC**
5.	**Thuja occidentalis**	**5**		**FACW**
6.	**Cornus sericea**	**5**		**FACW**
7.				
		63	= Total Cover	
Herb Stratum (Plot size: **5' RAD**)				
1.	**Trifolium pratense**	**38**	**X**	**FACU**
2.	**Arctium minus**	**15**	**X**	**FACU**
3.	**Lonicera morrowii**	**15**	**X**	**FACU**
4.	**Galium mollugo**	**15**	**X**	**FACU**
5.	**Fragaria virginiana**	**10**		**FACU**
6.	**Solidago canadensis**	**10**		**FACU**
7.	**Solidago rugosa**	**10**		**FAC**
8.	**Asarum canadense**	**5**		**UPL**
9.	**Daucus carota**	**3**		**UPL**
10.	**Symphyotrichum laeve**	**5**		**FACU**
11.				
12.				
		126	= Total Cover	
Woody Vines (Plot size:)				
1.				
2.				
3.				
4.				
5.				
		= Total Cover		

Dominance Test Worksheet:

Dominants OBL, FACW, FAC: _____ (A)

Dominants across all strata: **5** (B)

% Dominants OBL, FACW, FAC: _____ (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	x 1 =	
FACW **10**	x 2 =	**20**
FAC **15**	x 3 =	**45**
FACU **156**	x 4 =	**624**
UPL **8**	x 5 =	**40**
Sum: **189** (A)		**729** (B)

Prevalence Index = B/A = **3.86**

Hydrophytic Vegetation Indicators:

_____ Dominance Test is > 50%

_____ Prevalence Index is <= 3.0

_____ Problematic Hydrophytic Vegetation[1] (explain)

_____ Rapid Test for Hydrophytic Vegetation

_____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **NO**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-SA-4-wet

Project Site:	K42	City/County:	St Albans /Franklin	Samp. Date:	5/18/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-SA-4-wet
Investigator(s):	MCJ	Section, Township, Range:	St Albans		
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	Concave	Slope (%):	15-60
Subregion (LRR or MLRA):	LRR R	Lat: 44.826207	Long: -73.114830	Datum:	NAD 83
Soil Map Unit:	Farmington Rock outcrop complex			NWI Class:	PEM

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	YES	Is This Sample Area Within a Wetland? YES
Hydric Soil Present?	YES	
Wetland Hydrology Present?	YES	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)	Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required)
High Water Table (A2)	Aquatic Fauna (B13)	Surface Soil Cracks (B6)
Saturation (A3)	Marl Deposits (B13)	Drainage Patterns (B10)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Saturation Visible on Aerial (C9)
Iron Deposits (B5)	Thin Muck Surface (C7)	Stunted or Stressed Plants (D1)
Inundation Visible on Aerial (B7)	Other (Explain in Remarks)	Geomorphic Position (D2)
Sparsely Vegetated Concave Surface (B8)		Shallow Aquitard (D3)
		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	X	Depth (inches):	surface
Water Table Present?		Depth (inches):	
Saturation Present?		Depth (inches):	

Wetland Hydrology Present? YES

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

0.39" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22 near normal(NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/1	95	10YR 3/6	5	C	M	SILT LOAM	
6-16	10yr 4/6	85	10yr 5/6	15	c	m	CLAY LOAM	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)	Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	Indicators for Problematic Hydric Soils[3]:
Histic Epipedon (A2)	Thin Dark Surface (S9) (LRR R, MLRA 149B)	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black Histic (A3)	Loamy Mucky Mineral (F1) (LRR K, L)	Coast Prairie Redox (A16) (LRR K, L, R)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Stratified Layers (A5)	Depleted Matrix (F3)	Dark Surface (S9) (LRR K, L, M)
Depleted Below Dark Surface (A11)	X Redox Dark Surface (F6)	Polyvalue Below Surface (S8) (LRR K, L)
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	Thin Dark Surface (S9) (LRR K, L)
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Gleyed Matrix (S4)		Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Redox (S5)		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Stripped Matrix (S6)		Red Parent Material (F21)
Dark Surface (S7) (LRR R, MLRA 149B)		Very Shallow Dark Surface (TF12)
		Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? YES

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-SA-4-wet**

		Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum	(Plot size: **30' RAD**)			
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Sapling Stratum	(Plot size: **15' RAD**)			
1.	**Thuja occidentalis**	**15**	**X**	**FACW**
2.	**Betula populifolia**	**3**		**FAC**
3.	**Salix bebbiana**	**3**		**FACW**
4.				
5.				
6.				
7.				
		21 = Total Cover		
Shrub Stratum	(Plot size: **15' RAD**)			
1.	**Cornus amomum**	**15**	**X**	**FACW**
2.	**Cornus racemosa**	**15**	**X**	**FAC**
3.	**Lonicera morrowii**	**3**		**FACU**
4.				
5.				
6.				
7.				
		33 = Total Cover		
Herb Stratum	(Plot size: **5' RAD**)			
1.	**Valerian officinalis**	**32**	**X**	**FACW**
2.	**Equisetum pratense**	**32**	**X**	**FACW**
3.	**Thelypteris palustris**	**15**		**FACW**
4.	**Onoclea sensibilis**	**15**		**FACW**
5.	**Phalaris arundinacea**	**1**		**FACW**
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		95 = Total Cover		
Woody Vines	(Plot size:)			
1.				
2.				
3.				
4.				
5.				
		= Total Cover		

Dominance Test Worksheet:

Dominants OBL, FACW, FAC: **5** (A)

Dominants across all strata: **5** (B)

% Dominants OBL, FACW, FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	x 1 =	
FACW **128**	x 2 =	**256**
FAC **18**	x 3 =	**54**
FACU **3**	x 4 =	**12**
UPL	x 5 =	
Sum: **149** (A)		**322** (B)

Prevalence Index = B/A = **2.16**

Hydrophytic Vegetation Indicators:

- **X** Dominance Test is > 50%
- **X** Prevalence Index is <= 3.0
- ____ Problematic Hydrophytic Vegetation[1] (explain)
- ____ Rapid Test for Hydrophytic Vegetation
- ____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **YES**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-SA-8-Up

Project Site:	K42	City/County:	St Albans /Franklin	Samp. Date:	5/18/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-SA-8-Up
Investigator(s):	MCJ	Section, Township, Range:	St Albans		
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	Convex	Slope (%):	0-3
Subregion (LRR or MLRA):	LRR R	Lat: 44.845828	Long: -73.113099	Datum:	NAD 83
Soil Map Unit:	Kingsbury clay			NWI Class:	Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	NO	Is This Sample Area Within a Wetland? NO
Hydric Soil Present?	NO	
Wetland Hydrology Present?	NO	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?		Depth (inches):	
Water Table Present?		Depth (inches):	
Saturation Present?		Depth (inches):	

Wetland Hydrology Present? NO

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

0.39" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22 near normal(NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15	10yr 3/2	100					LOAM	
15-18	10YR 5/1	90	10yr 5/6	5	C	M	SANDY LOAM	5% organic consentration

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified 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) (LRR R, MLRA 149B)
- ___ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- ___ Thin Dark Surface (S9) (LRR R, MLRA 149B)
- ___ Loamy Mucky Mineral (F1) (LRR K, L)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ___ Coast Prairie Redox (A16) (LRR K, L, R)
- ___ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ___ Dark Surface (S9) (LRR K, L, M)
- ___ Polyvalue Below Surface (S8) (LRR K, L)
- ___ Thin Dark Surface (S9) (LRR K, L)
- ___ Iron-Manganese Masses (F12) (LRR K, L, R)
- ___ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ___ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? NO

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-SA-8-Up**

		Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size: **30' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Herb Stratum (Plot size: **5' RAD**)				
1.	**Agrostis capillaris**	**38**	**X**	**FAC**
2.	**Galium mollugo**	**15**	**X**	**FACU**
3.	**Phalaris arundinacea**	**15**	**X**	**FACW**
4.	**Solidago canadensis**	**15**	**X**	**FACU**
5.	**Equisetum arvense**	**3**		**FAC**
6.	**Vicia cracca L.**	**3**		**UPL**
7.				
8.				
9.				
10.				
11.				
12.				
		89 = Total Cover		
Woody Vines (Plot size:)				
1.				
2.				
3.				
4.				
5.				
		= Total Cover		

Dominance Test Worksheet:

# Dominants OBL, FACW, FAC:	**2**	(A)
# Dominants across all strata:	**4**	(B)
% Dominants OBL, FACW, FAC:	**50%**	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL		x 1 =	
FACW	**15**	x 2 =	**30**
FAC	**41**	x 3 =	**123**
FACU	**30**	x 4 =	**120**
UPL	**3**	x 5 =	**15**
Sum:	**89** (A)		**288** (B)

Prevalence Index = B/A = **3.24**

Hydrophytic Vegetation Indicators:

- ____ Dominance Test is > 50%
- ____ Prevalence Index is <= 3.0
- ____ Problematic Hydrophytic Vegetation[1] (explain)
- ____ Rapid Test for Hydrophytic Vegetation
- ____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **NO**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-SA-8-wet

Project Site:	K42	City/County:	St Albans /Franklin	Samp. Date:	5/18/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-SA-8-wet
Investigator(s):	MCJ	Section, Township, Range:	St Albans		
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	Concave	Slope (%):	0-3
Subregion (LRR or MLRA):	LRR R	Lat: 44.845766	Long: -73.113031	Datum:	NAD 83
Soil Map Unit:	Kingsbury clay			NWI Class:	PEM

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	YES	Is This Sample Area Within a Wetland? YES
Hydric Soil Present?	YES	
Wetland Hydrology Present?	YES	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

	Surface Water (A1)	X	Water-Stained Leaves (B9)
	High Water Table (A2)		Aquatic Fauna (B13)
X	Saturation (A3)		Marl Deposits (B13)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)
	Iron Deposits (B5)		Thin Muck Surface (C7)
	Inundation Visible on Aerial (B7)		Other (Explain in Remarks)
	Sparsely Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)
	Drainage Patterns (B10)
	Moss Trim Lines (B16)
	Dry-Season Water Table (C2)
	Crayfish Burrows (C8)
	Saturation Visible on Aerial (C9)
	Stunted or Stressed Plants (D1)
	Geomorphic Position (D2)
	Shallow Aquitard (D3)
	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?		Depth (inches):	
Water Table Present?		Depth (inches):	
Saturation Present?	X	Depth (inches):	Surface

Wetland Hydrology Present? YES

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

0.39" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22 near normal(NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YYR 3/1	98	10YR 5/2	2	D	M	CLAY LOAM	
10-15	10YR 5/1	85	10YR 4/6	15	C	M	CLAY	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

	Histosol (A1)		Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
	Histic Epipedon (A2)		Thin Dark Surface (S9) (LRR R, MLRA 149B)
	Black Histic (A3)		Loamy Mucky Mineral (F1) (LRR K, L)
	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
	Stratified Layers (A5)		Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)	X	Redox Dark Surface (F6)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)		Redox Depressions (F8)
	Sandy Gleyed Matrix (S4)		
	Sandy Redox (S5)		
	Stripped Matrix (S6)		
	Dark Surface (S7) (LRR R, MLRA 149B)		

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

Indicators for Problematic Hydric Soils[3]:

	2 cm Muck (A10) (LRR K, L, MLRA 149B)
	Coast Prairie Redox (A16) (LRR K, L, R)
	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
	Dark Surface (S9) (LRR K, L, M)
	Polyvalue Below Surface (S8) (LRR K, L)
	Thin Dark Surface (S9) (LRR K, L)
	Iron-Manganese Masses (F12) (LRR K, L, R)
	Piedmont Floodplain Soils (F19) (MLRA 149B)
	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
	Red Parent Material (F21)
	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? YES

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-SA-8-wet**

		Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size: **30' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Herb Stratum (Plot size: **5' RAD**)				
1.	**Phalaris arundinacea**	**95**	**X**	**FACW**
2.	**Solidago gigantea**	**3**		**FACW**
3.	**Equisetum arvense**	**3**		**FAC**
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		101 = Total Cover		
Woody Vines (Plot size:)				
1.				
2.				
3.				
4.				
5.				
		= Total Cover		

Dominance Test Worksheet:

# Dominants OBL, FACW, FAC:	**1**	(A)
# Dominants across all strata:	**1**	(B)
% Dominants OBL, FACW, FAC:	**100%**	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	x 1 =	
FACW **98**	x 2 =	**196**
FAC **3**	x 3 =	**9**
FACU	x 4 =	
UPL	x 5 =	
Sum: **101** (A)		**205** (B)

