SECTION 248 NATURAL RESOURCES REPORT

VELCO Sandbar Station Smartvalve Project – Natural Resources Report

Town of Milton, Vermont.

PREPARED FOR



VT Transco LLC 366 Pinnacle Ridge Road Rutland, Vermont 05701

PREPARED BY



40 IDX Drive Building 100, Suite 200 South Burlington, Vermont 05403

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Introduction

At the request of VT Transco LLC ("VELCO"), VHB conducted natural resources assessments in support of the proposed Sandbar Station expansion in Milton, Vermont. This natural resources report ("Report") includes a general description of the proposed Project, the Project's Study Area, a description of individual methodologies for each resource assessment, the findings, and an evaluation of the Project with respect to each criterion per the applicable 30 V.S.A. §248 (b)(5) natural resource criteria reviewed by the Vermont Public Utility Commission ("PUC").

VHB's assessment includes review of public and privileged databases provided by:

- > VELCO, consisting of past project data collection and permitting efforts;
- > Publicly available Permits and information associated with Projects adjacent to or overlapping the Study Area.
- Vermont Fish and Wildlife Department ("FWD") Natural Heritage Inventory ("NHI") for known Elemental Occurrences ("EO") of rare, threatened or endangered ("RTE") species and significant natural communities;
- > U.S. Fish and Wildlife Service ("USFWS") Information, Planning, and Conservation ("IPaC") System for potential occurrences of federally-listed threatened or endangered species;
- Vermont Agency of Natural Resources ("ANR") for mapped state-significant wetlands, surface and groundwater resources, surficial geology, and wildlife habitat;
- > Natural Resources Conservation Science ("NRCS") for soils data and mapping; and,
- > Federal Emergency Management Agency ("FEMA") for floodways/floodway fringe mapping.

In addition to desktop reviews of the above-described databases, VHB conducted field delineations and assessments of wetlands, streams, and vernal pools, as well as surveys for potential wildlife habitat, natural communities, and RTE plant and animal species in support of various Project components. Field delineations and assessments were conducted during the 2024 field season.

During natural resources assessments and Project planning, VHB conducted outreach and coordination with various ANR programs in coordination with VELCO, including:

- Department of Environmental Conservation ("DEC") Wetlands Tina Heath (ANR Wetland Ecologist) and Project representatives conducted wetland field review and preapplication meeting/coordination, and desktop review of wetland classifications and mapping; and
- > FWD Grace Glynn (Vermont State Botanist), Bob Zaino (Vermont Natural Community Ecologist) and Project representatives met virtually and in-person to review potential impacts to rare, threatened, or endangered ("RTE") plants, and Significant Natural Communities.

The report includes an evaluation of the following Act 250 criteria as incorporated into 30 V.S.A. Section 248(b)(5) review, using both desktop and field data collected by VHB:

- Outstanding Resource Waters (10 V.S.A. § 1424a(d))
- Primary Agricultural Soils (30 V.S.A. § 248(b)(5))
- Air Pollution and Greenhouse Gas Impacts (30 V.S.A. § 248(b)(5))
- Water Pollution (10 V.S.A. § 6086(a)(1))
- Headwaters (10 V.S.A. § 6086(a)(1)(A))
- Waste Disposal (10 V.S.A. § 6086(a)(1)(B))
- Water Conservation (10 V.S.A. § 6086(a)(1)(C))
- 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))
- Water Supply (10 V.S.A. § 6086(a)(2) and (3))
- 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))

In making assessments of Project impacts or conformance with the applicable criteria, VHB relied substantially on Project plans and spatial data provided by VELCO between July 2024 and December 2024, and on impact analyses conducted by VHB with data collected in the field.

Project Description

The VELCO Sandbar SmartValve Station ("Project") involves the installation of an Advanced Power Flow Controller (APFC), which is needed to maintain reliability of power in the region by extending the life of Sandbar Station Phase Shifting Transformer. The Project will install 12 APFC modules adjacent to the existing Sandbar Station in Milton. The APFC installation requires a yard expansion of the eastern fence line of the existing station to accommodate the APFC devices (SmartValves), bus work, instrument transformers, and connection of the APFC into the exiting Sandbar Station. The existing eastern fence line of the station will be moved approximately 187 feet to the east to accommodate the APFC, and this new fenced-in area will encompass approximately 41,240 square feet (a little less than one acre). There will be three new motor-operated load break switches installed within the existing Sandbar Station. The Project will require VELCO to relocate two sections of the existing K19 115kV transmission line for the expansion of the station and to provide access for construction and maintenance. Tree clearing and grading are required, to facilitate the station's yard expansion, transmission line relocation, and the creation of RTE habitat area. The Project also includes constructing an access drive along the northern end of the existing fence line to create an access route for construction, and the creation of laydown yards adjacent to the

existing Station access road. The Project proposes approximately 2.61 acres of tree clearing within an 8.52-acre limits of work.

As part of the Project, VELCO acquired the residential and structures adjacent to the existing Station. Proposed work at this parcel includes demolition of the residential structure, retirements of the existing private well and septic system, installation of an access drive, and creation of a laydown area.

Study Area Description

The Project is located at 586 Bear Trap Road, Milton, Vermont. VHB conducted assessments in 2024 and 2025 on the 136-acre parcel that currently contains the Sandbar Station identified as SPAN 396-123-13662 and the 1-acre residential inholding parcel that VELCO recently acquired identified as SPAN 396-123-10213

The 137-acre Study Area includes approximately 14.8 acres of maintained right-of-way ("ROW"), 1-acre of the residential inholding, and the existing Station and associated infrastructure (i.e. roads and parking areas). The 22-acre portion surrounding the existing Station and where Project activities will occur was the core area assessed by VHB. The Natural Resources Map Series (Appendix A) and the Primary Agricultural Soils Mapping (Appendix B) depict the Study Area.

The Project is located within the Champlain Valley biophysical region of Vermont. This area is generally characterized as low, warm, and comparatively dry with clay soils deposited by post-glacial lakes and seas, sands from post-glacial rivers, and outcrops of limestone and other Ordovician rocks. The Study is within the Lamoille River sub-watershed (HU12: 043001050306). Elevations on-site range approximately 100 to 345 feet above mean sea level ("amsl") varying from nearly level to steep banks near riverine areas. The USDA Natural Resources Conservation Service ("NRCS") has numerous soil types mapped in the Study Area, of which the following are most dominant in terms of area:

- Farmington extremely rocky loam, 20 to 60 percent slopes;
- Adams and Windsor loamy sands, 0 to 5 percent slopes;
- Rock land; and
- Hinesburg fine sandy loam, 15 to 25 percent slopes.

Land cover types within the Study Area include upland hills of terraced Dunham Dolostone, hardwood dominated forests, wetlands (emergent, scrub-shrub, and forested), stream and river crossings, and maintained areas (such as residential lawn, roads, and overhead utility corridors). The 1-acre residential inholding parcel included in the Study Area is characterized by maintained lawn, a small area of forest, and a single-family residence. Further, the Study Area contains portions of the maintained K19, K20, and K22 ROW and the existing Sandbar Station, which are subject to routine vegetation management in accordance with VELCO's Transmission Vegetation Management Plan (TVMP). Vegetation management includes mowing, hand clearing, and herbicide application to maintain compatible vegetation beneath and adjacent to the high-voltage power lines, and outside of the station fence and associated stone apron.

Section 248 Natural Resources **Criteria**

The following sections detail the methodology and findings of field and desktop reviews and how the Project will avoid undue adverse impacts to natural resources as defined in each criterion described below.

Outstanding Resource Waters (10 V.S.A. § 1424a (d))

The Vermont Water Quality Standards ("VWQS", effective November 15, 2022) (ANR 2022), under section 1-03D, state that the Secretary of the Vermont Agency of Natural Resources ("ANR") may, under 10 V.S.A. Section 1424(a), designate Outstanding Resource Waters ("ORW"). The following waterways have been classified as ORWs:

- 1. Batten Kill River, Towns of Dorset and Arlington;
- 2. Pike's Falls/Ball Mountain, Town of Jamaica;
- Poultney River, Towns of Poultney and Fair Haven; and
- 4. Great Falls, Ompompanoosuc River, Town of Thetford.

The Study Area does not cross any portions of the waters listed above, which all occur in southern Vermont counties. There are no ORWs which intersect Study Area; therefore, the Project will not result in any impacts to resources included for review under this criterion.

Primary Agricultural Soils (30 V.S.A. § 248(b)(5))

To satisfy this criteria, a project must be shown to have given due consideration to impacts on primary agricultural soils as defined in 10 V.S.A. § 6001.

Under 10 V.S.A. § 6001(15), Primary Agricultural Soils ("PAS") are defined as:

(A) An important farmland soils map unit that the Natural Resources Conservation Service of the U.S. Department of Agriculture ("NRCS") has identified and determined to have a rating of prime, statewide, or local importance, unless the (Act 250) District Commission determines that the soils within the unit have lost their agricultural potential. In determining that soils within an important farmland soils map unit have lost their agricultural potential, the Commission shall consider:

- (i) impacts to the soils relevant to the agricultural potential of the soil from previously constructed improvements;
- (ii) the presence on the soils of a Class I or Class II wetland under chapter 37 of this title;
- (iii) the existence of topographic or physical barriers that reduce the accessibility of the rated soils to cause their isolation and that cannot reasonably be overcome; and
- (iv) other factors relevant to the agricultural potential of the soils, on a site-specific basis, as found by the Commission after considering the recommendation, if any, of the Secretary of Agriculture, Food and Markets.
- (B) Soils on the project tract that the District Commission finds to be of agricultural importance, due to their present or recent use for agricultural activities and that have not been identified by the NRCS as important farmland soil map units.

VHB's review is limited to the NRCS soil map unit designations where PAS soils are defined as those soils with a prime agricultural soil rating of 1 (most desirable) through 7 (least desirable) with some soils with a rating of 8 included. Soils of statewide importance have an agricultural value of 7 or less and soils of local importance consist of selected soil types with an agricultural value of 8 or less. VHB conducted a review of the NRCS soil map data to determine if PAS were present at the Project site. NRCS soil map units as well as soil information, including PAS designations, are included on natural resources maps included in the appendices for the Project. PAS soils within the Study Area are shown in Appendix B.

The Study Area contains a number of soil map units that meet the definition of as PAS and are listed in the table included with Appendix A. Collectively, these PAS constitute approximately 36.5 acres. PAS Soils within the Study Area consist of:

- Adams and Windsor loamy sands, 0 to 5 percent slopes
- Adams and Windsor loamy sands, 5 to 12 percent slopes
- Enosburg and Whately soils, 3 to 8 percent slopes
- Limerick silt loam
- Winooski very fine sandy loam
- Hinesburg fine sandy loam, 0 to 3 percent slopes
- Hinesburg fine sandy loam, 3 to 8 percent slopes
- Munson and Raynham silt loams, 2 to 6 percent slopes

Work within NRCS-mapped PAS will be limited to areas adjacent to previously impacted PAS soils by access roads, station development and managed ROWs. Proposed new development would impact approximately 2.43 acres of mapped PAS directly adjacent to the previously impacted 3.52 acres of PAS. While these areas are mapped as PAS, VHB opines they have lost their agricultural value based on surrounding land use consisting of electrical and adjacent transportation infrastructure, steep topography, and soils largely consisting of sand. While the area shows evidence of agricultural use prior to 1980, the construction of U.S. Route 2 and change in surrounding land use fragmented the previously used agricultural areas into

tracts that are not conducive to farming. Further, historic aerial photographs indicate earth extraction in the vicinity of the Project, further indicating loss of agricultural value at the Project location.

Based on absence of agricultural value of the soils mapped on-site, it is VHB's opinion that there will be no undue adverse effects to farming, farming potential, or PAS as a result of the Project based on existing land use and soil conditions.

Air Pollution and Greenhouse Gas Impacts (30 V.S.A. § 248(b)(5))

This criterion requires that the Project will not result in undue air pollution, sound, or greenhouse gas emissions. For the Project, VHB's consideration of this criterion is limited to the construction phase of the proposed work as the facility, when in operation, will not emit greenhouse gases (VELCO, personal communication) or other air pollution and will not require an air pollution control permit from ANR Air Quality and Climate Division. A description of the Project related to sound impacts is provided in a separate memorandum. Minor temporary emissions associated with vehicular traffic and construction equipment operations are expected during the construction phase, though they are not anticipated to be significant. Dust generated during the construction phase of the Project will be controlled by applying water or calcium chloride, as an alternate BMP, to work areas, as needed, in accordance with the VEGM and applicable BMPs. As a result, this Project will not result in undue air pollution or greenhouse gas emissions.

Water Pollution (10 V.S.A. § 6086(a)(1))

This criterion requires that the Project will result in no undue water pollution. The Project will address surface water pollution by implementing practices outlined in Vermont DEC's Low-Risk Site Handbook for Erosion and Sediment Control (ANR 2020) and VELCO's Environmental Guidance Manual (VELCO 2023) ("VEGM"). A site-specific Erosion Prevention and Sediment Control Plan and Best Management Practices ("BMPs"), which are described further in the Soil Erosion and Waste Disposal section of this memorandum, will be applied if the Project is considered moderate risk under the Vermont Construction Stormwater general permit. In addition, VELCO will implement the policies and procedures outlined in the VEGM, such as contractor trainings regarding permits and sensitive resource areas, signage and flagging for sensitive resources including receiving waters, and by clearly noting these areas on project plans. As such, the Project will not result in undue water pollution. Further, VHB understands that the Project will not generate any wastewater once in operation. The septic system and private water supply associated with the existing residential structure will be retired as part of the Project, and work will be completed in compliance with the Wastewater System and Potable Water Supply rules.

Through the use of applicable BMPs and adherence to the Project's ancillary environmental permit conditions, the Project will not generate undue water pollution.

Headwaters (10 V.S.A § 6086(a)(1)(A))

VHB conducted a field review and analyzed available information including soils data, topographic maps, and state-mapped public water supply source protection areas, to determine if the Study Area is located on any lands that meet the criteria of 10 V.S.A. § 6086(a)(1)(A) as incorporated in the Section 248(b)(5) review. If located in a headwater, a project is required to 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. The criteria for headwaters are as follows:

- headwaters of watersheds characterized by steep slopes and shallow soils;
- ii) drainage areas of 20 square miles or less;
- above 1,500 feet elevation; iii)
- iv) watersheds of public water supplies designated by the Agency of Natural Resources;
- areas supplying significant amounts of recharge waters to aquifers. V)

It is VHB's opinion that the lands within the Study Area do not meet the character of the headwater criteria. While the Study Area contains areas of locally steep terrain (greater than 15 percent), with somewhat shallow soils, and unnamed tributaries with drainage areas of less than 20 miles, it does not exceed 1,500 feet elevation and does not cross a statemapped groundwater or surface water Source Protection Area. The Study Area is also within the Lamoille River drainage area (HUC12), which has a drainage area of greater than 700 square miles.

The Project will not adversely affect groundwater or surface water because the Project will meet applicable health and DEC regulations regarding the quality of groundwater and surface waters. A site-specific Erosion Prevention and Sediment Control Plan and Best Management Practices ("BMPs"), which are described further in the Soil Erosion and Waste Disposal section of this memorandum, will be applied if the Project is considered moderate risk under the Vermont Construction Stormwater General Permit. In addition, VELCO will implement the policies and procedures outlined in the VEGM, such as contractor trainings regarding permits and sensitive resource areas, signage and flagging for sensitive resources including receiving waters, and by clearly noting these areas on project plans. The Project will follow BMPs for treated pole removal and installation as included in Appendix A of the "Pentachlorophenol Report" (ANR 2016). The Project will create approximately 0.02 acres of new impervious surface, which does not exceed the 0.5-acre threshold of new impervious or exceed the new and existing threshold of one-acre. As such, the Project does not require an operational stormwater management permit.

While the Project meets one or more of the statutory criteria for a headwaters area, the Study Area does not meet the character of the headwater criteria. Regardless, VELCO has designed the Project to avoid adversely affecting groundwater and surface water by meeting all applicable health and DEC regulations pertaining to the quality of groundwater and surface water. There will be no reduction in ground or surface water quality of headwaters or non-headwater areas from the construction and/or operation of the proposed Project activities, and no undue adverse impacts to headwater areas.

Waste Disposal (§ 6086(a)(1)(B))

The Waste Disposal criterion requires that a project meet applicable health and environmental regulations regarding the disposal of waste and not involve injection of waste material or any harmful or toxic substances into groundwater or wells. For the Project, VHB's consideration of waste disposal involves sanitary wastewater, stormwater runoff, treated utility poles, and general construction debris.

VELCO will dispose of all construction debris that cannot be re-used or recycled in accordance with Vermont Department of Environmental Conservation ("DEC") waste management rules and BMPs. Management and disposal of wooden utility poles throughout the Project will follow BMPs for the use of Pentachlorophenol-treated utility poles (ANR 2016). In addition, the VEGM outlines spill response procedures for releases generated by construction equipment and requires all contractors to maintain spill response kits to respond to incidental spills associated with construction activities and equipment. Sanitary waste will be collected through portable toilets, and managed by a sanitation company, and the proposed expansion will not require additional bathrooms or potable water. As noted earlier in the headwaters section, disposal related to stormwater will be addressed through the construction stormwater permit and the practices outlined in the VEGM.

With regards to the demolition of the existing residential structure, the Project will test for the presence of hazardous materials, including lead paint and asbestos. If encountered, the materials will be demolished and disposed of in accordance with the Vermont Regulations for Asbestos Control and the Vermont Regulations for Lead Control. All other materials, if they cannot be recycled, will be disposed of in accordance with DEC waste management rules and BMPs.

Regarding stormwater, as the Project will generate 0.02 acres of new impervious at a site with 0.69 acres of existing impervious, an Operational Stormwater permit is not required. The Project also proposes removal of a portion of the existing impervious resulting in a reduction to 0.58 acres total impervious following Project completion. A description of constructionphase stormwater management is further described in the Soil Erosion section.

As described above, the Project will meet the applicable health and DEC regulations regarding the disposal of waste and does not involve the injection of waste materials into groundwater or wells and once constructed, the Project will not generate wastewater. Therefore, the Project will not have an undue adverse effect to the environment associated with waste disposal.

Water Conservation (§ 6086(a)(1)(C))

Under this criterion, the Project design must consider water conservation, incorporate multiple use or recycling where technically and economically practical, utilize the best available technology for such applications, and provide for continued efficient operation of these systems. The Project will not use water for operational purposes, will not require new on-site water supplies, and will not involve expansion or redevelopment of existing water supplies. Only minor amounts of water may be needed for construction phase temporary dust suppression or to establish temporary or permanent vegetative coverage as needed. Therefore, the proposed Project will not have an undue adverse effect on water supplies.

Floodways (10 V.S.A § 6086(a)(1)(D))

The Act 250 Floodway criterion, as incorporated into Section 248 review, takes into consideration a project's effect on both floodways and floodway fringes. Per 10 V.S.A. § 6001(6), a "flood hazard area" is "the land in the flood plain within a community subject to a one percent or greater chance of flooding in any given year" (44 CFR 59.1), where a one percent chance of flooding is synonymous with the 100-year floodplain. A project's impacts are considered with respect to both flood inundation and fluvial erosion hazards pursuant to the Flood Hazard Area and River Corridor ("FHARC") Protection Procedure (ANR 2017).

The Flood Hazard Area ("FHA") and River Corridor ("RC") Protection Procedure addresses both inundation risks as represented by FEMA-mapped flood information, and potential fluvial erosion risks associated with the geomorphic principles necessary to achieve stable fluvial processes. The River Corridor consists of the meander belt or fluvial erosion hazard area, which is defined as the lateral width of a stream corridor that may be subject to fluvial erosion from stream channel lateral migration as well as a 100-foot riparian buffer outside of this meander belt (ANR 2017b). The meander belt is typically determined by geomorphic assessments of channel bank full width, meander centerline, confining lateral topography, channel type, and current channel adjustments, which is then translated into the channelwidth-to-belt-width ratio, dependent on stream sensitivity type and adjacent landform. For field-delineated perennial stream features without a state-mapped RC, a 50-foot-wide RC is assigned by VHB and measured from the limits of top-of-bank or top-of-slope.

To assess the presence/absence of FHA and RC and to evaluate impacts to both, VHB conducted desktop and field verifications. VHB relied on FEMA-mapped flood information, which required digitization to effectively evaluate Project impacts. VHB also reviewed statemapped RC and relied on field-mapped stream features to assign a 50-foot RC to perennial streams where required. From this review, VHB found the Study Area to cross one occurrence of a Special Flood Hard Area Zone AE, associated with the adjacent Lamoille River, as shown on the Natural Resources Map (Appendix A).

While the Study area does cross a FHA, the proposed work will occur well outside of this zone and therefore, not restrict or divert the flow of flood waters, and endanger the health, welfare or safety of the public or of riparian owners during flooding, therefore there will be no undue adverse effect on Floodways.

Streams (10 V.S.A § 6086(a)(1)(E))

This Act 250 criterion requires that projects will, when feasible, maintain natural stream channel condition, and will not endanger the health safety, or welfare of the public or adjoining landowners (10 V.S.A. § 6086(a)(1)(E)).

When applicable, VHB's stream delineation flagging is conducted pursuant to ANR Riparian Buffer Guidance (ANR 2005). Stream Top of Bank ("TOB") and Top of Slope ("TOS") are flagged in the field according to ANR Riparian Buffer Guidance. Stream TOB and TOS are flagged on larger channels and stream centerline ("SC") is flagged for smaller channels; all flagging is labeled with the stream ID and flag number. Stream determinations and Ordinary High Water ("OHW") width measurements follow guidance provided in the United States Army Corps of Engineers ("USACE") Regulatory Guidance Letter No. 05-05: Subject - Ordinary High-Water Identification (USACE 2005). OHW limits are flagged when applicable, typically on larger stream features. 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.

During 2024 and 2025 fieldwork, VHB delineated or confirmed the presence of five intermittent streams and 13 ephemeral streams within the Study Area. All delineated streams occur south and east of the existing Station. Representative site photos are provided in Appendix C, and additional information for each stream is provided in the Wetland and Waters Summary Table (Appendix D).

There are several unnamed streams or brooks delineated within the Study Area. Unnamed streams generally consist of tributaries to the Lamoille River. For design planning, 50-foot riparian buffers are shown on the plans and extend outward from centerline, or TOB/TOS, of intermittent and perennial streams. A 100-foot riparian buffer is assigned to the Lamoille River. No work is proposed within any riparian buffers.

No construction activities are proposed within any delineated stream channels, and therefore no additional permitting is anticipated.

Based on proposed work practices and project design the Project will maintain the natural condition of streams, and will not endanger health, safety, or welfare of the public or of adjoining landowners.

Shorelines (10 V.S.A § 6086(a)(1)(F))

Shorelines are defined under Act 250 as the land adjacent to the waters of lakes, ponds, reservoirs, and rivers. Shorelines include the land between the mean high-water mark and the low-water mark of such waters (Argentine 2008). For projects that are within shoreline areas, the following shoreline management criteria are required to be met:

- (i) retain the shoreline and the waters in their natural condition;
- allow continued access to the waters and the recreational opportunities provided (ii) by the waters;

- (iii) retain or provide vegetation which will screen the development or subdivision from the waters, and;
- stabilize the bank from erosion as necessary with vegetation cover. (iv)

The Study Area borders the Lamoille River and no lakes or ponds. The shoreline associated with the Lamoille River will remain in its current condition as the Project work will not occur near the river. The shoreline and waters will maintain existing conditions, and no changes in access will result from the Project. Vegetative cover will remain the same and the banks will remain stabilized.

