Exhibit Petitioner JWS-2

Memorandum

To: VT Transco LLC
Stowe LCP-20
Project File

Date: December 10, 2024

Project #: 59075.00

From: Nicole Fenton, Environmental Scientist;
Ryan M. Scott, CPESC, PWS

Re: Section 248 Natural Resources Assessment

At the request of VT Transco, LLC ("Client" or "VELCO"), VHB conducted natural resources assessments for a 1.6-acre parcel as depicted on drawings provided by VELCO located along Kimberly Lane in Waterbury, Vermont ("Study Area") (see Attachment 1). VHB understands that the Client is seeking support for Section 248 approval for the emergency replacement, relocation, and addition of two structures on the VELCO K24-5 Duxbury Tap-Stowe Line completed in summer 2024, as well as the permanent installation of Structure LCP-20 and removal of Structure LCP-21 ("Project"). This memorandum presents the results of VHB's database and field assessments of natural resources and addresses the Project's potential impacts to natural resources under the 30 V.S.A. Section 248(b)(5) criteria.

The natural resources assessments for the Project were designed to include an evaluation for the presence/absence of natural resources generally reviewed under the following Act 250 Criteria, which are given due consideration by the Vermont Public Utility Commission ("PUC") under 30 V.S.A. Section 248 in determining whether to issue a Certificate of Public Good ("CPG"):

- Outstanding Resource Waters (§ 248(b)(8));
- Headwaters (10 V.S.A § 6086(a)(1)(A));
- Floodways (10 V.S.A § 6086(a)(1)(D));
- Streams (10 V.S.A § 6086(a)(1)(E));
- Shorelines (10 V.S.A § 6086(a)(1)(F));
- Wetlands (10 V.S.A § 6086(a)(1)(G));
- Soil Erosion (10 V.S.A § 6086(a)(4));
- Rare and Irreplaceable Natural Areas ("RINA")(10 V.S.A § 6086(a)(8)),
- Necessary Wildlife Habitat and Endangered Species (10 V.S.A § 6086(a)(8)(A)), and
- Primary Agricultural Soils (10 V.S.A. § 6001(15).

An assessment of each criterion for the site is presented in a Section 248 Natural Resources Assessment matrix ("Section 248 Natural Resources Site Screening Tables", Attachment 2), which includes a brief statement of potential impacts to the natural resources covered by each criterion, recommended approaches for follow-up detailed surveys (if necessary), design or management options to first avoid and then minimize potential adverse effects (if necessary), and identification of collateral environmental permits that may be required for the Project activity.

The following sections of this memorandum contain a brief description of the Project, a description of existing conditions, an overall summary of the resource assessments conducted by VHB, and a description of potential Project impacts to Section 248 criteria. VHB relied upon Project information provided electronically by the Client on September 10, 2024, to assist in determining the natural resources Study Area and evaluating potential impacts to natural resources due to the Project. To conduct its review of the presence/absence of each natural resource type and

potential impacts, VHB relied on field assessments conducted on September 26, 2024 and desktop reviews of data maintained by the Federal Emergency Management Agency ("FEMA"), U.S. Fish and Wildlife Service ("USFWS"), Vermont Center for Geographic Information ("VCGI"), Vermont Fish and Wildlife Department ("FWD"), Vermont Agency of Natural Resources ("ANR"), and Vermont Natural Heritage Inventory ("NHI").

Project Description

The Project started under an emergency waiver from the PUC for the temporary replacement and relocation of Structure LCP-20 approximately 30 feet west of the current pole location and the addition of Structure LCP-21 approximately 150 feet north of the existing LCP-20 structure. Structure LCP-20 was replaced with a single wood pole with three guy wires and two anchors. Structure LCP-21 is a three-pole guyed wood structure. The work occurred within the existing ROW, with the exception of one access route. The Project required removal of five danger trees outside the ROW to maintain safe and efficient operation of the electrical system. Structure LCP-20 was relocated approximately 30 feet west from the original location as a single wood pole and a new, three poled structure (LCP-21), was installed approximately 150 feet north of the existing Structure LCP-20. Per PUC Order dated 07/24/2024 regarding Case No. 24-2234-PET VELCO is proposing a permanent replacement of Structure LCP-20 with a self-supporting steel structure and the removal of Structure LCP-21 to restore the aesthetic condition to the greatest extent possible. As required in the PUC's emergency order, VELCO now seeks approval under 30 V.S.A section 248(k) to make the structure placement permanent.

Existing Conditions

The Study Area is within the Northern Green Mountain biophysical region of Vermont and within the Graves Brook-Winooski River Sub-watershed (HUC12 043001030601). The region is characterized by high elevations, cool summer temperatures, and acidic metamorphic rocks. On-site topography consists of relatively flat terrain along the transmission ROW with steeper slopes to the south and east above a stone retaining wall, with elevations ranging from approximately 610 feet to 656 feet above sea level. The dominant on-site soils, as mapped by the Natural Resources Conservation Service ("NRCS"), are Buxton silt loam (15 to 25 percent slopes) and Colonel fine sandy loam (15 to 25 percent slopes).

The Study Area consists of a maintained ROW through residential lawns and a housing development, which sits below the ROW. Upland areas are dominated by maintained lawn with naturalized areas consisting of staghorn sumac (*Rhus typhina*), Morrow's honeysuckle (*Lonicera morrowii*), Canada goldenrod (*Solidago canadensis)*, red raspberry *(Rubus idaeus)*, Queen Anne's lace (*Daucus carota)*, and blackberry (*Rubus Allegheniensis)* (see Attachment 3, Representative Site Photographs). Lowland areas are dominated by sensitive fern (*Onoclea* sensibilis), New England aster (*Symphyotrichum novae-angliae*), smooth arrowwood (*Viburnum dentatum)*, and creeping Jenny (*Lysimachia nummularia)*. There are no wetlands mapped by the Vermont Significant Wetlands Inventory ("VSWI") within or adjacent to the Study Area, however VHB identified two wetlands within the Study Area during the site visit on September 26, 2024, which are detailed in the wetlands section below. There are no Vermont Hydrography Dataset ("VHD") stream channels or VHB-delineated streams mapped within the Study Area. VHB approximated the course of one intermittent stream that occurs outside the Study Area during the site visit. The intermittent stream flows southeast toward the Study Area along the northern boundary.

Memorandum

Section 248 Natural Resources Criteria Summary and Conclusions

Based on database and field review, VHB conducted an analysis of impacts to Section 248 criteria and evaluated the need for collateral permitting (See Attachment 2). From this review, VHB determined that there are no Outstanding Resource Waters, Floodways, Shorelines, Rare and Irreplaceable Natural Areas, or Necessary Wildlife Habitat and Endangered Species known to be present within or directly adjacent to the Study Area. As a result, the Project will have no direct or indirect impact on these resources.