Prevalence Index = B/A = **2.03**

Hydrophytic Vegetation Indicators:

- **X** Dominance Test is > 50%
- **X** Prevalence Index is <= 3.0
- ____ Problematic Hydrophytic Vegetation[1] (explain)
- ____ Rapid Test for Hydrophytic Vegetation
- ____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **YES**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-SA-17-Up

Project Site:	K42	City/County:	St Albans /Franklin	Samp. Date:	5/19/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-SA-17-Up
Investigator(s):	BG	Section, Township, Range:	St Albans		
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	Convex	Slope (%):	3-8
Subregion (LRR or MLRA):	LRR R	Lat: 44.853001	Long: -73.102978	Datum:	NAD 83
Soil Map Unit:	Enosburg Loamy fine sand			NWI Class:	Upalnd

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	Is This Sample Area Within a Wetland? NO
Hydric Soil Present?	NO	
Wetland Hydrology Present?	NO	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?		Depth (inches):	
Water Table Present?		Depth (inches):	
Saturation Present?		Depth (inches):	

Wetland Hydrology Present? NO

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

1.02" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22near normal (NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10yr 2/1	100					LOAM	
10-16	2.5Y 5/6	90	10YR 2/1	10			LOAM	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified 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) (LRR R, MLRA 149B)
- ___ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- ___ Thin Dark Surface (S9) (LRR R, MLRA 149B)
- ___ Loamy Mucky Mineral (F1) (LRR K, L)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ___ Coast Prairie Redox (A16) (LRR K, L, R)
- ___ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ___ Dark Surface (S9) (LRR K, L, M)
- ___ Polyvalue Below Surface (S8) (LRR K, L)
- ___ Thin Dark Surface (S9) (LRR K, L)
- ___ Iron-Manganese Masses (F12) (LRR K, L, R)
- ___ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ___ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? NO

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-SA-17-Up**

		Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size: **30' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Herb Stratum (Plot size: **5' RAD**)				
1.	**Solidago canadensis**	**40**	**X**	**FACU**
2.	**Poa palustris**	**15**	**X**	**FACW**
3.	**Phalaris arundinacea**	**10**		**FACW**
4.	**Taraxacum officinale**	**5**		**FACU**
5.	**Impatiens capensis**	**3**		**FACW**
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		73 = Total Cover		
Woody Vines (Plot size:)				
1.				
2.				
3.				
4.				
5.				
		= Total Cover		

Dominance Test Worksheet:

Dominants OBL, FACW, FAC: **1** (A)

Dominants across all strata: **2** (B)

% Dominants OBL, FACW, FAC: **50%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	x 1 =	
FACW **28**	x 2 =	**56**
FAC	x 3 =	
FACU **45**	x 4 =	**180**
UPL	x 5 =	
Sum: **73** (A)		**236** (B)

Prevalence Index = B/A = **3.23**

Hydrophytic Vegetation Indicators:

_____ Dominance Test is > 50%

_____ Prevalence Index is <= 3.0

_____ Problematic Hydrophytic Vegetation[1] (explain)

_____ Rapid Test for Hydrophytic Vegetation

_____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **NO**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-SA-17-wet

Project Site:	K42	City/County:	St Albans /Franklin	Samp. Date:	5/19/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-SA-17-wet
Investigator(s):	MCJ	Section, Township, Range:	St Albans		
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	Concave	Slope (%):	3-8
Subregion (LRR or MLRA):	LRR R	Lat: 44.853002	Long: -73.102969	Datum:	NAD 83
Soil Map Unit:	Enosburg Loamy fine sand			NWI Class:	PEM

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	YES	Is This Sample Area Within a Wetland? YES
Hydric Soil Present?	YES	
Wetland Hydrology Present?	YES	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

	Surface Water (A1)	X	Water-Stained Leaves (B9)
	High Water Table (A2)		Aquatic Fauna (B13)
X	Saturation (A3)		Marl Deposits (B13)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)
	Iron Deposits (B5)		Thin Muck Surface (C7)
	Inundation Visible on Aerial (B7)		Other (Explain in Remarks)
	Sparsely Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)
	Drainage Patterns (B10)
	Moss Trim Lines (B16)
	Dry-Season Water Table (C2)
	Crayfish Burrows (C8)
	Saturation Visible on Aerial (C9)
	Stunted or Stressed Plants (D1)
	Geomorphic Position (D2)
	Shallow Aquitard (D3)
	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?		Depth (inches):		Wetland Hydrology Present?	YES
Water Table Present?		Depth (inches):			
Saturation Present?	X	Depth (inches):	6		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

1.02" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22near normal (NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12							MUCK	
12-16	10yr 2/1						MUCKY LOAM	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

	Histosol (A1)		Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
X	Histic Epipedon (A2)		Thin Dark Surface (S9) (LRR R, MLRA 149B)
	Black Histic (A3)		Loamy Mucky Mineral (F1) (LRR K, L)
	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
	Stratified Layers (A5)		Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)		Redox Dark Surface (F6)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)		Redox Depressions (F8)
	Sandy Gleyed Matrix (S4)		
	Sandy Redox (S5)		
	Stripped Matrix (S6)		
	Dark Surface (S7) (LRR R, MLRA 149B)		

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

Indicators for Problematic Hydric Soils[3]:

	2 cm Muck (A10) (LRR K, L, MLRA 149B)
	Coast Prairie Redox (A16) (LRR K, L, R)
	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
	Dark Surface (S9) (LRR K, L, M)
	Polyvalue Below Surface (S8) (LRR K, L)
	Thin Dark Surface (S9) (LRR K, L)
	Iron-Manganese Masses (F12) (LRR K, L, R)
	Piedmont Floodplain Soils (F19) (MLRA 149B)
	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
	Red Parent Material (F21)
	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? YES

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-SA-17-wet**

		Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size: **30' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Herb Stratum (Plot size: **5' RAD**)				
1.	**Epilobium hirsutum**	**63**	**X**	**FACW**
2.	**Phalaris arundinacea**	**32**	**X**	**FACW**
3.	**Vitis riparia**	**15**		**FAC**
4.	**Solidago canadensis**	**15**		**FACU**
5.	**Equisetum arvense**	**15**		**FAC**
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		140 = Total Cover		
Woody Vines (Plot size:)				
1.				
2.				
3.				
4.				
5.				
		= Total Cover		

Dominance Test Worksheet:

Dominants OBL, FACW, FAC: **2** (A)

Dominants across all strata: **2** (B)

% Dominants OBL, FACW, FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	x 1 =	
FACW **95**	x 2 =	**190**
FAC **30**	x 3 =	**90**
FACU **15**	x 4 =	**60**
UPL	x 5 =	
Sum: **140** (A)		**340** (B)

Prevalence Index = B/A = **2.43**

Hydrophytic Vegetation Indicators:

- **X** Dominance Test is > 50%
- **X** Prevalence Index is <= 3.0
- ____ Problematic Hydrophytic Vegetation[1] (explain)
- ____ Rapid Test for Hydrophytic Vegetation
- ____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **YES**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-SA-9-Up

Project Site:	K42	City/County:	St Albans /Franklin	Samp. Date:	6/2/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-SA-9-Up
Investigator(s):	BG	Section, Township, Range:	St Albans		
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	Convex	Slope (%):	0-3
Subregion (LRR or MLRA):	LRR R	Lat: 44.873675	Long: -73.084575	Datum:	NAD 83
Soil Map Unit:	St Albans Clay			NWI Class:	Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No — Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No — (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	NO	Is This Sample Area Within a Wetland? NO
Hydric Soil Present?	NO	
Wetland Hydrology Present?	NO	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? ___ Depth (inches): ___

Water Table Present? ___ Depth (inches): ___

Saturation Present? ___ Depth (inches): ___

Wetland Hydrology Present? NO

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

0.69" of Rain in the 5 days prior; PDSI -0.35" for the week ending in 06/04/22 near normal (NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10yr 4/1	100					LOAM	
10-16	5Y 6/3	95	5y 5/1	5	c	m	LOAM	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified 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) (LRR R, MLRA 149B)
- ___ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- ___ Thin Dark Surface (S9) (LRR R, MLRA 149B)
- ___ Loamy Mucky Mineral (F1) (LRR K, L)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ___ Coast Prairie Redox (A16) (LRR K, L, R)
- ___ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ___ Dark Surface (S9) (LRR K, L, M)
- ___ Polyvalue Below Surface (S8) (LRR K, L)
- ___ Thin Dark Surface (S9) (LRR K, L)
- ___ Iron-Manganese Masses (F12) (LRR K, L, R)
- ___ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ___ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? NO

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-SA-9-Up**

	Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: **5' RAD**)			
1. **Galium mollugo**	**80**	**X**	**FACU**
2. **Onoclea sensibilis**	**30**	**X**	**FACW**
3. **Fragaria virginiana**	**10**		**FACU**
4. **Parthenocissus quinquefolia**	**5**		**FACU**
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	125 = Total Cover		
Woody Vines (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Dominance Test Worksheet:

Dominants OBL, FACW, FAC: **1** (A)

Dominants across all strata: **2** (B)

% Dominants OBL, FACW, FAC: **50%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	x 1 =	
FACW **30**	x 2 =	**60**
FAC	x 3 =	
FACU **95**	x 4 =	**380**
UPL	x 5 =	
Sum: **125** (A)		**440** (B)

Prevalence Index = B/A = **3.52**

Hydrophytic Vegetation Indicators:

_____ Dominance Test is > 50%

_____ Prevalence Index is <= 3.0

_____ Problematic Hydrophytic Vegetation[1] (explain)

_____ Rapid Test for Hydrophytic Vegetation

_____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **NO**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-SA-9-wet

Project Site:	K42	City/County:	St Albans /Franklin	Samp. Date:	6/2/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-SA-9-wet
Investigator(s):	BG	Section, Township, Range:	St Albans		
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	Concave	Slope (%):	0-3
Subregion (LRR or MLRA):	LRR R	Lat: 44.873751	Long: -73.084677	Datum:	NAD 83
Soil Map Unit:	St Albans Clay			NWI Class:	PEM

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	YES	Is This Sample Area Within a Wetland? YES
Hydric Soil Present?	YES	
Wetland Hydrology Present?	YES	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

	Surface Water (A1)	Water-Stained Leaves (B9)
	High Water Table (A2)	Aquatic Fauna (B13)
X	Saturation (A3)	Marl Deposits (B13)
	Water Marks (B1)	Hydrogen Sulfide Odor (C1)
	Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)
	Drift Deposits (B3)	Presence of Reduced Iron (C4)
	Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)
	Iron Deposits (B5)	Thin Muck Surface (C7)
	Inundation Visible on Aerial (B7)	Other (Explain in Remarks)
	Sparsely Vegetated Concave Surface (B8)	

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)
	Drainage Patterns (B10)
	Moss Trim Lines (B16)
	Dry-Season Water Table (C2)
	Crayfish Burrows (C8)
	Saturation Visible on Aerial (C9)
	Stunted or Stressed Plants (D1)
	Geomorphic Position (D2)
	Shallow Aquitard (D3)
	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?		Depth (inches):	
Water Table Present?		Depth (inches):	
Saturation Present?	X	Depth (inches):	surface

Wetland Hydrology Present? YES

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

0.69" of Rain in the 5 days prior; PDSI -0.35" for the week ending in 06/04/22 near normal (NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	5y 3/1	100					LOAM	
5-16	5y 3/1	90	5Y 5/6	10	c	M	LOAM	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

	Histosol (A1)	Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
	Histic Epipedon (A2)	Thin Dark Surface (S9) (LRR R, MLRA 149B)
	Black Histic (A3)	Loamy Mucky Mineral (F1) (LRR K, L)
	Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)
	Stratified Layers (A5)	Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)
	Thick Dark Surface (A12)	Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)	Redox Depressions (F8)
	Sandy Gleyed Matrix (S4)	
	Sandy Redox (S5)	
	Stripped Matrix (S6)	
	Dark Surface (S7) (LRR R, MLRA 149B)	

X Depleted Matrix (F3)

X Redox Dark Surface (F6)

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

Indicators for Problematic Hydric Soils[3]:

	2 cm Muck (A10) (LRR K, L, MLRA 149B)
	Coast Prairie Redox (A16) (LRR K, L, R)
	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
	Dark Surface (S9) (LRR K, L, M)
	Polyvalue Below Surface (S8) (LRR K, L)
	Thin Dark Surface (S9) (LRR K, L)
	Iron-Manganese Masses (F12) (LRR K, L, R)
	Piedmont Floodplain Soils (F19) (MLRA 149B)
	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
	Red Parent Material (F21)
	Very Shallow Dark Surface (TF12)
	Other (Explain in Remarks)