As no work is proposed between the land between mean high water and mean low water, and the management criteria associated with lands adjacent will be met, the Project will "preserve the shorelines of Vermont's lakes and ponds and rivers and stream."

Wetlands (10 V.S.A § 6086(a)(1)(G))

The wetlands criterion under Act 250, as reviewed under Section 248, requires that the proposed Project comply with the Vermont Wetland Rules ("VWR") (ANR 2023). The VWR regulate significant wetlands (Class I and Class II wetlands) and their buffers. Impacts to Class III wetlands are not part of criterion 1(G) but are generally reviewed under section 248(b)(5) (no undue adverse impacts on the natural environment), and other criteria. In addition, proposed impacts to Class III wetlands are regulated by the USACE Section 404 permit program as well as the related DEC Section 401 Water Quality Certification review process.

The entirety of the Study Area was field reviewed for wetlands during the 2024 and 2025 growing seasons. Wetland delineations were made pursuant to the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region Routine Determination Method (USACE 2012). Attributes were noted to record information relative to wetland classifications under the VWR, general characteristics, potential functions and values of the wetland, and any unique characteristics observed during the site assessment, along with other considerations relevant to support site findings. Wetlands were classified in accordance with the Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979). Wetland functions criteria were qualitatively evaluated based on the field notes and observations according to the VWR Section 5 (ANR 2020). Wetland features were mapped in the field using sub-meter capable mobile data collection technology, which also allowed delineators to capture qualitative data including wetland type, functions and values, and notes related to unique aspects of features.

During the 2024 and 2025 growing seasons, VHB confirmed, modified, or mapped 19 wetland features within the Study Area, totaling approximately 17 acres. Eight wetlands are considered Class II and subject to DEC and USACE jurisdiction, and 11 are considered Class III and only subject to USACE jurisdiction. Features are depicted in the Natural Resources Map (Appendix A). Wetland boundaries and classifications proximal to proposed work were reviewed by DEC on October 31, 2024. The delineated wetlands vary in size, vegetative cover types, and functions and values, though the majority consist of hillside seeps that drain via intermittent and ephemeral streams to the Lamoille River. The dominant vegetative cover type is palustrine emergent or palustrine forested. Further details on wetlands, including the

functions and values provided, are included in the Summary of Delineated Wetlands Table (Appendix D). Delineated wetlands are also depicted in the spatial data provided to VELCO following fieldwork. USACE Wetland Determination Data Forms were completed for a subset of representative features (and approximately every mile) within the Study Area (Appendix E. Representative photographs are provided in Appendix C.

Impacts to Class II wetlands or their associated 50-foot buffer zones for uses other than those allowed under the VWR, require a Vermont Wetland Permit from DEC. It is VHB's understanding that there will be no Project impacts to any wetlands, or their associated buffers present within the Study Area, and therefore, no permitting is anticipated. As such, the Project will not result in any undue adverse impacts to wetlands.

Water Supply (§ 6086(a)(2) and (3))

In order to satisfy the Act 250 criterion for Water Supply, a project must have sufficient water available and not place unreasonable burden on existing water supplies. The Project design does not involve expansion or development of any additional water supplies, though as previously described, minimal amounts of water may be used during construction for dust control and vegetative establishment. Water used for these purposes will be acquired from the existing on-site water supplies associated with the private residence prior to its retirement and/or from the Station water supply. Additional water necessary for these purposes will be acquired in accordance with state and federal regulations and VELCO will work with appropriate officials to withdraw water from municipal or natural sources during construction. As such, there will be no undue adverse impacts to water supplies as a result of the Project.

Soil Erosion (10 V.S.A § 6086(a)(4))

In order to satisfy this Act 250 criterion, a project must not cause unreasonable soil erosion or significant drainage or runoff problems (Argentine 2008). Determination of compliance with this criterion involves two components: (1) preventing soil erosion, and (2) preventing a reduction in the land's capacity to hold water.

According to available Vermont Center for Geographic Information ("VCGI") data and soil descriptions from the Natural Resource Conservation Service ("NRCS"), the Study Area is dominated by the following soils:

- Farmington extremely rocky loam, 5 to 20 percent slopes;
- Farmington extremely rocky loam, 5 to 20 percent slopes;
- Hinesburg fine sandy loam 15 to 25 percent slopes
- Rock land.

In addition, soils within the Study Area range from a slope rating of 0 to 60 percent, and an erodibility ranking of not highly erodible to highly erodible. A complete list of soils present within the Study Area can be found in The Natural Resources Map Series (Appendix A).

The Project will result in greater than once acre of soil disturbance, thus requiring coverage under a Vermont Construction General Permit or an Individual Construction Stormwater Discharge Permit ("INDC"). While a percentage of the Study Area is characterized by steep slopes and/or highly erodible soils, the Project is sited in a topographically flat area comprised of sandy soils. The Project will implement measures in the Low Risk Site Handbook or develop a site-specific Erosion Prevention and Sediment Control Plan which will include mechanisms for temporary and permanent stabilization, as well as postconstruction restoration, if required by its risk scoring. This handbook or plan will be used in conjunction with the VEGM to prevent the risk of soil erosion and runoff from the Project

Compliance with applicable stormwater permits, the Low Risk Site Handbook or site-specific EPSC Plan, and the VEGM will prevent any undue soil erosion from the areas of earth disturbance. There will also be no significant or measurable reduction of the land's capacity to hold water and the nature of this Project will not result in an appreciable change in landform or cover over existing and managed conditions. As such, there will be no dangerous or unhealthy conditions associated with soil erosion as a result of the Project, and there will be no undue adverse effect from soil erosion.

Rare and Irreplaceable Natural Areas (RINA) (10 V.S.A § 6086(a)(8)), and Necessary Wildlife Habitat and Endangered Species (10 V.S.A § 6086(a)(8)(A))

To satisfy these criteria, a project must be shown to have no undue adverse effect on Rare and Irreplaceable Natural Areas ("RINA") (10 V.S.A. § 6086(a)(8)). Additionally, a project must not destroy or significantly imperil Necessary Wildlife Habitat ("NWH") or any Endangered Species (10 V.S.A. § 6086(a)(8)(A)).

Rare and Irreplaceable Natural Areas ("RINA")

Significant natural communities can be deemed RINA as part of the four-part test required by the Act 250 Criterion. Determinations of "Significance" are ultimately made after utilizing a combination of community ranking, current condition (age, degree of disturbance), and landscape context (size, degree of fragmentation) in order to determine an "Element (or Community) Occurrence Ranking." Rare (S1 and S2) natural communities can be considered significant when quality-ranked A, B, or C. Uncommon (S3) and common (S4) types require a quality rank of A or B to be considered significant. Very common (S5) types require an A-rank (ANR 2016). Significant natural communities can be deemed RINA under Criterion 8, based on the combination of the natural community rarity and quality ranking. Additional considerations for RINA include the presence of RTE species in these communities, as well as overall natural community associations.

As an initial step to screen the Project area for the potential presence of state-significant natural communities that could be considered RINA, VHB queried the Vermont NHI database to locate all mapped state-significant natural community occurrences within a specified radius of each Project component and found the following to occur within the Project Area:

Dry Oak-Hickory-Hophornbeam Forest (S3)

VHB used this list of natural communities to prepare targeted natural community field surveys under the assumption that the prevailing landscape conditions could produce similar natural community types within the Project area. Additionally, VHB used this list of natural community types to identify potential target RTE species known to occur within these natural communities (per Thompson, et. al. 2020). Additional details are provided in the Vermont Potential Rare, Threatened, and Endangered Species and Natural Communities in the Project Region and Onsite Habitats Summary (Appendix F).

VHB identified or confirmed the presence and extents of previously mapped significant natural communities within the Study Area. VHB found the forested area north of the ROW to support two significant natural communities, a 33-acre mosaic of Dry Oak-Hickory-Hophornbeam Forest (S3) and Dry Oak-Maple Limestone Forest (S3). VHB proposes this occurrence to be classified as B-ranked. Additionally, VHB observed an additional 10-acre occurrence of Dry Oak-Hickory-Hophornbeam Forest in south of the ROW in the Study Area, also with a proposed ranked as B. Other forested areas south of the ROW and Station generally consist of non-significant natural communities such as a hemlock forest, a matrix hemlock-northern hardwood forest, multiple temperate calcareous cliffs, and a small mosaic of sensitive-fern and ostrich fern floodplain forests along the Lamoille River. A site visit with Natural Community Ecologist, Robert Zaino with Vermont Fish and Wildlife Department ("FWD"), occurred on November 7, 2024 to review potential impacts to identified communities.

Direct impacts to the potentially significant natural communities will be avoided, and indirect impacts including the introduction of non-native invasive species ("NNIS") will be limited by implementing VELCO's VEGM and insuring equipment and material brought to the site is clean of debris.

Necessary Wildlife Habitat ("NWH")

NWH is generally defined as deer wintering habitat, black bear forage habitat (beech mast or wetlands), black bear travel corridors, moose overwintering area, amphibian breeding habitat, or grassland bird habitat. There is no identified black bear forage habitat, black bear travel corridors, grassland bird habitat or moose overwintering area within the Study Area. There are no ANR-mapped Deer Wintering Areas ("DWAs") within the Study Area, however there are two ANR-mapped DWAs on the north side of Bear Trap Road. One of these ANRmapped DWAs is located approximately 190-feet from the Project entrance. VHB identified a potential DWA in the eastern corner of the Study Area during the July 2024 field visit, though it is located over 500 feet from the Project. The forested area was dominated by eastern hemlock with evidence of concentrated use through browsing and scat. The proposed DWA has not been categorized or reviewed by FDW. The proposed project will have no direct impacts on the VHB- or state-identified DWA. Though proposed work, including road building, construction traffic, and project staging will occur within 190 feet of the statemapped occurrence it is not likely to indirectly impact wintering deer due to its proximity to U.S. Route 2, Bear Trap Road, and the existing Station facility.

VHB identified six potential vernal pools ("PVP"). As the 2024 fieldwork occurred outside of the vernal pool season, VHB identified, photographed, and mapped the location of PVPs, primarily based on physical characteristics using a combination of definitions from USACE, FWD, and Wetland, Woodland, Wildland: A Guide to the Natural Communities of Vermont (Sorenson et. al. 2019). PVPs were identified and generally associated with wetland complexes in the east and southeast portions of the site. The nearest potential vernal pool is located over 750 feet northeast of the proposed work.

Through avoidance of direct impacts to NWH, the Project will not destroy or significantly imperil NWH.

Endangered Species

Endangered Species include those that are defined as "threatened" or "endangered" on the Vermont state endangered and threatened species list and are thus protected under the Vermont Endangered Species Rule (10 V.S.A. Chapter 123). Species protected under the federal Endangered Species Act (16 U.S.C. §1531 et seq. 1973) are included as well.

Rare, Threatened and Endangered Plants

Target Species and Habitats for Field Surveys

VHB conducted an initial endangered species review by querying the Vermont NHI database for EO's of threatened and endangered species within a one-mile radius of the Project. VHB Ecologists evaluated on-site habitats for each project component and determined whether there was potential habitat for any of the RTE species identified in the NHI query. In making determinations about the potential for the Project Study Area to provide habitat for an RTE species, VHB relied on a) published accounts of species distributions and habitat preferences; b) Geographic Information Systems ("GIS") mapping of soils, bedrock, and surficial deposits; c) habitat descriptions included in Element Occurrence reports; and d) institutional knowledge (VELCO, VHB and FWD) of the Project region. RTE species with potential habitat within the Project Study Area were considered "target species" for VHB Botanists and Ecologists conducting field work.

VHB also conducted an initial review for species protected under federal endangered species law using the U.S. Fish and Wildlife Service Information for Planning and Consultation ("IPaC") database portal (see Appendix G).

The area surrounding the existing Station has been extensively surveyed in the past for RTE plant species. In addition, VELCO received a Vermont Threatened and Endangered Species Takings Permit in May 2020 to take up to 12 plants of Cyperus houghtonii (Houghton's flatsedge) in connection with reconstruction of the perimeter fence of the Sandbar Station.

Based on the methods described above, VHB, VELCO and FWD developed a comprehensive list of target species, to survey for plants protected under the endangered species law or otherwise considered rare. In addition to targeting species, VHB conducted a general survey within the Project Study Area focusing on naturalized areas. As such, maintained, lawns, roadways, and developed (i.e. paved) areas were excluded.

Field Surveys and Results

VHB botanists conducted field surveys in accordance with ANR's Guidance for Conducting Rare, Threatened, and Endangered Plant Inventories in Connection with Section 248 Projects (ANR 2016a) on July 23, 2024, August 5, 2024, and August 15, 2024. A list of identified species is provided in Appendix H. During those surveys, VHB identified or confirmed the presence and extent of previously mapped populations of the following occurrences of RTE plant species within the Study Area:

- Calystegia spithamaea ssp. spithamaea (low Bindweed) (S2, State-Threatened)
- Crocanthemum canadense (Canada frostweed) (S2S3)
- Cyperus houghtonii (Houghton's flatsedge) (S2, State-Threatened)
- Desmodium cuspidatum (large-bracted tick-trefoil) (S1, State-Rare)
- Eutrochium purpureum var. purpureum (Sweet Joe-pye weed) (S2S3)
- Helianthus strumosus (harsh sunflower) (S2S3)
- Lythrum alatum ssp. alatum (winged-loosestrife) (S1, State-Rare)
- Polygala senega (Seneca Snakeroot) (S2S3)

Previously identified species within the Study Area not observed during the 2024 surveys include:

- Botrychium rugulosum (rugulose grapefern) (S1, State-Rare)
- Bromus kalmii (wild chess) (S2, State-Threatened)
- Hackelia deflexa ssp. americana (nodding stickseed) (S2, State-Threatened)
- Lactuca hirsuta (hairy lettuce) (S1S2, State-Threatened)

On November 7, 2024, Vermont State Botanist, Grace Glynn, with Vermont Fish and Wildlife Department ("FWD") conducted a site visit to review areas of potential impact to these species. During the site visit, a potential occurrence of Corallorhiza odontorhiza (autumn coral-root) (S2, State-Threatened) was identified. While it is recommended an additional survey for this species occur in the fall to confirm presence/absence, the potential occurrence was outside of the Project limits.

Additionally, during field assessments, the previously recorded populations of *Botrychium* rugulosum were not identified however, Botrychium multifidum (S3, uncommon) was observed. While Botrychium rugulosum was not identified, Project activities will avoid impacts to the historic occurrence.

At the suggestion of the Vermont botanist, the Project will re-survey proposed RTE impact areas, the existing and proposed mitigation area, and the location of potential autumn coralroot, during the appropriate 2025 growing season survey window. In addition, the Project will concurrently survey the approximately one-acre residential property located west of the existing Station as the Project component was added after the 2024 growing season.

Project Avoidance, Mimization and Mitigation

While complete avoidance of all RTE plant species is not feasible given site constraints, the project has been designed to minimize impacts where practicable and mitigate any unavoidable impacts.

As proposed impacts to Cyperus houghtonii are unavoidable based on engineering constraints (i.e. electrical interconnection requirements and site topology), the Project will obtain a species-specific Takings Permit from FWD, and will follow all conditions associated with it, including the approved mitigation and monitoring plan. Through collaboration with FWD and the Flora Advisory Group, the mitigation plan is designed to create a habitat mitigation area to support future populations of the species.

Impacts to Crocanthemum canadense and Eutrochium purpureum var. purpureum are unavoidable, however these species are not listed as either Threatened or Endangered and will not require a Takings Permit, though they are located proximal to impacts occurrences of Cyperus and the seedbank of all species will be transported to the habitat mitigation area as part of the overall mitigation plan.

The Project will avoid any unpermitted impacts to RTE plant species to the greatest extent practicable by implementing the following practices:

- > Population boundaries will be depicted on Project compliance plans for use during construction activities. Additionally, high visibility boundary flagging and signage will be installed around each population to ensure avoidance during construction activities.
- Project-specific training will be provided to all VELCO employees and contractors working on the Project that will include information on how to identify plants in the field, identify locations on Project plans, and to identify flagging, signage, and barriers intended to preclude access to known occurrences.

Where work is required within 25 feet of documented RTE populations, five years of postconstruction NNIS monitoring of the adjacent work areas will be completed, with annual reporting to the VT ANR, as outlined in the NNIS Monitoring and Control Plan. If no NNIS plants are present where work occurs within 25 feet of these RTE occurrences after three years of post-construction monitoring, monitoring and reporting may be discontinued in consultation with ANR.

Though RTE plants are present within the Study Area, the Project will not destroy or significantly imperil endangered species as a result of the Project through avoidance, minimization, and mitigation. Work will be completed in accordance with the conditions presented in the Takings Permit

Rare, Threatened, and Endangered Animals

Based on the results of VHB's IPaC query, NHI database reviews, and coordination with the FWD, VHB identified RTE animals that occur within one-mile of the Study Area, in addition to the potential summer range of the northern long-eared bat (Myotis septentrionalis or "MYSE") and potential occurrences of the tricolored bat (Perimyotis subflavus or "PESU") (see Appendix F).

Surveys for RTE animal species were excluded from field work as VHB assumes Project components can avoid impacts to desktop-identified species by avoiding habitat (such as aquatic), conducting sweeps to remove individuals ahead of construction, or by mitigating construction-phase impacts.

Myotis septentrionalis (S1, State-Endangered, Federal-Endangered)

Although no critical habitat within or adjacent to the Project has been designated for this species by USFWS, the Project occurs within the potential summer range of the federallythreatened and Vermont-endangered northern long-eared bat (Myotis septentrionalis) ("MYSE"). Potential summer range is considered to be the entirety of Vermont by FWD. As there are no known occurrences of MYSE (including hibernacula) within one mile of the Project area, the Study Area constitutes "Potential MYSE Summer Habitat" under FWD Regulatory Review Guidance for Protecting Northern Long-eared Bats and Their Habitats (ANR 2017a). As such, if tree clearing occurs during the MYSE dormancy period or impacts less than one percent of suitable forested habitat within one mile, no additional conservation measures are required for MYSE.

Perimyotis subflavus (S1, State-Endangered, Federal-Proposed Endangered)

Although no critical habitat within or adjacent to the Project has been designated for this species by the USFWS, the Project occurs within the potential summer range of the federallyproposed endangered and Vermont-endangered tricolored bat (Perimyotis subflavus) ("PESU"). On September 13, 2022, the USFWS announced a proposal to list the tricolored bat (Perimyotis subflavus) as endangered under the Endangered Species Act, however no formal listing has been established. In the absence of published guidance from USFWS or FWD, VHB assumes adhering to MYSE time-of-year restrictions provides adequate conservation measures to protect PESU, resulting in no impact.

Further, a review against the USFWS Northern Long-eared Bat and Tricolored Bat Range-Wide Determination Key resulted in a preliminary determination of "may affect - not likely to adversely affect."

From desktop review, four Elemental Occurrences ("EO") for RTE animals intersect the Study Area include:

- 1. Apalone spinifera (spiny softshell) (S1, State-Rare)
- 2. Myotis lucifugus (little brown bat) (S1, State-Endangered)
- 3. Pyganodon grandis (giant floater) (S2S3, State-Threatened)
- 4. Sternotherus odoratus (eastern musk turtle) (S2, State-Threatened)

The three of the four occurrences identified above are aquatic species and occur in the Lamoille River. The Project is designed to avoid temporary or permanent impacts to the Lamoille River, thus avoiding direct impacts to aquatic species identified above. With regards to little brown bat, the Project will conduct a presence/absence survey prior to demolishing the residential property, or will demolish the residential structure during the hibernation period from December 1 to March 31, when bats are presumed to be in caves, thus avoiding incidental take of the species.

Based on the findings related to RTE animals and the proposed avoidance and minimization practices, the Project will not destroy or significantly imperil endangered animal species.

Summary

On behalf of VELCO, VHB conducted a natural resources assessment and documentation review of the Project Study Area in Milton, Vermont. The assessment was performed in support of an anticipated application to the Vermont Public Utility Commission for a CPG. The assessment included the evaluation of potential impacts to resources identified in Section 248 criteria including Outstanding Resource Waters (10 V.S.A. § 1424a(d)), Primary Agricultural Soils (30 V.S.A. § 258(b)(5)), Air Pollution and Greenhouse Gas Impacts (30 V.S.A. § 258(b)(5)), Water Pollution (10 V.S.A. § 6086(a)(1)), Headwaters (10 V.S.A. § 6086(a)(1)(A)), Water Conservation (10 V.S.A. § 6086(a)(1)(C)), 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)), Water Supply (10 V.S.A. § 6086(a)(2) and (3)), Soil Erosion (10 V.S.A. § 6086(a)(4)), Rare and Irreplaceable Natural Areas (10 V.S.A. § 6086(a)(8)), and Necessary Wildlife Habitat and Endangered Species (10 V.S.A. § 6086(a)(8)(A. Based on VHB's review, the proposed Project activities if undertaken and constructed as indicated herein and in the Project Plans, will not result in any undue adverse impacts to the above natural resources criteria reviewed under Section 248.

References

Argentine, C.C. 2008. Vermont Act 250 Handbook. Putney Press, Brattleboro, VT.

Cowardin, L.M., V. Carter, F.C. Golet, 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.

Thompson, E.S., E. Sorenson, R.J. Zaino. 2019, Wetland, Woodland, Wildland: A Guide to the Natural Communities of Vermont. Published by The Nature Conservancy and Vermont Department of Fish and Wildlife, distributed by University Press of New England.

USACE. 2005. "Regulatory Guidance Letter. Subject: Ordinary High Water Mark Identification." No. 05-05. Available online at:

http://www.usace.army.mil/Portals/2/docs/civilworks/RGLS/rgl05-05.pdf

USACE. 2011. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0), ed. J.S. Wakeley, R.W. Lichvar, C.V. Noble, and J.F. Berkowitz. ERDC/EL TR-09-19. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

USDA-NRCS. 2003. Vermont Soil Fact Sheet – Detailed Definitions and Explanations. April 2003. Available online at:

https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_010210.pdf

USDA Web Soil Survey. 2024. Accessed online at: http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm.

