

**TECHNICAL MEMORANDUM, TRC 2021 SURVEY RESULTS
FLORENCE SUBSTATION CONDITION ASSESSMENT PROJECT
PITTSFORD, VERMONT**

SURVEY DATE:	September 28, 2021
LOCATION:	8042 Whipple Hollow Road, Pittsford, Vermont
PROJECT:	Florence Substation Condition Assessment Project
SUBJECT:	TRC 2021 Field Survey Results
PARTICIPANTS:	Duane Choquette – TRC Survey Lead Scientist Art Gilman – Gilman & Briggs Environmental Scientist

OBJECTIVES:

TRC was contracted by Vermont Transco (VT TRANSCO) to perform additional surveys on VT TRANSCO's Florence Substation property to identify natural resources, field verify boundaries of state and federal jurisdictional wetlands and waterbodies, and prepare updated data forms to support regulatory filings in accordance with the U.S. Army Corps of Engineers' *1987 Wetlands Delineation Manual* (USACE Technical Report Y-87-1) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*, Version 2.0 (ERDC/EL TR-12-1, 2012). These field efforts were intended to identify constraints associated with the proposed replacement of the Florence Substation as part of VTTRANSCO's Florence Substation Condition Assessment Project ("Project"). These surveys described herein were to examine 4.34 additional acres of potential temporary workspace for the Project.

SURVEY OVERVIEW:

TRC conducted natural resource surveys for rare plants, natural communities, wetlands, waterbodies, and potential vernal pools survey on the new expanded 4.34-acre assessment area on September 28, 2021 using a Global Positioning System (GPS) unit with sub-meter accuracy. No rare, threatened or endangered species, rare natural communities, no waterbodies, and no additional potential vernal pools were identified. One additional wetland was found and is detailed below:

The new assessment area is an extension of the original assessment area presented in the Natural Resources Assessment Report ("NRR"), located on the east side of the existing access road (Inset 1). This survey area consists of forested land adjacent to the access road, extends northeast up a segment of VT TRANSCO transmission utility right of way ("ROW") to the neighboring OMYA facility, and north along a Green Mountain Power ("GMP") transmission utility ROW to Whipple Hollow Road. TRC has updated the NRR Figures 1 and 2 to reflect this expanded assessment area, and both figures are included in Attachment 1.

The new assessment area was comprised of a mixed deciduous early successional forest of young maple (*Acer rubrum*), cottonwood (*Populus deltoides*), and elm trees (*Ulmus americana*), with a dense understory of alders (*Alnus incana*), dogwoods (*Cornus amomum* and *C. sericea*) and willows (*Salix nigra*, and *S. discolor*). This palustrine forested wetland abuts the access road in the west and extends northeast to the edge of the transmission ROWs. Here the forested community gives way to a scrub-shrub environment of willows, alders and dogwood, and a large stand of the invasive common reed *Phragmites australis* where the VT TRANSCO and GMP transmission corridors meet. A dense shrub swamp of alders and willows transitions between the forest and the open *Phragmites* wetland.



The survey area was found to contain a segment of one overall wetland complex. A portion of this wetland has been previously mapped by the Vermont Significant Wetland Inventory (VSWI). Previous delineations in the original assessment area denoted this wetland as Pi-6. The new segment identified in this memorandum was given the designation Pi-6F. Overall wetland PI-6 is a Class II wetland as shown in the VSWI as Object ID 11948.

PI6F is a depressional PSS/PFO wetland located north of the existing substation, partially within GMP and VT TRANSCO transmission line corridors. The wetland originates uphill and off-site on the adjacent OMYA property to the northeast, and flows downhill to the northwest, crossing the transmission corridor and entering the forest north and east of the existing access road. The wetland segment within the right of way is dominated by common reed (cattail (*Typha latifolia*) and thick stands of silky dogwood and willow shrubs. The forested portion of the wetlands is a mix of primarily deciduous red maple, cottonwoods, American elm, yellow birch (*Betula allegheniensis*), and scattered white pines (*Pinus strobus*). The soils are comprised of 0-4" of mucky sandy loam (10YR 2/2), underlain by 4-14" of depleted sandy loam (10YR 3/1 with 5% mottles (10YR 4/4)). Based on its connectivity to PI-6D (separated by the existing access road, but still connected via culvert), general topography, and its moderate size, PI-6F is a Class Two wetland.