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? YES

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-SA-9-wet**

	Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)			
1. **Spiraea alba**	**5**	**X**	**FACW**
2.			
3.			
4.			
5.			
6.			
7.			
	5 = Total Cover		
Herb Stratum (Plot size: **5' RAD**)			
1. **Phalaris arundinacea**	**90**	**X**	**FACW**
2. **Onoclea sensibilis**	**25**		**FACW**
3. **Vicia cracca L.**	**10**		**UPL**
4. **Galium mollugo**	**10**		**FACU**
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	135 = Total Cover		
Woody Vines (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Dominance Test Worksheet:

# Dominants OBL, FACW, FAC:	**2**	(A)
# Dominants across all strata:	**2**	(B)
% Dominants OBL, FACW, FAC:	**100%**	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL		x 1 =	
FACW	**120**	x 2 =	**240**
FAC		x 3 =	
FACU	**10**	x 4 =	**40**
UPL	**10**	x 5 =	**50**
Sum:	**140** (A)		**330** (B)

Prevalence Index = B/A = **2.36**

Hydrophytic Vegetation Indicators:

- **X** Dominance Test is > 50%
- **X** Prevalence Index is <= 3.0
- ____ Problematic Hydrophytic Vegetation[1] (explain)
- ____ Rapid Test for Hydrophytic Vegetation
- ____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **YES**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-SW-202-Up

Project Site:	K42	City/County:	Swanton /Franklin	Samp. Date:	5/19/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-SW-202-Up
Investigator(s):	BG	Section, Township, Range:	Swanton		
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	Convex	Slope (%):	0-6
Subregion (LRR or MLRA):	LRR R	Lat: 44.90936	Long: -73.065062	Datum:	NAD 83
Soil Map Unit:	AU Gres Loamy fine sand			NWI Class:	Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	YES	Is This Sample Area Within a Wetland? NO
Hydric Soil Present?	YES	
Wetland Hydrology Present?	NO	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?		Depth (inches):	
Water Table Present?		Depth (inches):	
Saturation Present?		Depth (inches):	

Wetland Hydrology Present? NO

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

1.02" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22near normal (NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	2.5y 3/3	100						
10-14	5y 5/1	60	10YR 5/6	40	c	m	LOAM	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified 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) (LRR R, MLRA 149B)
- ___ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- ___ Thin Dark Surface (S9) (LRR R, MLRA 149B)
- ___ Loamy Mucky Mineral (F1) (LRR K, L)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ___ Coast Prairie Redox (A16) (LRR K, L, R)
- ___ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ___ Dark Surface (S9) (LRR K, L, M)
- ___ Polyvalue Below Surface (S8) (LRR K, L)
- ___ Thin Dark Surface (S9) (LRR K, L)
- ___ Iron-Manganese Masses (F12) (LRR K, L, R)
- ___ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ___ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? YES

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-SW-202-Up**

	Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)			
1. **Lonicera morrowii**	5	X	FACU
2. **Salix bebbiana**	5	X	FACW
3.			
4.			
5.			
6.			
7.			
	10 = Total Cover		
Herb Stratum (Plot size: **5' RAD**)			
1. **Solidago rugosa**	15	X	FAC
2. **Anthoxanthum odoratum**	5	X	FACU
3. **Equisetum fluviatile**	5	X	OBL
4. **Galium mollugo**	5	X	FACU
5. **Spartina alterniflora**	5	X	OBL
6. **Houstonia caerulea**	5	X	FACU
7.			
8.			
9.			
10.			
11.			
12.			
	40 = Total Cover		
Woody Vines (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Dominance Test Worksheet:

# Dominants OBL, FACW, FAC:	**4**	(A)
# Dominants across all strata:	**8**	(B)
% Dominants OBL, FACW, FAC:	**50%**	(A/B)

Prevalence Index Worksheet:

Total % Cover of:			Multiply By:
OBL	**10**	x 1 =	**10**
FACW	**5**	x 2 =	**10**
FAC	**15**	x 3 =	**45**
FACU	**20**	x 4 =	**80**
UPL		x 5 =	
Sum:	**50** (A)		**145** (B)

Prevalence Index = B/A = **2.90**

Hydrophytic Vegetation Indicators:

- ____ Dominance Test is > 50%
- **X** Prevalence Index is <= 3.0
- ____ Problematic Hydrophytic Vegetation[1] (explain)
- ____ Rapid Test for Hydrophytic Vegetation
- ____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **YES**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-SW-202-Wet

Project Site:	K42	City/County:	Swanton /Franklin	Samp. Date:	5/19/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-SW-202-Wet
Investigator(s):	MCJ	Section, Township, Range:	Swanton		
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	Concave	Slope (%):	0-6
Subregion (LRR or MLRA):	LRR R	Lat: 44.909219	Long: -73.065063	Datum:	NAD 83
Soil Map Unit:	AU Gres Loamy fine sand			NWI Class:	PEM

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	YES	Is This Sample Area Within a Wetland? YES
Hydric Soil Present?	YES	
Wetland Hydrology Present?	YES	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)	Water-Stained Leaves (B9)	
High Water Table (A2)	Aquatic Fauna (B13)	
Saturation (A3)	Marl Deposits (B13)	
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	
Drift Deposits (B3)	Presence of Reduced Iron (C4)	
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	
Iron Deposits (B5)	Thin Muck Surface (C7)	
Inundation Visible on Aerial (B7)	Other (Explain in Remarks)	
Sparsely Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

Surface Soil Cracks (B6)
Drainage Patterns (B10)
Moss Trim Lines (B16)
Dry-Season Water Table (C2)
Crayfish Burrows (C8)
Saturation Visible on Aerial (C9)
Stunted or Stressed Plants (D1)
Geomorphic Position (D2)
Shallow Aquitard (D3)
Microtopographic Relief (D4)
FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?		Depth (inches):	
Water Table Present?		Depth (inches):	
Saturation Present?	X	Depth (inches):	surface

Wetland Hydrology Present? YES

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

1.02" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22near normal (NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	2.5y 4/1	95	7.5yr 5/1	5	d	m	SAND	
6-16	2.5/5gy	90	2.5y 4/1	10	d	m	SAND	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)	Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	
Histic Epipedon (A2)	Thin Dark Surface (S9) (LRR R, MLRA 149B)	
Black Histic (A3)	Loamy Mucky Mineral (F1) (LRR K, L)	
Hydrogen Sulfide (A4)	X Loamy Gleyed Matrix (F2)	
Stratified Layers (A5)	Depleted Matrix (F3)	
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	
Sandy Gleyed Matrix (S4)		
Sandy Redox (S5)		
Stripped Matrix (S6)		
Dark Surface (S7) (LRR R, MLRA 149B)		

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

Indicators for Problematic Hydric Soils[3]:

2 cm Muck (A10) (LRR K, L, MLRA 149B)
Coast Prairie Redox (A16) (LRR K, L, R)
5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Dark Surface (S9) (LRR K, L, M)
Polyvalue Below Surface (S8) (LRR K, L)
Thin Dark Surface (S9) (LRR K, L)
Iron-Manganese Masses (F12) (LRR K, L, R)
Piedmont Floodplain Soils (F19) (MLRA 149B)
Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Red Parent Material (F21)
Very Shallow Dark Surface (TF12)
Other (Explain in Remarks)

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? YES

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-SW-202-Wet**

Tree Stratum (Plot size:)	Absolute % Cover	Dom. Sp?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling Stratum (Plot size: 15' RAD)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Shrub Stratum (Plot size: 15' RAD)			
1. **Salix bebbiana**	32	X	FACW
2. **Spiraea alba**	15	X	FACW
3.			
4.			
5.			
6.			
7.			
	47	= Total Cover	
Herb Stratum (Plot size: 5' RAD)			
1. **Thelypteris palustris**	32	X	FACW
2. **Onoclea sensibilis**	32	X	FACW
3. **Phalaris arundinacea**	32	X	FACW
4. **Equisetum arvense**	15		FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	111	= Total Cover	
Woody Vines (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Dominance Test Worksheet:

# Dominants OBL, FACW, FAC:	**5**	(A)
# Dominants across all strata:	**5**	(B)
% Dominants OBL, FACW, FAC:	**100%**	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	x 1 =	
FACW **143**	x 2 =	**286**
FAC **15**	x 3 =	**45**
FACU	x 4 =	
UPL	x 5 =	
Sum: **158** (A)		**331** (B)

Prevalence Index = B/A = **2.09**

Hydrophytic Vegetation Indicators:

- **X** Dominance Test is > 50%
- **X** Prevalence Index is <= 3.0
- ____ Problematic Hydrophytic Vegetation[1] (explain)
- ____ Rapid Test for Hydrophytic Vegetation
- ____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **YES**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-HI-8-up

Project Site:	K42	City/County:	Highgate /Franklin	Samp. Date:	5/19/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-HI-8-up
Investigator(s):	MCJ	Section, Township, Range:	Highgate		
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	Convex	Slope (%):	25-60
Subregion (LRR or MLRA):	LRR R	Lat: 44.923634	Long: -73.057882	Datum:	NAD 83
Soil Map Unit:	Windsor loamy fine sand			NWI Class:	Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No — Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No — (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	NO	Is This Sample Area Within a Wetland? NO
Hydric Soil Present?	NO	
Wetland Hydrology Present?	NO	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?		Depth (inches):	
Water Table Present?		Depth (inches):	
Saturation Present?		Depth (inches):	

Wetland Hydrology Present? NO

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

1.02" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22near normal (NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/2	100					SANDY LOAM	
2-14	2.5y 5/4	100					SANDY LOAM	
14-17	2.5y 5/2	100					SANDY LOAM	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified 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) (LRR R, MLRA 149B)
- ___ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- ___ Thin Dark Surface (S9) (LRR R, MLRA 149B)
- ___ Loamy Mucky Mineral (F1) (LRR K, L)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ___ Coast Prairie Redox (A16) (LRR K, L, R)
- ___ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ___ Dark Surface (S9) (LRR K, L, M)
- ___ Polyvalue Below Surface (S8) (LRR K, L)
- ___ Thin Dark Surface (S9) (LRR K, L)
- ___ Iron-Manganese Masses (F12) (LRR K, L, R)
- ___ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ___ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? NO

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-HI-8-up**

		Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum	(Plot size:)			
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Sapling Stratum	(Plot size: **15' RAD**)			
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Shrub Stratum	(Plot size: **15' RAD**)			
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Herb Stratum	(Plot size: **5' RAD**)			
1.	**Rubus idaeus**	**35**	**X**	**FACU**
2.	**Solidago rugosa**	**35**	**X**	**FAC**
3.	**Calamagrostis canadensis**	**15**		**OBL**
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		85 = Total Cover		
Woody Vines	(Plot size:)			
1.				
2.				
3.				
4.				
5.				
		= Total Cover		

Dominance Test Worksheet:

# Dominants OBL, FACW, FAC:	**1**	(A)
# Dominants across all strata:	**2**	(B)
% Dominants OBL, FACW, FAC:	**50%**	(A/B)

Prevalence Index Worksheet:

Total % Cover of:			Multiply By:
OBL	**15**	x 1 =	**15**
FACW		x 2 =	
FAC	**35**	x 3 =	**105**
FACU	**35**	x 4 =	**140**
UPL		x 5 =	
Sum:	**85** (A)		**260** (B)

Prevalence Index = B/A = **3.06**

Hydrophytic Vegetation Indicators:

- ____ Dominance Test is > 50%
- ____ Prevalence Index is <= 3.0
- ____ Problematic Hydrophytic Vegetation[1] (explain)
- ____ Rapid Test for Hydrophytic Vegetation
- ____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **NO**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-HI-8-Wet

Project Site: K42 City/County: Highgate /Franklin Samp. Date: 5/19/2022
Applicant/Owner: Velco State: Vermont Sampling Point: 2022-HI-8-Wet
Investigator(s): LK Section, Township, Range: Highgate
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 25-60
Subregion (LRR or MLRA): LRR R Lat: 44.923613 Long: -73.057800 Datum: NAD 83
Soil Map Unit: Windsor loamy fine sand NWI Class: PEM
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? No Normal Circumstances? Yes
Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	YES	Is This Sample Area Within a Wetland? YES
Hydric Soil Present?	YES	
Wetland Hydrology Present?	YES	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

	Surface Water (A1)		Water-Stained Leaves (B9)
X	High Water Table (A2)		Aquatic Fauna (B13)
X	Saturation (A3)		Marl Deposits (B13)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)
	Iron Deposits (B5)		Thin Muck Surface (C7)
	Inundation Visible on Aerial (B7)		Other (Explain in Remarks)
	Sparsely Vegetated Concave Surface (B8)		