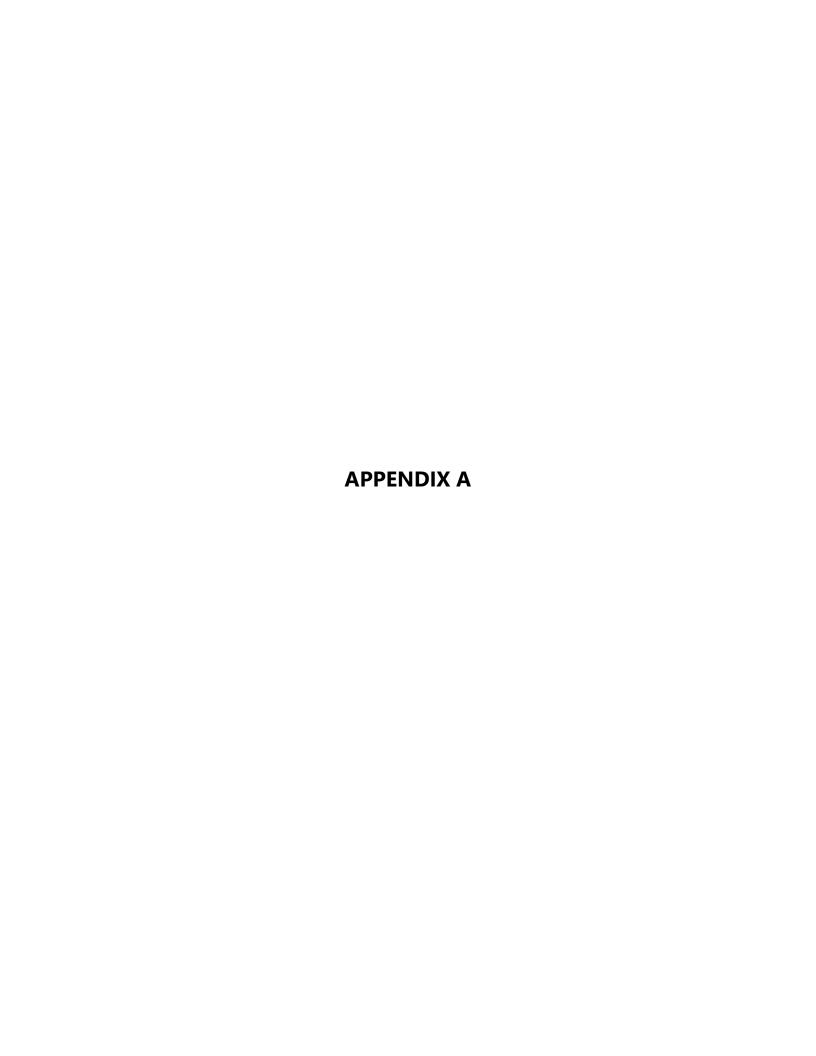
USFWS. 2024. Information for Planning and Consultation. Available online at: https://ipac.ecosphere.fws.gov

Vermont Agency of Natural Resource. 2023. Vermont Wetland Rules. Available online at: https://dec.vermont.gov/sites/dec/files/documents/wsmd_VermontWetlandRules.pdf

2022. Vermont Water Quality Standards Environmental Protection Rule Chapter 29A, Effective November 15, 2022.

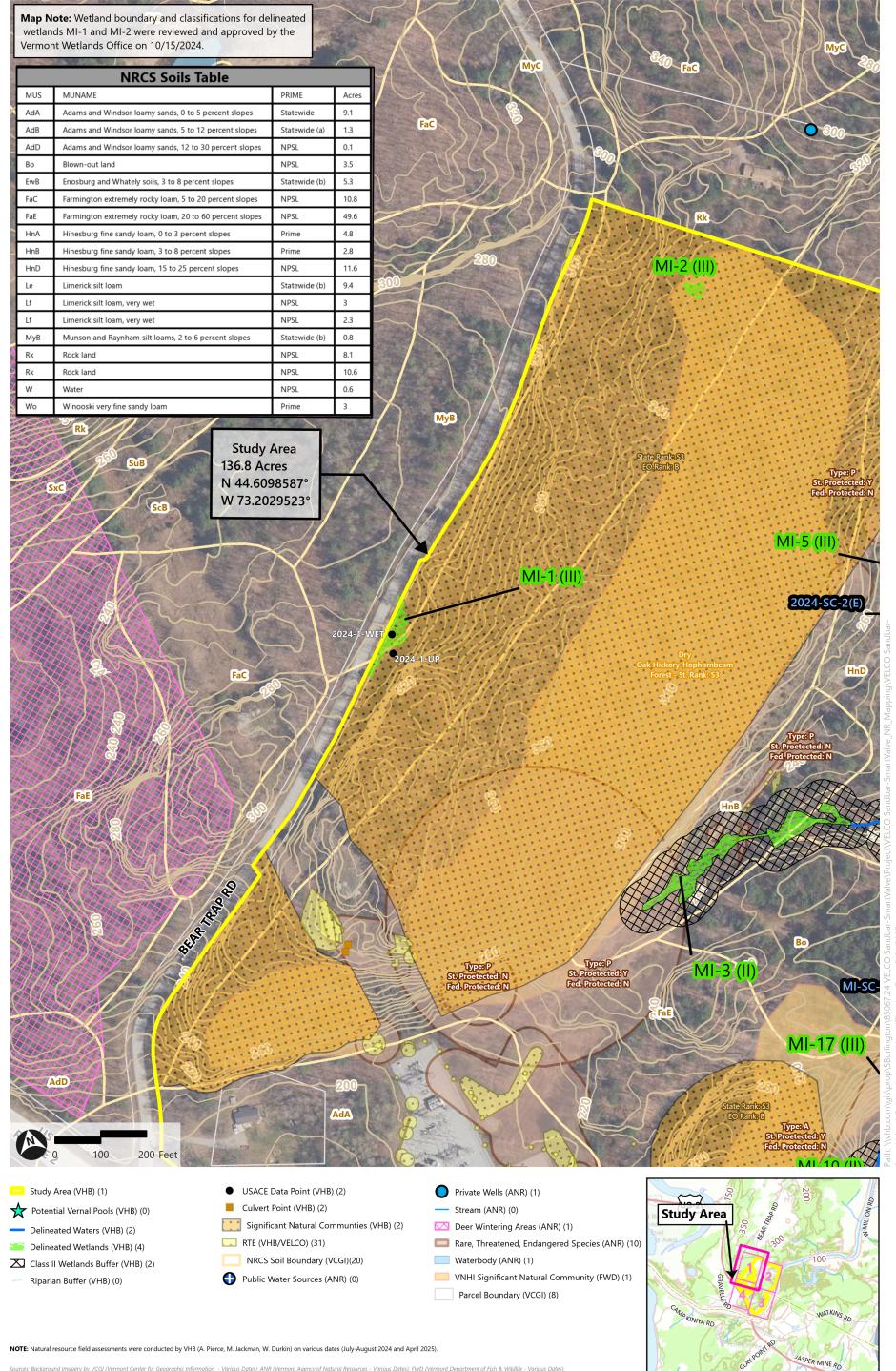
2021. Vermont Fish and Wildlife. Guidance for Review and Mitigation of Impacts to
Grassland Bird Habitat in Connection with Regulated Projects in Vermont.
2021. Vermont Fish and Wildlife. Potential Roost Tree Survey Methods for Endangere
Bats.
2020a. Vermont Wetland Rules. Effective January 21, 2020. Available online at:
https://dec.vermont.gov/sites/dec/files/documents/wsmd_VermontWetlandRules.pdf

2020b. The Low-Risk Site Handbook for Erosion Prevention and Soil Control. Department of Environmental Conservation.
2018. <i>Rare and Uncommon Native Vascular Plants of Vermont</i> . Fish and Wildlife Department. Effective August 9, 2018.
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.
2016. Vermont Natural Community Ranking Specifications. Fish and Wildlife Department. Effective January 2016.
2009. Guidelines for the Design of Stream/Road Crossings for Passage of Aquatic Organisms in Vermont. Fish and Wildlife Department.
2005. Guidance for Agency Act 250 and Section 248 Comments Regarding Riparian Buffers. December 9, 2005. Available online at: http://www.anr.state.vt.us/site/html/buff/BufferGuidanceFINAL-120905.pdf.



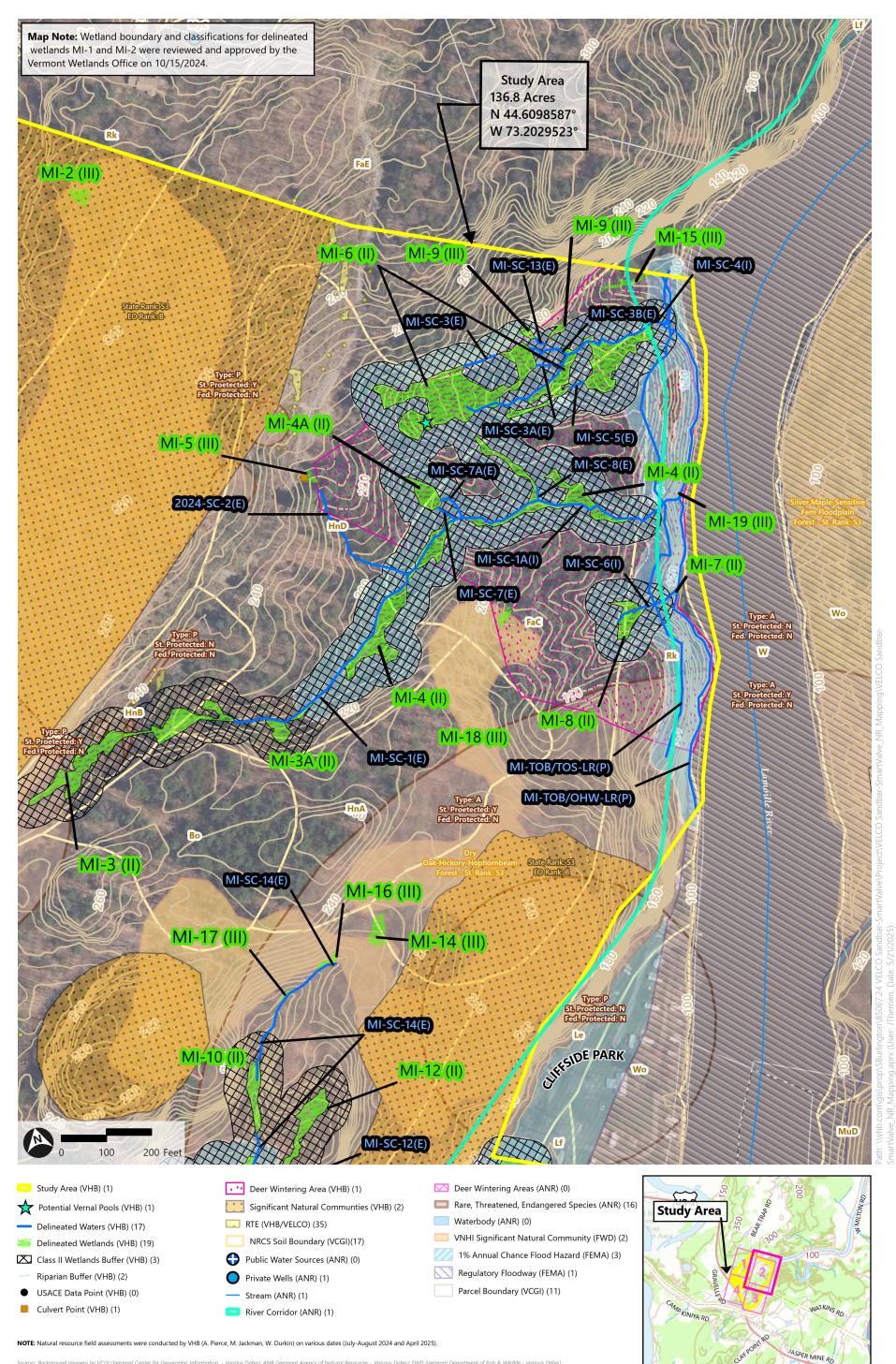






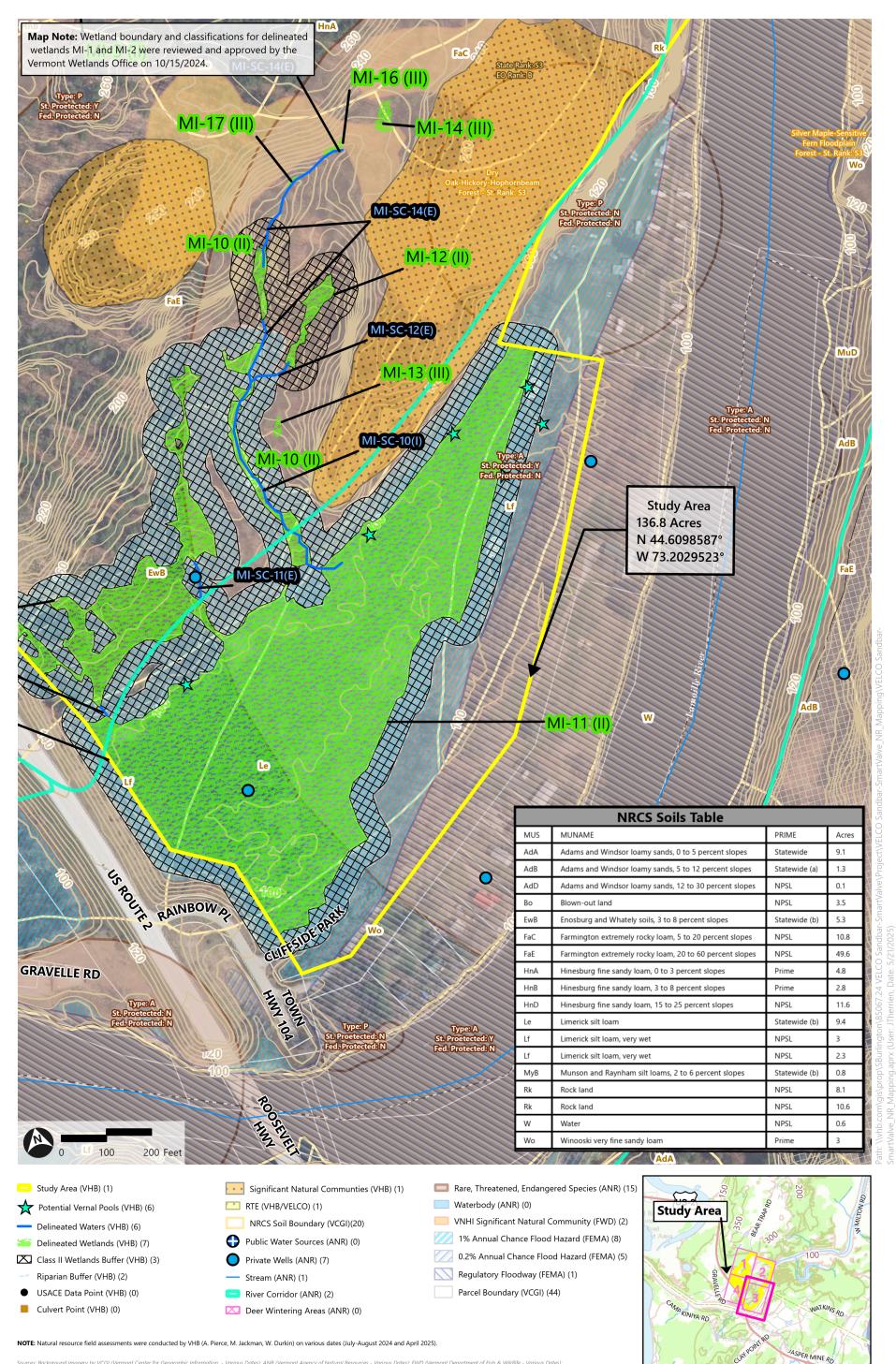






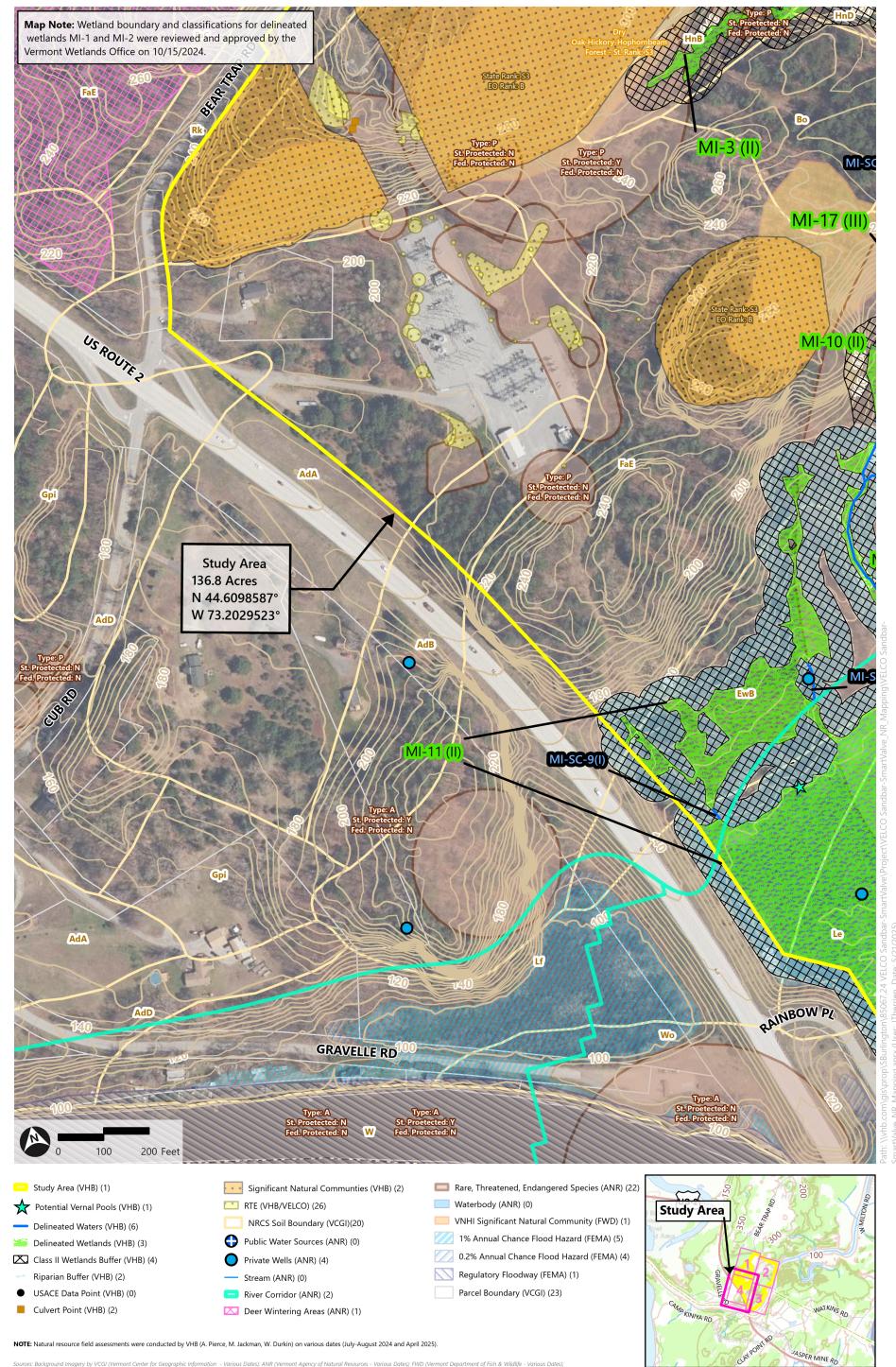














\\vhb.com\gbl\proj\SBurlington\59175.00 VELCO Sandbar Smartvalve\cad\ld\Planset\5917500-PAS.dwg INESBURG FINE SANDY LOAM, 3-8% SLOPE HYDROLOGIC SOIL GROUP: A FARMLAND CLASSIFICATION: PRIME HYDRIC SOIL: NO <u>HnD</u> HINESBURG FINE SANDY LOAM, 15-25% SLOPES IYDROLOGIC SOIL GROUP: A FARMLAND CLASSIFICATION NOT PRIME HYDRIC SOIL: NO FARMINGTON EXTREMELY ROCKY LOAM, 20-60% SLOPES <u>**Bo**</u> BLOWN-OUT LAND HYDROLOGIC SOIL GROUP: D HYDROLOGIC SOIL GROUP: UNRANKED FARMLAND CLASSIFICATION: NOT PRIME ARMLAND CLASSIFICATION: NOT PRIME HYDRIC SOIL: NO HYDRIC SOIL: NO SANDS, 12-30% SLOPES
HYDROLOGIC SOIL GROUP: A
FARMLAND CLASSIFICATION:
NOT PRIME
HYDRIC SOIL: NO Ada

ADAMS AND WINDSOR LOAMY SANDS, 0-5% SLOPES
HYDROLOGIC SOIL GROUP: A
FARMLAND CLASSIFICATION: STATEWIDE
HYDRIC SOIL: NO PAS IMPACT LEGEND Area (ACRES) Description PROPOSED LIMITS OF WORK (LOW) EXISTING DEVELOPMENT WITHIN MAPPED PAS Adb Adams and Windsor Loamy Sands, 5-12% Slopes Hydrologic Soil Group: A FARMLAND CLASSIFICATION: STATEWIDE Hydric Soil: NO PERMANENT DISTURBANCE 2.43 WITHIN MAPPED PAS PAS Impact Exhibit Sandbar Substation L<u>III</u> WETLAND — — EXISTING EDGE OF PAVEMENT/GRAVEL — — — APPROXIMATE BOUNDARY LINE 1. BOUNDARY LINES OBTAINED FROM PARCEL DATASETS AVAILABLE ON THE VERMONT OPEN GEODATA PORTAL, THIS PLAN DOES NOT CONSTITUTE A BOUNDARY SURVEY. WETLAND BUFFER **GUY ANCHOR** 2. EXISTING TREE LINES PRODUCED FROM A COMBINATION OF GROUND SURVEY AND Milton, VT EXISTING 10' CONTOUR ____ DELINEATED WATERS LIGHTNING MAST

NRCS SOIL AREA BOUNDARY

AEFCO

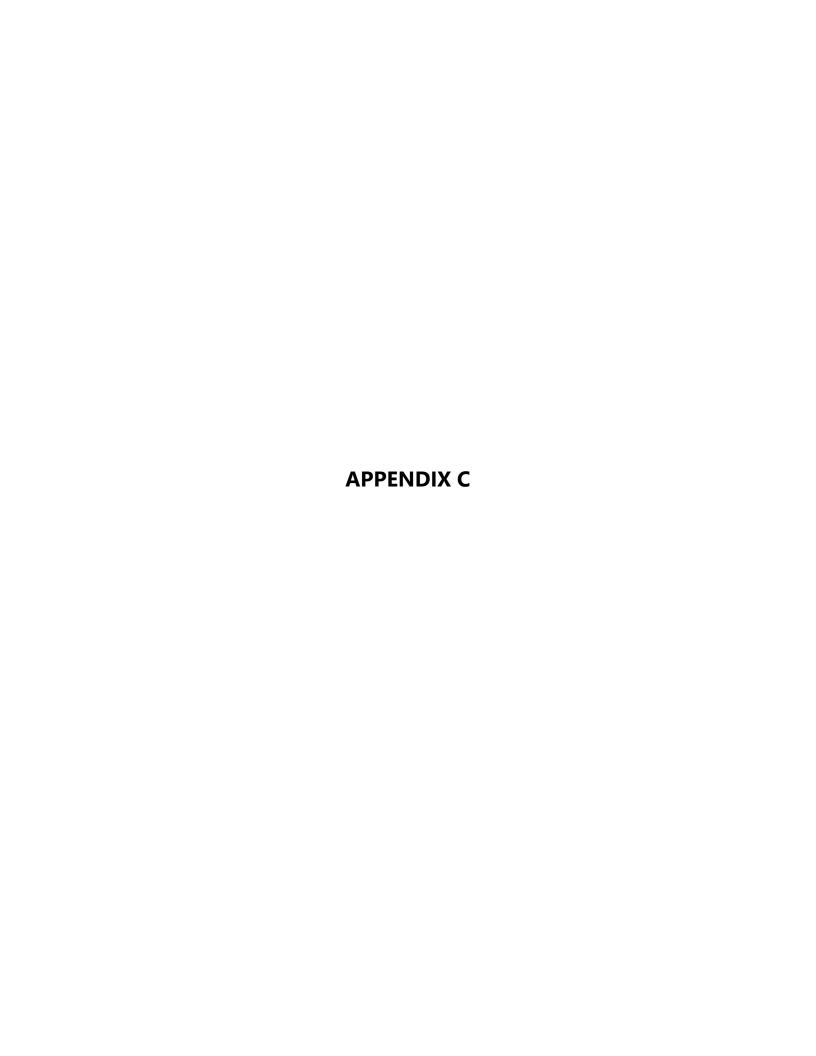
EXISTING 2' CONTOUR

PROPOSED 10' CONTOUR

PROPOSED 2' CONTOUR

POWER FLOW CONTROL DEVICE

Source: VELCO
Prepared for: Permitting
Date: May 22, 2025







VELCO Sandbar SmartValve Substation

Photographs: 2024-2025 Natural Resources Assessment

PROJECT NUMBER

59175.00

586 Bear Trap Road Milton, Vermont 05468

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





NO. 1 / 07.25.2024

DESCRIPTION

A representative photograph of an isolated depressional wetland located in the east and southeast portions of the Study Area.