Natural resources that are present within the Study Area, and/or require additional discussion or assessment related to pertinent Section 248 criteria beyond what is provided in Attachment 2, are discussed below. Documents supporting VHB's database and field resource assessments are also included in the Attachments, listed below.

Headwaters

The Headwaters criterion under Act 250, as incorporated into Section 248 review, requires that if a project is located in a headwaters area, it must meet "any applicable health and environmental conservation department regulations regarding reduction of the quality of the ground or surface waters flowing through or upon lands that are not devoted to intensive development" (§ 6086(a)(1)(A)). The factors for determining whether a project is within headwaters are as follows:

(i). Headwaters or watersheds characterized by steep slopes and shallow soils;

(ii). Drainage areas of 20 square miles or less;

(iii). Above 1,500 feet elevation;

(iv). Watersheds of public water supplies designated by ANR; or

(v). Areas supplying significant amounts of recharge waters to aquifers.

The Study Area is located northwest of Thatcher Brook and is within the Graves Brook-Winooski River subwatershed (HUC12 043001030601). It is VHB's judgment that the Study Area is not located in a headwaters area. Though the Study Area does meet headwaters subcriteria i and ii, it is located approximately one mile from the Winooski River, which has a drainage area of 1080 square miles adjacent to the Project site. Further, the Graves Brook-Winooski River subwatershed has a drainage area of 40 square miles.

While not considered within a headwaters, the Project will not adversely affect groundwater or surface water or associated steep slopes. The Project will meet applicable health and Vermont Department of Environmental Conservation ("DEC") regulations regarding the quality of groundwater and surface waters. Construction phase soil disturbance will be minimal and associated erosion prevention will follow the *Low Risk Site Handbook for Erosion Prevention and Sediment Control* (ANR 2020) and with VELCO's Environmental Guidance Manual. The Project does not anticipate disturbing more than an acre of soil nor will it create more than a ½ acre of impervious, and therefore will not require coverage under a Vermont Construction Stormwater or Operational Stormwater Permit. In addition, VELCO will follow BMPs and will take measures to protect against impacts in the event of an oil spill by adhering to all state, federal, and internal requirements and policies for notification, response, and remediation. The proposed Project will result in no reduction of ground or surface water quality from the construction and/or operation of the proposed Project activities, and no undue adverse impacts to headwater areas.

Streams

This Act 250 criterion, as incorporated into Section 248 review, requires that a project will, whenever feasible, maintain the natural condition of the stream, and will not endanger the health, safety, or welfare of the public or adjoining landowners (10 V.S.A. § 6086(a)(1)(E)). VHB conducted stream delineations on September 26, 2024, to map any onsite occurrences.

VHB conducted stream delineations pursuant to ANR's *Guidance for Agency Act 250* and Section 248 Comments regarding Riparian Buffers ("ANR Riparian Buffer Guidance") (ANR 2005). Stream determinations and Ordinary High Water ("OHW") width follow guidance provided in the United States Army Corps of Engineers ("USACE") Regulatory Guidance Letter: Subject - Ordinary High Water Identification (USACE 2005). Stream Top of Bank ("TOB") and Top of Slope ("TOS") are flagged in the field per ANR 2005. Stream TOB and TOS are flagged on larger channels and stream center-line is flagged for smaller channels and labeling includes the stream ID and flag number. OHW limits are flagged when applicable. Stream flow regimes are preliminarily classified as ephemeral, intermittent, or perennial and are determined based on qualitative observations of instream hydrology indicators at the time of observation, as well as geomorphic characteristics, and are subject to professional judgment. Stream features are located in the field using sub-meter capable GPS equipment. Riparian buffers adjacent to streams and rivers, consistent with the ANR Riparian Buffer Guidance, are designated for natural perennial and intermittent stream channels when applicable.

VHB observed and approximated the location of one intermittent stream outside the Study Area that flows southeast toward the northeastern portion of the Study area along the northern boundary. (see Natural Resources Map, Attachment1). VHB assigned a 50-foot riparian buffer to the intermittent stream, pursuant to the ANR Riparian Buffer Guidance. No tree clearing or change of land use is proposed within riparian buffer.

The Project is designed to avoid impacts to streams and will maintain the natural conditions of on-site streams and will not endanger the health, safety, or welfare of the public or adjoining landowners. If the Project cannot avoid impacts to stream channel, then a state Stream Alterations Permit, and a US Army Corps of Engineers ("USACE") Section 404 permit may be required. Impacts such as development and woody vegetation clearing within a riparian buffer would need review under Section 248 and consultation with the Vermont Fish and Wildlife Department ("FWD").

Wetlands

Regarding the Section 248 criterion for **Wetlands *(§ 6086(a)(1)(G)***, the proposed Project must comply with the Vermont Wetland Rules ("VWR") (ANR 2023). The VWR regulate significant wetlands (class I and Class II) and their associated 50-foot buffer zones. Impacts to Class III wetlands are generally reviewed under Section 248(b)(5) through the PUC's consideration of the potential for undue adverse impacts on the natural environment. Further, all wetlands may be regulated by the USACE under Section 404 of the Clean Water Act ("CWA"), as well as the related DEC CWA Section 401 Water Quality Certification ("WQC") review process.

Wetland delineations are made pursuant to applicable methodologies outlined in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region Routine Determination Method (USACE 2011). Wetlands are identified in the field with pink flagging. Wetland functions and value presence and significance are evaluated based on the field notes and observations according to the VWR. When present, wetland features are GPS-located using the same methods as streams.

VHB delineated two categorical Class II wetlands (WA-1 and WA-2), occurring in the northeastern and southwestern portions of the Study Area with applied 50-foot buffers (see Attachment 1). Further data characterizing on-site

wetlands are presented in the Summary of Wetland and Waters Table (Attachment 4) and the USACE Wetland Determination Forms (Attachment 5).

Any proposed project activity occurring within the identified wetlands or their associated buffer zones, which is not exempt or considered an "allowed use" under the VWR, will require a permit, in addition to permits needed for wetlands regulated by the USACE under Section 404 of the Clean Water Act ("CWA"). Based on VHB's understanding of the Project, access within the Class II wetland buffer of WA-1 will consist of overland travel and is considered an Allowed Use. The Project will seek authorization through a Vermont Wetland Permit for a permanent stone access road within the Class II buffer of WA-2. As such, the Project will comply with the VWR.

The proposed Project is sited to avoid impacts within wetlands and/or associated buffers to the extent practicable.