Conclusion:

No new natural resources beyond the extension of the previously mapped wetland Pi-6 were found within the expanded assessment area. As there is limited work to occur in the expanded assessment area, the conclusions of the original NRR remain the same.

Based on the current project design, there will be minimal impacts associated with wetland segment PI6-F, resulting from the necessary replacement of an existing culvert, which will improve the hydrologic connection between PI6-D and PI6-F within the project area. Additionally, much of the wetland buffer associated with wetland segment PI6-F overlaps the previously identified buffer of wetland PI6-D, resulting in minimal additional cumulative wetland buffer impacts associated with the access road expansion and culvert replacement.

Wetland segment PI6-F and its associated 50 foot regulated buffer have been included in the State of Vermont Wetlands Application and will be incorporated into the USACE Wetlands Application. As with other recent VELCO projects, appropriate mitigation measures will be developed during the wetland permitting process as necessary, and significant adverse impacts to wetland functions and values will be avoided or mitigated. In addition, erosion prevention and sediment control practices as described in the VEGM (and/or a Project-specific EPSC Plan to be developed under General Permit 3-9020 or an Individual Construction Stormwater Discharge Permit) will ensure the protection of wetlands and water quality from unintended runoff and sedimentation during construction. Therefore, no undue, adverse effects to wetland functions and values will occur.

Attached is a map showing TRC's expanded assessment area detailed in this memo. photographs, USACE delineation forms from the field surveys, and an updated plant list inventory from Gilman and Briggs Environmental.



Inset 1: The expanded assessment area identified in this memo is outlined in red. The overall assessment area for the entire Project can be seen in the updated figures in Attachment 1.