NO. 2 / 07.25.2024

DESCRIPTION

A representative photograph of wetland MI-11, located in the southern portion of the Study Area.





NO. 3 / 07.25.2024

DESCRIPTION

A representative photograph of a seep, which are present in the east and southeast portions of the Study Area.



NO. 4 / 07.24.2024

DESCRIPTION

A representative photograph of ephemeral streams located in the east and southeastern portions of the Study Area.





NO. 5 / 09.26.2024

DESCRIPTION

A representative photograph of intermittent streams occurring within the Study Area.



NO. 6 / 09.26.2024

DESCRIPTION

A representative photograph of the Lamoille River along the eastern boundary of the Study Area.





NO. 7 / 07.19.2024

DESCRIPTION

A representative photograph of the Dry-Oak-Hickory-Hophornbeam Forest located in the northern and southern portions of the Study Area.



NO. 8 / 07.19.2024

DESCRIPTION

A representative photograph of the Dry-Oak-Hickory-Hophornbeam Forest located in the northern and southern portions of the Study Area.





NO. 9 / 07.19.2024

DESCRIPTION

A representative photograph of Dunham Dolostone ledges in northern portion of the Study Area.



NO. 10 / 07.30.2024

DESCRIPTION

A representative photograph of the Deer Winter Area located in the northeastern portion of the Study Area.





NO. 11 / 07.30.2024

DESCRIPTION

A representative photograph of the canopy cover in the Deer Wintering Area located in the northeastern portion of the Study Area.



NO. 12 / 07.19.2024

DESCRIPTION

A representative photograph of the proposed Project site east of the current substation yard.





NO. 13 / 07.19.2024

DESCRIPTION

A representative photograph of the maintained ROW east of the substation yard.

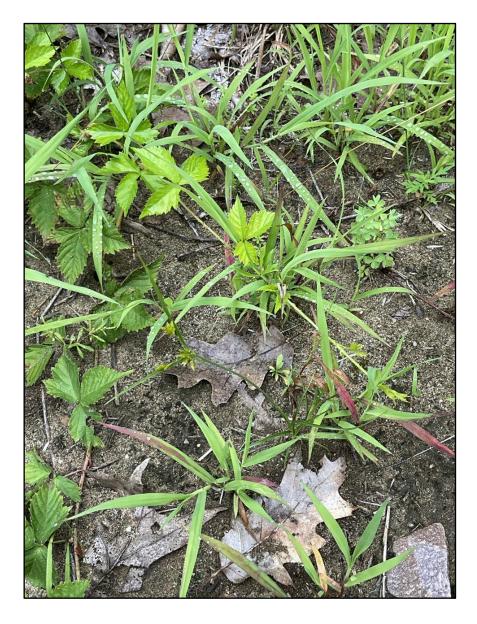


NO. 14 / 07.24.2024

DESCRIPTION

A representative photograph of potential vernal pools located largely in eastern and southern portions of the Study Area.





NO. 15 / 07.23.2024

DESCRIPTION

A representative photograph of RTE plant species present within the Study Area.





NO. 16 / 04.25.2025

DESCRIPTION

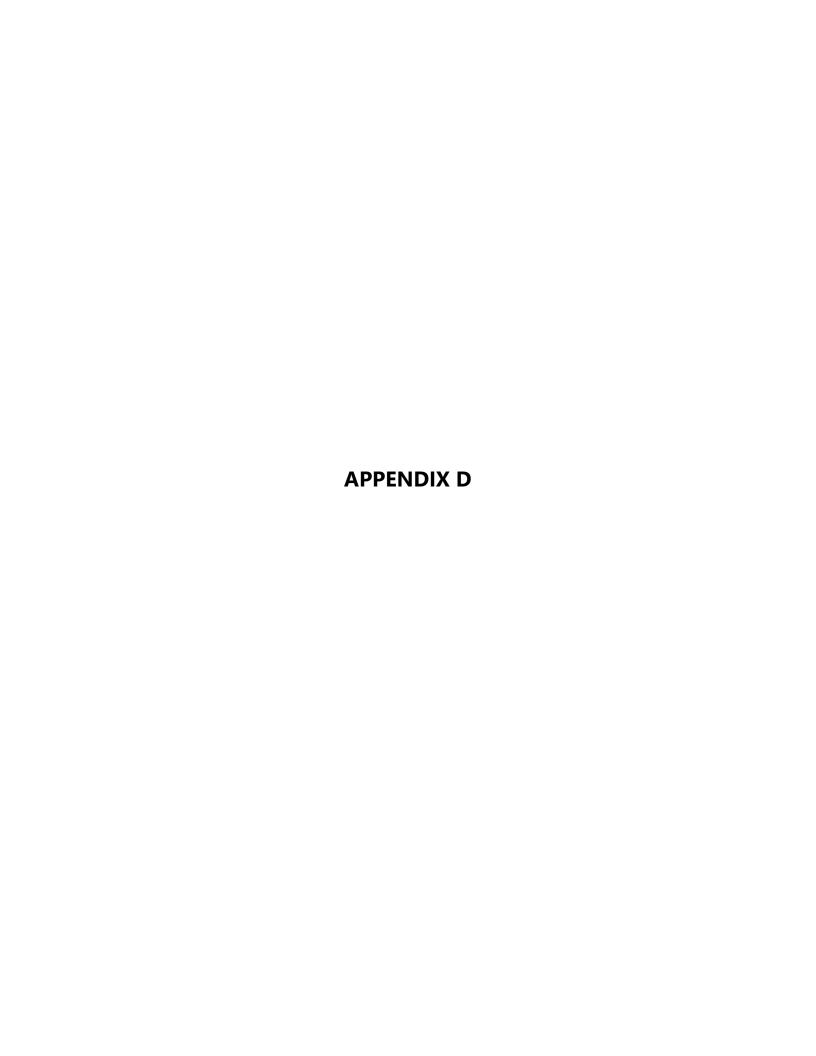
A representative photograph of the forested conditions at the residential inholding parcel located to the west of the current substation.



NO. 17 / 04.15.2025

DESCRIPTION

A representative photograph of marinated yard at the residential inholding parcel.





Summary of Delineated Streams

Project: Sandbar Substation Smartvalve

Client: Vermont Electric Power Company (VELCO)

Location: Milton, VT

Prepared By: VHB (A. Pierce)

Delineation Date(s): 7/19/2024, 7/23-25/2024, 7/30/2024

	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	
MI-SC-1	-	MI-3, MI-4	1.5	Silt	1	0.50	Ephemeral	<0.5	В	No	No	No	Ephemeral channel in natural valley draining wetland MI-3	
MI-SC-1A	-	MI-4, MI-19	4.0	Silt, Gravel	1	1.00	Intermittent	<0.5	В	No	No	Yes	Continuation of MI-SC-1 where additional inputs of hydrology results in presence of stream characteristics. Drains to Lamoille River	
MI-SC-2	-	MI-4, MI-5	3.00	Silt	2	2.00	Ephemeral	<0.5	В	No	No	No	Ephemeral channel draining wetland MI-5 to intermittent stream MI-SC-1A. Drainage in incised, natural valley	
MI-SC-3	-	MI-6	1.50	Cobble, Loam	0	1.00	Ephemeral	<0.5	В	No	No	No	Ephemeral drainage connecting two portions of wetland MI-6	
MI-SC-3A	-	MI-6	2.50	Silt	1	1.00	Ephemeral	<0.5	В	No	No	No	Ephemeral drainage connecting a portion of wetland MI-4 to intermittent stream MI-SC-4	
MI-SC-3B	-	MI-6	1.00	Silt	1	0.25	Ephemeral	<0.5	В	No	No	No	Ephemeral drainage connecting a portion of wetland MI-4 to intermittent stream MI-SC-4	
MI-SC-4	-	MI-6	3.00	Silt, Gravel	1	2.00	Intermittent	<0.5	В	No	No	Yes	Intermittent stream draining wetland MI-6 to Lamoille River	
MI-SC-5	-	MI-6	1.50	Loam	0	2.00	Ephemeral	<0.5	В	No	No	No	Short, weak, ephemeral channel connecting two portions of wetland 2024-6	
MI-SC-6	-	MI-7, MI-8	3.00	Gravel	1	1.00	Intermittent	<0.5	В	No	No	Yes	Intermittent stream draining wetland MI-8 to Lamoille River	
MI-SC-7	-	MI-4	1.5	Silt	1	3.00	Ephemeral	<0.5	В	No	No	No	Ephemeral channel draining lobe of wetland MI-4 to intermittent stream MI-SC-1A	

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	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
MI-SC-7A	-	MI-4	1.0	Silt	0	1.50	Ephemeral	<0.5	В	No	No	No	Ephemeral channel draining lobe of wetland MI-4 to intermittent stream MI-SC-1A
MI-SC-8	-	MI-4	1.0	Silt	0	1.50	Ephemeral	<0.5	В	No	No	No	Ephemeral channel draining lobe of wetland MI-4 to intermittent stream MI-SC-1A
MI-SC-9	-	MI-11	3.0	Cobble	1	6.00	Intermittent	<0.5	В	No	No	Yes	Intermittent stream in deeply incised channel connection two portions of wetland 2024-11 adjacent to Route 2
MI-SC-10	-	MI-10, MI-11	1.0	Silt	1	1.00	Intermittent	<0.5	В	No	No	Yes	Intermittent stream in incised natural valley where ephemeral channel MI-SC-14 gains multiple new inputs of hydrology along with a headcut and change in substrate. Stream dissipates into MI-11
MI-SC-11	-	MI-11	1.5	Silt	0	3.00	Ephemeral	<0.5	В	No	No	No	Ephemeral channel in ROW connecting a portion of 2024-11 outside the ROW to a portion in the ROW
MI-SC-12	-	MI-12, MI-10	1.5	Silt	0	4.00	Ephemeral	<0.5	В	No	No	No	Ephemeral channel in incised drainage between wetland MI-12 and intermittent stream MI-SC-10
MI-SC-13	-	MI-9	1.5	Loam	0	0.50	Ephemeral	<0.5	В	No	No	No	Ephemeral channel in outcrop area connecting two lobes of wetland MI-9
MI-SC-14	-	MI-10, MI-16, MI- 17	1.5	Loam	0	0.50	Ephemeral	<0.5	В	No	No	No	Ephemeral channel draining wetlands MI-16, MI-17, and MI-10 to intermittent stream MI-SC-10
MI-TOB/TOS-LR	-	MI-7, MI-15, MI-19	330.0	Silt	25	4.00	Perennial	720.0	В	Yes	Yes	Yes	Lamoille River

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

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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.

Summary of Delineated Wetlands

Project: Sandbar Substation Smartvalve

Client: Vermont Electric Power Company (VELCO)

Location: Milton, VT

Prepared By: VHB (A. Pierce, W. Durkin)

Delineation Date(s): 7/19/2024, 7/23-25/2024

						VHB Delineate	d Wetlands					
							Vermont Wetlan	d Rules Classific	cation			
Wetland ID	Delineated Area (Square Feet) ¹	Cowardin Classification ²	Hydrology Indicator	Hydric Soil Indicator	Contiguous to	Riparian Wetland Contiguous to	VWR Section 4.6	Critorio Proce	on 5 Functional nce / Significance	VHB-Proposed	Typical Vegetation	Comments
					mapped Wetland?	Stream Channel? (Flow Regime) ³	Presumptions ⁴	Type⁵	VHB-Proposed Significant?	VWR Classification ⁶		
MI-1	4,117	PFO, PEM	Saturation (A3), Geomorphic Position (D2), FAC-Neutral (D5)	N/A, meets USACE definition of hydric soil	No	No	-	5.1(L), 5.2(L)	No	III	Phragmites australis, Populus grandidentata, Salix bebbiana	Inundated depression between Bear Trap Rd and rock outcrop
MI-2	1,222	PFO	Surface Water (A1), High Water Table (A2), Saturation (A3), Water- Stained Leaves (B9), Geomorphic Position (D2)	N/A, meets USACE definition of hydric soil	No	No	-	5.1(L), 5.2(L)	No	III	Salix bebbiana, Fraxinus pennsylvanica, Onoclea sensibilis	Small, isloated depression on forested outcrop.
MI-3	15,599	PSS, PEM, PFO	Surface Water (A1), High Water Table (A2), Saturation (A3), Geomorphic Position (D2), FAC- Neutral (D5)	Depleted Matrix (D3)	No	Yes(I)	b, e	5.1(P), 5.2(P), 5.6(P), 5.10(P)	Yes	II	Salix discolor, Phalaris arundinacea, Urtica dioica, Onoclea sensibilis, Impatiens capensis	Narrow, inundated depression within ROW. Wetland continues into the adjacent forest and is drained by an incised ephemeral channel
MI-4	25,204	PEM, PFO	Surface Water (A1), High Water Table (A2), Saturation (A3), Water- Stained Leaves (B9), Drainage Patterns (B10), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral (D5)	Depletex Matrix (D3)	No	Yes(I)	a, b	5.1(P), 5.2(P), 5.10(P)	Yes	П	Impatiens capensis, Fraxinus pennsylvanica, Tsuga canadensis, Betula alleghaniensis,	Seep complex associated with intermittent stream and ephemeral drainages within steep forest.
MI-5	491	PSS, PEM, PFO	Surface Water (A1), High Water Table (A2), Saturation (A3), Drainage Patterns (B10), Geomorphic Position (D2), FAC- Neutral (D5)	Depletex Matrix (D3)	No	No	-	5.1(L), 5.2(L)	No	III	Impatiens capensis, Ulmus americana, Betula alleghaniensis	Small wetland at culvert outlet adjacent to ROW. Wetland drained by ephemeral channel to intermittent stream
MI-6	39,566	PFO	Surface Water (A1), High Water Table (A2), Saturation (A3), Drainage Patterns (B10), Geomorphic Position (D2), FAC- Neutral (D5)	Depletex Matrix (D3)	No	Yes(I)	a, b	5.1(P), 5.2(P), 5.4(P), 5.10 (P)	Yes	II	Tsuga canadensis, Fraxinus pennsylvanica, Lycopus uniflorus, Trillium cernuum, Scutellaria lateriflora	Large seep in hemlock stand drained by intermittent stream to the Lamoille. VHB identified a Potential Vernal Pool within the wetland. VHB conservatively assumes 5.4 at a present level, although spring vernal pool surveys have not been conducted.
MI-7	116	PEM, PSS	High Water Table (A2), Saturation (A3), Drainage Patterns (B10)	Depletex Matrix (D3)	No	Yes(I)	-	5.1(L), 5.2(L)	No	III	Equisetum arvense, Impatiens capensis, Solanum dulcamara	Small wetland at confluence of intermittent stream into Lamoille River



HB Delineated Wetland

Committee	
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						VHB Delineated	Vermont Wetlan	d Rules Classific	ation			
Wetland ID	Delineated Area (Square Feet) ¹	Cowardin Classification ²	Hydrology Indicator	Hydric Soil Indicator	Contiguous to	Riparian Wetland Contiguous to	VWR Section 4.6	Cuitaria Duasa	on 5 Functional nce / Significance	VHB-Proposed	Typical Vegetation	Comments
					mapped Wetland?	Stream Channel? (Flow Regime) ³	Presumptions⁴	Type ⁵	VHB-Proposed Significant?	VWR Classification ⁶		
MI-8	3,108	PFO, PSS, PEM	Surface Water (A1), High Water Table (A2), Saturation (A3), Drainage Patterns (B10), Geomorphic Position (D2), FAC- Neutral (D5)	Depleted Matrix (F3), 2cm Muck (A10)	No	Yes(I)	b	5.1(P), 5.2(P), 5.10(P)	Yes	II	Parthenocissus quinquefolia, Tsuga canadensis, Betula alleghaniensis, Impatiens capensis	Hillside seep drained by intermittent stream to Lamoille River
MI-9	1,119	PFO, PSS, PEM	Saturation (A3), Water-Stained Leaves (B9), Geomorphic Position (D2), FAC-Neutral (D5)	Depleted Matrix (F3)	No	No	-	5.1(L), 5.2(L)	No	III	Parthenocissus quinquefolia, Tsuga canadensis, Betula alleghaniensis, Impatiens capensis	Seep wetland on steep outcrop and at toe of cliff
MI-10	16,445	PEM	High Water Table (A2), Saturation (A3), Sparsely Vegetated Concave Surface (B8), Drainage Patterns (B10), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)		Yes	Yes(I)	b	5.1(P), 5.2(P), 5.10(P)	Yes	II	Parthenocissus quinquefolia, Fraxinus pennsylvanica, Betula alleghaniensis, Impatiens capensis	Series of seeps adjacent to a ephemeral channel in a natural, incised channel. Becomes drained by intermittent stream MI-SC-11
MI-11	624,555	PFO, PSS, PEM	Surface Water (A1), High Water Table (A2), Saturation (A3), Water- Stained Leaves (B9), Drainage Patterns (B10), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral (D5)	Depleted Matrix (F3)	Yes	Yes(I, P)	a, b	5.1(P), 5.2(P), 5.4(P), 5.10(P)	Yes	II	Fraxinus pennsylvanica, Onoclea sensibilis, Lonicera morrowii, Acer saccharinum, Lysimachia nummularia	Large wetland complex associated with Lamoille River. Wetland bisected by road and a portion within the Study Area is within a maintain ROW
MI-12	5,269	PEM	Water-Stained Leaves (B9), Geomorphic Position (D2), FAC- Neutral (D5)	Depleted Matrix (F3)	Yes	No	-	5.1(L), 5.2(L)	Yes	II	Impatiens capensis, Amphicarpaea bracteata, Onoclea sensibilis, Persicaria virginiana	Long, narrow seep in natural valley. Drained by ephmeral channel to intermittent stream
MI-13	570	PFO, PSS, PEM	Surface Water (A1), High Water Table (A2), Saturation (A3), Drainage Patterns (B10), Geomorphic Position (D2), FAC- Neutral (D5)	Depleted Matrix (F3), 2cm Muck (A10)	No	No	-	5.1(L), 5.2(L)	No	III	Parthenocissus quinquefolia, Tsuga canadensis, Betula alleghaniensis, Impatiens capensis	Small isolated seep in natural valley of hardwood forest. Evidence of overland flow draining wetland at times of high water to ephemeral channel
MI-14	2,109	PFO	Sparsely Vegetated Concave Surface (B8), Saturation (A3), Geomorphic Position (D2), FAC- Neutral Test (D5)	Depleted Matrix (F3)	No	No	-	5.1(L), 5.2(L)	No	III	Impatiens capensis, Onoclea sensibilis, Galium palustre, Fraxinus pennsylvanica	Isolated forest depression
MI-15	1,027	PFO	Sparsely Vegetated Concave Surface (B8), Saturation (A3), Geomorphic Position (D2)	Depleted Matrix (F3)	No	Yes(P)	-	5.1(L), 5.2(L)	No	III	Onoclea sensibilis, Acer saccharum, Dryopteris intermedia, Fraxinus pennsylvanica	Narrow drainage fed by two ephemeral stream channels



						VHB Delineate	d Wetlands					
							Vermont Wetlan	d Rules Classific	ation			
Wetland ID	Delineated Area (Square Feet) ¹	Cowardin Classification ²	Hydrology Indicator	Hydric Soil Indicator	Contiguous to	Riparian Wetland Contiguous to	VWR Section 4.6		on 5 Functional nce / Significance	VHB-Proposed	Typical Vegetation	Comments
					mapped Wetland?	Stream Channel? (Flow Regime) ³	Presumptions ⁴	Type ⁵	VHB-Proposed Significant?	VWR Classification ⁶		
MI-16	739	PEM	High Water Table (A2), Saturation (A3), Sparsely Vegetated Concave Surface (B8), Drainage Patterns (B10), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)		No	No	-	5.1(L), 5.2(L)	No	III	Onoclea sensibilis	Seep at headwaters of an ephemeral channel MI-SC-14 in a natural, incised channel.
MI-17	272	PEM	High Water Table (A2), Saturation (A3), Sparsely Vegetated Concave Surface (B8), Drainage Patterns (B10), Geomorphic Position (D2), Microtopographic Relief (D4), FAC-Neutral Test (D5)		Yes	No	-	5.1(L), 5.2(L)	No	III	-	Small fringe/seep along ephemeral stream MI-SC-14 in a natural, incised channel.
MI-18	749	PFO, PSS, PEM	Surface Water (A1), High Water Table (A2), Saturation (A3), Drainage Patterns (B10), Geomorphic Position (D2), FAC- Neutral (D5)	Depleted Matrix (F3), 2cm Muck (A10)	No	No	-	5.1(L), 5.2(L)	No	III	Parthenocissus quinquefolia, Tsuga canadensis, Betula alleghaniensis, Impatiens capensis	Small isolated forested wetland with marginal drainage to wetland MI-8
MI-19	85	PEM	Surface Water (A1), High Water Table (A2), Saturation (A3), Drainage Patterns (B10), Geomorphic Position (D2), FAC- Neutral (D5)	Depletex Matrix (D3)	No	Yes(I)	-	5.1(L), 5.2(L)	No	III	Eutrochium maculatum, Eupatorium perfoliatum, Thuja occidentalis, Solanum dulcamara	Small wetland at confluence of intermittent stream into Lamoille River

¹All 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.

²Classification 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.

³Wetland 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 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).

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

⁵VWR 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, 5.5=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.

⁶VHB-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.