Necessary Wildlife Habitat and Endangered Species

Regarding the Section 248 criterion for **Necessary Wildlife Habitat and Endangered Species *(§ 6086(a)(8)(A))***, a review of the U.S. Fish and Wildlife Service ("USFWS") Information for Planning and Consultation ("IPaC") database determined the Project Area falls within the known summer range of two protected bat species, federal-endangered and Vermont-endangered northern long-eared bat (*Myotis septentrionalis, "*MYSE*"*) and federal-proposed endangered and Vermont-endangered Tricolored bat (*Perimyotis subflavus, "PESU"*)(see Attachment 6). As of October 2024, no critical habitat within or adjacent to the Project has been designated for these species by USFWS (See Attachment 6 for the USFWS Official Species List). Further, there are no known occurrences of MYSE or PESU (including hibernacula) within one mile of the Study Area, and therefore the Study Area is assumed to be "Potential Summer Habitat" under FWD *Regulatory Review Guidance for Protecting Northern Long-eared Bats and Their Habitats* (ANR 2017b). Under this assumption, if tree clearing occurs during the MYSE dormancy period, no additional conservation measures are required. In absence of published guidance from FWD or USFWS, VHB assumes MYSE time-of-year restrictions provide adequate conservation measures to protect PESU, resulting in no impact.

As part of VHB's one-mile radius review of the Vermont National Heritage Inventory ("NHI") Database, no elemental occurrences ("EO") of state-protected species are known to occur within the Study Area (see Attachment 7). Two natural communities (Red Oak-Northern Hardwood Forest and Woodland Seep) occur within a 1-mile search radius of the Study Area with the potential for habitat to occur on-site. Field surveys conducted on September 26, 2024, confirmed the absence of these natural communities within the Study Area. In addition, targeted RTE plant surveys identified no RTE plants (see Attachment 8).

As described in the Site Description section above, the Study Area consists of a cleared and maintained utility ROW, residential lawns and buildings, and forested and shrubby areas adjacent to wetland. From database and field reviews, it is VHB's judgement that there are no adverse effects on known listed threatened or endangered species resulting from the Project.

Prime Agricultural Soils

Regarding Act 250 criterion for ***Primary Agricultural Soils 10 V.S.A. § 6001(15)*** ("PAS"), the proposed project must not result in any reduction in the agricultural potential of the primary agricultural soils. Colonel fine sandy loam (8 to 15 percent slopes) and Lamoine silt loam (8 to 15 percent slopes) are mapped by the Natural Resources Conservation Service ("NRCS") as a prime agricultural soil and are present in the Study Area (see Attachment 1). Approximately 0.0034 acres of PAS occur within the Study Area.

The PAS area is located within an established and maintained ROW, and as such, it is VHB's conclusion that the Project will not reduce the potential for agricultural use and there will be no undue adverse effects to farming, farming potential, or PAS as a result of the Project. Further, impacts will not exceed the two-acre mitigation threshold and are considered *de minimis*.

Conclusions

Based on VHB's assessment of the Study Area with respect to the natural resources criteria listed above, VHB concludes that there are natural resources present that would be given due consideration under Section 248 as well as collateral permitting as well as mitigation needs if impacts are unavoidable. Based on this screening of natural resources, VHB finds that there are resources and/or buffers present on site to which direct impacts should be minimized or avoided by Project design if feasible.

Attachments

- Attachment 1 – Natural Resource Maps
- Attachment 2 – Section 248 Natural Resources Site Screening Tables
- Attachment 3 – Representative Site Photographs
- Attachment 4 – Wetland and Waters Summary Table
- Attachment 5 – USACE Wetland Determination Data Forms
- Attachment 6 – USFWS IPaC Official Species List
- Attachment 7 – Element Occurrence Table
- Attachment 8 – Partial Floristic Inventory

References Cited

Agency of Natural Resources ("ANR") 2023. The Vermont Wetland Rules. Department of Environmental Conservation. Effective February 2023.

—2022a. *Endangered and Threatened Plants of Vermont.* Natural Heritage Inventory, Fish and Wildlife Department. Effective February 10, 2022.

—2022b. *Rare and Uncommon Native Vascular Plants of Vermont. Fish and Wildlife Department. Effective May 4, 2022.*

—2022c. *Vermont Water Quality Standards.* Environmental Protection Rule, Chapter 29A. Department of Environmental Conservation. Effective November 15, 2022.

—2017a. Environmental Protection Rule. Vermont Stormwater Management Rule and the Agency's Design Guidance. Chapter 36, effective July 1, 2017.

—2017b. *Flood Hazard Area and River Corridor Protection Procedure.* Environmental Protection Rule Chapter 29. Department of Environmental Conservation. Effective September 7, 2017.

—2017c. *Regulatory Review Guidance for Protecting Northern Long-eared Bats and Their Habitats*. Effective February 2017.

—2016a. *Guidance for Conducting Rare, Threatened, and Endangered Plant Inventories in Connection with Section 248 Projects.* Fish and Wildlife Department. Effective October 5, 2016.

—2016b. *Vermont Natural Community Ranking Specifications*. Fish and Wildlife Department. Effective January 2016.

—2009. *Forest Management Guidelines for Indiana Bat Habitat*. Fish and Wildlife Department. Effective June 2009.

—2005. *Guidance for Agency Act 250 and Section 248 Comments Regarding Riparian Buffers*. Effective December 9, 2005.

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US Army Corps of Engineers (USACE). 2022. Department of the Army Vermont General Permit: NAE-2022-00024. New England Division. Effective December 6, 2022.

—2011. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeastern Region (Version 2.0)*, *Final Report*.

—2005. *Regulatory Guidance Letter: Ordinary High Water Mark Identification*. No. 05-05.

US Fish and Wildlife Service (USFWS). 2016. *Key to the Northern Long-Eared Bat 4(d) Rule for Federal Actions that May Affect Northern Long-Eared Bats.* Created January 13, 2016; Revised February 17, 2016.