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)
	Drainage Patterns (B10)
	Moss Trim Lines (B16)
	Dry-Season Water Table (C2)
	Crayfish Burrows (C8)
	Saturation Visible on Aerial (C9)
	Stunted or Stressed Plants (D1)
	Geomorphic Position (D2)
	Shallow Aquitard (D3)
	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?		Depth (inches):	
Water Table Present?	X	Depth (inches):	6
Saturation Present?	X	Depth (inches):	surface

Wetland Hydrology Present? YES

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

1.02" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22near normal (NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10yr 4/1	90	10YR 3/6	10	c	m	SANDY LOAM	
8-16	2.5y 4/1	97	10YR 3/6	3	c	m	SANDY LOAM	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

	Histosol (A1)		Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
	Histic Epipedon (A2)		Thin Dark Surface (S9) (LRR R, MLRA 149B)
	Black Histic (A3)		Loamy Mucky Mineral (F1) (LRR K, L)
	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
	Stratified Layers (A5)		Depleted Matrix (F3)
	Depleted Below Dark Surface (A11)	X	Redox Dark Surface (F6)
	Thick Dark Surface (A12)		Depleted Dark Surface (F7)
	Sandy Mucky Mineral (S1)		Redox Depressions (F8)
	Sandy Gleyed Matrix (S4)		
	Sandy Redox (S5)		
	Stripped Matrix (S6)		
	Dark Surface (S7) (LRR R, MLRA 149B)		

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

Indicators for Problematic Hydric Soils[3]:

2 cm Muck (A10) (LRR K, L, MLRA 149B)
Coast Prairie Redox (A16) (LRR K, L, R)
5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Dark Surface (S9) (LRR K, L, M)
Polyvalue Below Surface (S8) (LRR K, L)
Thin Dark Surface (S9) (LRR K, L)
Iron-Manganese Masses (F12) (LRR K, L, R)
Piedmont Floodplain Soils (F19) (MLRA 149B)
Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Red Parent Material (F21)
Very Shallow Dark Surface (TF12)
Other (Explain in Remarks)

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? YES

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-HI-8-Wet**

	Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: **5' RAD**)			
1. **Calamagrostis canadensis**	35	X	OBL
2. **Solidago rugosa**	15	X	FAC
3. **Carex scabrata**	15	X	OBL
4. **Dryopteris cristata**	15	X	OBL
5. **Equisetum sylvaticum**	15	X	FACW
6. **Carex diandra**	15	X	OBL
7. **Galium palustre**	3		OBL
8.			
9.			
10.			
11.			
12.			
	113	= Total Cover	
Woody Vines (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Dominance Test Worksheet:

Dominants OBL, FACW, FAC: **6** (A)

Dominants across all strata: **6** (B)

% Dominants OBL, FACW, FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	**83** x 1 =	**83**
FACW	**15** x 2 =	**30**
FAC	**15** x 3 =	**45**
FACU	x 4 =	
UPL	x 5 =	
Sum:	**113** (A)	**158** (B)

Prevalence Index = B/A = **1.40**

Hydrophytic Vegetation Indicators:

- **X** Dominance Test is > 50%
- **X** Prevalence Index is <= 3.0
- ____ Problematic Hydrophytic Vegetation[1] (explain)
- ____ Rapid Test for Hydrophytic Vegetation
- ____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **YES**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-HI-6-up

Project Site:	K42	City/County:	Highgate /Franklin	Samp. Date:	5/19/2022
Applicant/Owner:	Velco	State:	Vermont	Sampling Point:	2022-HI-6-up
Investigator(s):	RMS	Section, Township, Range:	Highgate		
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	Convex	Slope (%):	0-3
Subregion (LRR or MLRA):	LRR R	Lat: 44.9294	Long: -73.054565	Datum:	NAD 83
Soil Map Unit:	Wareham loamy fine sand			NWI Class:	Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No Normal Circumstances? Yes

Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	NO	Is This Sample Area Within a Wetland? NO
Hydric Soil Present?	NO	
Wetland Hydrology Present?	NO	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? ___ Depth (inches): ___

Water Table Present? ___ Depth (inches): ___

Saturation Present? ___ Depth (inches): ___

Wetland Hydrology Present? NO

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

1.02" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22near normal (NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/2	100					SANDY CLAY LOAM	
5-7	10YR 4/3	100					SANDY LOAM	
7-14	10YR 5/6	95	10YR 6/6	5	c	m	SANDY LOAM	

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

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified 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) (LRR R, MLRA 149B)
- ___ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- ___ Thin Dark Surface (S9) (LRR R, MLRA 149B)
- ___ Loamy Mucky Mineral (F1) (LRR K, L)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ___ Coast Prairie Redox (A16) (LRR K, L, R)
- ___ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- ___ Dark Surface (S9) (LRR K, L, M)
- ___ Polyvalue Below Surface (S8) (LRR K, L)
- ___ Thin Dark Surface (S9) (LRR K, L)
- ___ Iron-Manganese Masses (F12) (LRR K, L, R)
- ___ Piedmont Floodplain Soils (F19) (MLRA 149B)
- ___ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? NO

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-HI-6-up**

	Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling Stratum (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Shrub Stratum (Plot size: **15' RAD**)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: **5' RAD**)			
1. **Pteridium aquilinum**	**20.5**	**X**	**FACU**
2. **Onoclea sensibilis**	**3**	**X**	**FACW**
3. **Solidago canadensis**	**10.5**	**X**	**FACU**
4. **Solidago rugosa**	**10.5**	**X**	**FAC**
5. **Parthenocissus quinquefolia**	**20.5**	**X**	**FACU**
6. **Heracleum mantegazzianum**	**3**		**FAC**
7.			
8.			
9.			
10.			
11.			
12.			
	68 = Total Cover		
Woody Vines (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Dominance Test Worksheet:

# Dominants OBL, FACW, FAC:	**2**	(A)
# Dominants across all strata:	**5**	(B)
% Dominants OBL, FACW, FAC:	**40%**	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	x 1 =	
FACW **3**	x 2 =	**6**
FAC **13.5**	x 3 =	**40.5**
FACU **51.5**	x 4 =	**206**
UPL	x 5 =	
Sum: **68** (A)		**252.5** (B)

Prevalence Index = B/A = **3.71**

Hydrophytic Vegetation Indicators:

- ____ Dominance Test is > 50%
- ____ Prevalence Index is <= 3.0
- ____ Problematic Hydrophytic Vegetation[1] (explain)
- ____ Rapid Test for Hydrophytic Vegetation
- ____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **NO**

Remarks: (If observed, list morphological adaptations below).

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2022-HI-6-Wet

Project Site: K42 | City/County: Highgate /Franklin | Samp. Date: 5/19/2022
Applicant/Owner: Velco | State: Vermont | Sampling Point: 2022-HI-6-Wet
Investigator(s): LK | Section, Township, Range: Highgate
Landform (hillslope, terrace, etc.): Terrace | Local relief (concave, convex, none): Concave | Slope (%): 0-3
Subregion (LRR or MLRA): LRR R | Lat: 44.929326 | Long: -73.054439 | Datum: NAD 83
Soil Map Unit: Wareham loamy fine sand | NWI Class: PEM
Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? No | Normal Circumstances? Yes
Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	YES	Is This Sample Area Within a Wetland? YES
Hydric Soil Present?	YES	
Wetland Hydrology Present?	YES	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X	Surface Water (A1)		Water-Stained Leaves (B9)		Surface Soil Cracks (B6)
	High Water Table (A2)		Aquatic Fauna (B13)		Drainage Patterns (B10)
X	Saturation (A3)		Marl Deposits (B13)		Moss Trim Lines (B16)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
	Sediment Deposits (B2)	X	Oxidized Rhizospheres on Living Roots (C3)		Crayfish Burrows (C8)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Saturation Visible on Aerial (C9)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Tilled Soils (C6)		Stunted or Stressed Plants (D1)
	Iron Deposits (B5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
	Inundation Visible on Aerial (B7)		Other (Explain in Remarks)		Shallow Aquitard (D3)
	Sparsely Vegetated Concave Surface (B8)				Microtopographic Relief (D4)
					FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present?	X	Depth (inches):	1
Water Table Present?		Depth (inches):	
Saturation Present?		Depth (inches):	

Wetland Hydrology Present? YES

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

1.02" of Rain in the 5 days prior; PDSI 0.85" for the week ending in 5/20/22near normal (NOAA)

Remarks:

SOIL

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

Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	5y 3/2	100					SILT LOAM	
5-16	5y 5/1	95	10yr 4/6	5	c	m	SANDY LOAM	

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

Hydric Soil Indicators:

	Histosol (A1)		Polyvalue Below Surface (S8) (LRR R, MLRA 149B)		2 cm Muck (A10) (LRR K, L, MLRA 149B)
	Histic Epipedon (A2)				Coast Prairie Redox (A16) (LRR K, L, R)
	Black Histic (A3)		Thin Dark Surface (S9) (LRR R, MLRA 149B)		5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
	Hydrogen Sulfide (A4)		Loamy Mucky Mineral (F1) (LRR K, L)		Dark Surface (S9) (LRR K, L, M)
	Stratified Layers (A5)		Loamy Gleyed Matrix (F2)		Polyvalue Below Surface (S8) (LRR K, L)
	Depleted Below Dark Surface (A11)	X	Depleted Matrix (F3)		Thin Dark Surface (S9) (LRR K, L)
	Thick Dark Surface (A12)		Redox Dark Surface (F6)		Iron-Manganese Masses (F12) (LRR K, L, R)
	Sandy Mucky Mineral (S1)		Depleted Dark Surface (F7)		Piedmont Floodplain Soils (F19) (MLRA 149B)
	Sandy Gleyed Matrix (S4)		Redox Depressions (F8)		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
	Sandy Redox (S5)				Red Parent Material (F21)
	Stripped Matrix (S6)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		Very Shallow Dark Surface (TF12)
	Dark Surface (S7) (LRR R, MLRA 149B)				Other (Explain in Remarks)

Indicators for Problematic Hydric Soils[3]:

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

Hydric Soil Present? YES

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: **2022-HI-6-Wet**

		Absolute % Cover	Dom. Sp?	Indicator Status
Tree Stratum	(Plot size:)			
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Sapling Stratum	(Plot size: **15' RAD**)			
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Shrub Stratum	(Plot size: **15' RAD**)			
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Herb Stratum	(Plot size: **5' RAD**)			
1.	**Phalaris arundinacea**	**95**	**X**	**FACW**
2.	**Onoclea sensibilis**	**20**		**FACW**
3.	**Thelypteris palustris**	**15**		**FACW**
4.	**Typha latifolia**	**5**		**OBL**
5.	**Vicia cracca L.**	**5**		**UPL**
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		140 = Total Cover		
Woody Vines	(Plot size:)			
1.				
2.				
3.				
4.				
5.				
		= Total Cover		

Dominance Test Worksheet:

# Dominants OBL, FACW, FAC:	**1**	(A)
# Dominants across all strata:	**1**	(B)
% Dominants OBL, FACW, FAC:	**100%**	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:
OBL	**5** x 1 =	**5**
FACW	**130** x 2 =	**260**
FAC	x 3 =	
FACU	x 4 =	
UPL	**5** x 5 =	**25**
Sum:	**140** (A)	**290** (B)

Prevalence Index = B/A = **2.07**

Hydrophytic Vegetation Indicators:

- **X** Dominance Test is > 50%
- **X** Prevalence Index is <= 3.0
- ____ Problematic Hydrophytic Vegetation[1] (explain)
- ____ Rapid Test for Hydrophytic Vegetation
- ____ Morphological Adaptations

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? **YES**

Remarks: (If observed, list morphological adaptations below).