State: VT Sampling Point: Mil-1-UPL	Applicative/forwers VELCO Interestingstrop(s)	Application/Comment Micro	Applicant/Owners VELCO Interview (1974 (AP, PM) Secretary, Tournship, Range: Chittenden Intervie	Project Site:	Sandhar S	ubstation Sma	ırt Valve	Cit	y/County:	Milton			Samp. Date: 7/	19/2024
Vestigator(s): VHB (AP, EM) Section, Township, Range: Chittenden	Interesting and control (Control Control Contr	Investigation Section Section Township, Ramps Chiterden	Interesting (IRR) or MITA(IRR) (IRR)	•		ubstation sina	iit vaive		y/ county.		VT	Sampling Point:		
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Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) Inundation Visible on Aerial (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) PFAC-Neutral Test (D5) eld Observations: Inface Water Present? Depth (inches): ater Table Present? Depth (inches): Depth (inches): Depth (inches): Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 21" of rain in 5 days prior in Burlington, VT (NWS 2024); PDSI 0.95 (Near Normal) for week ending 7/20/2024	Water Maris (B1) Hydrogen Suffice Odor (C1) Craylish Burrows (C8) Sediment Depots (B2) Oxidezed Rhisopapers on University Brots (C3) Suturation (C9) Sediment Oxide (C9) Oxidezed Rhisopapers on University Brots (C3) Suturated or Stressed Plants (D1) Stunted or Stressed Plants (D2) Stunted or Stressed Plants (D2) Iron Deposits (B3) Presence of Reduced Iron (C4) Suturated (C7) Shallow Aquitard (D3) Iron Deposits (B3) Inundation Visible on Aerial (B7) Other (Explain in Remarks) Micropapaths Relief (D4) FAC-Neutral Test (D3) Micropapaths (Relief (D4) FAC-Ne	Water Marks (81)	Water Marks (51)					. ,					. ,	
Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial (B7) Sparsely Vegetated Concave Surface (B8) Edd Observations: Irface Water Present? Depth (inches): Depth (inches): Depth (inches): Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 21" of rain in 5 days prior in Burlington, VT (NWS 2024); PDSI 0.95 (Near Normal) for week ending 7/20/2024	Sediment Deposite (82) Oxidized Rhizospheres on Univing Boots (G3) Saturation (Valle or Presence of Reduced Iron (C4) Sturted or Stressed Plants (D1) Agal Mart or Crust (84) Recent Iron Reduction in Tilled Solis (C6) Sunday Agal Mart or Crust (84) Recent Iron Reduction in Tilled Solis (C6) Shallow Agal Mart or Crust (84) Recent Iron Reduction in Tilled Solis (C6) Shallow Against (D1)	Sediment Deposits (82) Oxidized Rhibospheres on Living Roots (G3) Saturation Visible on Aerial (G9) Agail Mat or Cruss (84) Recent fron Reduction in Tilled Solls (C6) Soll-Recent (G1) Agail Mat or Cruss (84) Recent fron Reduction in Tilled Solls (C6) Soll-Recent (G1) Iron Deposits (R8) Thin Munck Surface (C7) Shallow Augutard (D3) Inundation Visible on Aerial (87) Other (Explain in Remarks) Microspographic Relief (D4) FAC-Neutral Test (D5) FAC-Neutr	Sodiment Deposits (82) Oxidized Rhizospheres on Univing Boots (G3) Saturation Visible on Aerial (C9) Agail Mat or Crust (84) Recent from Reduction in Titled Solis (C6) Geomorphic Position (D2) Stunder Oxide Presence of Reduced Iron (C4) Stunder Oxide Presence of Reduction in Titled Solis (C6) Geomorphic Position (D2) Shallow Augustra (D3) Immodation Visible on Aerial (S7) Other (Explain in Remarks) Microtropographic Relief (D4) FAC-Neutral Test (D5) Shallow Augustra (D3) Microtropographic Relief (D4) FAC-Neutral Test (D5) FAC-Neutral Test (D5) FAC-Neutral Test (D5) Sturation Present? Depth (Inches):		-				C1)					
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turation Present? Depth (inches):	Depth (Inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 1.21" of rain in 5 days prior in Burlington, VT (NWS 2024); PDSI 0.95 (Near Normal) for week ending 7/20/2024 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) % Type¹ Loc² Texture Remarks 0-12 10YR 4/2 100%	Depth (Inches): Depth (Inches): Depth (Inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 1.21" of rain in 5 days prior in Burlington, VT (NWS 2024); PDSI 0.95 (Near Normal) for week ending 7/20/2024	Depth (inches): Depth								\4/=+l=			NO
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marks:	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 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM 1-1-1 10YR 3/2 10XR 1.1 1498	SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Redox Features Redox Features Type 1 Loc 2 Texture Remarks O-12 10VR 4/2 100% O-12 10VR 4/2 100% Texture Remarks O-12 10VR 3/2 90% T-SYR 2.5/3 10% LOAM Type 1 LoAM LOAM Type 2 LoC 3 Texture Remarks CLAY LOAM LOAM Type 2 LoC 4 LOAM LOAM Type 3 LoC 4 LOAM LOAM Type 2 LoC 4 LOAM LOAM Type 3 LoC 4 LOAM LOAM Type 3 LoC 4 LOAM LOAM Type 5 LoC 5 Texture Remarks LOAM LOAM Type 5 LoC 5 Texture Remarks LOAM LOAM Type 5 LOAM LOAM Type 5 LOAM LOAM Type 6 LOAM Ty	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) % Type¹ Loc² Texture Remarks 0-12 10YR 4/2 100% CLAY 12+ 10YR 3/2 99% 7.5YR 2.5/3 10% LOAM Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains. Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand, Reduced Matrix, MS-Masked San	1.21" of rain in 5 d	lays prior	in Burlington	, VT (NWS 2024); PI	OSI 0.95	(Near Nor	mal) for	week endi	ng 7/20/2024		
marks:	SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features (in) Color (moist) % Color (moist) % Type ¹ Loc ² Texture Remarks 0-12 10YR 4/2 100% CLAY 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM Type: C-Concentration, D-Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (SS) (LRR R, LOAM) Hydric Soil Indicators: Indicators: Indicators for Problematic Hydric Soils ³ : Histosol (A1) Polyvalue Below Surface (SS) (LRR R, LOAM) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Sorm Mucky Peat or Peat (S3) (LRR K, L, R) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (A12) Redox Dark Surface (F6) Inno-Manganese Masses (F12) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sardy Redox (S5) Redox C55 Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sardy Redox (S5) Redox C55 Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sardy Redox (S5) Redox C55 Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sardy Redox (S5) Redox C55 Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sardy Redox (S5) Red Parent Material (F1) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Dark Surface (S7) (LRR R, MLRA 149B) Piedmont Floodplain Soils (F19) (MLRA 149B) Sardy Redox (S5) Red Parent Material (F1) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Dark Surface (S7) (LRR R, MLRA 149B) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Dark Surface (S7) (LRR R, MLRA 149B) Piedmont Flo	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) % Type¹ Loc² 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% CLAY 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% CLAY Type: C-Concentration, D-Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: C-Concentration, D-Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Histosol (A1)	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) % Type¹ Loc² Texture Remarks 0-12 10YR 4/2 100% CLAY 12+ 10YR 3/2 99% 7.5YR 2.5/3 10% LOAM Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand Grains. Type: C-Concentration, D-Depletion, RM-Reduced Matrix, MS-Masked Sand, Reduced Matrix, MS-Masked San	- 1										
	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) % Type¹ Loc² Texture Remarks 0-12 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% CLAY 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM 1	Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features	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) % Type¹ Loc² 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM	Remarks:										
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	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) % Type¹ Loc² Texture Remarks 0-12 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% CLAY 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM 1	Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features	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) % Type¹ Loc² 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM											
	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) % Type¹ Loc² Texture Remarks 0-12 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% CLAY 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM 1	Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features	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) % Type¹ Loc² 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM											
	Depth Matrix Redox Features (in) Color (moist) % Color (moist) % Type Loc Texture Remarks 0-12 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% COAM Texture Remarks (in) Color (moist) % CLAY 12+ 10YR 3/2 100% To CLAY 10AM	Depth Matrix New	Depth Matrix Redox Features (in) Color (moist) % Color (moist) % Type Loc Texture Remarks 0-12 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% CLAY Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: CS oil Indicators: Indicators: Indicators for Problematic Hydric Soils Histos (A1) Polyvalue Below Surface (S8) (LRR R, Histos Epipedon (A2) MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Hydricgen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Cark Surface (F6) Indicator (F7) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Indicator (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) 3 And Surface (A12) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) 3 And Surface (A12) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) 3 And Surface (S7) (LRR R, MLRA 149B) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) And Surface (S7) (LRR R, MLRA 149B) Redox Dark Surface (S7) (LRR R, L) Piedmont Floodplain Soils (F19) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (F12) Other (Explain in Remarks) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	SOIL										
DIL	Depth Matrix Redox Features (in) Color (moist) % Color (moist) % Type Loc Texture Remarks 0-12 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% COAM Texture Remarks (in) Color (moist) % CLAY 12+ 10YR 3/2 100% To CLAY 10AM	Depth Matrix New	Depth Matrix Redox Features (in) Color (moist) % Color (moist) % Type Loc Texture Remarks 0-12 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% CLAY Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: CS oil Indicators: Indicators: Indicators for Problematic Hydric Soils Histos (A1) Polyvalue Below Surface (S8) (LRR R, Histos Epipedon (A2) MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Hydricgen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Cark Surface (F6) Indicator (F7) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Indicator (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) 3 And Surface (A12) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) 3 And Surface (A12) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) 3 And Surface (S7) (LRR R, MLRA 149B) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) And Surface (S7) (LRR R, MLRA 149B) Redox Dark Surface (S7) (LRR R, L) Piedmont Floodplain Soils (F19) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (F12) Other (Explain in Remarks) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO		(Describe to	the depth nee	eded to document the	indicato	or or confirn	n the abso	ence of indic	cators.)		
	(in) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 12+ 10YR 4/2 100% 12+ 10YR 3/2 90% 1-SYR 2.5/3 10% 1-Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 1-Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Mask	(in) Color (moist) % Color (moist) % Type¹ Loc² 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM Type: =Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: =Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Intition of the problematic Hydric Soil³: Histosol (A2) MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L, R) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Thin Dark Surface (S9) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Tirpeed Matrix (S4) Redox Depressions (F8) Red Parent Material (F21) Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	(in) Color (moist) % Color (moist) % Type³ Loc² Texture Remarks 0-12 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% CIAY 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM Type: C-Concentration, D-Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: C-Concentration, D-Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R, Indicators for Problematic Hydric Soils³: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Indicators for Problematic Hydric Soils³: Histosol (A2) MLRA 149B) Coast Prairie Reduced (A16) (LRR K, L, MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Sorm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L, M) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Hydric Soil Present? NO		•	•						,		
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)	10YR 4/2 10WR 3/2 90% 7.5YR 2.5/3 10% LOAM 11Ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 1 Polyvalue Below Surface (S8) (LRR R, Isite Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR R, L) Dark Surface (S9) (LRR K, L) Dark Surface (S9) (LRR K, L) Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thic Dark Surface (F7) Polyvalue Below Surface (F7) Polyvalue Below Surface (F7) Polyvalue Below Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Mucky Mineral (F1) (LRR K, L) Polyvalue Below Surface (F7) Polyvalue Below Surface (F7) Polyvalue Below Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Mucky Mineral (F1) (LRR K, L) Polyvalue Below Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144B, 145, 149B) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144B, 145, 149B) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144B, 145, 149B) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144B, 145, 149B) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144B, 145, 149B) Piedmont	10YR 4/2 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM 12H 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM 10YB 3/2 90% 7.5YR 2.5/3 10% LOAM 10YB 3/2 10OX 10YB 3/2 10YB 3/2 10YB 3/2 10YB 10YB 10YB 10YB 10YB 10YB 10YB 10YB	12+ 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R,			%	Color (moist)			Type ¹	Loc ²	Tevture	Ro	marks
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth Matrix Redox Features	12+ 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM 1-Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 1-Type: C=Concentration, D=Depletion, RM=Raked Sand Grains. 1-Type: C=Concentration, M=Matrix. 1-Type: C=Concentration, M=Matrix. 1-Type: C=Concentration, M=Matrix. 1-Type: C=Concentration P=Depletion P=De	12+ 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM 1-Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 1-Location: PL=Pore Lining, M=Matrix. 1-Location: Pl=	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Thick Soil Indicators for Problematic Hydric Soils³: Indicators for Problematic Hydric Soils³: Indicators for Problematic Hydric Soils³: Coast Prairie Redox (A16) (LRR K, L, R) Sort Mucky (A10) (LRR K, L, R) Coast Prairie Redox (A16) (LRR K, L, R) Sort Mucky Peat or Peat (S3) (LRR K, L, R) Dark Surface (S9) (LRR K, L, R) Dark Surface (S9) (LRR K, L, R) Dark Surface (A11) Depleted Below Dark Surface (A12) Redox Dark Surface (F5) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Dark Surface (S7) (LRR R, MLRA 149B) Type: Dark Surface (S7) (LRR R, MLRA 149B) Type: Depth (inches): Hydric Soil Present? NO				Color (moist)		70	Турс	LOC		- INC	illarks
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Stripped Matrix (S4) Redox Depressions (F8) Stripped Matrix (S6) Stripped Mat	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S4) Redox Dark Surface (F7) Sandy Redox (S5) Stripped Matrix (S6) Sandy Redox (S5) Stripped Matrix (S6) Sandy Redox (S7) Stripped Matrix (S6) Dark Surface (S7) (LRR R, L) Mesic Spodic (TA6) (MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches):	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) MLRA 1498) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Matrix (F3) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S9) Are dox Dark Surface (A12) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S9) Are dox Dark Surface (A12) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S9) Are dox Dark Surface (A12) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S9) Are dox Dark Surface (A12) Stripped Matrix (S6) Hydric Soil Present? NO Hydric Soil Present? NO				7.5YR 2.5/3		10%					
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth	Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (58) (LRR R, Histic Epipedon (A2) MLRA 149B) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (S9) (LRR R, L) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Hydric Soil Present? NO	Hydric Soil Indicators: Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (S1) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Hydric Soil Present? NO	Hydric Soil Indicators: Histosol (A1) Histosol (A2) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Burface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A12) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Dark Surface (F8) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Type: Depth (inches): Indicators for Problematic Hydric Soils ³ : All Camp Mucky Mineral (S8) (LRR K, L, MLRA 149B) Dark Surface (S8) (LRR K, L, R) Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R) Dark Surface (S9) (LRR K, L) Fripped Matrix (S6) Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) NO Depth (inches):										-	
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth	Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (58) (LRR R, Histic Epipedon (A2) MLRA 149B) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (S9) (LRR R, L) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Hydric Soil Present? NO	Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) MLRA 149B) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (S9) (LRR R, L) Thic Dark Surface (A11) Depleted Matrix (F3) Thic Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix	Hydric Soil Indicators: Histosol (A1) Histosol (A2) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Burface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A12) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Dark Surface (F8) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Type: Depth (inches): Indicators for Problematic Hydric Soils ³ : All Camp Mucky Mineral (S8) (LRR K, L, MLRA 149B) Dark Surface (S8) (LRR K, L, R) Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R) Dark Surface (S9) (LRR K, L) Fripped Matrix (S6) Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) NO Depth (inches):			-								
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth	Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (58) (LRR R, Histic Epipedon (A2) MLRA 149B) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (S9) (LRR R, L) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Hydric Soil Present? NO	Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) MLRA 149B) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (S9) (LRR R, L) Thic Dark Surface (A11) Depleted Matrix (F3) Thic Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix	Hydric Soil Indicators: Histosol (A1) Histosol (A2) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Burface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A12) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Dark Surface (F8) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Type: Depth (inches): Indicators for Problematic Hydric Soils ³ : All Camp Mucky Mineral (S8) (LRR K, L, MLRA 149B) Dark Surface (S8) (LRR K, L, R) Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R) Dark Surface (S9) (LRR K, L) Fripped Matrix (S6) Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) NO Depth (inches):								-			
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth	Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (58) (LRR R, Histic Epipedon (A2) MLRA 149B) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (S9) (LRR R, L) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Hydric Soil Present? NO	Hydric Soil Indicators: Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (S1) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Hydric Soil Present? NO	Hydric Soil Indicators: Histosol (A1) Histosol (A2) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Burface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A12) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Dark Surface (F8) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Type: Depth (inches): Indicators for Problematic Hydric Soils ³ : All Camp Mucky Mineral (S8) (LRR K, L, MLRA 149B) Dark Surface (S8) (LRR K, L, R) Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R) Dark Surface (S9) (LRR K, L) Fripped Matrix (S6) Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) NO Depth (inches):											
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth	Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L, M) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Sandy Mucky Mineral (S1) Peiedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) 3 Indicators of hydrophytic vegetation and Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (S9) (LRR K, L, M) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (S9) (LRR K, L) Thick Dark Surface (A11) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S9) (LRR K, L, M) Polyvalue Below Surface (S9) (LRR K, L, M) Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Redox Depressions (F8) Red Parent Material (F21) Very Shallow Dark Surface (F712) Other (Explain in Remarks) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) MIRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L, M) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (¹ Type: C=Concentration, I	D=Depletion, F	RM=Reduced Matr	ix, MS=Masked Sand Grains	i.				² Location: PL=Pore Lining,	M=Matrix.	
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth	Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L, M) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Sandy Mucky Mineral (S1) Peiedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) 3 Indicators of hydrophytic vegetation and Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (S9) (LRR K, L, M) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (S9) (LRR K, L) Thick Dark Surface (A11) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S9) (LRR K, L, M) Polyvalue Below Surface (S9) (LRR K, L, M) Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Redox Depressions (F8) Red Parent Material (F21) Very Shallow Dark Surface (F712) Other (Explain in Remarks) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) MIRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L, M) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (Hydric Soil Indicator	s:							Indicators for Proble	matic Hydric Soil	s ³ :
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth	Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) S cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (S9) (LRR K, L) Thick Dark Surface (A11) Depleted Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (F2) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Polyvalue B	Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (S9) (LRR K, L, M) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L) Sandy Mucky Mineral (S1) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) S cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (S9) (LRR K, L) Thick Dark Surface (A11) Depleted Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) S cm Mucky Peat or Peat (S3) (LRR K, L, M) Dark Surface (S9) (LRR K, L, M) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (•									•	
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Peth Matrix Redox Features In) Color (moist) % Color (moist) % Type ¹ Loc ² Texture Remarks 12 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% Peter C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Peter C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Indicators for Problematic Hydric Soils ³ :	Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified (A4) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Surface (S9) (LRR K, L, M) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Str	Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Blydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L, M) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (S9) (LRR K, L) Thin Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Surface (S9) (LRR K, L, M) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A12) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Str						Surface (S8)	(LRR R,				
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth	Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (F2) Depleted Dark Surface (F6) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S7) (LRR R, MLRA 149B) Sandy Gleyed Matrix (S6) Stripped Matrix (S6) Hydric Soil Present? NO	Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) (LRR K, L) Depleted Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (F2) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (F12) Other (Explain in Remarks) Restrictive Layer (if observed): Type: Depth (inches):	Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (F2) Depleted Dark Surface (A12) Sandy Gleyed Matrix (F3) Sandy Gleyed Matrix (F3) Thin Dark Surface (F3) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Cherrical (F12) Other (Explain in Remarks) NO Depth (inches):					,	/> /·		,			
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Peth Matrix Redox Features In) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 12 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% Description: CLAY Indicators: Indicators: Indicators: Indicators: Indicators for Problematic Hydric Soils³: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)	Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (F3) Sandy Redox Dark Surface (F7) Sandy Redox Depleted Dark Surface (F7) Sandy Redox Depleted Dark Surface (F7) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Stripped Matrix (S7) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Cherrican in Remarks) NO Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Tend-Manganese Masses (F12) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Tend-Manganese Masses (F12) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Telephant Indian Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Tele		-						∌B)			R K, L, R)
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Peth Matrix Redox Features In) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 12 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% Proce C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Proce C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R, LR R, LR MLRA 149B) Histic Epipedon (A2) MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) To Som Mucky Peat or Peat (S3) (LRR K, L, R)	Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (F7) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Gisturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S7) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): 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 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) NO Hydric Soil Present? NO	Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO							RR K, L)				
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Peth Matrix Redox Features In) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks -12 10YR 4/2 100% ILOAM Pete: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R, L) Histosol (A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L, M) Dark Surface (S9) (LRR K, L, M) Dark Surface (S9) (LRR K, L, M)	Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F12) (MRR 149B) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (F7) Other (Explain in Remarks) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Redox Dark Surface (F6) Redox Dark Surface (F6) Redox Dark Surface (F7) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144B, 145, 149B) Redox Dark Surface (F7) Mesic Spodic (TA6) (MLRA 144B, 145, 149B) Redox Dark Surface (F7) Red Parent Material (F21) Red Parent Material (F21) Red Parent Material (F21) Red Parent Material (F21) Red Parent Material (F2		. ,									K, L)
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Peth Matrix Redox Features In) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks PL2 10YR 4/2 100% ICLAY IOVR 1/2 10YR 3/2 90% 7.5YR 2.5/3 10% Peter C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Peter C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R, Indicators for Problematic Hydric Soils³: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Indicators for Problematic Hydric Soils Single Polyvalue Below Surface (S9) (LRR R, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L, M) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L)	Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 149B) Red Parent Material (F21) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Redox Depressions (F8) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Strip	Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Depleted Dark Surface (F7) Redox Depressions (F8) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Hydric Soil Present? NO			ce (A11)								,
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) appth Matrix Redox Features in) Color (moist) % Color (moist) % Type ¹ Loc ² Texture Remarks -12 10YR 4/2 100% CLAY -12 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM	Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Sandy Gleyed Matrix (\$4) Sandy Redox (\$55) Stripped Matrix (\$6) Dark Surface (\$77) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Hydric Soil Present? NO	Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Redox Depressions (F8) Redox Depressions (F8) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Redox Depressions (F8) Redox Depressions (F8) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) disturbed or problematic. Hydric Soil Present? NO						. ,					
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) appth Matrix Redox Features in) Color (moist) % Color (moist) % Type ¹ Loc ² Texture Remarks -12 10YR 4/2 100% CLAY -12 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM	Sandy Redox (55) Stripped Matrix (56) Dark Surface (57) (LRR R, MLRA 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Hydric Soil Present? NO	Sandy Redox (S5) Stripped Matrix (S6) Park Surface (S7) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Red Parent Material (F21) Very Shallow Dark Surface (FF12) Other (Explain in Remarks) Other (Explain in Remarks) Hydric Soil Present? NO	Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Hydric Soil Present? NO											-
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth Matrix Redox Features in) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 12 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% Description: (Description: (Description: CLAY) Per C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Per C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R, Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Indicators for Problematic Hydric Soils³: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Location: PL=Pore Lining, M=Matrix. Polyvalue Below Surface (S9) (LRR R, Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Indicators for Problematic Hydric Soils³: Loam Muck (A10) (LRR K, L, MIRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Coast Prairie Redox (A16) (LRR K, L) Depleted Below Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B)	Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Total Matrix (S6) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? NO Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Hydric Soil Present? NO	Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Stripped Matrix (S6) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? NO	Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Stripped Matrix (S6) Wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? NO				Redox	Depressio	ns (F8)					l45, 149B)
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) appth Matrix Redox Features in) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks -12 10YR 4/2 100% CLAY -12+ 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM	Dark Surface (S7) (LRR R, MLRA 149B) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Other (Explain in Remarks) Hydric Soil Present? NO	Dark Surface (S7) (LRR R, MLRA 149B) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Other (Explain in Remarks) Hydric Soil Present? NO	Dark Surface (S7) (LRR R, MLRA 149B) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Other (Explain in Remarks) Hydric Soil Present? NO		-			3						
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Pepth Matrix Redox Features In) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks -12 10YR 4/2 100% -12 10YR 3/2 90% 7.5YR 2.5/3 10% Depte C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R, Lindicators: Indicators for Problematic Hydric Soils³: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Lindicators) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L, M) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Red Parent Material (F21)	Restrictive Layer (if observed): Type: Hydric Soil Present? NO Depth (inches):	disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO											
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) ppth Matrix Redox Features in) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks -12 10YR 4/2 100% -12 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM	Restrictive Layer (if observed): Type: Hydric Soil Present? NO Depth (inches):	Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Restrictive Layer (if observed): Type: Hydric Soil Present? NO Depth (inches):	Dark Surface (S	57) (LRR R, M	ILRA 149B)		wetland				Other (Explain	n Remarks)	
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Matrix Redox Features	Type: Hydric Soil Present? NO Depth (inches):	Type: Hydric Soil Present? NO Depth (inches):	Type: Hydric Soil Present? NO Depth (inches):	Building 1 CC	. 1				dist	turbed or p	oroblematic.	T		
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Matrix Redox Features	Depth (inches):	Depth (inches):	Depth (inches):	, ,	observed):									
offile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Parth Matrix Redox Features In Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 12 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM Per Ce-Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R, L) Loamy Mucky Mineral (F1) (LRR K, L) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S8) (LRR K, L) Depleted Below Dark Surface (S8) (LRR K, L) Depleted Below Dark Surface (A12) Redox Parts (A12) Redox Parts (A12) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Depressions (F8) Redox (S5) (LRR R, MLRA 149B) Redox Dark Surface (T712) Other (Explain in Remarks) Polyvalue Below Dark Surface (F7) Polyvalue Below Surface (F7) Polyvalue Below Surface (F7) Polyvalue Below Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Piedmont	, , ,		, , ,	Type:									Soil Present?	NO
offile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) peth Matrix Redox Features in) Color (moist) % Color (moist) % Type¹ Loc² 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) pet C-Lory 10YR 3/2 100% Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Texture Remarks CLAY LOAM DOAM DOAM Description: (Describe to the depth needed to document the indicators of Problematic Hydric Soil of LOAM Description: (Describe to the depth needed to document the indicators of Problematic Hydric Soil of LOAM Description: (Describe to the depth needed to document the indicators of Problematic Hydric Soil of LOAM Description: (Describe to the depth needed to document the indicators of Problematic Hydric Soil of LOAM Description: (Description: (Description: (Description: Description: (Description: Description: (Description: Description: (Description: (Description: Description: (Description: Description: (Description: Description: (Description: Description: (Description: (Description: Description: (Description: Description: (Description: Description: (Description: Description: (Description: (Description: Description: (Description: Description: (Description: Description: (Description: (Descri		kemarks:	кетагкs:									Hydric		NO
	³ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Placation: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Indicators for Problematic Hydric Soils 3: Coast Prairie Redox (A16) (LRR K, L, MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Strippe	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Thick Dark Surface (A11) Depleted Dark Surface (F7) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Type: Depth (inches): Hydric Soil Present? NO	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R, Indicators for Problematic Hydric Soils ³ : Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149E Red Parent Material (F21) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Hydric Soil Present? NO	SOIL Profile Description: (Depth (in) Color (0-12 10YR	(Describe to Matrix (moist) 3 4/2	o the depth nee	eded to document the Color (moist)	e indicato	or or confirn Features	n the abso	ence of indic	ators.) Texture CLAY	Re	marks
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ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth Matrix Redox Features	12+ 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM 1-Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 1-Type: C=Concentration, D=Depletion, RM=Raked Sand Grains. 1-Type: C=Concentration, M=Matrix. 1-Type: C=Concentration, M=Matrix. 1-Type: C=Concentration, M=Matrix. 1-Type: C=Concentration P=Depletion P=De	12+ 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Indicators for Problematic Hydric Soils³: Histosol (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Dark Surface (S8) (LRR K, L) Thick Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Aindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches):	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Thick Soil Indicators for Problematic Hydric Soils³: Indicators for Problematic Hydric Soils³: Indicators for Problematic Hydric Soils³: Coast Prairie Redox (A16) (LRR K, L, R) Sort Mucky (A10) (LRR K, L, R) Coast Prairie Redox (A16) (LRR K, L, R) Sort Mucky Peat or Peat (S3) (LRR K, L, R) Dark Surface (S9) (LRR K, L, R) Dark Surface (S9) (LRR K, L, R) Dark Surface (A11) Depleted Below Dark Surface (A12) Redox Dark Surface (F5) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Dark Surface (S7) (LRR R, MLRA 149B) Type: Dark Surface (S7) (LRR R, MLRA 149B) Type: Depth (inches): Hydric Soil Present? NO				Color (Illoist)		70	туре	LUC		- Ne	IIIaiks
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Stripped Matrix (S4) Redox Depressions (F8) Stripped Matrix (S6) Stripped Mat	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S4) Redox Dark Surface (F7) Sandy Redox (S5) Stripped Matrix (S6) Sandy Redox (S5) Stripped Matrix (S6) Sandy Redox (S7) Stripped Matrix (S6) Dark Surface (S7) (LRR R, L) Mesic Spodic (TA6) (MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches):	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) MLRA 1498) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Matrix (F3) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S9) Are dox Dark Surface (A12) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S9) Are dox Dark Surface (A12) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S9) Are dox Dark Surface (A12) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S9) Are dox Dark Surface (A12) Stripped Matrix (S6) Hydric Soil Present? NO Hydric Soil Present? NO				7.5YR 2.5/3		10%					
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth	Hydric Soil Indicators: Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6)	Hydric Soil Indicators: Histosol (A1) Histo Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (S9) (LRR R, L) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Stripped	Hydric Soil Indicators: Histosol (A1) Histosol (A2) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Burface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A12) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Dark Surface (F8) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Type: Depth (inches): Indicators for Problematic Hydric Soils ³ : All Camp Mucky Mineral (S8) (LRR K, L, MLRA 149B) Dark Surface (S8) (LRR K, L, R) Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R) Dark Surface (S9) (LRR K, L) Fripped Matrix (S6) Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) NO Depth (inches):				· ———————							
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth	Hydric Soil Indicators: Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6)	Hydric Soil Indicators: Histosol (A1) Histo Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (S9) (LRR R, L) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Stripped	Hydric Soil Indicators: Histosol (A1) Histosol (A2) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Burface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A12) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Dark Surface (F8) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Type: Depth (inches): Indicators for Problematic Hydric Soils ³ : All Cam Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A10) (LRR K, L, R) Som Mucky Preat (S9) (LRR K, L, R) Dark Surface (S9) (LRR K, L, M) Dark Surface (S9) (LRR K, L, M) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Fleidmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO											
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth	Hydric Soil Indicators: Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6)	Hydric Soil Indicators: Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (S9) (LRR R, L) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix	Hydric Soil Indicators: Histosol (A1) Histosol (A2) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Burface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A12) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Dark Surface (F8) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Type: Depth (inches): Indicators for Problematic Hydric Soils ³ : All Cam Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A10) (LRR K, L, R) Som Mucky Preat (S9) (LRR K, L, R) Dark Surface (S9) (LRR K, L, M) Dark Surface (S9) (LRR K, L, M) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Fleidmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO											
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth	Hydric Soil Indicators: Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6)	Hydric Soil Indicators: Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (S9) (LRR R, L) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix	Hydric Soil Indicators: Histosol (A1) Histosol (A2) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Burface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A12) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Dark Surface (F8) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Type: Depth (inches): Indicators for Problematic Hydric Soils ³ : All Cam Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A10) (LRR K, L, R) Som Mucky Preat (S9) (LRR K, L, R) Dark Surface (S9) (LRR K, L, M) Dark Surface (S9) (LRR K, L, M) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Fleidmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO			 						2		
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth	Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L, M) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Sandy Mucky Mineral (S1) Peiedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) 3 Indicators of hydrophytic vegetation and Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Dark Surface (A12) Sandy Mucky Mineral (F1) Sandy Gleyed Matrix (F2) Depleted Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Stripped Ma	Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) MIRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L, M) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (NVI=Neduced IVIati	ix, IVI3-IVId3KEG 3dilG Grailis							
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth	Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) S cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (S9) (LRR K, L) Thick Dark Surface (A11) Depleted Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (F2) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Polyvalue B	Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A11) Depleted Matrix (F3) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6)	Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) S cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (S9) (LRR K, L) Thick Dark Surface (A11) Depleted Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) S cm Mucky Peat or Peat (S3) (LRR K, L, M) Dark Surface (S9) (LRR K, L, M) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (Hydric Soil Indicator	S:							Indicators for Proble	matic Hydric Soil	s":
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth	Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified (A4) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Surface (S9) (LRR K, L, M) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Str	Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Blydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L, M) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (S9) (LRR K, L) Thin Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Surface (S9) (LRR K, L, M) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A12) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Str	Histosol (A1)			Polyval	lue Below	Surface (S8)	(LRR R,		2 cm Muck (A1	0) (LRR K, L, MLRA	149B)
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth	Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (F2) Depleted Dark Surface (F6) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S7) (LRR R, MLRA 149B) Sandy Gleyed Matrix (S6) Stripped Matrix (S6) Hydric Soil Present? NO	Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) (LRR K, L) Depleted Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (F2) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (F12) Other (Explain in Remarks) Restrictive Layer (if observed): Type: Depth (inches):	Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (F2) Depleted Dark Surface (A12) Sandy Gleyed Matrix (F3) Sandy Gleyed Matrix (F3) Thin Dark Surface (F3) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Cherrical (F12) Other (Explain in Remarks) NO Depth (inches):	Histic Epipedor	n (A2)		MLR	A 149B)				Coast Prairie R	edox (A16) (LRR K,	L, R)
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Peth Matrix Redox Features In) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 12 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% Description: CLAY Indicators: Indicators: Indicators: Indicators: Indicators for Problematic Hydric Soils³: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)	Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Stripped Matrix (S6) Bedox Depressions (F8) Redox Depressions (F10) Redox Depress	Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Cherrican in Remarks) NO Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Tend-Manganese Masses (F12) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Tend-Manganese Masses (F12) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Telephant Indian Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Tele	Black Histic (As	3)		Ihin Da	ark Surfac	e (S9) (LRR R,	, MLRA 149	9B)	5 cm Mucky Pe	at or Peat (S3) (LRI	R K, L, R)
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Peth Matrix Redox Features In) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 12 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% Proce C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Proce C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R, LR R, LR MLRA 149B) Histic Epipedon (A2) MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) To Som Mucky Peat or Peat (S3) (LRR K, L, R)	Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (F7) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Gisturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): 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 144B, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) NO Hydric Soil Present? NO	Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Hydrogen Sulfi	ide (A4)		Loamy	Mucky M	ineral (F1) (LF	RR K, L)		Dark Surface (S	9) (LRR K, L, M)	
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Peth Matrix Redox Features In) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 12 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% Proce C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Proce C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R, LR R, LR MLRA 149B) Histic Epipedon (A2) MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) To Som Mucky Peat or Peat (S3) (LRR K, L, R)	Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (F7) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Gisturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): 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 144B, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) NO Hydric Soil Present? NO	Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Stratified Lavor	rs (A5)		Loamy	Gleved M	latrix (F2)			Polyvalue Rolo	w Surface (SQ) (LDD	K 1)
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Peth Matrix Redox Features In) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks -12 10YR 4/2 100% ILOAM Pete: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R, L) Histosol (A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L, M) Dark Surface (S9) (LRR K, L, M) Dark Surface (S9) (LRR K, L, M)	Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F12) (MRR 149B) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Redox Dark Surface (F6) Redox Dark Surface (F6) Redox Dark Surface (F7) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144B, 145, 149B) Redox Dark Surface (F7) Mesic Spodic (TA6) (MLRA 144B, 145, 149B) Redox Dark Surface (F7) Red Parent Material (F21) Red Parent Material (F21) Red Parent Material (F21) Red Parent Material (F21) Red Parent Material (F2		. ,	(0.4.5)								• •
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Peth Matrix Redox Features In) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks PL2 10YR 4/2 100% ICLAY IOVR 1/2 10YR 3/2 90% 7.5YR 2.5/3 10% Peter C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Peter C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R, Indicators for Problematic Hydric Soils³: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Indicators for Problematic Hydric Soils Single Polyvalue Below Surface (S9) (LRR R, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L, M) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L)	Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Redox Depressions (F8) Redox Depressions (F8) 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	Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Redox Dark Surface (F6) Redox Dark Surface (F6) Redox Dark Surface (F7) Red Parent Material (F21) Red Parent Materi	Depleted Belov	w Dark Surfa	ce (A11)	Deplet	ea Matrix	(F3)			Thin Dark Surfa	ce (59) (LRR K, L)	
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Peth Matrix Redox Features In) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks PL2 10YR 4/2 100% ICLAY IOVR 1/2 10YR 3/2 90% 7.5YR 2.5/3 10% Peter C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Peter C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R, Indicators for Problematic Hydric Soils³: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Indicators for Problematic Hydric Soils Single Polyvalue Below Surface (S9) (LRR R, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L, M) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L)	Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 149B) Red Parent Material (F21) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Redox Depressions (F8) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Strip	Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Depleted Dark Surface (F7) Redox Depressions (F8) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Hydric Soil Present? NO	Thist Davis Conf	face (A12)							Iron Mana-	o Massas /F13\ // 5	DK I D/
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) appth Matrix Redox Features in) Color (moist) % Color (moist) % Type ¹ Loc ² Texture Remarks -12 10YR 4/2 100% CLAY -12 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM	Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Sandy Gleyed Matrix (\$4) Sandy Redox (\$55) Stripped Matrix (\$6) Dark Surface (\$77) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Hydric Soil Present? NO	Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Redox Depressions (F8) Redox Depressions (F8) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Redox Depressions (F8) Redox Depressions (F8) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) disturbed or problematic. Hydric Soil Present? NO	i nick Dark Surf	race (A12)		Redox	Dark Surfa	ace (F6)			Iron-Manganes	e iviasses (F12) (LR	к к, L, К)
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) appth Matrix Redox Features in) Color (moist) % Color (moist) % Type ¹ Loc ² Texture Remarks -12 10YR 4/2 100% CLAY -12 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM	Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Sandy Gleyed Matrix (\$4) Sandy Redox (\$5\$) Stripped Matrix (\$6\$) Dark Surface (\$7\$) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Redox Depressions (\$8\$) Red Parent Material (\$2\$1) Very Shallow Dark Surface (\$7\$) (LRR R, MLRA 149B) wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? NO	Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Redox Depressions (F8) Redox Depressions (F8) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Redox Depressions (F8) Redox Depressions (F8) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) disturbed or problematic. Hydric Soil Present? NO	Complete	dinoral (C1)		Danlet	ad Darli C	urface (F7)			Die des aut El-	Inlain Cail- (F10) (A	ALDA 1400\
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) appth Matrix Redox Features in) Color (moist) % Color (moist) % Type ¹ Loc ² Texture Remarks -12 10YR 4/2 100% CLAY -12 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM	Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Sandy Gleyed Matrix (\$4) Sandy Redox (\$55) Stripped Matrix (\$6) Dark Surface (\$77) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Hydric Soil Present? NO	Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Redox Depressions (F8) Redox Depressions (F8) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Redox Depressions (F8) Redox Depressions (F8) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) disturbed or problematic. Hydric Soil Present? NO	Sandy Widcky N	Autiet qt (21)		Deplet	en nark Sl	urrace (F/)			rieamont Floor	ihiaiii 20112 (£13) (I)	VILLY TAAR)
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) appth Matrix Redox Features in) Color (moist) % Color (moist) % Type ¹ Loc ² Texture Remarks -12 10YR 4/2 100% CLAY -12 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM	Sandy Redox (55) Stripped Matrix (56) Dark Surface (57) (LRR R, MLRA 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Hydric Soil Present? NO	Sandy Redox (S5) Stripped Matrix (S6) Park Surface (S7) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Red Parent Material (F21) Very Shallow Dark Surface (FF12) Other (Explain in Remarks) Other (Explain in Remarks) Hydric Soil Present? NO	Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Hydric Soil Present? NO											-
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth Matrix Redox Features in) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 12 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% Description: (Description: (Description: CLAY) Per C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Per C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R, Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Indicators for Problematic Hydric Soils³: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Location: PL=Pore Lining, M=Matrix. Polyvalue Below Surface (S9) (LRR R, Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Indicators for Problematic Hydric Soils³: Loam Muck (A10) (LRR K, L, MIRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Coast Prairie Redox (A16) (LRR K, L) Depleted Below Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B)	Sandy Redox (55) Stripped Matrix (56) Dark Surface (57) (LRR R, MLRA 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Hydric Soil Present? NO	Sandy Redox (S5) Stripped Matrix (S6) Park Surface (S7) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Red Parent Material (F21) Very Shallow Dark Surface (FF12) Other (Explain in Remarks) Other (Explain in Remarks) Hydric Soil Present? NO	Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Hydric Soil Present? NO	Sandy Gleved N	Matrix (S4)		Redox	Depression	ns (F8)			Mesic Spodic (1	Ab) (MLRA 144A. 1	(45, 149B)
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) epth Matrix Redox Features in) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 12 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% Description: (Description: (Description: CLAY) Per C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Per C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R, Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Indicators for Problematic Hydric Soils³: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Location: PL=Pore Lining, M=Matrix. Polyvalue Below Surface (S8) (LRR R, Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Indicators for Problematic Hydric Soils³: Loam Muck (A10) (LRR K, L, MIRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (S9) (LRR K, L) Thick Dark Surface (A11) Depleted Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Pledmont Floodplain Soils (F19) (MLRA 149B)	Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Total Matrix (S6) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? NO Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Hydric Soil Present? NO	Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Topic Matrix (S6) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? NO	Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Stripped Matrix (S6) Wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? NO					.,	/					, , , -,
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) appth Matrix Redox Features in) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks -12 10YR 4/2 100% CLAY -12+ 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM	Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Total Matrix (S6) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? NO Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Hydric Soil Present? NO	Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Restrictive Layer (if observed): Type: Depth (inches): Topic Matrix (S6) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? NO	Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Stripped Matrix (S6) Wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? NO	Sandy Dodoy 19	55)							Red Daront Ma	terial (F21)	
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) appth Matrix Redox Features in) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks -12 10YR 4/2 100% CLAY -12+ 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM	Dark Surface (S7) (LRR R, MLRA 149B) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Other (Explain in Remarks) Hydric Soil Present? NO	Dark Surface (S7) (LRR R, MLRA 149B) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Other (Explain in Remarks) Hydric Soil Present? NO	Dark Surface (S7) (LRR R, MLRA 149B) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Other (Explain in Remarks) Hydric Soil Present? NO	Januy Reudx (S	ادد							Neu Parent IVIa	terrar (FZI)	
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) appth Matrix Redox Features in) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks -12 10YR 4/2 100% CLAY -12+ 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM	Dark Surface (S7) (LRR R, MLRA 149B) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Other (Explain in Remarks) Hydric Soil Present? NO	Dark Surface (S7) (LRR R, MLRA 149B) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Other (Explain in Remarks) Hydric Soil Present? NO	Dark Surface (S7) (LRR R, MLRA 149B) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Other (Explain in Remarks) Hydric Soil Present? NO		-			-						
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) appth Matrix Redox Features in) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks -12 10YR 4/2 100% CLAY -12+ 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM	Dark Surface (S7) (LRR R, MLRA 149B) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Other (Explain in Remarks) Hydric Soil Present? NO	Dark Surface (S7) (LRR R, MLRA 149B) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Other (Explain in Remarks) Hydric Soil Present? NO	Dark Surface (S7) (LRR R, MLRA 149B) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Other (Explain in Remarks) Hydric Soil Present? NO		100			2						
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Pepth Matrix Redox Features In) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks -12 10YR 4/2 100% -12 10YR 3/2 90% 7.5YR 2.5/3 10% Depte C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R, Lindicators: Indicators for Problematic Hydric Soils³: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Lindicators) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L, M) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Red Parent Material (F21)	Dark Surface (S7) (LRR R, MLRA 149B) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Other (Explain in Remarks) Hydric Soil Present? NO	Dark Surface (S7) (LRR R, MLRA 149B) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Other (Explain in Remarks) Hydric Soil Present? NO	Dark Surface (S7) (LRR R, MLRA 149B) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Other (Explain in Remarks) Hydric Soil Present? NO	Ctringad Master	v /cs\			3,	Anna actions	and a second	and a second	Von Challe D	ark Surface /TE13\	
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Pepth Matrix Redox Features In) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks -12 10YR 4/2 100% -12 10YR 3/2 90% 7.5YR 2.5/3 10% Depte C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R, Lindicators: Indicators for Problematic Hydric Soils³: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Lindicators) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L, M) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Red Parent Material (F21)	Dark Surface (S7) (LRR R, MLRA 149B) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Other (Explain in Remarks) Hydric Soil Present? NO	Dark Surface (S7) (LRR R, MLRA 149B) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Other (Explain in Remarks) Hydric Soil Present? NO	Dark Surface (S7) (LRR R, MLRA 149B) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Other (Explain in Remarks) Hydric Soil Present? NO	stripped Matri:	x (30)			Indica	ators of hydro	ophytic ver	getation and	very Shallow D	ark Surface (TF12)	
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Pepth Matrix Redox Features In) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks -12 10YR 4/2 100% -12 10YR 3/2 90% 7.5YR 2.5/3 10% Depte C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R, Lindicators: Indicators for Problematic Hydric Soils³: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Lindicators) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L, M) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Red Parent Material (F21)	Restrictive Layer (if observed): Type: Hydric Soil Present? NO Depth (inches):	disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO											
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Pepth Matrix Redox Features In) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks -12 10YR 4/2 100% -12 10YR 3/2 90% 7.5YR 2.5/3 10% Depte C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R, Lindicators: Indicators for Problematic Hydric Soils³: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Lindicators) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L, M) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Red Parent Material (F21)	Restrictive Layer (if observed): Type: Hydric Soil Present? NO Depth (inches):	disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Dark Surface /6	S7) (IRR D M	I RΔ 1//QR\		wotlan	hydrolom.	nuct ha are	cont unlace	Other (Evalsia	in Remarke)	
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) ppth Matrix Redox Features in) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks -12 10YR 4/2 100% -12 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM	Restrictive Layer (if observed): Type: Hydric Soil Present? NO Depth (inches):	Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Restrictive Layer (if observed): Type: Hydric Soil Present? NO Depth (inches):	Dark Surface (S	3/) (LKK K, N	LNA 149B)		wetland	ı ilyarology m	iiust be pre	sent, unless	Other (Explain	ii veilig[K2]	
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) ppth Matrix Redox Features in) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks -12 10YR 4/2 100% -12 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM	Restrictive Layer (if observed): Type: Hydric Soil Present? NO Depth (inches):	Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? NO	Restrictive Layer (if observed): Type: Hydric Soil Present? NO Depth (inches):						dist	turbed or r	oroblematic.			
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Matrix Redox Features	Type: Hydric Soil Present? NO Depth (inches):	Type: Hydric Soil Present? NO Depth (inches):	Type: Hydric Soil Present? NO Depth (inches):	Postrictive Lawrence	obconic -1\				uisi	carbeu OI [or objettidlit.			
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Matrix Redox Features	Depth (inches):	Depth (inches):	Depth (inches):	Restrictive Layer (if o	observed):									
ofile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Matrix Redox Features	Depth (inches):	Depth (inches):	Depth (inches):	Type								I District of	Soil Present?	NO
offile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Parth Matrix Redox Features In Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 12 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% LOAM Per Ce-Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Polyvalue Below Surface (S8) (LRR R, L) Loamy Mucky Mineral (F1) (LRR K, L) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S8) (LRR K, L) Depleted Below Dark Surface (S8) (LRR K, L) Depleted Below Dark Surface (A12) Redox Parts (A12) Redox Parts (A12) Redox Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Depressions (F8) Redox (S5) (LRR R, MLRA 149B) Redox Dark Surface (T712) Other (Explain in Remarks) Polyvalue Below Dark Surface (F7) Polyvalue Below Surface (F7) Polyvalue Below Surface (F7) Polyvalue Below Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Piedmont	, , ,	, , ,	, , ,									HVATIC		
offile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) peth Matrix Redox Features in) Color (moist) % Color (moist) % Type¹ Loc² 10YR 4/2 100% 12+ 10YR 3/2 90% 7.5YR 2.5/3 10% Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) pet C-Lory 10YR 3/2 100% Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Texture Remarks CLAY LOAM DOAM DOAM Description: (Describe to the depth needed to document the indicators of Problematic Hydric Soil of LOAM Description: (Describe to the depth needed to document the indicators of Problematic Hydric Soil of LOAM Description: (Describe to the depth needed to document the indicators of Problematic Hydric Soil of LOAM Description: (Describe to the depth needed to document the indicators of Problematic Hydric Soil of LOAM Description: (Description: (Description: (Description: Description: (Description: Description: (Description: Description: (Description: (Description: Description: (Description: Description: (Description: Description: (Description: Description: (Description: (Description: Description: (Description: Description: (Description: Description: (Description: Description: (Description: (Description: Description: (Description: Description: (Description: Description: (Description: (Descri	, , ,	, , ,	, , ,									Hydric		NO
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		A h l - + -	Da.==	1		
T	Charles (District and DAD)	Absolute	Dom.	Indicator	B. of contract Western	
	Stratum (Plot size: 30' RAD)	% Cover	Sp?	Status	Dominance Test Worksheet:	
	Populus grandidentata	10	X	FACU	# Dominants OBL, FACW, FAC:	(A)
2.	Fraxinus americana	5	X	FACU		
3.	Tilia americana	5	Х	FACU	# Dominants across all strata: 11	(B)
4.	Betula papyrifera	2		FACU		
5.					% Dominants OBL, FACW, FAC:	(A/B)
6.		-			, , <u> </u>	_``'
7.					Prevalence Index Worksheet:	
٧.		22	= Tota	Cause		
6 II	ng Stratum (Plot size: 15' RAD)		= 101a	Cover	Total % Cover of: Multiply By	<u>. </u>
					OBL x 1 =	_
1.	Acer spicatum	20	X	FACU	FACW 15 x 2 = 30	_
2.	Cornus sericea	5		FACW	FAC x 3 =	
3.	Ostrya virginiana	5		FACU	FACU 137 x 4 = 548	
4.	Rhus hirta	5		FACU	UPL x 5 =	·
5.					Sum: 152 (A) 578	(B)
6.					, ,	_` ′
7.					Prevalence Index = B/A = 3.80	
7.					Frevalence index - B/A - 3.80	_
		35	= Total	Cover	Hydrophytic Vegetation Indicators:	
Shrul	Stratum (Plot size: 15' RAD)				Dominance Test is > 50%	
1.	Lonicera morrowii	20	Х	FACU	Prevalence Index is <= 3.0	
2.	Rubus odoratus	15	Х		Problematic Hydrophytic Vegetation (ex	plain)
3.	Salix bebbiana	5		FACW	Rapid Test for Hydrophytic Vegetation	
4.					Morphological Adaptations	
5.		·			¹ Indicators of hydric soil and wetland hydrology must be pr	esent,
6.					unless disturbed or problematic.	
7.					Definitions of Vegetation Strata:	
		40	= Total	Cover		
Herb	Stratum (Plot size: 5' RAD)				Tree - Woody plants, excluding woody vines, approximate	ly 20ft
1.	Solidago canadensis	20	Х	FACU	(6m) or more in height and 3in (7.6cm) or larger in diamete	r at breast
2.	Acer spicatum	10	X	FACU	height (DBH).	
	Maianthemum racemosum	10	X	FACU		
	Lonicera morrowii	5	<u> </u>	FACU	Sapling - Woody plants, excluding woody vines, approxin	ataly 20ft
	Cornus sericea			FACW	(6m) or more in height and less than 3in (7.6cm) DBH.	lately 2010
		5			(,,,,,,,	
	Rubus allegheniensis	5		FACU		
7.						
8.					Shrub - Woody plants, excluding woody vines, approxima	tely 3 to
9.					20ft (1 to 6m) in height.	
10.						
11.					Herb - All herbaceous (non-woody) plants, including herb	aceous
12.		·			vines, regardless of size. Includes woody plants, except woo	
12.					less than approximately 3ft (1m) in height.	
	451 DAD	55	= Total	Cover		
	dy Vines (Plot size: 15' RAD)					
1.	Vitis labrusca	10	Х	FACU		
2.	Fragaria virginiana	5	Х	FACU	Woody vine - All woody vines, regardless of height.	
3.						
4.					Hydrophytic	
5.					Vegetation	
		15	= Tota	Cover	Present? NO	
			- 10ta	Cover	rieseitt:	_
Remark	s: (If observed, list morphological adaptations below).					