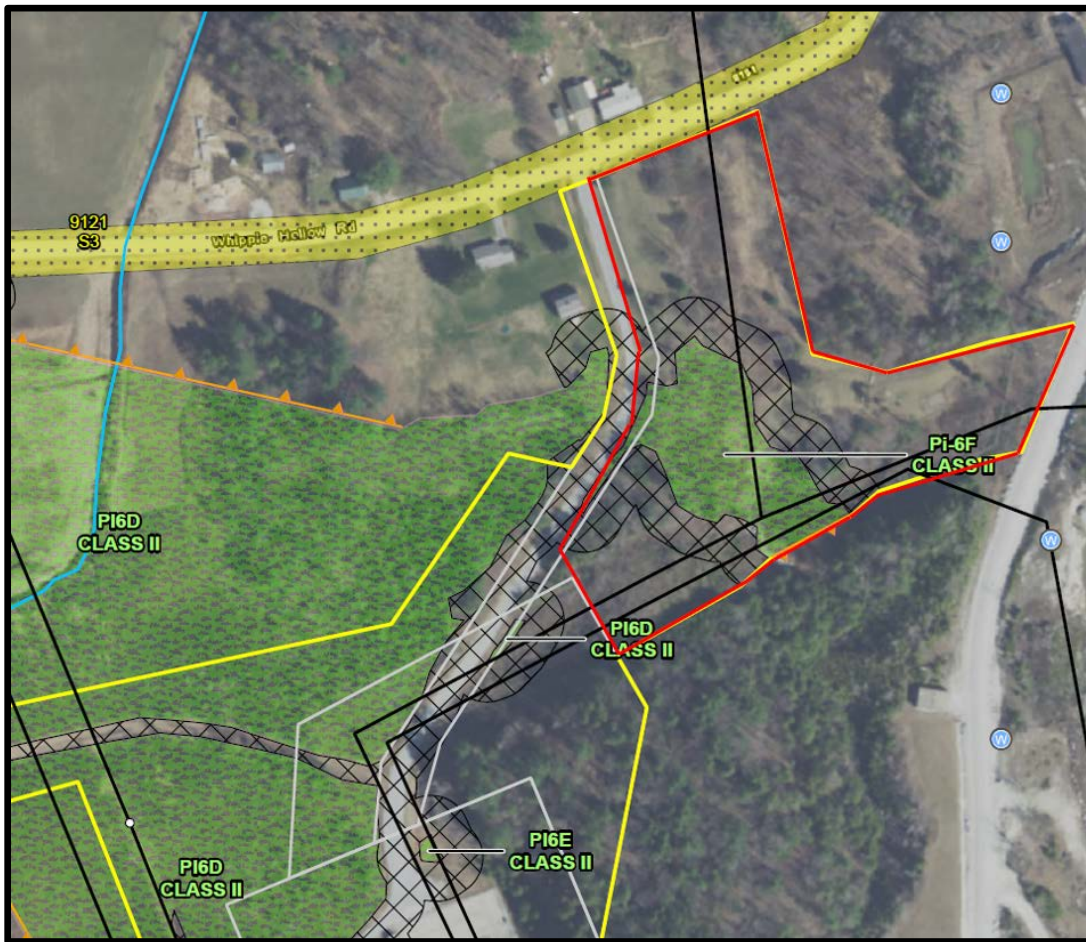




Photo 1. Facing North, looking across wetland Pi-6F and down the GMP corridor.

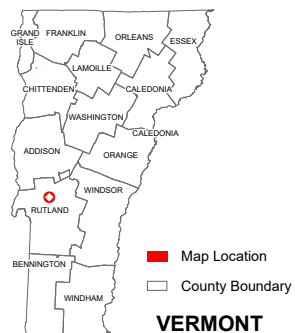


Photo 2. Facing North along GMP's transmission corridor to Whipple Hollow Road.



Photo 3. Facing Northeast along the existing VT TRANSCO access road. New assessment area is located along the northeastern side of the road (right side of the photo).

**ATTACHMENT 1:
NATURAL RESOURCE ASSESSMENT REPORT FIGURES 1 & 2
(UPDATED)**



- PRIVATE WELL
- VELCO STRUCTURE
- GMP AND/OR VELCO TRANSMISSION LINE
- ASSESSMENT AREA
- PROPERTY BOUNDARY
- VERMONT STREAMS
- WETLAND EXTENDS
- DELINEATED WETLAND
- TENTATIVE 50-FOOT WETLAND BUFFER
- RARE, THREATENED, & ENDANGERED SPECIES & SIGNIFICANT COMMUNITY



Source Data: FEMA, Vermont Center for Geographic Information, Vermont Natural Resources Atlas, 2019, Vermont Electric Power Company, 2014.