APPENDIX F

Vermont Potential Rare, Threatened, and Endangered Species and Natural Communities in the Project Region and Onsite Habitats Summary
Client: Vermont Electric Power Company ("VELCO")
Project: VELCO K42 Franklin County Line Upgrade
Prepared by: VHB (K.Maines, C. Peterson) October 20, 2023
Survey Date: May-August, 2023

Species	Common Name	Type	State Rank	Global Rank	Vermont Status	Federal Status	EO last Observed	Habitat Description[1]	Occurrence Description[2]	Optimal Survey Time[3]	EO Mapped within Study Area?	Potential for Habitat to Occur Onsite?	Survey Recommended?	
													(yes/no)	Comments
Ambystoma jeffersonianum	Jefferson Salamander	Animal	S2	G4	-	-	2019	Lives in forested areas and breeds in vernal pools.	Found in a mixed hardwood stand in Georgia.	Summer	No	Yes	No	Not a state or federally protected species.
Ammocrypta pellucida	Eastern Sand Darter	Animal	S1	G4	T	-	2019	Clean rivers and streams with sandy substrate.	Found in the lower Missisquoi River.	Summer	Yes	Yes	No	No project components located in waterways, no survey recommended.
Anemone multifida var. multifida	Early Thimbleweed	Plant	S1	G5T5	E	-	1873	High-pH rivershore outcrops; limestone ledges along the Winooski and Ottaquechee Rivers	Found along the Missisquoi River.	Summer (June)	No	Yes	Yes	Species is state Endangered and has been documented on site.
Anodontoides ferussacianus	Cylindrical Papershell	Animal	S1S2	G5	E	-	2020	Lives in small streams with sandy or muddy substrate.	Found in the lower Missisquoi River.	Late Summer	Yes	Yes	No	No project components located in waterways, no survey recommended.
Antrostomus vociferus	Eastern Whip-poor-will	Animal	S2B	G5	T	-	2019, 2020	Sparse forests and forest edge near open areas.	Found in agriculture fields in Georgia. As well as several location in Franklin County Airport.	Summer	No	Yes	No	Species is state Threatened but has not been documented on site.
Apalone spinifera	Spiny Softshell (Turtle)	Animal	S1	G5	T	-	2018	Rivers and streams with soft substrate and high oxygenation.	Found in streams north of St. Albans Bay state park.	Spring-Summer	No	Yes	Yes	Species is state Threatened and has potential habitat on site.
Bartramia longicauda	Upland Sandpiper	Animal	S2B	G5	E	-	2022	open tall grass fields.	From I 89, Exit 21 east on VT 78 approximately 1 mile to Airport Road north, also found in fields on both sides of Rt 207.	Summer	No	Yes	No	Species is state Threatened but has not been documented on site.
Equisetum pratense	Meadow Horsetail	Plant	S3	G5	-	-	1,987	Meadows, woodlands, riparian forests with rich soils	Highgate Falls, by Power Plant	Spring	No	No	No	Not a state or federally protected species.
Carex atherodes	Awned Sedge	Plant	S1	G5	-	-	2019	Swales and wet meadows (slough sedge)	Found in disturbed areas in St. Albans.	Summer	No	Yes	Yes	Species is rare and has been documented on site.
Carex merritt-fernaldii	Fernald's Sedge	Plant	S1	G5	-	-	2010	Dry rocky or sandy soil or outcrops	Found near a substation in Georgia.	Summer	No	Yes	Yes	Species is very rare and has been documented on site.
Carex typhina	Cat-tail Sedge	Plant	S2S3	G5	-	-	1992	Floodplain woodlands in western VT	Found near the mouth of the Mill River.	Late Summer	No	Yes	No	Not a state or federally protected species.

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													(yes/no)	Comments
Cottus bairdii	Mottled Sculpin	Animal	S2	G5	-	-	1998	Gravel or rocky swift flowing streams.	Found in a lakeshore wetland complex on Lake Champlain.	Spring-Summer	No	No	No	Not a state or federally protected species.
Cyperus engelmanni	Engelmann's Flatsedge	Plant	S1S2	G4Q	-	-	2021	Found on pond shores and disturbed muddy areas.	St. Albans Bay	Late Summer-Fall	No	Yes	Yes	Species is rare and has potential habitat on site.
Esox masquinongy	Muskellunge	Animal	S1	G5	-	-	1981	Lives in a variety of river and lake habitats.	Found near the Swanton dam.	Spring - Summer	No	Yes	No	No project components located in waterways, no survey recommended.
Hemidactylium scutatum	Four-toed Salamander	Animal	S2	G5	-	-	2016	Forested habitat near wetlands	Found in a wet meadow in Georgia	Summer	No	Yes	No	Not a state or federally protected species.
Hybognathus hankinsoni	Brassy Minnow	Animal	S2S3	G5	-	-	2006	Lives in various streams and ponds.	Found at various points within Stonebridge Brook.	Summer - Late Summer	Yes	Yes	No	No project components located in waterways, no survey recommended.
Hypericum ascyron	Great St. John's-wort	Plant	S2	G4	T	-	2008	Riparian forests, riverbanks and low fields	Found adjacent to a brook west of a bridge on Rt 207.	Summer	No	Yes	Yes	Species is state Threatened and has potential habitat on site.
Ichthyomyzon unicuspis	Silver Lamprey	Animal	S2	G5	-	-	2016	Lives in large rivers and lakes.	Found at various points within Stonebridge Brook.	Summer- Late Summer	Yes	Yes	No	No project components located in waterways, no survey recommended.
Ixobrychus exilis	Least Bittern	Animal	S2B	G4G5	-	-	1993	They nest in freshwater and brackish marshes with tall aquatic vegetation such as cattails and other reeds and rushes.	Found in emergent wetland at upper reaches of Kelly Brook in Highgate	Spring-Summer	No	Yes	No	Not a state or federally protected species.
Lampsilis ovata	Pocketbook	Animal	S2	G5	E	-	2020	Lives in large rivers with packed sand and gravel substrate.	Found within the Missisquoi River.	Summer-Late Summer	Yes	Yes	No	No project components located in waterways, no survey recommended.
Lasmigona costata	Flutedshell	Animal	S2	G5	E	-	1998	Lives in medium to large rivers often in riffles.	Found within the Missisquoi River.	Late Summer	Yes	Yes	No	No project components located in waterways, no survey recommended.
Leptodea fragilis	Fragile Papershell	Animal	S2	G5	E	-	2018	Lives in a variety of aquatic habitats.	Found in the St. Albans Bay.	Late Summer	No	Yes	No	No project components located in waterways, no survey recommended.

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Species	Common Name	Type	State Rank	Global Rank	Vermont Status	Federal Status	EO last Observed	Habitat Description[1]	Occurrence Description[2]	Optimal Survey Time[3]	EO Mapped within Study Area?	Potential for Habitat to Occur Onsite?	Survey Recommended?	
													(yes/no)	Comments
Lethenteron appendix	American Brook Lamprey	Animal	S1	G4	T	-	2020	Lives in slow moving warm streams.	Found at various points within Hungerford Brook, Missisquoi River, Youngman Brook.	Summer - Late Summer	Yes	Yes	No	No project components located in waterways, no survey recommended.
Ligumia recta	Black Sandshell	Animal	S1	G4G5	E	-	1998	Lives in riffles and runs of larger rivers or sand bottom lakes.	Found within the Missisquoi River.	Late Summer	Yes	Yes	No	No project components located in waterways, no survey recommended.
Monarda punctata	Dotted Horsemint	Plant	S1	G5	-	-	2020	Found in fields roadsides and clearings.	Found along the north side of a rail trail.	Late Summer	No	Yes	Yes	Species is rare and has potential habitat on site.
Moxostoma anisurum	Silver Redhorse	Animal	S2	G5	-	-	2000	Various rivers and lakes.	Found within the Missisquoi River.	Spring - Summer	Yes	Yes	No	No project components located in waterways, no survey recommended.
Moxostoma macrolepidotum	Shorthead Redhorse	Animal	S2	G5	-	-	2011	Various rivers and lakes.	Found in the lower Missisquoi River.	Spring - Summer	Yes	Yes	No	No project components located in waterways, no survey recommended.
Moxostoma valenciennesi	Greater Redhorse	Animal	S1	G4	-	-	2011	Various rivers and lakes.	Found in the lower Missisquoi River.	Spring - Summer	Yes	Yes	No	No project components located in waterways, no survey recommended.
Myotis leibii	Eastern Small-footed Bat	Animal	S1	G4	T	-	2019	Ground level crevices in tallus slopes.	Found in a woodland near a residential area in St. Albans	Summer	No	Yes	Yes	Species is state Endangered and has potential habitat on site.
Noturus flavus	Stonecat	Animal	S1	G5	E	-	2011	Found in medium to small streams.	Found in a riffle of a stream in Highgate.	Spring - Summer	Yes	Yes	No	No project components located in waterways, no survey recommended.
Platanthera flava var. herbiola	Tubercled Orchid	Plant	S1	G4	T	-	2019	River shores, usually associated with circumneutral seeps, sandy alluvium, or shrub thickets, rarely in tidal marshes, also in wet fields, meadows, and swamps	Two small patches of woods on either side of Cedar Street where ditched waterway about 300 meters to the east.	Summer-Late Summer	No	Yes	Yes	Species is state Threatened and has potential habitat on site.
Potamilus alatus	Pink Heelsplitter	Animal	S2	G5	E	-	2017	Medium to large rivers with a variety of substrates. Can also adapt to shallow lakes.	Found in St. Albans Bay.	N/A	No	No	No	No project components located in waterways, no survey recommended.
Proserpinaca palustris	Marsh Mermaid-weed	Plant	S2S3	G5	-	-	1995	Shallow, still or slow-moving, basic to circumneutral water of lakes and rivers, ponds shores, swamps, fens, mucky pools	East of I-89, south of Village of Highgate Springs	Summer-Late Summer	No	Yes	No	Not a state or federally protected species.

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														(yes/no)	Comments
Element Occurrence Range: 1-Mile Radius	*Pyganodon grandis*	Giant Floater	Animal	S2S3	G5	T	-	2020	Found in shallow lakes and streams with fine sediment.	Found within the Missisquoi River.	Spring - Summer	Yes	Yes	No	No project components located in waterways, no survey recommended.
	Ulmus thomasii	Cork Elm	Plant	S1	G5	T	-	2016	Limestone ledges or rich soils in western VT	Found on a limy ridge in Georgia.	Summer	No	Yes	Yes	Species is state Threatened and has potential habitat on site.
	Thalictrum venulosum	Border Meadow-rue	Plant	S2S3	G5	-	-	2020	lake shores and ice scoured rivers.	At the edge of a driveway on the edge of a floodplain forest.	Summer	No	Yes	No	Not a state or federally protected species.
	Sisyrinchium atlanticum	Eastern Blue-eyed-grass	Plant	S1	G5	-	-	1998	fields, meadows, marsh edges	In sandy field, north side of VT 78, east of I-89 in Swanton.	Spring - Summer	No	Yes	Yes	Species is very rare and has potential habitat on site.
	Ardea herodias	Great Blue Heron	Animal	S3S4B	G5	-	-	1994	Marshes, swamps, lakeshores, riversides, beaches and ponds; praries and meadows (winter)	Stone Bridge Brook	Spring-Summer	No	No	No	Not a state or federally protected species.
	Cyprinella spiloptera	Spotfin Shiner	Animal	S3S4	G5	-	-	2011	Large creeks, rivers, lakes and reservoirs	Missisquoi River- Lower	Summer - Late Summer	No	No	No	Not a state or federally protected species.
	Eragrostis hypnoides	Creeping Love-grass	Plant	S3	G5	-	-	2021	Moist soils and wet margins, mud flats, sandy shores of streams and rivers	Mill River Mouth	Summer - Fall	No	No	No	Not a state or federally protected species.
	Carex grayi	Gray's Sedge	Plant	S3	G4G5	-	-	1992	Moist soils, floodplain forest, shaded seeps	Mill River Mouth	Summer	No	No	No	Not a state or federally protected species.
	Umbra limi	Central Mudminnow	Animal	S3S4	G5	-	-	1998	Slow-moving rivers and streams, marshy shores	Kelly Brook	Summer - Late Summer	No	No	No	No project components located in waterways, no survey recommended.
	Sagittaria rigida	Sessile-fruited Arrowhead	Plant	S3	G5	-	-	2021	Lakes, river shores, backwaters and pools; fresh to brackish-tidal rivers	Mill River Mouth	Summer	No	No	No	Not a state or federally protected species.
	Lycopus virginicus	Virginia Bugleweed	Plant	S3	G5	-	-	2021	Moist soil, floodplain forests, along shores and wet meadows	Mill River Mouth	Spring - Summer	No	No	No	Not a state or federally protected species.
	Dichanthelium columbianum	Columbian Rosette-grass	Plant	S3	G5T5	-	-	1990	Open spaces with thin or sandy soils	Hungerford Brook	Spring	No	No	No	Not a state or federally protected species.