—2023. Information Planning and Consultation. Available on-line at IPaC: Home (fws.gov)

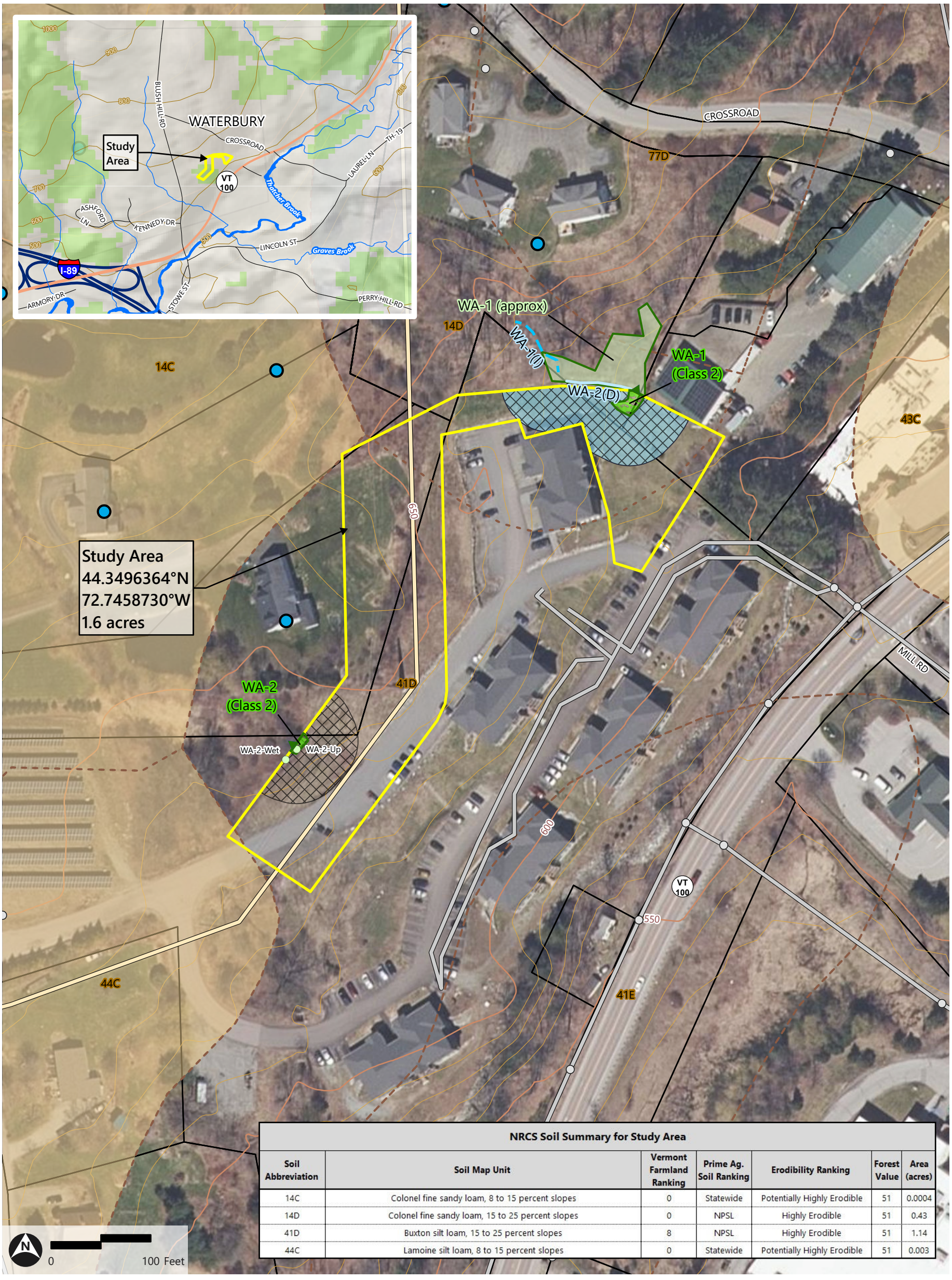
Vermont Fish and Wildlife Department ("FWD"). 2023. New Endangered and Threatened Species List Designations. Available on-line at New Endangered and Threatened Species List Designations | Vermont Fish & Wildlife Department (vtfishandwildlife.com).

ATTACHMENT 1

Natural Resources Map

VELCO LCP-20 Emergency Access | Waterbury, Vermont

November 25, 2024



NRCS Soil Summary for Study Area

Soil Abbreviation	Soil Map Unit	Vermont Farmland Ranking	Prime Ag. Soil Ranking	Erodibility Ranking	Forest Value	Area (acres)
14C	Colonel fine sandy loam, 8 to 15 percent slopes	0	Statewide	Potentially Highly Erodible	51	0.0004
14D	Colonel fine sandy loam, 15 to 25 percent slopes	0	NPSL	Highly Erodible	51	0.43
41D	Buxton silt loam, 15 to 25 percent slopes	8	NPSL	Highly Erodible	51	1.14
44C	Lamoine silt loam, 8 to 15 percent slopes	0	Statewide	Potentially Highly Erodible	51	0.003

- Study Area (VHB)
- Delineated Wetland (VHB)
- Approximate Wetland (VHB)
- Potential Class II Wetland Buffer - 50 ft. (VHB)
- Wetland Extends (VHB)
- Wetland Determination Data Point (VHB)
- Approximate Stream (VHB)
- Ditch (VHB)
- Riparian Stream Buffer (VHB)
- Existing Utility Pole - GMP/VEC (VCGI)
- Transmission Line Corridors (VCGI)
- Existing Overhead Electric - GMP (VCGI)
- Private Well (ANR)
- Town Boundary (VCGI)
- Parcel Boundary (VCGI)
- NRCS Soils (VCGI)
- NRCS Prime Agricultural Soils (VCGI)
- Contour - 50 ft (VCGI)
- Contour - 10 ft (VCGI)

Legend Note - Only layers visible in the current map display are displayed in the legend.

NR Data Note: Natural resource field investigations performed by VHB on September 26 (A. Pierce) and November 20, 2024 (R. Scott).

Sources: Background imagery by VCGI (Collected in 2022); ANR (Vermont Agency of Natural Resources - Various Dates); VCGI (Vermont Center for Geographic Information - Various Dates); VTrans (Vermont Agency of Transportation - Hosted Feature Service); VHB (Vanasse Hangen Brustlin - 2024).