Service Layer Credits: Esri, HERE, IPC, VCGI, Maxar, Microsoft



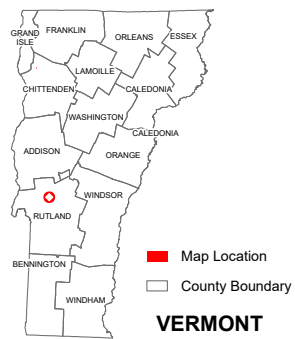
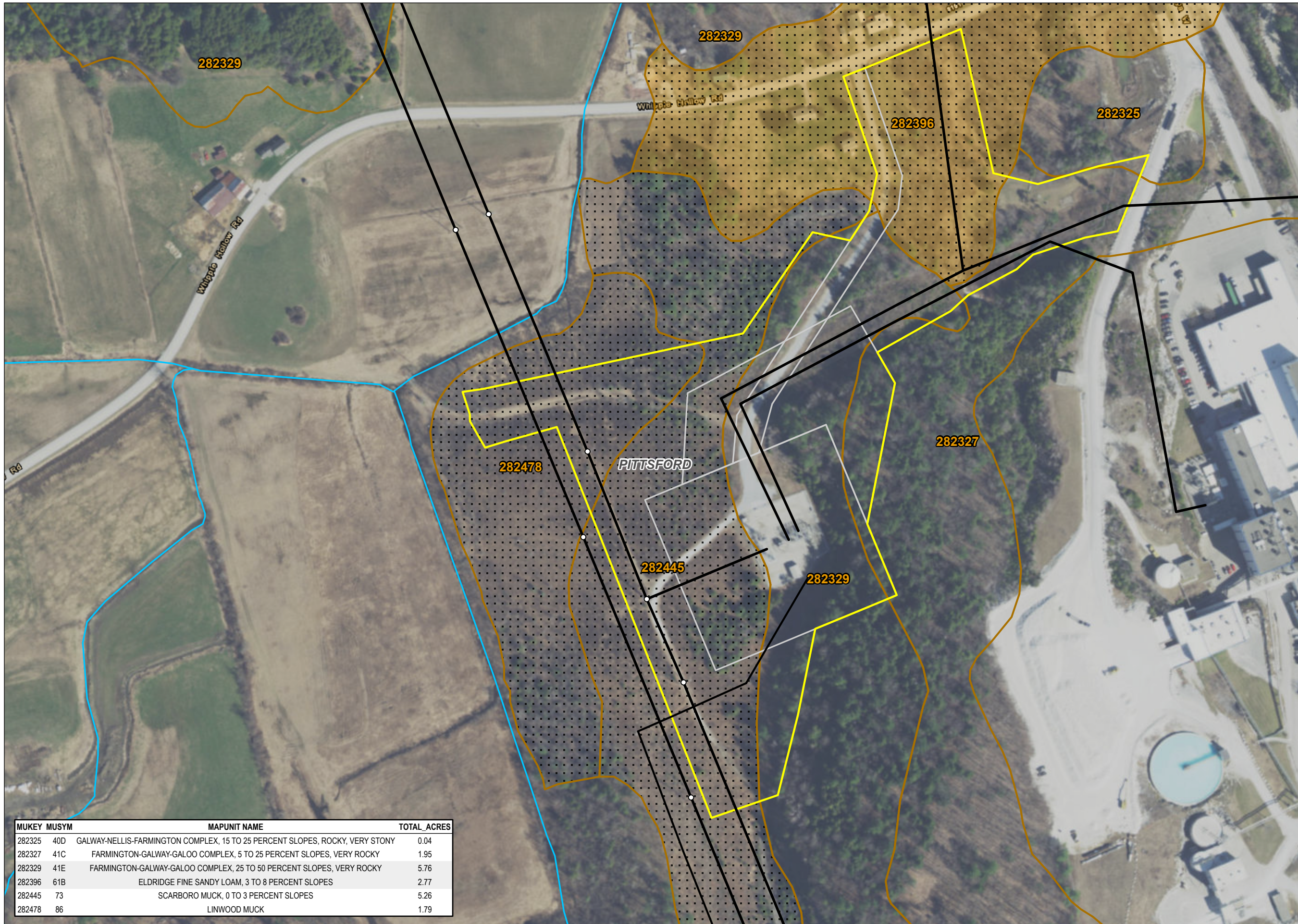
VELCO 336 Pinnacle Ridge Rd.
Rutland, VT 05701
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TRC 6 Ashley Drive
1st Floor
Scarborough, ME 04074