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													(yes/no)	Comments
Chrosomus neogaeus	Finescale Dace	Animal	S3	G5	-	-	1998	Smaller shallow and narrow streams with sandy substrates; high drainage headwaters	Kelly Brook	Summer - Late Summer	No	No	No	Not a state or federally protected species.
Dichanthelium dichotomum var. dichotomum	Cypress Witchgrass	Plant	S3	G5T5	-	-	1989	Moist areas, either on peat, sand, silty clay, loam or loamy sand. Wet meadows, marshes, swamps, bogs, streamsides	Missisquoi Crossing, Missisquoi Falls	Spring-Summer	No	No	No	Not a state or federally protected species.
Cyperus squarrosus	Awned Flatsedge	Plant	S3	G5	-	-	2011	Moist sandy or gravelly disturbed soils, stream banks, pond edges, rocky outcrops	Mill River Mouth	Summer	No	No	No	Not a state or federally protected species.
Carex brevior	Fescue Sedge	Plant	S3	G5	-	-	2009	Seasonal or permanently saturated soils of fields, swamps, and wetland margins	Rail Trail West, along side-slope of LVRT, northwest of VT-78 east of Highgate Center.	Summer	No	No	No	Not a state or federally protected species.
Ambystoma laterale	Blue-spotted Salamander	Animal	S3	G5	-	-	1988	Deciduous hardwood forests, swampy woodlands, wet fields, vernal pools into mid-summer	Mill River Natural Area, northwest corner of Georgia where Mill River empties into Lake Champlain	Spring - Summer	No	No	No	Not a state or federally protected species.
Ranunculus trichophyllus	Northeastern White Water-buttercup	Plant	S3	G5	-	-	1992	Still or slow-moving water of lakes and rivers, circumneutral to basic water	Mill River Mouth	Spring - Summer	No	No	No	Not a state or federally protected species.
Ranunculus flabellaris	Yellow Water-buttercup	Plant	S3	G5	-	-	1992	Swamps, ponds, pools, slow streams	Mill River Mouth	Spring - Summer	No	No	No	Not a state or federally protected species.
Anguilla rostrata	American Eel	Animal	S2	G4	-	-	2013	Freshwater, coastal streams, rivers and estuaries	Stonebridge Brook	Spring - Summer	No	No	No	No project components located in waterways, no survey recommended.
Hybognathus regius	Eastern Silvery Minnow	Animal	S3S4	G5	-	-	1998	Rivers, streams, lakes, tolerant of various water environments	Mill River, east side of St. Albans Bay near mouth	Summer - Late Summer	No	No	No	No project components located in waterways, no survey recommended.
Etheostoma flabellare	Fantail Darter	Animal	S3	G5	-	-	1983	Smaller streams, rivers, fast-flowing rocky waters	Hungerford Brook	Summer	No	No	No	No project components located in waterways, no survey recommended.
Alasmidonta undulata	Triangle Floater	Animal	S3	G4	-	-	2020	Streams, rivers, and lakes, substrates of sand, rock, or gravel	Missisquoi River - Highgate Dam to Swanton Dam	Summer - Fall	No	No	No	No project components located in waterways, no survey recommended.
Opheodrys vernalis	Smooth Greensnake	Animal	S3	G5	-	-	2018	Moist meadows and woodlands, often adjacent to water sources and areas of dense low vegetation	Sodom Road - Georgia	Spring - Summer	No	No	No	Not a state or federally protected species.
Bombus rufocinctus	Red-belted Bumble Bee	Animal	S3	G5	-	-	2013	Open areas, prairies and meadows with wooded margins	Stone Bridge Brook, unnamed tributary east of Brook and Miltonboro	Spring	No	No	No	Not a state or federally protected species.

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Notropis rubellus	Rosyface Shiner	Animal	S3	G5	-	-	2011	Rivers, streams, lakes	Missisquoi River - Lower	Summer - Late Summer	No	No	No	Not a state or federally protected species.
Strophitus undulatus	Creeper	Animal	S3	G5	-	-	2020	Woodlands, shaded groves, mature mixed woods	Missisquoi River - Highgate Dam to Swanton Dam	Summer	No	No	No	Not a state or federally protected species.
Elymus wiegandii	Wild-rye	Plant	S3	G4G5	-	-	1992	Mesic-wet upland forests, prairies, glades, ledges and bluffs, river and stream banks	Highgate Falls Islands	Spring - Summer	No	No	No	Not a state or federally protected species.
Margariscus margarita	Allegheny Pearl Dace	Animal	S3	G5	-	-	2011	Lakes, ponds, rivers, usually on substrates of sand or gravel; generally in clear waters	Lower Missisquoi River	Summer - Late Summer	No	No	No	No project components located in waterways, no survey recommended.
Drymocallis arguta	Tall Cinquefoil	Plant	S3	G5	-	-	2009	Prairies, wooded edges in shade	Highgate Center Railroad	Summer	No	No	No	Not a state or federally protected species.
Symphyotrichum ontarionis	Ontario Aster	Plant	S2S3	G5	-	-	2021	Open areas of floodplain forest.	Adjacent to a path to the shore of Lake Champlain in Georgia, and near the delta of the Mill River.	Summer- Late Summer	No	No	No	Not a state or federally protected species.
Cottus bairdii	Mottled Sculpin	Animal	S2	G5	-	-	2021	Small gravel bottom streams or rocky shorelines of lakes.	In Lake Champlain east of the islands.	N/A	No	No	No	No project components located in waterways, no survey recommended.
Hackelia deflexa ssp. americana	Nodding Stickseed	Plant	S2	G5T5	T	-	2000	Rocky forest and cliff bases.	Along a calcareous bluff along Lake Champlain.	Summer -Late Summer	No	Yes	Yes	Species is state Threatened and has potential habitat on site.
Calystegia spithamaea ssp. spithamaea	Low Bindweed	Plant	S2	G4G5T4T5	T	-	2020	Sandy, open areas or areas with disturbance.	On North side of LVRT circa 1000 feet east of VT-78 just south of Pine Haven Road.	Summer	No	Yes	No	Not a state or federally protected species.
Scutellaria parvula var. parvula	Small Skullcap	Plant	S2	G4T4	-	-	2000	Woodlands, balds, river bank, often with thin soil over bedrock.	Found along railroad tracks in Highgate.	Spring - Summer	No	Yes	No	Not a state or federally protected species.
Schoenoplectus heterochaetus	Slender Bulrush	Plant	S2	G5	-	-	2021	Shallow waters, or wet river and lake shores.	Found near the delta of the Mill River.	Summer- Late Summer	No	Yes	No	Not a state or federally protected species.
Cyperus erythrorhizos	Red-root Flatsedge	Plant	S2S3	G5	-	-	2022	Mesic to hydric shorelines and wet areas.	Southeast side of small deltaic penninsula between Deep Bulrush Marsh and Deep Broadleaf Marsh.	Late summer-Fall	No	Yes	No	Not a state or federally protected species.

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Species	Common Name	Type	State Rank	Global Rank	Vermont Status	Federal Status	EO last Observed	Habitat Description[1]	Occurrence Description[2]	Optimal Survey Time[3]	EO Mapped within Study Area?	Potential for Habitat to Occur Onsite?	Survey Recommended?	
													(yes/no)	Comments
Deep Bulrush Marsh		Natural Community	S4	-	-	-	2021	Open water areas with bullrush often on lake shores or backwaters of slow rivers.	Found near the delta of the Mill River.	Summer-Fall	No	No	No	No potential habitat on site.
Deep Broadleaf Marsh		Natural Community	S4	-	-	-	2021	Open water areas with often on pond and lake shores or backwaters of slow rivers.	Found near the delta of the Mill River.	Summer-Fall	No	No	No	No potential habitat on site.
Limestone Bluff Cedar-Pine Forest		Natural Community	S2	-	-	-	1992	Outcrops of limestone, shale or dolostone bluffs or outcrops	Found on the shore of Lake Champlain.	Summer-Fall	No	Yes	Yes	Check rocky forested areas, especially near Lake Champlain
Lakeside Floodplain Forest		Natural Community	S3	-	-	-	1992	Former lake coves, in complexes of marshes and swamps at the mouths of rivers and streams	Found on the shore of Lake Champlain.	Summer-Fall	No	Yes	Yes	Check lakeside areas in Study area.
Red Maple-Northern White Cedar Swamp		Natural Community	S3	-	-	-	1996	Floodplains of larger rivers on calcareous bedrock or isolated basins on calcareous bedrock.	Found in a quarry swamp in Swanton.	Summer-Fall	No	Yes	Yes	Check forested, low gradient areas or basins with softwoods in Study Area.
Silver Maple-Ostrich Fern Floodplain Forest		Natural Community	S3	-	-	-	1992	Behind the natural levees of low to moderate grade portions of large rivers.	Found on islands in the Missisquoi River.	Summer-Fall	No	Yes	Yes	Check floodplain areas associated with large rivers in Study Area.

[1]Potential sources for habitat description listed below
Ahles, Harry E. and Magee, Dennis W. 2007. *Flora of the Northeast*. A Manual of the Vascular Flora of New England and Adjacent New York
Animal Diversity Web. Retrieved from: https://animaldiversity.org/accounts
Cornell Lab of Ornithology Bird Guide. Retrieved from: https://www.allaboutbirds.org/guide/
Gilman, Arthur V. 2015. *New Flora of Vermont*. The New York Botanical Garden.
Gleason, Henry A. and Cronquist, Arthur. 1991. *Manual of Vascular Plants of Northeaster United States and Adjacent Canada.* The New York Botanical Garden.
Haines, Arthur. 2011. *Flora Novae Angliae*. New England Wildflower Society/Yale University Press, New Haven, CT . 973 Pp.
Langdon, Richard W., Ferguson, Mark T. and Cox, Kenneth M. 2006. *Fishes of Vermont*. Vermont Department of Fish and Wildlife.
Newcomb, Lawrence. 1977. *Newcomb's Wildflower Guide*. Little, Brown, and Company, Boston
Northern Prairie Wildlife Research Center. http://www.npwrc.usgs.gov/resource/distr/insects/tigb/usa/49.htm
Seymour, Frank Conkling. 1982. *The Flora of New England*. 2d ed. Phytologia Memoirs 5. Plainfield, NJ: Harold N. Moldenke and Alma L. Moldenke. 611 p. [7604]
Thompson, Elizabeth H., Sorenson, Eric R. and Zaino, Robert J. 2019. *Wetland, Woodland, Wildland: A Guide to the Natural Communities of Vermont*. Vermont Department of Fish and Wildlife and The Nature Conservancy.
Vermont Natural Resources Atlas, Accessed August 2023. Element Occurrence Reports
[2]Sources for occurrence description listed below:
Vermont Natural Heritage Inventory - Vermont Fish & Wildlife Department - Element Occurrence Reports.
[3]Flowering Time: Spring (April-May), Summer (June-July), Late Summer (August-September), Fall (October-November)

APPENDIX G

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To: October 17, 2023
Project Code: 2023-0056518
Project Name: VELCO FCLU Line Rebuild Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

Updated 4/12/2023 **-** *Please review this letter each time you request an Official Species List, we will continue to update it with additional information and links to websites may change.*

About Official Species Lists

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Federal and non-Federal project proponents have responsibilities under the Act to consider effects on listed species.

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested by returning to an existing project's page in IPaC.

Endangered Species Act Project Review

Please visit the "**New England Field Office Endangered Species Project Review and Consultation**" website for step-by-step instructions on how to consider effects on listed

species and prepare and submit a project review package if necessary:

https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review

NOTE Please do not use the **Consultation Package Builder** tool in IPaC except in specific situations following coordination with our office. Please follow the project review guidance on our website instead and reference your **Project Code** in all correspondence.

Northern Long-eared Bat - (**Updated 4/12/2023**) The Service published a final rule to reclassify the northern long-eared bat (NLEB) as endangered on November 30, 2022. The final rule went into effect on March 31, 2023. You may utilize the **Northern Long-eared Bat Rangewide Determination Key** available in IPaC. More information about this Determination Key and the Interim Consultation Framework are available on the northern long-eared bat species page:

https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis

For projects that previously utilized the 4(d) Determination Key, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective. If your project was not completed by March 31, 2023, and may result in incidental take of NLEB, please reach out to our office at newengland@fws.gov to see if reinitiation is necessary.

Additional Info About Section 7 of the Act
Under section 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether projects may affect threatened and endangered species and/or designated critical habitat. If a Federal agency, or its non-Federal representative, determines that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Federal agency also may need to consider proposed species and proposed critical habitat in the consultation. 50 CFR 402.14(c)(1) specifies the information required for consultation under the Act regardless of the format of the evaluation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/service/section-7-consultations

In addition to consultation requirements under Section 7(a)(2) of the ESA, please note that under sections 7(a)(1) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Please contact NEFO if you would like more information.