Project Sit	۵.	Sandhar 9	Substation Sma	rt Valve	(City/County:	Milton			Samp. Date: 7	/19/2024
Applicant,	_	VELCO	abstation sina	it valve	—`	nty/ County.	State:	VT	Sampling Point:		-1-WET
Investigat	-	VHB (AP,	EM)			Sectio	_	nip, Range:	Chittenden		
. •	(hillslope, terr		Basin					convex, none):	None	Slope (%):	2- 6%
	(LRR or N		LRR R		Lat:	44.61248		Long:	-73.205585	Datum:	NAD 83
Soil Map l	Jnit:	Munson a	nd Raynham si	It loams 2 to 6 percen	t slop	es.				NWI Class:	PEM/PFO
Are climat	ic/hydrolog	ic conditi	ons on the site	typical for this time of	year?		Yes	(If no,	explain in Remarks.)		
Are Veget	ation, Soil,	or Hydrol	ogy significantly	disturbed?	-		No	_	Normal Cir	cumstances?	Yes
Are Veget	ation, Soil,	or Hydrol	ogy naturally pr	oblematic?			No		(If needed, ex	plain any answ	ers in Remarks.)
				_					_		
SUMMA	ARY OF FI	NDING:	S - Attach sit	e map showing s	ampl	le point lo	ocations	, transects	s, important featu	ires, etc.	
Hydrophy	tic Vegetati	on Presen	t?	YES							
Hydric Soi	l Present?			YES				Is This	Sample Area Within	a Wetland?	YES
Wetland H	Hydrology P	resent?		YES							<u> </u>
Remarks:							*				
Ro	adside dep	oression	near base of r	ocky outcrop							
HYDROI	LOGY										
	Hydrology Ir	ndicators:							Secondary Indicators	(minimum of t	wo required)
			f one is require	d; check all that apply)				Surface Soil Cra		
	face Water (Water-Stained I		(B9)		-	Drainage Patte		
	h Water Tabl	•		Aquatic Fauna (Moss Trim Line		
	uration (A3)			Marl Deposits (E					Dry-Season Wa		
	ter Marks (B	1)		Hydrogen Sulfid		(C1)			Crayfish Burrov		
Sec	diment Depos	its (B2)		Oxidized Rhizos	pheres	on Living Roc	ots (C3)		Saturation Visib	ole on Aerial (C9)	
Dri	ft Deposits (B	3)		Presence of Red	luced I	ron (C4)			Stunted or Stre	ssed Plants (D1)	
Alg	al Mat or Cru	ıst (B4)		Recent Iron Red	luction	in Tilled Soils	(C6)		X Geomorphic Po	sition (D2)	
	n Deposits (B	-		Thin Muck Surfa					Shallow Aquita		
	ndation Visib			Other (Explain in	n Rema	rks)			Microtopograp		
Spa	arsely Vegeta	ted Concav	e Surface (B8)						X FAC-Neutral Te	st (D5)	
Field Obse	ervations:										
Surface W	ater Presen	ıt?		Depth (inch	ies):		_				
	ole Present?)		Depth (inch			_	Wetland	d Hydrology Present?		YES
Saturation	n Present?		Х	Depth (inch	ies):	10					
Remarks:											
SOIL								6. 1.			
	scription: (L		o the depth nee	eded to document the			rm the abs	sence of indic	cators.)		
Depth		Matrix			Read	ox Features	_ 1	. 2			
(in)	Color (n		%	Color (moist)		%	Type ¹	Loc²	Texture	Re	emarks
0-10	10YR 4		100%						SANDY LOAM SAND		
10-13	2.31	,, s	100%						JAND		
¹ Type: C=Cor	ncentration, D	Depletion,	RM=Reduced Matri	x, MS=Masked Sand Grains.					² Location: PL=Pore Lining,	M=Matrix.	
Hydric Soi	I Indicators:								Indicators for Proble	matic Hydric So	ils ³ :
•				Dalamak) / DD D			•	
	tosol (A1) tic Epipedon	(42)				w Surface (S8	3) (LKK K,			0) (LRR K, L, MLRA	•
					(149B)		D MIDA 14	OB)		edox (A16) (LRR K	
	ck Histic (A3) drogen Sulfid					ace (S9) (LRR Mineral (F1) (98)		at or Peat (S3) (LF	(K K, L, K)
	atified Layers				,	Matrix (F2)	LKK K, L)		Dark Surface (S	w Surface (S8) (LR	BK I)
	pleted Below		ICO (A11)	Deplete						ice (S9) (LRR K, L)	K K, L)
	ck Dark Surfa		ce (AII)			rface (F6)				ice (39) (LKK K, L) ie Masses (F12) (L	BBK I B)
	ndy Mucky M					Surface (F7)				dplain Soils (F19) (
	ndy Gleyed M					sions (F8)				7A6) (MLRA 144A,	
	ndy Redox (S5				-ср. сос				Red Parent Ma		1.5, 1.55,
	ipped Matrix	-			3Ind	icators of hyd	lrophytic ve	getation and		ark Surface (TF12)
	rk Surface (S7		ILRA 149B)			nd hydrology	must be pr	esent, unless	X Other (Explain		,
Restrictive	e Layer (if ol	bserved):				di	isturbed or	problematic.			
	, ,	Rock Ref	usal						Hydric	Soil Present?	YES
Depth	n (inches):								· ·	_	-
Remarks:											
						-			fined in Chapter 3 of the No time of delineation (7/19),	-	