ATTACHMENT 2

Section 248 Natural Resources Site Screening Table

Project: **Stowe LCP-20**
Client: VELCO
Location: Waterbury, Vermont
Field Visit Date(s): 26-Sep-24
Study Area: 1.6

		Outstanding Resource Waters (10 V.S.A. § 1424a(d))	Headwaters (§ 6086(a)(1)(A))	Floodways (§ 6086(a)(1)(D))	Streams (§ 6086(a)(1)(E))	Shorelines (§ 6086(a)(1)(F))	Wetlands (§ 6086(a)(1)(G))	Soil Erosion (§ 6086(a)(4))	Rare or Irreplaceable Natural Areas (§ 6086(a)(8))	Wildlife Habitat and Endangered Species (§ 6086(a)(8)(a))	Prime Agricultural Soils 10 V.S.A. § 6001
Section 248 Natural Resources Criteria Assessment	**Identification Method**	Review of the Natural Resources Board/ Agency of Natural Resources list of Outstanding Resource Waters (ORW) and Prospective Outstanding Resource Waters (ANR)	If not in an intensively developed area, sub-criteria reviewed (as applicable) by evaluating NRCS soils data, contour data; watershed size; ground and surface water protection areas to determine if the site meets the headwater criteria	Review of floodplain mapping provided by VCGI and FEMA (Community Panel Number 50021C0332D (August 28, 2008); Review of ANR River Corridor Map Layer; Stream flow regime from review of watershed sizes and in-field determinations.	Review of VHD stream mapping provided by VCGI; field review to determine if there are any streams present.	Review of VHD waterbody data provided by VCGI and field review to determine if there are any named waterbodies including lakes, ponds, reservoirs, or rivers present.	Review of VSWI mapping provided by VCGI; field review to delineate potential federal/state jurisdictional features. If present, presumed wetland classifications made per the VT Wetland Rules (VWR) and confirmed in-field with DEC District Wetlands Ecologist.	Review of NRCS-mapped soil survey series and K-factors used to determine potential soil erodibility; soil series are considered to be of "medium" or "high" erodibility ranking (Medium 0.17<K<0.37 and High K>0.36) according to the Vermont Standards and Specifications for Erosion Prevention and Sediment Control	Review of the significant natural community mapping provided by VCGI and corroborated by presence/absence and approximate extent field mapping (if present) for potential rare and significant natural communities .	VHB review of VT NHI database for Rare, Threatened and Endangered Species (RTE) species; review of black bear and deer wintering habitat data provided by VCGI; review of USFWS IPaC database; all database reviews corroborated by field reviews.	Review of NRCS-mapped soil survey series to determine those that would be considered Primary Agricultural Soils (PAS).
	Presence / Absence	Absent	Absent	Absent	**Present**	Absent	**Present**	**Present**	Absent	**Present**	**Present**
	Resource Description	None Present.	Thatcher Brook is located approximately 600 feet southeast of the Study Area. An additional unnamed tributary to Thatcher Brook is located approximately 35 feet west of the Study Area. Both streams have a drainage area of <20 square miles, however, they are part of the Graves Brook-Winooski River subwatershed which has a drainage area of >20 square miles. Shallow Colonel fine sandy loam soils are present onsite with steep slopes. While two subcriteria are met, it is VHB's judgement that the Study Area should not be considered a headwaters location.	Thatcher Brook is located approximately 600 feet southeast of the Study Area. An unnamed tributary to Thatcher Brook is located approximately 35 feet west of the Study Area. VHB identified and approximated one intermittent stream north of the Study Area. No streams are mapped within the Study Area.No flood hazard areas or river corridors are associated with the unnamed tributary to Thatcher Brook or the VHB-approximated stream. The Study Area does not fall within Thatcher Brook's flood zones.	No streams are present within the Study Area, however an unnamed intermittent stream was identified north of Study Area. A VHB-assigned 50 foot riparian buffer will be applied to this stream and overlap the Study Area.	The Study Area does not contain any Shorelines.	VHB delineated two categorical class II wetland features within the Study Area. Wetland WA-1 is located in the northeastern portion of the Study Area and Wetland WA-2 is located in the southwestern portion of the Study Area.	Soils mapped within the Study Area include Colonel fine sandy loam (15 to 25 percent slopes) (K-factor=0.37, medium erodibility); Colonel fine sandy loam (8 to 15 percent slopes) (K-factor=0.37, medium erodibility,) Buxton silt loam (15 to 25 percent) (K-factor=not listed), Lamoine silt loam (8 to 15 percent slopes) (K-factor=0.37, medium erodibility).	No natural communities are mapped within or adjacent to the Study Area. Field review corroborated that no potential state-significant natural communities are present within the Study Area.	No ANR-mapped NWH are present within the Project Area. The Project is within the known summer range of VT-endangered northern long-eared bat (Myotis septentrionalis) ("MYSE") and the tricolored bat (Perimyotis subflavus)("PESU") although no critical habitat for these species is present within the Study Area.	VHB's review of PAS is limited to soil types mapped by the NRCS. Based on a review of the ANR Atlas there are two mapped PAS soil on site: Colonel fine sandy loam (8 to 15 percent slopes) and Lamoine silt loam (8 to 15 percent slopes).
	Further Survey Recommended?	No	No	No	No	No	No	No	No	No	No
	Potential Adverse Impacts (Yes/No)	No	No	No	No	No	No	No	No	No	No
	Impact Mitigation Description/ Recommendation	None required or recommended.	VHB recommends adhering to the Low-Risk Site handbook so as not to adversely impact ground or surface water quality.	None required or recommended	If the Project impacts the delineated streams or their associated riparian buffers, permitting or mitigation measures would be necessary.	None recommended or required.	VHB recommends the implementation of best management practices for utility maintenance work as an Allowed Use, as described in the Vermont Wetland Rules.	The Project will adhere to the Low-Risk Site handbook and DEC dust control standards.	None required or recommended.	VHB recommends following FWD Regulatory Review Guidance for Protecting Northern Long-eared Bats and Their Habitats (ANR 2017b).	None required or recommended. The existing impacts and landuse within the Study Area, preclude the area from farming. Impacts will not exceed two acres of required mitigation and are considered *de minimis* .
	Impact Assessment	As there are no ORW present within the Study Area, there would be no impacts to this resource.	The Study Area does not fall within a headwaters location and therefore, there would be no impacts to this resource.	None. The Project will not significantly increase the peak discharge of the river or stream within or downstream from the area of development and endanger the health, safety, or welfare of the public or riparian owners during flooding.	The Project will not impact the stream or its associated riparian buffer.	Thatcher Brook is located approximately 600 feet southeast of the Study Area. There are no shorelines within or adjacent to the Project, and therefore no impacts would occur.	Project impacts to USACE and Vermont jurisdictional wetlands that do not qualify for Self-Verification Eligibility or are not considered Allowed Uses for the project will need to obtain authorization through a Vermont Wetlands Permit and authorization from USACE.	With adherence to EPSC measures during construction, there will be no significant or measurable reduction of the land's capacity to hold water as the nature of this Project will not result in an appreciable change in land form or cover. As such, there would be no dangerous or unhealthy conditions associated with soil erosion as a result of the Project and there would be no undue adverse effect from soil erosion.	As there are no rare or irreplaceable natural areas present within the Study Area, there would be no impacts to the resource.	If tree clearing is anticipated as part of the Project impacts, it is recommended that work follow FWD guidance that states tree clearing be kept to less than one percent of suitable forested habitat within one mile. The Project will not destroy or significantly imperil necessary wildlife habitat or any endangered species.	The Study Area contains an established and maintained ROW along with residential properties, which preclude the site from farming.
Collateral Environmental Permits (Federal or State)	**Applicable Permit(s) (If Required)**	None	No specific permits required for Headwaters Criterion; a project must comply with applicable health and environmental regulations	Flood Hazard and River Corridor Permit (General or Individual)	Clean Water Act Section 404 Permit / Clean Water Act Section 401 WQC / Stream Alteration Permit	Rivers and Harbors Act Section 10 Permit / Shoreland Protection and Lake Encroachment Permits	Clean Water Act Section 404 Permit / Clean Water Act Section 401 WQC / Vermont Wetland Permit	Construction Stormwater Discharge Permit (GP 3-9020/INDC)	None	Endangered Species Takings Permit (None for NWH)	None
	Agency	VT DEC Watershed Management Division	Public Utility Commission / Agency of Natural Resources; VT DEC Stormwater Section; VT FWD	VT DEC River Management Section	USACE / VT DEC Watershed Management Division / VT DEC River Management Section	USACE / VT DEC Lakes and Ponds Section	USACE / VT DEC Watershed Management Division / VT DEC Wetlands Section	VT DEC Stormwater Section	VT FWD	VT FWD / USFWS	VT Agency of Agriculture and Food Markets
	Required (Yes/No)	No	No	No	Yes	No	Yes	No	No	No	No