**VELCO SUBSTATION
CONDITION ASSESSMENT
PROJECT**

**FIGURE 1
NATURAL RESOURCE MAP**

DATE: 11/29/2021



- VELCO STRUCTURE
- GMP AND/OR VELCO TRANSMISSION LINE
- ▭ ASSESSMENT AREA
- ▭ PROPERTY BOUNDARY
- VERMONT STREAMS
- ▭ HYDRIC SOILS
- ▭ NRCS SOIL MAP UNIT
- ▭ PRIME AGRICULTURAL SOILS
- ▭ PRIME FARMLAND

Note: Floodplain is depicted in Attachment C: Hydrology & Hydraulics Summary by Fitzgerald Environmental Associates, LLC



Source Data: FEMA, Vermont Center for Geographic Information, Vermont Natural Resources Atlas, 2019, Vermont Electric Power Company, 2014.

Service Layer Credits: Esri, HERE, IPC, VCGI, Maxar, Microsoft



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**VELCO SUBSTATION
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**FIGURE 2
SOILS MAP**

DATE: 11/29/2021

MUKEY	MUSYM	MAPUNIT NAME	TOTAL_ACRES
282325	40D	GALWAY-NELLIS-FARMINGTON COMPLEX, 15 TO 25 PERCENT SLOPES, ROCKY, VERY STONY	0.04
282327	41C	FARMINGTON-GALWAY-GALOO COMPLEX, 5 TO 25 PERCENT SLOPES, VERY ROCKY	1.95
282329	41E	FARMINGTON-GALWAY-GALOO COMPLEX, 25 TO 50 PERCENT SLOPES, VERY ROCKY	5.76
282396	61B	ELDRIDGE FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES	2.77
282445	73	SCARBORO MUCK, 0 TO 3 PERCENT SLOPES	5.26
282478	86	LINWOOD MUCK	1.79

Gilman & Briggs Environmental

1 Conti Circle #5, Barre, VT 05641

Ph: 802-479-7480; team@gbevt.com

MEMORANDUM

To: Duane Choquette
From: Art Gilman
Date: 15 November 2021
Re: Additional searches for Rare, Threatened, or Endangered plant species at the site of the proposed Florence Substation project

In July of this year, I inspected areas to the east, north, and west of VELCO's existing Florence Substation on Whipple Hollow Road in Pittsford for the presence/absence of any such species. Results of that effort—no such plant species were observed—are given in my memorandum dated 27 July 2021. Subsequently, VELCO has determined that additional areas, generally to the north and east of what was previously inspected, will be necessary for the project. Therefore, I inspected the additional area on 29 September. Although somewhat late in the growing season, this time was still within the recommended time-frame (15 June–30 September) for rare plant searches. Furthermore, the site is near the valley floor of the Otter Creek, i.e., a relatively “warm” location, and no frost had been experienced in that section of Vermont as yet.

I observed no plant species that are tracked by the Vermont Nongame and Natural Heritage Inventory as uncommon, rare, very rare, threatened, or endangered. The land in question is relatively “rough” and consists of old farm land and pasture that had grown up to shrub thickets and tall herb communities, mostly within existing electric distribution line corridors. There are some areas of wetland, and one area of ledge exposure (which is a northward extension of the ledgy hill just east of the existing substation). The vegetation is, in general, quite thick and even difficult to walk through. It consists of a mixture of native and non-native species typical of “old field areas” and powerline corridors. In my opinion, the potential for rare plant species to occur in this area is low.

The attached Table 4 lists all plant species observed in this area on 29 September; those marked with a checkmark (✓) are species additional to ones I observed on the rest of the study area in July. Species listed without a checkmark are those observed in July and included in Tables 1–3, attached to my memorandum of July 27.

Table 4. Plants observed in September at the proposed Florence Substation expansion areas in addition that are to the areas inspected in July. Additional species observed only in this area are marked with a checkmark (✓).