Candidate species that appear on the enclosed species list have no current protections under the ESA. The species' occurrence on an official species list does not convey a requirement to

consider impacts to this species as you would a proposed, threatened, or endangered species. The ESA does not provide for interagency consultations on candidate species under section 7, however, the Service recommends that all project proponents incorporate measures into projects to benefit candidate species and their habitats wherever possible.

Migratory Birds

In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see:

https://www.fws.gov/program/migratory-bird-permit

https://www.fws.gov/library/collections/bald-and-golden-eagle-management

Please feel free to contact us at **newengland@fws.gov** with your **Project Code** in the subject line if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Attachment(s): Official Species List

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

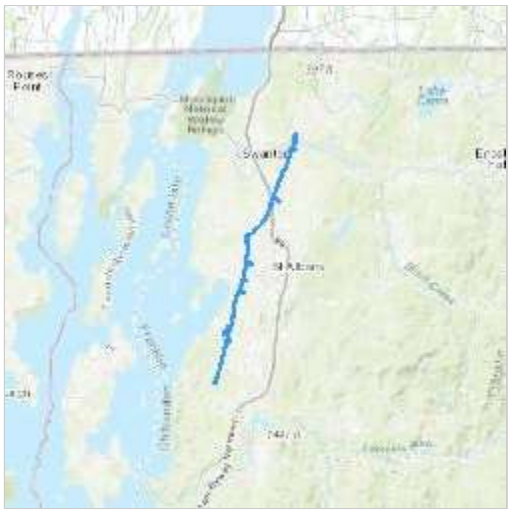
This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

PROJECT SUMMARY

Project Code: 2023-0056518
Project Name: VELCO FCLU Line Rebuild Project
Project Type: Utility Infrastructure Maintenance
Project Description: VELCO Franklin County line rebuild project that extends throughout Georgia, Saint Albans Town, Swanton, Highgate, Vermont.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@44.8261943,-73.11450266361163,14z



Counties: Franklin County, Vermont

ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency:	VHB
Name:	Kaitlyn Maines
Address:	40 IDX Drive
Address Line 2:	Building 100, Suite 200
City:	South Burlington
State:	VT
Zip:	05403
Email	kmaines@vhb.com
Phone:	8024976189

APPENDIX H

Species Checklist - Partial Floristic Inventory
Project: Franklin County Line Upgrade Project
Client: Vermont Electric Power Company ("VELCO")
Location: Georgia to Highgate, Vermont
Survey Date(s): May-September 2022, July-August 2023 (L. Keszey, M.Jackman, C. Fenner, K. Maines)
Prepared By: VHB - October 17, 2023

Scientific Name [1]	Common Name	Family	Vermont Rarity Rank[2]	Non-Native Invasive Species[3]
Achillea millefolium L.	common yarrow	Asteraceae		
Acer negundo L.	boxelder	Aceraceae		
Actaea pachypoda Elliott	white baneberry	Ranunculaceae		
Acer pensylvanicum L.	striped maple	Aceraceae		
Acalypha rhomboidea Raf.	common threeseed mercury	Euphorbiaceae		
Acer rubrum L.	red maple	Aceraceae		
Actaea rubra (Aiton) Willd.	red baneberry	Ranunculaceae		
Acer pensylvanicum L.	striped maple	Aceraceae		
Acer rubrum L.	red maple	Aceraceae		
Acer saccharum Marshall	sugar maple	Aceraceae		
Acer spicatum Lam.	mountain maple	Aceraceae		
Adiantum pedatum L.	northern maidenhair	Pteridaceae		
Ageratina altissima (L.) R.M. King & H. Rob.	white snakeroot	Asteraceae		
Agrostemma githago L.	common corncockle	Caryophyllaceae		
Agrostis gigantea Roth	redtop	Poaceae		
Agrimonia gryposepala Wallr.	tall hairy agrimony	Rosaceae		
Agrostis hyemalis (Walter) Britton, Sterns & Poggenb.	winter bentgrass	Poaceae		
Agrostis scabra Willd.	rough bentgrass	Poaceae		
Agrimonia striata Michx.	roadside agrimony	Rosaceae		
Allium tricoccum Aiton	ramp	Liliaceae		
Ambrosia artemisiifolia L.	annual ragweed	Asteraceae		
Amphicarpaea bracteata (L.) Fernald	American hogpeanut	Fabaceae		
Anemone canadensis L.	Canadian anemone	Ranunculaceae		
Antennaria neglecta Greene	field pussytoes	Asteraceae		
Apios americana Medik.	groundnut	Fabaceae		
Apocynum androsaemifolium L.	spreading dogbane	Apocynaceae		
Apocynum cannabinum L.	Indianhemp	Apocynaceae		
Aquilegia canadensis L.	red columbine	Ranunculaceae		
Arctium minus Bernh.	lesser burdock	Asteraceae		
Arisaema triphyllum (L.) Schott	Jack in the pulpit	Araceae		
Artemisia vulgaris L.	common wormwood	Asteraceae		
Asarum canadense L.	Canadian wildginger	Aristolochiaceae		
Asclepias incarnata L.	swamp milkweed	Asclepiadaceae		
Asplenium platyneuron (L.) Britton, Sterns & Poggenb.	ebony spleenwort	Aspleniaceae		
Asclepias syriaca L.	common milkweed	Asclepiadaceae		
Athyrium filix-femina (L.) Roth	common ladyfern	Dryopteridaceae		
Betula papyrifera Marshall	paper birch	Betulaceae		
Betula alleghaniensis Britton	yellow birch	Betulaceae		
Betula populifolia Marshall	gray birch	Betulaceae		
Bidens frondosa L.	devil's beggartick	Asteraceae		
Bromus inermis Leyss.	smooth brome	Poaceae		
Brassica nigra (L.) W.D.J. Koch	black mustard	Brassicaceae		
Carya cordiformis (Wangenh.) K. Koch	bitternut hickory	Juglandaceae		
Carex merritt-fernaldii Mack.	Fernald's sedge	Cyperaceae	S1	

Species Checklist - Partial Floristic Inventory
Project: Franklin County Line Upgrade Project
Client: Vermont Electric Power Company ("VELCO")
Location: Georgia to Highgate, Vermont
Survey Date(s): May-September 2022, July-August 2023 (L. Keszey, M.Jackman, C. Fenner, K. Maines)
Prepared By: VHB - October 17, 2023

Scientific Name [1]	Common Name	Family	Vermont Rarity Rank[2]	Non-Native Invasive Species[3]
Carex gracillima Schwein.	graceful sedge	Cyperaceae		
Carex pallescens L.	pale sedge	Cyperaceae		
Carex pensylvanica Lam.	Pennsylvania sedge	Cyperaceae		
Carex plantaginea Lam.	plantainleaf sedge	Cyperaceae		
Campanula rotundifolia L.	bluebell bellflower	Campanulaceae		
Calystegia spithamaea (L.) Pursh	low false bindweed	Convolvulaceae	S2 (T)	
Calystegia sepium (L.) R. Br.	hedge false bindweed	Convolvulaceae		
Centaurea nigra L.	lesser knapweed	Asteraceae		
Celastrus orbiculatus Thunb.	Oriental bittersweet	Celastraceae		B
Centaurea stoebe L.	spotted knapweed	Asteraceae		WL
Chelone glabra L.	white turtlehead	Scrophulariaceae		
Chenopodium pratericola Rydb.	desert goosefoot	Chenopodiaceae		
Circaea alpina L.	small enchanter's nightshade	Onagraceae		
Cirsium arvense (L.) Scop.	Canada thistle	Asteraceae		
Cichorium intybus L.	chicory	Asteraceae		
Clematis virginiana L.	devil's darning needles	Ranunculaceae		
Clinopodium vulgare L.	wild basil	Lamiaceae		
Cornus alternifolia L. f.	alternateleaf dogwood	Cornaceae		
Cornus amomum Mill.	silky dogwood	Cornaceae		
Cornus sericea L.	redosier dogwood	Cornaceae		
Cystopteris bulbifera (L.) Bernh.	bulblet bladderfern	Dryopteridaceae		
Cystopteris fragilis (L.) Bernh.	brittle bladderfern	Dryopteridaceae		
Cystopteris tenuis	Mackay's Fragile Fern	Woodsiacaea		
Cyperus houghtonii Torr.	Houghton's flatsedge	Cyperaceae	S2 (T)	
Cyperus lupulinus (Spreng.) Marcks	Great Plains flatsedge	Cyperaceae		
Daucus carota L.	Queen Anne's lace	Apiaceae		
Dactylis glomerata L.	orchardgrass	Poaceae		
Danthonia spicata (L.) P. Beauv. ex Roem. & Schult.	poverty oatgrass	Poaceae		
Desmodium canadense (L.) DC.	showy ticktrefoil	Fabaceae		
Desmodium perplexum B.G. Schub.	perplexed ticktrefoil	Fabaceae	S2	
Dichanthelium acuminatum (Sw.) Gould & C.A. Clark	tapered rosette grass	Poaceae		
Dianthus armeria L.	Deptford pink	Caryophyllaceae		
Digitaria ischaemum (Schreb.) Schreb. ex Muhl.	smooth crabgrass	Poaceae		
Doellingeria umbellata (Mill.) Nees	parasol whitetop	Asteraceae		
Dryopteris carthusiana (Vill.) H.P. Fuchs	spinulose woodfern	Dryopteridaceae		
Dryopteris clintoniana (D.C. Eaton) Dowell	Clinton's woodfern	Dryopteridaceae		
Dryopteris cristata (L.) A. Gray	crested woodfern	Dryopteridaceae		
Dryopteris intermedia (Muhl. ex Willd.) A. Gray	intermediate woodfern	Dryopteridaceae		
Dryopteris marginalis (L.) A. Gray	marginal woodfern	Dryopteridaceae		
Echinochloa crus-galli (L.) P. Beauv.	barnyardgrass	Poaceae		
Echium vulgare L.	common viper's bugloss	Boraginaceae		
Elymus hystrix L.	eastern bottlebrush grass	Poaceae		
Epilobium ciliatum Raf.	fringed willowherb	Onagraceae		
Equisetum arvense L.	field horsetail	Equisetaceae		

Species Checklist - Partial Floristic Inventory
Project: Franklin County Line Upgrade Project
Client: Vermont Electric Power Company ("VELCO")
Location: Georgia to Highgate, Vermont
Survey Date(s): May-September 2022, July-August 2023 (L. Keszey, M.Jackman, C. Fenner, K. Maines)
Prepared By: VHB - October 17, 2023

Scientific Name [1]	Common Name	Family	Vermont Rarity Rank[2]	Non-Native Invasive Species[3]
Equisetum hyemale L.	scouringrush horsetail	Equisetaceae		
Equisetum scirpoides Michx.	dwarf scouringrush	Equisetaceae		
Equisetum sylvaticum L.	woodland horsetail	Equisetaceae		
Erigeron annuus (L.) Pers.	eastern daisy fleabane	Asteraceae		
Erigeron philadelphicus L.	Philadelphia fleabane	Asteraceae		
Euthamia graminifolia (L.) Nutt.	flat-top goldentop	Asteraceae		
Eutrochium maculatum (L.) E.E. Lamont	spotted joe pye weed	Asteraceae		
Euphrasia nemorosa (Pers.) Wallr.	common eyebright	Scrophulariaceae		
Eupatorium perfoliatum L.	common boneset	Asteraceae		
Fagus grandifolia Ehrh.	American beech	Fagaceae		
Festuca rubra L.	red fescue	Poaceae		
Fraxinus americana L.	white ash	Oleaceae		
Fraxinus pennsylvanica Marshall	green ash	Oleaceae		
Fragaria vesca L.	woodland strawberry	Rosaceae		
Fragaria virginiana Duchesne	Virginia strawberry	Rosaceae		
Galium mollugo L.	false baby's breath	Rubiaceae		
Galinsoga parviflora Cav.	gallant soldier	Asteraceae		
Gentiana andrewsii Griseb.	closed bottle gentian	Gentianaceae	S2 (T)	
Geum laciniatum Murray	rough avens	Rosaceae		
Geranium robertianum L.	Robert geranium	Geraniaceae		
Glyceria canadensis (Michx.) Trin.	rattlesnake mannagrass	Poaceae		
Glechoma hederacea L.	ground ivy	Lamiaceae		
Gleditsia triacanthos L.	honeylocust	Fabaceae		
Hepatica nobilis Schreb. var. acuta (Pursh) Steyerm.	sharplobe hepatica	Ranunculaceae		
Helianthus tuberosus L.	Jerusalem artichoke	Asteraceae		
Hieracium pilosella L.	mouseear hawkweed	Asteraceae		
Hieracium scabrum Michx.	rough hawkweed	Asteraceae		
Hylodesmum glutinosum (Muhl. ex Willd.) H. Ohashi & R.R. Mill	large tick-trefoil	Fabaceae		
Hypericum perforatum L.	common St. Johnswort	Clusiaceae		
Hydrophyllum virginianum L.	eastern waterleaf	Hydrophyllaceae		
Ilex verticillata (L.) A. Gray	common winterberry	Aquifoliaceae		
Impatiens capensis Meerb.	jewelweed	Balsaminaceae		
Iris versicolor L.	harlequin blueflag	Iridaceae		
Juglans cinerea L.	butternut	Juglandaceae	S3?	
Juncus tenuis Willd.	poverty rush	Juncaceae		
Juniperus virginiana L.	eastern redcedar	Cupressaceae		
Lactuca canadensis L.	Canada lettuce	Asteraceae		
Leontodon autumnalis L.	fall dandelion	Asteraceae		
Leonurus cardiaca L.	common motherwort	Lamiaceae		
Lithospermum officinale L.	European stoneseed	Boraginaceae		
Linaria vulgaris Mill.	butter and eggs	Scrophulariaceae		
Lobelia cardinalis L.	cardinalflower	Campanulaceae		
Lotus corniculatus L.	bird's-foot trefoil	Fabaceae		
Lobelia inflata L.	Indian-tobacco	Campanulaceae		