ATTACHMENT 3

Stowe LCP-20

Photographs: 2024 Natural Resources Assessment

PROJECT NUMBER

59075.00

K24-5 Duxbury Tap – Stowe Line
Waterbury, Vermont 05676

VT Transco, LLC
366 Pinnacle Ridge Road
Rutland, VT 05701

NO. 1 / 09.26.2024

DESCRIPTION

A representative photograph of the access road to LCP-20 and LCP-21.

NO. 2 / 09.26.2024

DESCRIPTION

A representative photograph of newly placed Structure LCP-20.

NO. 3 / 09.26.2024

DESCRIPTION

A representative photograph of three pole Structure LCP-21 and LCP-20.

NO. 4 / 09.26.2024

DESCRIPTION

A representative photograph of the ROW.

NO. 5 / 09.26.2024

DESCRIPTION

A representative photograph of the stone retaining wall below Structures LCP-20 and 21 and the base of the removed laminate structure.

NO. 6 / 09.26.2024

DESCRIPTION

A representative photograph of Wetland WA-2.

NO. 7 / 09.26.2024

DESCRIPTION

A representative photograph of WA-1.

ATTACHMENT 4

Summary of Delineated Wetlands
Project: VELCO Stowe LCP-20
Client: VT Transco LLC (VELCO)
Location: Waterbury, VT
Prepared By: VHB (N. Fenton)
Delineation Date(s): 9/26/2024

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 Presumptions[4]**	**VWR Section 5 Functional Criteria Presence / Significance**		**VHB-Proposed VWR Classification[6]**		
								Type[5]	**VHB-Proposed Significant?**			
WA-1	398	PEM	Saturation (A3), Geomorphic Position (D2), FAC-Neutral Test (D5)	Depleted Matrix (F3)	No	Yes	b	5.1, 5.2, 5.10	Yes	II	*Juncus effusus, Carex Sp., Myosotis scorpioides, Symphyotrichum novae-angliae, Eupatorium perfoliatum, Persicaria hydropiper,*	Small seep wetland where surface runoff enters a culvert.
WA-2	145	PEM/PSS	Oxidized Rhizospheres on Living Roots (C3), Geomorphic Position (D2), FAC-Neutral Test (D5)	Depleted Matrix (F3)	No	No	a, b	5.1, 5.2, 5.10	Yes	II	*Frangula alnus, Viburnum dentatum, Lysimachia nummularia, Symphyotrichum lanceolatum, Onoclea sensibilis, Symphyotrichum novae-angliae, Solanum dulcamara, Rosa multiflora, Impatiens capensis*	Eastern extent of depressional wetland. Surrounded by development.

[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.

[6]VHB-Proposed VWR Classification is based on review and application of the VWR, particularly VHB's interpretation of Section 4.6 Presumptions and is subject to final determinations by the ANR-DEC.

Summary of Delineated Streams
Project: VELCO Stowe LCP-20
Client: VT Transco LLC (VELCO)
Location: Waterbury, VT
Prepared By: VHB (N. Fenton)
Delineation Date(s): 9/26/2024

VHB Delineated Streams													
Stream ID	**Stream Name**	**Associated Wetlands**	**Average Ordinary High Water (OHW) Width (Feet)[1]**	**Dominant Substrate**	**Water Depth (Inches)**	**Bank Height (Feet)**	**Flow Regime (Ephemeral, Intermittent, or Perennial)[2]**	**Watershed Size (Square Miles) [3]**	**VWQS Classification (2022)[4]**	**ANR-Mapped Stream/River (Yes/No)**	**ANR-Mapped River Corridor? (Yes/No)[5]**	**VHB-Proposed Riparian Buffer ? (Yes/No)[6]**	**Comments**
WA-1(I)	-	WA-1	3.0	Cobble, Sand	2	1.00	Intermittent	<0.5	B	No	No	Yes	Intermittent stream approximated entirely outside of the Study Area. Riparian buffer extends into the Study Area.
WA-2(D)	-	WA-1	2.0	Cobble	1	3.00	Intermittent	<0.5	B	No	No	No	Constructed ditch adjacent to right of way access that drains wetland WA-1. Receives hydrology from intermittent stream WA-1.

[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.*

ATTACHMENT 5

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

WA-2-UPL

Project Site: **VELCO Stowe LCP-20** City/County: **Waterbury/Washington** Samp. Date: **9.26.2024**

Applicant/Owner: **VELCO** State: **Vermont** Sampling Point: **WA-2-UPL**

Investigator(s): **AP** Section, Township, Range: **-**

Landform (hillslope, terrace, etc.): **Hillslope** Local relief (concave, convex, none): **None** Slope (%): **3-5**

Subregion (LRR or MLRA): **LRR R** Lat: **44.3490181** Long: **-72.7460999** Datum: **NAD 83**

Soil Map Unit: **Buxton silt loam (15 to 25 percent slopes)** NWI Class: **UPL**

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:

0.92" of rain in 5 days prior in Burlington, VT (NWS 2021); PDSI 1.13 (Near Normal) for week ending 9/28/2024

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	**2.5Y 4/2**	**100**					**LOAM**	
3-13	**2.5Y 4/3**	**100**					**LOAM**	
13-16	**2.5Y 5/4**	**100**					**GRAVELLY 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: **WA-2-UPL**