Scientific Name	Common Name	Newly observed in September
TREES, SHRUBS AND WOODY VINES		
<i>Acer rubrum</i>	Red maple	
<i>Acer saccharum</i>	Sugar maple	
<i>Berberis vulgaris</i>	European barberry	
<i>Carpinus caroliniana</i>	Blue-beech	
<i>Cornus alternifolia</i>	Alternate-leaved dogwood	
<i>Cornus racemosa</i>	Racemed dogwood	✓
<i>Corylus cornuta</i>	Beaked hazel	
<i>Crataegus holmesiana</i>	Holmes's hawthorn	✓
<i>Frangula alnus</i>	Glossy buckthorn	✓
<i>Fraxinus americana</i>	White ash	
<i>Juglans cinerea</i>	Butternut	
<i>Lonicera morrowii</i>	Morrow's honeysuckle	
<i>Malus pumila</i>	Apple	✓
<i>Parthenocissus quinquefolia</i>	Virginia creeper	
<i>Picea rubens</i>	Red spruce	✓
<i>Populus balsamifera</i>	Balsam-poplar	
<i>Populus deltoides</i>	Cottonwood	✓
<i>Prunus virginiana</i>	Choke cherry	✓
<i>Rhamnus catharticus</i>	Common buckthorn	
<i>Ribes sp.</i>	Currant	✓
<i>Rosa gallica</i>	Gallic rose	✓ Remnant of horticulture
<i>Rhamnus cathartica</i>	Common buckthorn	
<i>Rubus alleghaniensis</i>	Tall blackberry	
<i>Rubus idaeus</i>	Red raspberry	
<i>Rubus occidentalis</i>	Black-cap raspberry	
<i>Salix discolor</i>	Pussy willow	
<i>Salix eriocephala</i>	Meadow willow	
<i>Salix fragilis</i>	Crack willow	
<i>Sorbus americana</i>	Mountain ash	
<i>Syringa vulgaris</i>	Lilac	✓
<i>Thuja occidentalis</i>	Eastern white cedar	
<i>Tilia americana</i>	Basswood	
<i>Thuja occidentalis</i>	Northern white cedar	
<i>Ulmus americana</i>	American elm	
<i>Viburnum dentatum</i>	Arrowwood	
<i>Vitis riparia</i>	Riverbank grape	
FERNS AND FERN-ALLIES		
<i>Athyrium filix-femina</i>	Lady fern	
<i>Onoclea sensibilis</i>	Sensitive fern	
<i>Polystichum acrostichoides</i>	Christmas fern	

GRASSES, SEDGES, AND RUSHES		
<i>Carex eburnea</i>	Ebony sedge	
<i>Carex flava</i>	Yellow sedge	✓
<i>Carex granularis</i>	Limestone meadow sedge	✓
<i>Carex pedunculata</i>	Pedunculate sedge	
<i>Danthonia spicata</i>	Poverty-grass	✓
<i>Dichanthelium acuminatum</i> var. <i>fasciculatum</i>	Panic-grass	
<i>Juncus articulatus</i>	Jointed rush	✓
<i>Oryzopsis asperifolia</i>	Mountain rice grass	
<i>Phragmites australis</i>	Common reed	
<i>Scirpus hattorianus</i>	Hattori bulrush	✓
<i>Typha angustifolia</i>	Narrow-leaved cat-tail	✓
<i>Typha latifolia</i>	Broad-leaved cat-tail	✓
HERBS		
<i>Ageratina altissima</i>	White snakeroot	
<i>Agrimonia gryposepala</i>	Agrimony	✓
<i>Anemone virginiana</i>	Thimbleweed	
<i>Arctium lappa</i>	Burdock	✓
<i>Asarum canadense</i>	Wild ginger	
<i>Bidens frondosus</i>	Beggar's-ticks	✓
<i>Centaurea stoebe</i>	Spotted knapweed	
<i>Cichorium intybus</i>	Chicory	✓
<i>Cirsium arvense</i>	Canada thistle	
<i>Doellingeria umbellata</i>	Tall white aster	
<i>Echium vulgare</i>	Viper's bugloss	
<i>Erysimum cheiranthoides</i>	Treacle-mustard	✓
<i>Euthamia graminifolia</i>	Grass-leaved goldenrod	✓
<i>Eutrochium maculatum</i>	Joe Pye weed	
<i>Galeopsis tetrahit</i>	Henbit	✓
<i>Galium mollugo</i>	Common bedstraw	
<i>Impatiens capensis</i>	Jewelweed	✓
<i>Leucanthemum vulgare</i>	Oxeye daisy	
<i>Lotus corniculatus</i>	Bird's-foot trefoil	
<i>Lycopus americanus</i>	American water-horehound	
<i>Lythrum salicaria</i>	Purple loosestrife	
<i>Origanum vulgare</i>	Oregano	
<i>Packera schweinitziana</i>	Robbins's ragwort	
<i>Pastinaca sativa</i>	Parsnip	
<i>Phlox paniculata</i>	Garden phlox	✓ Remnant of horticulture
<i>Pilosella piloselloides</i>	Glaucous king-devil	
<i>Plantago lanceolata</i>	English plantain	✓
<i>Prunella vulgaris</i>	Self-heal	
<i>Rudbeckia hirta</i> var. <i>pulcherrima</i>	Black-eyed Susan	✓
<i>Rumex crispus</i>	Curly dock	✓
<i>Rumex longifolius</i>	Dooryard dock	✓
<i>Securigera varia</i>	Crown vetch	