			Absolute	Dom.	Indicator			
Tree	Stratum (Plot size:	30' RAD)	% Cover	Sp?	Status	Dominance Test Worksheet:		
	Populus grandidentata	,	20	X	FACU	# Dominants OBL, FACW, FAC:	3	(A)
2.	r opulus granulucitata				TACO	# bollillaits obt, l'Acw, l'Ac.		(^)
3.						# Dominants across all strata.	8	(D)
						# Dominants across all strata:		_(B)
4.						N/ Davidson to ODL FACIN/ FAC	200/	(A /D)
5.						% Dominants OBL, FACW, FAC:	38%	(A/B)
6.								
7.						Prevalence Index Worksheet:		
		ITI DAD	20	= Total	Cover		ultiply By:	-
	ng Stratum (Plot size:	15' RAD)				OBL x 1 =		-
1.						FACW 100 x 2 =	200	-
2.						FAC 20 x 3 =	60	_
						FACU 50 x 4 =	200	-
4.						UPL x 5 =		-
5.						Sum: <u>170</u> (A)	460	(B)
6.								
7.						Prevalence Index = B/A =	2.71	_
				= Total	Cover	Hydrophytic Vegetation Indicators:		
Shru	b Stratum (Plot size:	15' RAD)				Dominance Test is > 50%		
1.	Salix bebbiana		25	X	FACW	X Prevalence Index is <= 3.0		
2.	Rhus hirta		10	Х	FACU	Problematic Hydrophytic Vege	tation ¹ (expl	ain)
3.	Lonicera morrowii		10	X	FACU	Rapid Test for Hydrophytic Veg	getation	
4.	Fraxinus pennsylvanica		5		FACW	X Morphological Adaptations		
5.						¹ Indicators of hydric soil and wetland hydrology	must be pres	ent.
6.						unless disturbed or problematic.	mast be pres	c,
7.						Definitions of Vegetation Strata:		
			50	= Total	Cover			
Herb	Stratum (Plot size:	5' RAD)				Tree - Woody plants, excluding woody vines, a	pproximately	20ft
1.	Phragmites australis	,	60	х	FACW	(6m) or more in height and 3in (7.6cm) or larger	r in diameter	at breast
2.			25	X		height (DBH).		
3.	Onoclea sensibilis		10		FACW			
4.	Rhamnus cathartica		5		FAC	Sapling - Woody plants, excluding woody vine	es, approxima	tely 20ft
5.						(6m) or more in height and less than 3in (7.6cm		·
6.								
7.								
8.						Shrub - Woody plants, excluding woody vines	. approximate	lv 3 to
9.						20ft (1 to 6m) in height.	,	.,
10.								
11.						Herb - All herbaceous (non-woody) plants, inc	luding herhad	enus
12.						vines, regardless of size. Includes woody plants,		
12.			100	- Total	Cover	less than approximately 3ft (1m) in height.		
Woo	dy Vines (Plot size:	15' RAD)		= Total	COVE			
)	15	v	EAC			
	Vitis riparia		10	X	FACU	Woody vine - All woody vines, regardless of	haiaht	
	Fragaria virginiana				FACU	WOOdy Ville - All Woody Villes, regardless of	neignt.	
3.						Unidas ale at		
4.						Hydrophytic		
5.						•		
			25	= Total	Cover	Present?	YES	-
5.	s: (If observed, list morphologica	al adaptations below).	25	= Total	Cover	Vegetation Present?	YES	_