Tree Stratum (Plot size: **30' RAD**)	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. **Rubus idaeus**	**10**	**X**	**FACU**
2.			
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	
Herb Stratum (Plot size: 5' RAD)			
1. **Boehmeria cylindrica**	**15**	**X**	**OBL**
2. **Vicia americana**	**15**	**X**	**FACU**
3. **Symphyotrichum novae-angliae**	**10**	**X**	**FACW**
4. **Lysimachia nummularia**	**10**	**X**	**FACW**
5. **Impatiens capensis**	**10**	**X**	**FACW**
6. **Solidago rugosa**	**10**	**X**	**FAC**
7. **Onoclea sensibilis**	**5**		**FACW**
8. **Cornus sericea**	**5**		**FACW**
9. **Rubus allegheniensis**	**5**		**FACU**
10. **Rubus hispidus**	**5**		**FACW**
11.			
12.			
	90	= Total Cover	
Woody Vines (Plot size: 15' RAD)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Dominance Test Worksheet:

# Dominants OBL, FACW, FAC:	**5**	(A)
# Dominants across all strata:	**7**	(B)
% Dominants OBL, FACW, FAC:	**71%**	(A/B)

Prevalence Index Worksheet:

Total % Cover of:			Multiply By:
OBL	**15**	x 1 =	**15**
FACW	**45**	x 2 =	**90**
FAC	**10**	x 3 =	**30**
FACU	**30**	x 4 =	**120**
UPL		x 5 =	
Sum:	**100** (A)		**255** (B)

Prevalence Index = B/A = **2.55**

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

WA-2-Wet

Project Site: **VELCO Stowe LCP-20** City/County: **Waterbury/Washington** Samp. Date: **9.26.2024**

Applicant/Owner: **VELCO** State: **Vermont** Sampling Point: **WA-2-Wet**

Investigator(s): **AP** Section, Township, Range: **-**

Landform (hillslope, terrace, etc.): **Hillslope** Local relief (concave, convex, none): **None** Slope (%): **3-5**

Subregion (LRR or MLRA): **LRR R** Lat: **44.3490464** Long: **-72.7460556** Datum: **NAD 83**

Soil Map Unit: **Buxton silt loam (15 to 25 percent slopes)** NWI Class: **PEM/PSS**

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)
	Saturation Visible on Aerial (C9)
	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
	Shallow Aquitard (D3)
	Microtopographic Relief (D4)
X	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:

0.92" of rain in 5 days prior in Burlington, VT (NWS 2021); PDSI 1.13 (Near Normal) for week ending 9/28/2024

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	**2.5Y 4/2**	**95**	**7.5YR 4/6**	**5**	**C**	**m**	**LOAM**	
2-16	**2.5Y 4/2**	**100**					**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: **WA-2-Wet**

Tree Stratum (Plot size: **30' RAD**)	Absolute % Cover	Dom. Sp?	Indicator Status
1. **Frangula alnus**	**15**	**X**	**FAC**
2.			
3.			
4.			
5.			
6.			
7.			
	15	= Total Cover	
Sapling Stratum (Plot size: 15' RAD)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Shrub Stratum (Plot size: 15' RAD)			
1. **Viburnum dentatum**	**30**	**X**	**FAC**
2.			
3.			
4.			
5.			
6.			
7.			
	30	= Total Cover	
Herb Stratum (Plot size: 5' RAD)			
1. **Lysimachia nummularia**	**40**	**X**	**FACW**
2. **Symphyotrichum lanceolatum**	**20**	**X**	**FACW**
3. **Onoclea sensibilis**	**10**		**FACW**
4. **Symphyotrichum novae-angliae**	**10**		**FACW**
5. **Solanum dulcamara**	**10**		**FAC**
6. **Rosa multiflora**	**10**		**FACU**
7. **Impatiens capensis**	**5**		**FACW**
8.			
9.			
10.			
11.			
12.			
	105	= Total Cover	
Woody Vines (Plot size: 15' RAD)			
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		x 1 =	
FACW	**85**	x 2 =	**170**
FAC	**55**	x 3 =	**165**
FACU	**10**	x 4 =	**40**
UPL		x 5 =	
Sum:	**150** (A)		**375** (B)

Prevalence Index = B/A = **2.50**

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).

ATTACHMENT 6

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: 10/21/2024 19:30:45 UTC
Project Code: 2025-0008844
Project Name: VELCO Stowe LCP-20

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: 2025-0008844
Project Name: VELCO Stowe LCP-20
Project Type: Transmission Line - Maintenance/Modification - Above Ground
Project Description: Emergency transmission line work.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@44.349353699999995,-72.74563789706065,14z

Counties: Washington County, Vermont

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 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
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed 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: Nicole Fenton
Address: 40 Idx Dr. Building 100 Suite 200
City: South Burlington
State: VT
Zip: 05403
Email nfenton@vhb.com
Phone: 8024976107

ATTACHMENT 7

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: LCP-20
Prepared by: VHB (A. Pierce) September 16, 2024
Survey Date: 9/26/2024

	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)	Survey Recommended? Comments
Element Occurrences- 1 Mile Radius	*Bombus terricola*	Yellow-banded Bumble Bee	Animal	S3	G3G4	T	-	2014	Undisturbed woodlands, wetlands, prairies, and meadows	One queen collected from lawn at Pilgrim Park in Waterbury	Spring - Fall	No	No	No	All portions of the Study Area are likely to be disturbed due to surrounding land use
	Eragrostis capillaris	Lace Love-Grass	Plant	SH	G5	-	-	1981	Anthropogenic, cliffs, balds, ledges, floodplain, ridges	Railroad station, South Main Street, Waterbury. Not found in recent surveys	Summer - Late Summer	No	Yes	No	Not a state or federally protected species, nor mapped within Study Area
	Glyptemys insculpta	Wood Turtle	Animal	S3	G2G3	-	UR	2024	Found in varied habitats adjacent to streams including riparian woods, thickets, swamps, and fields	Multiple locations along Thatcher Brook in last 20 years	Spring - Fall	No	Yes	No	Not a state or federally protected species, nor mapped within Study Area
	Margaritifera margaritifera	Eastern pearlshell	Animal	S2	G4	T	-	2018	Stream bed substrates that have sandy patches surrounded by boulders and large rocks. Riffles are favored	Mussels were found around the impoundment of Bolton Dam and downstream of the dam	-	No	No	No	No potential habitat present within the Study Area
	Red Oak-Northern Hardwood Forest		Natural Community	S4	-	-	-	2011	Warm slopes and terraces below 2,500 feet elevation and typically facing south or west. Red oak dominates the canopy with a variety of other species, depending on the soil substrate	South-facing slopes above I-89, between Waterbury and Middlesex Notch. Dominated by Quercus rubra with Acer saccharum, Acer rubrum, Fraxinus americana, and Fagus grandifolia present as well	Spring - Fall	No	Yes	Yes	Document vegetative communities present in forested portions of Study Area
	Woodland Seep		Natural Community	S4	-	-	-	2003	Seeps occur where groundwater emerges and typically have a hardpan that inhibits the downward movement of water. Herbs dominate and moving water is present	Seep at far southern end of Worcester Mountains within forest dominated by Eastern Hemlock. The wetland is primarily herbaceous and approximately 0.5-acres in size	Spring - Fall	No	Yes	Yes	Look for areas with groundwater discharge dominated by herbaceous vegetation within the wooded portions of the 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 Omithology 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.
Michigan Natural Features Inventory. Accessed September 16, 2024. Retrieved from: https://mnfi.anr.msu.edu/species/description/15666/Eragrostis-capillaris
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/bigb/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 September 2024. 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)