Species Checklist - Partial Floristic Inventory
Project: Franklin County Line Upgrade Project
Client: Vermont Electric Power Company ("VELCO")
Location: Georgia to Highgate, Vermont
Survey Date(s): May-September 2022, July-August 2023 (L. Keszey, M.Jackman, C. Fenner, K. Maines)
Prepared By: VHB - October 17, 2023

Scientific Name [1]	Common Name	Family	Vermont Rarity Rank[2]	Non-Native Invasive Species[3]
Lonicera morrowii A. Gray	Morrow's honeysuckle	Caprifoliaceae		B
Lycopus americanus Muhl. ex W.P.C. Barton	American water horehound	Lamiaceae		
Lysimachia ciliata L.	fringed loosestrife	Primulaceae		
Lythrum salicaria L.	purple loosestrife	Lythraceae		B
Maianthemum canadense Desf.	Canada mayflower	Liliaceae		
Malus Mill.	apple	Rosaceae		
Maianthemum racemosum (L.) Link	feathery false lily of the valley	Liliaceae		
Melilotus officinalis (L.) Lam.	sweetclover	Fabaceae		
Mimulus ringens L.	Allegheny monkeyflower	Scrophulariaceae		
Muhlenbergia mexicana (L.) Trin.	Mexican muhly	Poaceae		
Nepeta cataria L.	catnip	Lamiaceae		
Oenothera biennis L.	common evening primrose	Onagraceae		
Onoclea sensibilis L.	sensitive fern	Dryopteridaceae		
Ostrya virginiana (Mill.) K. Koch	hophornbeam	Betulaceae		
Oxalis stricta L.	common yellow oxalis	Oxalidaceae		
Panicum capillare L.	witchgrass	Poaceae		
Parthenocissus quinquefolia (L.) Planch.	Virginia creeper	Vitaceae		
Pastinaca sativa L.	wild parsnip	Apiaceae		WL
Phalaris arundinacea L.	reed canarygrass	Poaceae		WL
Phragmites australis (Cav.) Trin. ex Steud.	common reed	Poaceae		
Physalis hederifolia A. Gray	ivyleaf groundcherry	Solanaceae		
Phleum pratense L.	timothy	Poaceae		
Pipatherum racemosum	Black seeded Mountain Rice	Poaceae		
Pinus strobus L.	eastern white pine	Pinaceae		
Platanthera flava (L.) Lindl.	palegreen orchid	Orchidaceae		
Plantago lanceolata L.	narrowleaf plantain	Plantaginaceae		
Polypodium appalachianum Haufler & Windham	Appalachian polypody	Polypodiaceae		
Potentilla argentea L.	silver cinquefoil	Rosaceae		
Poa compressa L.	Canada bluegrass	Poaceae		
Polygonum cuspidatum Siebold & Zucc.	Japanese knotweed	Polygonaceae		B
Populus deltoides W. Bartram ex Marshall	eastern cottonwood	Salicaceae		
Populus grandidentata Michx.	bigtooth aspen	Salicaceae		
Portulaca oleracea L.	little hogweed	Portulacaceae		
Poa palustris L.	fowl bluegrass	Poaceae		
Poa pratensis L.	Kentucky bluegrass	Poaceae		
Polygonum scandens L. var. scandens	climbing false buckwheat	Polygonaceae		
Potentilla simplex Michx.	common cinquefoil	Rosaceae		
Populus tremuloides Michx.	quaking aspen	Salicaceae		
Polygonum virginianum L.	jumpseed	Polygonaceae		
Prunella vulgaris L.	common selfheal	Lamiaceae		
Pycnanthemum tenuifolium Schrad.	narrowleaf mountainmint	Lamiaceae		
Quercus bicolor Willd.	swamp white oak	Fagaceae		
Quercus macrocarpa Michx.	bur oak	Fagaceae		
Quercus muehlenbergii Engelm.	chinkapin oak	Fagaceae	S3	

Species Checklist - Partial Floristic Inventory
Project: Franklin County Line Upgrade Project
Client: Vermont Electric Power Company ("VELCO")
Location: Georgia to Highgate, Vermont
Survey Date(s): May-September 2022, July-August 2023 (L. Keszey, M.Jackman, C. Fenner, K. Maines)
Prepared By: VHB - October 17, 2023

Scientific Name [1]	Common Name	Family	Vermont Rarity Rank[2]	Non-Native Invasive Species[3]
Quercus rubra L.	northern red oak	Fagaceae		
Rhamnus cathartica L.	common buckthorn	Rhamnaceae		B
Rhus glabra L.	smooth sumac	Anacardiaceae		
Rhus typhina L.	staghorn sumac	Anacardiaceae		
Ribes americanum Mill.	American black currant	Grossulariaceae		
Ribes cynosbati L.	eastern prickly gooseberry	Grossulariaceae		
Rosa multiflora Thunb.	multiflora rose	Rosaceae		WL
Rubus canadensis L.	smooth blackberry	Rosaceae		
Rumex crispus L.	curly dock	Polygonaceae		
Rubus hispidus L.	bristly dewberry	Rosaceae		
Rudbeckia hirta L.	blackeyed Susan	Asteraceae		
Rubus idaeus L.	American red raspberry	Rosaceae		
Rubus odoratus L.	purpleflowering raspberry	Rosaceae		
Salix bebbiana Sarg.	Bebb willow	Salicaceae		
Sanguinaria canadensis L.	bloodroot	Papaveraceae		
Salix discolor Muhl.	pussy willow	Salicaceae		
Salix interior Rowlee	sandbar willow	Salicaceae		
Salix nigra Marshall	black willow	Salicaceae		
Saponaria officinalis L.	bouncingbet	Caryophyllaceae		
Sambucus racemosa L.	red elderberry	Caprifoliaceae		
Salix sericea Marshall	silky willow	Salicaceae		
Scirpus atrovirens Willd.	green bulrush	Cyperaceae		
Scirpus cyperinus (L.) Kunth	woolgrass	Cyperaceae		
Scirpus hattorianus Makino	mosquito bulrush	Cyperaceae		
Scirpus microcarpus J. Presl & C. Presl	panicled bulrush	Cyperaceae		
Sedum acre L.	goldmoss stonecrop	Crassulaceae		
Setaria pumila (Poir.) Roem. & Schult.	yellow foxtail	Poaceae		
Sisyrinchium montanum Greene	strict blue-eyed grass	Iridaceae		
Solidago caesia L.	wreath goldenrod	Asteraceae		
Solidago altissima L.	Canada goldenrod	Asteraceae		
Solidago canadensis L.	Canada goldenrod	Asteraceae		
Solanum dulcamara L.	climbing nightshade	Solanaceae		
Solidago flexicaulis L.	zigzag goldenrod	Asteraceae		
Solidago gigantea Aiton	giant goldenrod	Asteraceae		
Solidago juncea Aiton	early goldenrod	Asteraceae		
Solidago nemoralis Aiton	gray goldenrod	Asteraceae		
Solidago rugosa Mill.	wrinkleleaf goldenrod	Asteraceae		
Sparganium americanum Nutt.	American bur-reed	Sparganiaceae		
Spiranthes cernua (L.) Rich.	nodding lady's tresses	Orchidaceae		
Spiranthes ochroleuca (Rydb.) Rydb.	yellow nodding lady's tresses	Orchidaceae	S3	
Streptopus amplexifolius (L.) DC.	claspleaf twistedstalk	Liliaceae		
Stellaria graminea L.	grass-like starwort	Caryophyllaceae		
Symphyotrichum cordifolium (L.) G.L. Nesom	common blue wood aster	Asteraceae		
Symphyotrichum lateriflorum (L.) Á. Löve & D. Löve	calico aster	Asteraceae		

Species Checklist - Partial Floristic Inventory
Project: Franklin County Line Upgrade Project
Client: Vermont Electric Power Company ("VELCO")
Location: Georgia to Highgate, Vermont
Survey Date(s): May-September 2022, July-August 2023 (L. Keszey, M.Jackman, C. Fenner, K. Maines)
Prepared By: VHB - October 17, 2023

Scientific Name [1]	Common Name	Family	Vermont Rarity Rank[2]	Non-Native Invasive Species[3]
Symphyotrichum lanceolatum (Willd.) G.L. Nesom	white panicle aster	Asteraceae		
Symphyotrichum novae-angliae (L.) G.L. Nesom	New England aster	Asteraceae		
Symphyotrichum puniceum (L.) Á. Löve & D. Löve	purplestem aster	Asteraceae		
Tanacetum vulgare L.	common tansy	Asteraceae		
Thalictrum dioicum L.	early meadow-rue	Ranunculaceae		
Thuja occidentalis L.	arborvitae	Cupressaceae		
Thalictrum pubescens Pursh	king of the meadow	Ranunculaceae		
Tilia americana L.	American basswood	Tiliaceae		
Toxicodendron rydbergii (Small ex Rydb.) Greene	western poison ivy	Anacardiaceae		
Trifolium aureum Pollich	golden clover	Fabaceae		
Triosteum aurantiacum E.P. Bicknell	orangefruit horse-gentian	Caprifoliaceae		
Trifolium pratense L.	red clover	Fabaceae		
Trifolium repens L.	white clover	Fabaceae		
Typha latifolia L.	broadleaf cattail	Typhaceae		
Ulmus americana L.	American elm	Ulmaceae		
Uvularia sessilifolia L.	sessileleaf bellwort	Liliaceae		
Valeriana officinalis L.	garden valerian	Valerianaceae		WL
Verbena hastata L.	swamp verbena	Verbenaceae		
Veronica officinalis L.	hard fescue	Scrophulariaceae		
Verbascum thapsus L.	common mullein	Scrophulariaceae		
Verbena urticifolia L.	white vervain	Verbenaceae		
Viburnum acerifolium L.	mapleleaf viburnum	Caprifoliaceae		
Vicia cracca L.	bird vetch	Fabaceae		
Vitis labrusca L.	fox grape	Vitaceae		
Viola L.	violet	Violaceae		
Vitis riparia Michx.	riverbank grape	Vitaceae		
Woodsia ilvensis (L.) R. Br.	rusty woodsia	Dryopteridaceae		
Woodsia obtusa (Spreng.) Torr.	bluntlobe cliff fern	Dryopteridaceae		
Xanthium strumarium L.	rough cocklebur	Asteraceae		
Zanthoxylum americanum Mill.	common pricklyash	Rutaceae		

X - Plant species was found in this community type.

[1] Nomenclature follows USDA-NRCS PLANTS database (plants.usda.gov/) (2023).

[2] The Vermont Rarity Rank from the "Rare and Uncommon Native Vascular Plants of Vermont - Vermont Natural Heritage Inventory - Vermont Fish & Wildlife Department", version dated May 4, 2022.

[3] The Vermont Rarity Rank from the "Endangered and Threatened Plants of Vermont - Vermont Natural Heritage Inventory - Vermont Fish & Wildlife Department", version dated February 10, 2022.

[4] **Class B Noxious Weeds Species (B)** from: Quarantine #3- Noxious Weeds (2012).
Watch List Species (WL) from: Vermont Invasive Exotic Plant Committee. 2017. Quarantine and Watch List Update.