<i>Solanum dulcamara</i>	Bittersweet nightshade	
<i>Solidago gigantea</i>	Late goldenrod	✓
<i>Solidago juncea</i>	Early goldenrod	
<i>Symphyotrichum cordifolium</i>	Heart-leaved aster	✓
<i>Symphyotrichum lanceolatum</i>	Lance-leaved aster	✓
<i>Symphyotrichum lateriflorum</i>	Calico aster	✓
<i>Symphyotrichum novae-angliae</i>	New England aster	
<i>Symphyotrichum puniceum</i>	Red-stemmed aster	✓
<i>Tussilago farfara</i>	Colt's-foot	
<i>Verbascum thapsus</i>	Common mullein	
<i>Verbena urticifolia</i>	Nettle-leaved vervain	✓

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Florence Substation City/County: Florence, Rutland Sampling Date: 2021-Sept-28
 Applicant/Owner: VELCO State: VT Sampling Point: PI6F_PEM-1
 Investigator(s): Duane Choquette , Art Gilman Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 1 to 10
 Subregion (LRR or MLRA): LRR R Lat: 43.710368 Long: -73.066009 Datum: WGS84
 Soil Map Unit Name: Eldridge fine sandy loam NWI classification: PEM

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If yes, optional Wetland Site ID:	PI6F
Remarks: (Explain alternative procedures here or in a separate report)			
Covertypes is PEM. There appears to be some type of capped and vented mound constructed adjacent to the wetland on the eastern side, on the edge of the transmission ROW> .			

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>4</u>
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>2</u>
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
There is evidence of surface flow from off property, uphill to the east, which carries sediment laden with white limestone powder, and deposits it within the wetland.	
Remarks:	
The criterion for wetland hydrology is met.	

VEGETATION -- Use scientific names of plants.