ATTACHMENT 8

Partial Floristic Inventory
Client: Vermont Transco LLC
Project: VELCO Stowe LCP-20
Survey Date(s): 9/26/2024
Prepared by: VHB (N. Fenton)

Study Completed By:
VHB
Field Investigators:
A. Pierce

Scientific Name [1]	Common Name	Family	Observed Habitat		VT Rarity Rank[2,3]	Non-Native Invasive Species[4]
			Upland	Wetland		
Vitis labrusca L.	fox grape	Vitaceae	X	X		
Symphyotrichum lateriflorum (L.) Á. Löve & D. Löve	calico aster	Asteraceae	X	X		
Achillea L.	yarrow	Asteraceae	X			
Vicia cracca L.	bird vetch	Fabaceae	X			
Lolium perenne L.	perennial ryegrass	Poaceae	X			
Lupinus L.	lupine	Fabaceae	X			
Tussilago farfara L.	coltsfoot	Asteraceae	X			
Symphyotrichum novae-angliae (L.) G.L. Nesom	New England aster	Asteraceae		X		
Eutrochium maculatum (L.) E.E. Lamont	spotted joe pye weed	Asteraceae		X		
Trifolium repens L.	White clover	Fabaceae	X			
Trifolium pratense L.	red clover	Fabaceae	X			
Ranunculus acris L.	tall buttercup	Ranunculaceae	X	X		
Galium mollugo L.	false baby's breath	Rubiaceae	X			
Solidago canadensis	Canada goldenrod	Asteraceae	X			
Solidago rugosa Mill.	Wrinkleleaf goldenrod	Asteraceae	X	X		
Agrostis L.	bentgrass	Poaceae		X		
Phleum pratense L.	timothy	Poaceae	X			
Lotus corniculatus L.	bird's-foot trefoil	Fabaceae	X			
Populus grandidentata Michx.	bigtooth aspen	Salicaceae	X			
Rumex crispus L	Curly dock	Polygonaceae	X			
Betula populifolia Marshall	gray birch	Betulaceae	X	X		
Parthenocissus quinquefolia (L.) Planch.	Virginia creeper	Vitaceae	X			
Symphyotrichum lanceolatum (Willd.) G.L. Nesom	white panicle aster	Asteraceae		X		
Boehmeria Jacq.	false nettle	Urticaceae		X		
Rubus allegheniensis Porter	Allegheny blackberry	Rosaceae	X			
Spiraea alba Du Roi	white meadowsweet	Rosaceae	X			
Viburnum dentatum L.	Arrowwood	Caprifoliaceae		X		
Lonicera morrowii A. Gray	Morrow's honeysuckle	Caprifoliaceae	X			B
Impatiens capensis Meerb.	jewelweed	Balsaminaceae		X		
Polygonum hydropiper L.	marshpepper knotweed	Polygonaceae		X		
Rhus typhina L.	Staghorn sumac	Anacardiaceae	X			
Salix sericea Marshall	silky willow	Salicaceae		X		
Cornus sericea L.	redosier dogwood	Cornaceae		X		
Populus tremuloides Michx.	Quaking aspen	Salicaceae	X			
Phalaris arundinacea L.	reed canarygrass	Poaceae	X	X		WL
Rhamnus cathartica L.	common buckthorn	Rhamnaceae	X	X		B
Onoclea sensibilis L.	sensitive fern	Dryopteridaceae		X		
Frangula alnus Mill.	glossy buckthorn	Rhamnaceae	X	X		B
Rosa multiflora Thunb.	multiflora rose	Rosaceae	X	X		WL
Acer rubrum L.	red maple	Aceraceae	X	X		
Acer saccharinum L.	silver maple	Aceraceae		X		
Picea rubens Sarg.	red spruce	Pinaceae	X			
Fraxinus pennsylvanica Marshall	green ash	Oleaceae		X		
Alliaria petiolata (M. Bieb.) Cavara & Grande	garlic mustard	Brassicaceae	X			B
Juncus effusus L.	common rush	Juncaceae		X		
Malus Mill.	apple	Rosaceae	X			
Persicaria maculosa	Lady's-thumb smartweed	Polygonaceae	X	X		
Taraxacum officinale F.H. Wigg.	common dandelion	Asteraceae	X			
Rubus idaeus L.	American red raspberry	Rosaceae	X			
Quercus rubra L.	northern red oak	Fagaceae	X			
Lysimachia nummularia L.	creeping jenny	Primulaceae		X		
Securigera DC.	crownvetch	Fabaceae		X		
Solanum dulcamara L.	climbing nightshade	Solanaceae	X	X		
Scirpus cyperinus (L.) Kunth	woolgrass	Cyperaceae		X		
Myosotis scorpioides L.	true forget-me-not	Boraginaceae		X		
Eupatorium perfoliatum L.	common boneset	Asteraceae		X		
Verbascum thapsus L.	common mullein	Scrophulariaceae	X			
Oenothera biennis L.	common evening primrose	Onagraceae		X		
Erechtites Raf.	burnweed	Asteraceae		X		
Echinochloa crus-galli (L.) P. Beauv.	barnyardgrass	Poaceae	X	X		
Prunus virginiana L.	chokecherry	Rosaceae	X			

X - Plant species was found in this community type.

[1] Nomenclature follows USDA-NRCS PLANTS database (plants.usda.gov/) (**2024**).

[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 June 10, 2024.

[3] The Vermont Rarity Rank from the "Endangered and Threatened Plants of Vermont - Vermont Natural Heritage Inventory - Vermont Fish & Wildlife Department",

[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.