Sampling Point: PI6F_PEM-1

	Absolute % Cover	Dominant Species?	Indicator Status																																									
Tree Stratum (Plot size: 30 ft)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>8</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																																								
1. <i>Acer rubrum</i>	15	Yes	FAC																																									
2. <i>Thuja occidentalis</i>	10	Yes	FACW																																									
3. <i>Fraxinus pennsylvanica</i>	10	Yes	FACW																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
			35 = Total Cover																																									
Sapling/Shrub Stratum (Plot size: 15 ft)																																												
1. <i>Cornus alba</i>	20	Yes	FACW	Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 10%;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%;">Multiply By:</th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;">0</td> <td></td> <td>x 1 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;">195</td> <td></td> <td>x 2 =</td> <td style="text-align: center;">390</td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;">15</td> <td></td> <td>x 3 =</td> <td style="text-align: center;">45</td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;">0</td> <td></td> <td>x 4 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;">0</td> <td></td> <td>x 5 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;">210</td> <td></td> <td>(A)</td> <td style="text-align: center;">435 (B)</td> </tr> <tr> <td colspan="3"></td> <td>Prevalence Index = B/A =</td> <td style="text-align: center;"><u>2.1</u></td> </tr> </tbody> </table>		Total % Cover of:		Multiply By:		OBL species	0		x 1 =	0	FACW species	195		x 2 =	390	FAC species	15		x 3 =	45	FACU species	0		x 4 =	0	UPL species	0		x 5 =	0	Column Totals	210		(A)	435 (B)				Prevalence Index = B/A =	<u>2.1</u>
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Herb Stratum (Plot size: 5 ft)																																												
1. <i>Phragmites australis</i>	70	Yes	FACW																																									
2. <i>Equisetum palustre</i>	40	Yes	FACW																																									
3. <i>Onoclea sensibilis</i>	30	Yes	FACW																																									
4. _____	_____	_____	_____																																									
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9. _____	_____	_____	_____																																									
10. _____	_____	_____	_____																																									
11. _____	_____	_____	_____																																									
12. _____	_____	_____	_____																																									
			140 = Total Cover																																									
Woody Vine Stratum (Plot size: 30 ft)																																												
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
			0 = Total Cover																																									

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

Hydrology Photos



Photo of Sample Plot North



Photo of Sample Plot East



Photo of Sample Plot West



WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Florence Substation City/County: Florence, Rutland Sampling Date: 2021-Sept-28
 Applicant/Owner: VELCO State: Vermont Sampling Point: PI6F_UPL-1
 Investigator(s): Duane Choquette, Art Gilman Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10 to 20
 Subregion (LRR or MLRA): LRR R Lat: 43.710308 Long: -73.06603 Datum: WGS84
 Soil Map Unit Name: Eldridge fine sandy loam NWI classification: Scrub-Shrub Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	If yes, optional Wetland Site ID:	
Remarks: (Explain alternative procedures here or in a separate report)			
Covertypes is UPL.			

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
(includes capillary fringe)	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

No positive indication of wetland hydrology was observed.

VEGETATION -- Use scientific names of plants.

Sampling Point: Pi6F_UPL-1

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 30 ft)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A) Total Number of Dominant Species Across All Strata: <u>11</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>63.6</u> (A/B)
1. <i>Acer rubrum</i>	15	Yes	FAC	
2. <i>Thuja occidentalis</i>	10	Yes	FACW	
3. <i>Pinus strobus</i>	10	Yes	FACU	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
			35 = Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)				
1. <i>Cornus amomum</i>	15	Yes	FACW	
2. <i>Betula populifolia</i>	15	Yes	FAC	
3. <i>Populus deltoides</i>	10	Yes	FAC	
4. <i>Populus tremuloides</i>	10	Yes	FACU	
5. <i>Thuja occidentalis</i>	10	Yes	FACW	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
			60 = Total Cover	
Herb Stratum (Plot size: 5 ft)				
1. <i>Solidago rugosa</i>	35	Yes	FAC	
2. <i>Pteridium aquilinum</i>	15	Yes	FACU	
3. <i>Rubus allegheniensis</i>	15	Yes	FACU	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
			65 = Total Cover	
Woody Vine Stratum (Plot size: 30 ft)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
			0 = Total Cover	

Prevalence Index worksheet:			
Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	35	x 2 =	70
FAC species	75	x 3 =	225
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column Totals	160	(A)	495 (B)
Prevalence Index = B/A =			<u>3.1</u>

Hydrophytic Vegetation Indicators:

___ 1- Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤ 3.0¹

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

___ Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No ___

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

Photo of Sample Plot
North