Project Site:		ubstation Smart	Valve	City/County:	Milton			Samp. Date: 7	
Applicant/Ow				C1'	State:	VT	Sampling Point	:M	I-3-UPL
nvestigator(s	· <u> </u>	FI				ip, Range:	Chittenden	Slope (%):	3- 8%
	slope, terrace, etc.): RR or MLRA):	Flat LRR R	Lat:	Local relief 44.610 6		Long:	-73.20444		NAD 83
Soil Map Unit			, 3 to 8 percent slopes	44.0100	701	Long.	-73.20444	NWI Class:	Upland
			pical for this time of year?	?	Yes	(If no,	explain in Remarks.)		- Opiana
-	n, Soil, or Hydrolo		•		No	, -,		Circumstances?	Yes
-	n, Soil, or Hydrolo				No		_	explain any answ	ers in Remark
							_		
SUMMARY	OF FINDINGS	S - Attach site	map showing samp	le point lo	cations,	transect	s, important feat	tures, etc.	
-lydrophytic \	egetation Presen	t? _	NO						
Hydric Soil Pr	esent?	_	NO			Is This	Sample Area With	in a Wetland? _	NO
	rology Present?		YES						
Remarks:									
Narro	w inundated we	tland present v	vithin ROW and continu	uing into adj	acent for	est. Draine	ed by incised epher	neral channel.	
HYDROLO	GΥ								
	ology Indicators:				-		Secondary Indicato		two required)
		t one is required;	; check all that apply)				Surface Soil (
	Water (A1)	_	Water-Stained Leaves	s (B9)			Drainage Pat		
	ater Table (A2)	-	Aquatic Fauna (B13)				Moss Trim Li		
X Saturat		_	Marl Deposits (B13)	(04)				Water Table (C2)	
	Marks (B1)	-	Hydrogen Sulfide Odo		tc (C2)		Crayfish Burr		
	nt Deposits (B2)	-	Oxidized Rhizospheres	-	IS (C3)			isible on Aerial (C9)	
	eposits (B3) lat or Crust (B4)	-	Presence of Reduced Recent Iron Reduction		(CE)		Geomorphic	ressed Plants (D1)	
	posits (B5)	=	Thin Muck Surface (C7		(CO)		Shallow Aqui		
	tion Visible on Aeria	_ I (B7)	Other (Explain in Rem					aphic Relief (D4)	
	y Vegetated Concav	· · · · · -					FAC-Neutral		
ield Observa									
ieiu Obsei va									
Surface Wate			Denth (inches):						
	r Present?		Depth (inches):			Wetlan	d Hydrology Presenti	>	VFS
Water Table Footbatter Table Footbatter Table Footbatter Table Footbatter Table Footbatter Table Footbatter Footbatter Table Footbatter Table Footbatter F	r Present? Present? esent? orded Data (strear		Depth (inches): Depth (inches): Depth (inches): ring well, aerial photos, pr /T (NWS 2024); PDSI 0.9			vailable:	d Hydrology Presenti ng 7/27/2024	? _	YES
Water Table F Saturation Pro Describe Recc 1.08" of rain Remarks:	r Present? Present? esent? orded Data (strear	n gauge, monito	Depth (inches): Depth (inches): ring well, aerial photos, pr	evious inspec		vailable:		-	YES
Water Table F Saturation Pro Describe Reco L.08" of rain Remarks:	r Present? Present? esent? orded Data (stream in 5 days prior	n gauge, monitoi in Burlington, \	Depth (inches): Depth (inches): ring well, aerial photos, pr /T (NWS 2024); PDSI 0.9	evious inspec 95 (Near Noi	rmal) for	vailable: week endi	ng 7/27/2024	-	YES
Water Table Footuration Processribe Recolors Remarks: SOIL Profile Descrip	r Present? Present? esent? orded Data (strear i in 5 days prior ption: (Describe to Matrix	n gauge, moniton in Burlington, \	Depth (inches): Depth (inches): ring well, aerial photos, pr /T (NWS 2024); PDSI 0.9	evious inspec 95 (Near Noi ator or confiri ox Features	m the abse	vailable: week endi	ng 7/27/2024		
Nater Table Figaturation Processribe Recol08" of rain Remarks: SOIL Profile Descrip Depth (in)	r Present? Present? esent? orded Data (strear i in 5 days prior ption: (Describe to Matrix Color (moist)	n gauge, monitor in Burlington, \ o the depth need	Depth (inches): Depth (inches): ring well, aerial photos, pr /T (NWS 2024); PDSI 0.9	evious inspec 95 (Near Noi	rmal) for	vailable: week endi	ng 7/27/2024 cators.)	F	YES
Vater Table Flaturation Processible Recol. 1.08" of rain Remarks: SOIL Profile Descripeth (in) 1.09	r Present? Present? esent? orded Data (strear i in 5 days prior ption: (Describe to Matrix	n gauge, moniton in Burlington, \	Depth (inches): Depth (inches): ring well, aerial photos, pr /T (NWS 2024); PDSI 0.9	evious inspec 95 (Near Noi ator or confiri ox Features	m the abse	vailable: week endi	ng 7/27/2024	F	
Vater Table Flaturation Processible Recol. 1.08" of rain Remarks: SOIL Profile Descripeth (in) 1.09	r Present? Present? esent? orded Data (stream in 5 days prior ption: (Describe to Matrix Color (moist) 10YR 4/3	o the depth need 100%	Depth (inches): Depth (inches): ring well, aerial photos, pr /T (NWS 2024); PDSI 0.9	evious inspec 95 (Near Noi ator or confiri ox Features	m the abse	vailable: week endi	ng 7/27/2024 cators.) Texture FINE SANDY LOAM	F	
Vater Table Flaturation Processible Recol. 1.08" of rain Remarks: SOIL Profile Descripeth (in) 1.09	r Present? Present? esent? orded Data (stream in 5 days prior ption: (Describe to Matrix Color (moist) 10YR 4/3	o the depth need 100%	Depth (inches): Depth (inches): ring well, aerial photos, pr /T (NWS 2024); PDSI 0.9	evious inspec 95 (Near Noi ator or confiri ox Features	m the abse	vailable: week endi	ng 7/27/2024 cators.) Texture FINE SANDY LOAM	F	
Nater Table Figaturation Processribe Recol08" of rain Remarks: SOIL Profile Descrip Depth (in)	r Present? Present? esent? orded Data (stream in 5 days prior ption: (Describe to Matrix Color (moist) 10YR 4/3	o the depth need 100%	Depth (inches): Depth (inches): ring well, aerial photos, pr /T (NWS 2024); PDSI 0.9	evious inspec 95 (Near Noi ator or confiri ox Features	m the abse	vailable: week endi	ng 7/27/2024 cators.) Texture FINE SANDY LOAM	F	
Nater Table Fisaturation Processribe Recol08" of rain Remarks: SOIL Profile Descripeth (in) 0-9 9-16	r Present? Present? esent? orded Data (stream in 5 days prior ption: (Describe to Matrix Color (moist) 10YR 4/3 2.5Y 4/2	o the depth need 100% 100%	Depth (inches): Depth (inches): ring well, aerial photos, pr /T (NWS 2024); PDSI 0.5 ed to document the indica Red Color (moist)	evious inspec 95 (Near Noi ator or confiri ox Features	m the abse	vailable: week endi	ng 7/27/2024 cators.) Texture FINE SANDY LOAM FINE SAND	F	
Water Table F Saturation Pro Describe Recc L.08" of rain Remarks: SOIL Profile Descri Depth (in) 0-9 9-16	r Present? P	o the depth need 100% 100%	Depth (inches): Depth (inches): ring well, aerial photos, pr /T (NWS 2024); PDSI 0.9	evious inspec 95 (Near Noi ator or confiri ox Features	m the abse	vailable: week endi	rators.) Texture FINE SANDY LOAM FINE SAND	R I Ing, M=Matrix.	emarks
Water Table F Saturation Pro Describe Recc L.08" of rain Remarks: SOIL Profile Descri Depth (in) 0-9 9-16	r Present? P	o the depth need 100% 100%	Depth (inches): Depth (inches): ring well, aerial photos, pr /T (NWS 2024); PDSI 0.5 ed to document the indica Red Color (moist)	evious inspec 95 (Near Noi ator or confiri ox Features	m the abse	vailable: week endi	ng 7/27/2024 cators.) Texture FINE SANDY LOAM FINE SAND	R I Ing, M=Matrix.	emarks
Water Table F Saturation Pro Describe Recc 1.08" of rain Remarks: SOIL Profile Descri Depth (in) 0-9 9-16 Type: C=Concen	r Present? Present? Present? present? present in 5 days prior prion: (Describe to Matrix Color (moist) 10YR 4/3 2.5Y 4/2 tration, D=Depletion, Idicators:	o the depth need 100% 100%	Depth (inches): Depth (inches): Depth (inches): ring well, aerial photos, pr /T (NWS 2024); PDSI 0.9 ed to document the indicated Red Color (moist) MS=Masked Sand Grains.	evious inspec 95 (Near Noi ator or confiri ox Features	m the abse	vailable: week endi	Texture FINE SANDY LOAM FINE SAND Location: PL=Pore Linir Indicators for Prob	R I Ing, M=Matrix.	emarks bils ³ :
SOIL Profile Descripepth (in) 0-9 9-16 Type: C=Concen Histoso	r Present? Present? Present? present? present in 5 days prior prion: (Describe to Matrix Color (moist) 10YR 4/3 2.5Y 4/2 tration, D=Depletion, Idicators:	o the depth need 100% 100%	Depth (inches): Depth (inches): Depth (inches): ring well, aerial photos, pr /T (NWS 2024); PDSI 0.9 ed to document the indicated Red Color (moist) MS=Masked Sand Grains.	ator or confiri	m the abse	vailable: week endi	rators.) Texture FINE SANDY LOAM FINE SAND	R Ng, M=Matrix.	emarks bils ³ : A 149B)
Water Table F Saturation Pro Describe Recc 1.08" of rain Remarks: SOIL Profile Descri Depth (in) 0-9 9-16 Type: C=Concen Hydric Soil Ind Histoso Histic E Black H	r Present? P	o the depth need 100% 100%	Depth (inches): Depth (inches): Depth (inches): Fing well, aerial photos, pr IT (NWS 2024); PDSI 0.5 To ded to document the indicate Red Color (moist) MS=Masked Sand Grains. Polyvalue Bele MLRA 1498 Thin Dark Surfi	ator or confiri lox Features %	m the abse	vailable: week endi	Texture FINE SANDY LOAM FINE SAND *Location: PL=Pore Linir Indicators for Prob 2 cm Muck (i Coast Prairie 5 cm Mucky	ng, M=Matrix. Jlematic Hydric So A10) (LRR K, L, MLR Redox (A16) (LRR K Peat or Peat (S3) (L	emarks bils ³ : A 149B)
Water Table F Saturation Pro Describe Reco L.08" of rain Remarks: SOIL Profile Descri Depth (in) 0-9 9-16 Type: C=Concen Hydric Soil Ind Histoso Histic E Black H Hydrog	r Present? Present? Present? present? present in 5 days prior prion: (Describe to Matrix Color (moist) 10YR 4/3 2.5Y 4/2 tration, D=Depletion, idicators: id (A1) pipedon (A2) istic (A3) en Sulfide (A4)	o the depth need 100% 100%	Depth (inches): Depth (inches): Depth (inches): Fing well, aerial photos, pr IT (NWS 2024); PDSI 0.9 To depth (inches): To depth (inches): To depth (inches): To depth (inches): Red To depth (inches): Depth (inc	ator or confirming the service of th	m the abse	vailable: week endi	Texture FINE SAND FINE SAND 2 Location: PL=Pore Linir Indicators for Prob 2 cm Muck (Coast Prairie 5 cm Mucky Dark Surface	ng, M=Matrix. Ilematic Hydric Sc A10) (LRR K, L, MLR Redox (A16) (LRR k Peat or Peat (S3) (L (S9) (LRR K, L, M)	emarks bils ³ : A 149B) 5, L, R) RR K, L, R)
Water Table F Saturation Pro Describe Reco L.08" of rain Remarks: SOUL Profile Descri Depth (in) 0-9 9-16 Type: C=Concen Histose Histose Black H Hydrog Stratific	r Present? Present? Present? Present? present? present in 5 days prior potion: (Describe to Matrix Color (moist) 10YR 4/3 2.5Y 4/2 tration, D=Depletion, Idicators: Id (A1) pipedon (A2) istic (A3) en Sulfide (A4) ed Layers (A5)	o the depth need Was 100%	Depth (inches): Depth (inches): Depth (inches): Pepth (inches): Ing well, aerial photos, pr IT (NWS 2024); PDSI 0.9 To (NWS 2024); PDSI 0.9 Ed to document the indicate of	ator or confirmox Features % bow Surface (S8) face (S9) (LRR R Mineral (F1) (L	m the abse	vailable: week endi	Texture FINE SANDY LOAM FINE SAND *Location: PL=Pore Linir Indicators for Prob 2 cm Muck (# Coast Prairie 5 cm Mucky Dark Surface Polyvalue Be	ng, M=Matrix. Dematic Hydric Sc A10) (LRR K, L, MLR Redox (A16) (LRR K) Peat or Peat (S3) (L (S9) (LRR K, L, M) low Surface (S8) (Li	emarks bils ³ : A 149B) C, L, R) RR K, L, R)
Water Table F Saturation Pro Describe Recc 1.08" of rain Remarks: SOIL Profile Descri Depth (in) 0-9 9-16 Type: C=Concen Histoso Histic E Black H Hydrog Stratific Deplete	r Present? P	o the depth need Was 100%	Depth (inches): Depth (inches): Depth (inches): Fing well, aerial photos, pr IT (NWS 2024); PDSI 0.5 Ed to document the indicate of the indi	ator or confiri ox Features % by Surface (S8)) face (S9) (LRR R Mineral (F1) (L I Matrix (F2)	m the abse	vailable: week endi	Texture FINE SANDY LOAM FINE SAND **Location: PL=Pore Linir Indicators for Prob 2 cm Muck (i Coast Prairie 5 cm Mucky Dark Surface Polyvalue Be Thin Dark Sur	, M=Matrix. Ilematic Hydric Sc A10) (LRR K, L, MLR R Redox (A16) (LRR K, L, M) (S9) (LRR K, L, M) low Surface (S8) (LI rface (S9) (LRR K, L)	emarks bils ³ : 4, 1498) 5, L, R, RR K, L, R)
Water Table F Saturation Pro Describe Recc 1.08" of rain Remarks: SOIL Profile Descri Depth (in) 0-9 9-16 Type: C=Concen Hydric Soil Ind Histoso Histic E Black H Hydrog Stratific Deplete Thick D	r Present? P	o the depth need Was 100%	Depth (inches): Depth (inches): Depth (inches): Fing well, aerial photos, pr IT (NWS 2024); PDSI 0.5 To (NWS 2024); PDS	ator or confiri lox Features % bow Surface (S8)) face (S9) (LRR R Mineral (F1) (L Matrix (F2) Lrix (F3) Lrix (F6)	m the abse	vailable: week endi	Texture FINE SANDY LOAM FINE SAND **Location: PL=Pore Linir* Indicators for Prob	ng, M=Matrix. Ilematic Hydric Sc A10) (LRR K, L, MLR Redox (A16) (LRR K) Peat or Peat (S3) (L (S9) (LRR K, L, M) low Surface (S8) (LI rface (S9) (LRR K, L)	emarks bils ³ : A 149B) S, L, R) RR K, L, R) RR K, L, R)
Water Table F Saturation Pro Describe Recc 1.08" of rain Remarks: SOIL Profile Descri Depth (in) 0-9 9-16 Type: C=Concen Hydric Soil Ind Histoso Histic E Black H Hydrog Stratific Deplete Thick D Sandy I	r Present? P	o the depth need Was 100%	Depth (inches): Depth (inches): Depth (inches): Fing well, aerial photos, pr IT (NWS 2024); PDSI 0.5 To (NWS 2024); PDSI 0.5 Ed to document the indicate Red Color (moist) MS=Masked Sand Grains. Polyvalue Beld MLRA 149B Thin Dark Surf Loamy Mucky Loamy Gleyed Depleted Mat Redox Dark St Depleted Dark Depleted Dark	ator or confiri lox Features % bow Surface (S8) face (S9) (LRR R Mineral (F1) (L Matrix (F2) trix (F2) trix (F6) k Surface (F6)	m the abse	vailable: week endi	rators.) Texture FINE SANDY LOAM FINE SAND	Redox (A16) (LRR K, L, MLR Redox (A16) (LRR K, L, M) (S9) (LRR K, L, M) (bw Surface (S8) (LI rface (S9) (LRR K, L) (bodplain Soils (F12) (bodplain Soils (F12) (bodplain Soils (F13)	emarks bils ³ : A 149B) S, L, R) RR K, L, R) RR K, L, R) LRR K, L, R) (MLRA 149B)
Water Table F Saturation Pro Describe Recc 1.08" of rain Remarks: SOIL Profile Descri Depth (in) 0-9 9-16 Type: C=Concen Hydric Soil Ind Histoso Histic E Black H Hydrog Stratific Deplete Thick D Sandy N Sandy O Sandy O Sandy O	r Present? P	o the depth need Was 100%	Depth (inches): Depth (inches): Depth (inches): Fing well, aerial photos, pr IT (NWS 2024); PDSI 0.5 To (NWS 2024); PDS	ator or confiri lox Features % bow Surface (S8) face (S9) (LRR R Mineral (F1) (L Matrix (F2) trix (F2) trix (F6) k Surface (F6)	m the abse	vailable: week endi	Texture FINE SANDY LOAM FINE SAND **Location: PL=Pore Linir Indicators for Prob 2 cm Mucky Coast Prairie 5 cm Mucky Dark Surface Polyvalue Be Thin Dark Sur Iron-Mangan Piedmont Flo Mesic Spodio Mesic Spodio	ng, M=Matrix. Ilematic Hydric So A10) (LRR K, L, MLR Redox (A16) (LRR K) Peat or Peat (S3) (L (S9) (LRR K, L, M) low Surface (S8) (LI rface (S9) (LRR K, L) ese Masses (F12) (codplain Soils (F19) c (TA6) (MLRA 144A	emarks bils ³ : A 149B) C, L, R) RR K, L, R) RR K, L, R) LRR K, L, R) (MLRA 149B)
Water Table F Saturation Pro Describe Recc 1.08" of rain Remarks: SOIL Profile Descri Depth (in) 0-9 9-16 Type: C=Concen Hydric Soil Inc Histoso Histic E Black H Hydrog Stratific Deplete Thick D Sandy F Sandy G Sandy F	r Present? Present? Present? Present? prion: (Describe to Matrix Color (moist) 10YR 4/3 2.5Y 4/2 tration, D=Depletion, Idicators: Id (A1) pipedon (A2) istic (A3) en Sulfide (A4) ed Layers (A5) ed Below Dark Surfa ark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) Redox (S5)	o the depth need Was 100%	Depth (inches): Depth (inches): Depth (inches): Pepth (inches): Ting well, aerial photos, pr IT (NWS 2024); PDSI 0.9 To (NWS 2024); PDSI 0.9 To (NWS 2024); PDSI 0.9 To (NWS 2024); PDSI 0.9 Red Color (moist) Polyvalue Beld MLRA 149B Thin Dark Surl Loamy Mucky Loamy Mucky Loamy Gleyed Depleted Darl Redox Dark Surl Depleted Darl Redox Depres	ator or confiring to the state of the state	m the abse	vailable: week endi	Texture FINE SANDY LOAM FINE SAND *Location: PL=Pore Linir Indicators for Prob 2 cm Mucky Coast Prairie 5 cm Mucky Dark Surface Polyvalue Be Thin Dark Sur Iron-Mangan Piedmont Flc Mesic Spodic Red Parent M	ng, M=Matrix. Dematic Hydric Socato) (LRR K, L, MLR Redox (A16) (LRR K, L, MLR Redox (A16) (LRR K, L, M) Low Surface (S8) (LI rface (S9) (LRR K, L) Lese Masses (F12) (Loodplain Soils (F19) Les (TA6) (MLRA 144A Material (F21)	emarks bils ³ : A 149B) C, L, R) RR K, L, R) RR K, L, R) (MLRA 149B) , 145, 149B)
Water Table F Saturation Pro Describe Reco 1.08" of rain Remarks: SOIL Profile Descri Depth (in) 0-9 9-16 Type: C=Concen Hydric Soil Ind Histoso Histic E Black H Hydrog Stratific Deplete Thick D Sandy F Sandy G Sandy G Sandy G Strippe	r Present? P	o the depth need % 100% 100% 2M=Reduced Matrix,	Depth (inches): Depth (inches): Depth (inches): Ting well, aerial photos, pr IT (NWS 2024); PDSI 0.5 ed to document the indicate of the indi	ator or confirming the state of	m the abse	ence of indic	Texture FINE SANDY LOAM FINE SAND *Location: PL=Pore Linir Indicators for Prob 2 cm Muck (// Coast Prairie 5 cm Mucky) Dark Surface Polyvalue Be Thin Dark Surlace Polyvalue Be Thin Dark Surface Polyvalue Be	ng, M=Matrix. Dematic Hydric Sc A10) (LRR K, L, MLR Redox (A16) (LRR K, L, M) low Surface (S8) (LI rface (S9) (LRR K, L) rese Masses (F12) (odplain Soils (F19) (TA6) (MLRA 144A Aterial (F21)	emarks bils ³ : A 149B) C, L, R) RR K, L, R) RR K, L, R) (MLRA 149B) , 145, 149B)
Water Table F Saturation Pro Describe Reco 1.08" of rain Remarks: SOIL Profile Descri Depth (in) 0-9 9-16 Type: C=Concen Hydric Soil Ind Histoso Histic E Black H Hydrog Stratific Deplete Thick D Sandy F Sandy G Sandy G Sandy G Strippe	r Present? Present? Present? Present? prion: (Describe to Matrix Color (moist) 10YR 4/3 2.5Y 4/2 tration, D=Depletion, Idicators: Id (A1) pipedon (A2) istic (A3) en Sulfide (A4) ed Layers (A5) ed Below Dark Surfa ark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) Redox (S5)	o the depth need % 100% 100% 2M=Reduced Matrix,	Depth (inches): Depth (inches): Depth (inches): Ting well, aerial photos, pr IT (NWS 2024); PDSI 0.5 ed to document the indicate of the indi	ator or confirming the state of	m the abset Type Type (LRR R, M, MLRA 149 RR K, L)	ence of indic	Texture FINE SANDY LOAM FINE SAND *Location: PL=Pore Linir Indicators for Prob 2 cm Muck (// Coast Prairie 5 cm Mucky) Dark Surface Polyvalue Be Thin Dark Surlace Polyvalue Be Thin Dark Surface Polyvalue Be	ng, M=Matrix. Dematic Hydric Socato) (LRR K, L, MLR Redox (A16) (LRR K, L, MLR Redox (A16) (LRR K, L, M) Low Surface (S8) (LI rface (S9) (LRR K, L) Lese Masses (F12) (Loodplain Soils (F19) Les (TA6) (MLRA 144A Material (F21)	emarks bils ³ : A 149B) C, L, R) RR K, L, R) RR K, L, R) (MLRA 149B) , 145, 149B)
Water Table F Saturation Pro Describe Reco 1.08" of rain Remarks: SOIL Profile Descrip Depth (in) 0-9 9-16 Type: C=Concen Hydric Soil Ind Histoso Histic E Black H Hydrog Stratific Deplete Thick D Sandy F Sandy G Sandy F Strippe Dark St	r Present? P	o the depth need % 100% 100% 2M=Reduced Matrix,	Depth (inches): Depth (inches): Depth (inches): Ting well, aerial photos, pr IT (NWS 2024); PDSI 0.5 ed to document the indicate of the indi	ator or confirming the state of	m the abset Type Type (LRR R, M, MLRA 149 RR K, L)	ence of indic	Texture FINE SANDY LOAM FINE SAND *Location: PL=Pore Linir Indicators for Prob 2 cm Muck (// Coast Prairie 5 cm Mucky) Dark Surface Polyvalue Be Thin Dark Surlace Polyvalue Be Thin Dark Surface Polyvalue Be	ng, M=Matrix. Dematic Hydric Sc A10) (LRR K, L, MLR Redox (A16) (LRR K, L, M) low Surface (S8) (LI rface (S9) (LRR K, L) rese Masses (F12) (odplain Soils (F19) (TA6) (MLRA 144A Aterial (F21)	emarks bils ³ : A 149B) C, L, R) RR K, L, R) RR K, L, R) (MLRA 149B) , 145, 149B)
Water Table F Saturation Pro Describe Reco L.08" of rain Remarks: SOIL Profile Descri Depth (in) 0-9 9-16 Type: C=Concen Hydric Soil Ind Histoso Histic E Black H Hydrog Stratific Deplete Thick D Sandy F Sandy G Sandy F Strippe Dark St	r Present? P	o the depth need % 100% 100% 2M=Reduced Matrix,	Depth (inches): Depth (inches): Depth (inches): Ting well, aerial photos, pr IT (NWS 2024); PDSI 0.5 ed to document the indicate of the indi	ator or confirming the state of	m the abset Type Type (LRR R, M, MLRA 149 RR K, L)	ence of indic	rators.) Texture FINE SANDY LOAM FINE SAND	ng, M=Matrix. Dematic Hydric Sc A10) (LRR K, L, MLR Redox (A16) (LRR K, L, M) low Surface (S8) (LI rface (S9) (LRR K, L) rese Masses (F12) (odplain Soils (F19) (TA6) (MLRA 144A Aterial (F21)	emarks bils ³ : A 149B) C, L, R) RR K, L, R) RR K, L, R) (MLRA 149B) , 145, 149B)

	Absolute	Dom.	Indicator	!
Tree Stratum (Plot size: 30' RAD)	% Cover	Sp?	Status	Dominance Test Worksheet:
1.				# Dominants OBL, FACW, FAC: (A)
				(',')
2		· ——		# Dominants across all strata: 4 (B)
		. ——		# Dominiants across an strata.
4	-			O/ Barriaga to OBL FACIN FAC
5				% Dominants OBL, FACW, FAC:(A/B)
6				
7				Prevalence Index Worksheet:
		= Total	Cover	Total % Cover of: Multiply By:
Sapling Stratum (Plot size: 15' RAD)				OBL x 1 =
1. Rhus hirta	5	Х	FACU	FACW 5 x 2 = 10
2. Tilia americana	2	Х	FACU	FAC x 3 =
3.				FACU 127 x 4 = 508
4.				UPL x 5 =
5.				Sum: 132 (A) 518 (B)
6 7.	-			Prevalence Index = B/A = 3.92
/·				Frevalence index – b/A – 3.92
	_		•	
ATI DAD	7	= Total	Cover	Hydrophytic Vegetation Indicators:
Shrub Stratum (Plot size: 15' RAD)				Dominance Test is > 50%
Lonicera morrowii	20	X	FACU	Prevalence Index is <= 3.0
2.				Problematic Hydrophytic Vegetation (explain)
3.				Rapid Test for Hydrophytic Vegetation
4.				Morphological Adaptations
5.				¹ Indicators of hydric soil and wetland hydrology must be present,
6.				unless disturbed or problematic.
7.	-			Definitions of Vegetation Strata:
··	20	= Total	Cover	Deminions of Vegetation strata.
Herb Stratum (Plot size: 5' RAD)		_ 10tai	COVE	Tree - Woody plants, excluding woody vines, approximately 20ft
	0.5	.,	E4611	(6m) or more in height and 3in (7.6cm) or larger in diameter at breast
1. Solidago canadensis	95	X	FACU	height (DBH).
2. Rubus idaeus	5		FACU	
3. Phalaris arundinacea	5		FACW	
4				Sapling - Woody plants, excluding woody vines, approximately 20ft
5				(6m) or more in height and less than 3in (7.6cm) DBH.
6.				
7.		· '		
8.				Shrub - Woody plants, excluding woody vines, approximately 3 to
9.				20ft (1 to 6m) in height.
10				
11				Herb - All herbaceous (non-woody) plants, including herbaceous
12.				vines, regardless of size. Includes woody plants, except woody vines,
12.	405			less than approximately 3ft (1m) in height.
4FLDAD	105	= Total	Cover	
Woody Vines (Plot size: 15' RAD)				
1				
2				Woody vine - All woody vines, regardless of height.
3.				
4.				Hydrophytic
5.				Vegetation
		= Total	Cover	Present? NO
	-			
Remarks: (If observed, list morphological adaptations below).				
ernarks. (If observed, list morphological adaptations below).				



Project Site:	Sandbar S	Substation Smar	t Valve	City/County:	Milton			Samp. Date: 7/	24/2024
Applicant/Owner:				_ 0.0,, 000, .	State:	VT	Sampling Point:	· ·	B-WET
Investigator(s):	VHB (AP)			Section	n, Townsh	ip, Range:	Chittenden		
Landform (hillslope,	, terrace, etc.):	Basin		Local relief	(concave, co	onvex, none):	Concave	Slope (%):	3- 8%
Subregion (LRR o	•	LRR R	Lat:	44.61069		Long:	-73.203490	Datum:	NAD 83
Soil Map Unit:		·	m, 3 to 8 percent slopes		V	/16	accelaire in Danasalus \	NWI Class:	PEM/PSS
Are Vegetation, So	_		ypical for this time of year	r:	Yes No	(II no, e	explain in Remarks.)	cumstances?	Yes
Are Vegetation, So					No		_	plain any answe	
Are vegetation, se	on, or riyuroic	ogy naturally pro			140			plant arry arrswc	is in Kemarks.
SUMMARY OF	FINDING	S - Attach site	e map showing sam	ple point lo	cations,	transects	s, important featu	res, etc.	
Hydrophytic Vege	tation Presen	it?	YES						
Hydric Soil Presen	t?		YES			Is This	Sample Area Within	a Wetland?	YES
Wetland Hydrolog	gy Present?		YES						
Remarks: Narrow w	etland start	ting in ROW an	d continuing into adja	cent forest. D	rained by	incised ep	hemeral channel.		
HYDROLOGY									
Wetland Hydrolog	y Indicators:						Secondary Indicators	(minimum of tw	vo required)
		of one is required	l; check all that apply)				Surface Soil Cra		
X Surface Wat	ter (A1)		Water-Stained Leave	es (B9)			Drainage Patter	rns (B10)	
X High Water	Table (A2)		Aquatic Fauna (B13))			Moss Trim Line	s (B16)	
X Saturation (A3)		Marl Deposits (B13)				Dry-Season Wa	ter Table (C2)	
Water Mark	s (B1)		Hydrogen Sulfide Od	dor (C1)			Crayfish Burrov		
Sediment De			Oxidized Rhizospher		ts (C3)			ole on Aerial (C9)	
Drift Deposi			Presence of Reduce					ssed Plants (D1)	
Algal Mat or			Recent Iron Reduction		(C6)		X Geomorphic Po		
Iron Deposit		al (D7)	Thin Muck Surface (Other (Explain in Re				Shallow Aquita Microtopograp		
	Visible on Aeria getated Concav		Other (Explain in Re	IIIdi KS)			X FAC-Neutral Te		
	-	ve Surrace (Bo)						31 (D3)	
Field Observations			Double (to alcon)	_					
Surface Water Pre		<u>X</u>	Depth (inches):			14/-41			VEC
Water Table Prese		X	Depth (inches): Depth (inches):			wetian	d Hydrology Present?		YES
Describe Recorded	d Data (strear	m gauge, monito	ring well, aerial photos, p	revious inspect	tions), if av	vailable:			
1.08" of rain in 5	5 days prior	in Burlington,	VT (NWS 2024); PDSI (0.95 (Near No	rmal) for	week endi	ing 7/27/2024		
Remarks:									
SOIL									
Profile Description	n: (Describe to	o the depth need	ded to document the indi	cator or confirn	n the abse	nce of indica	ators.)		
Depth	Matrix		Re	dox Features					
	r (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Re	marks
0+ 2.	5Y 5/2	92%	10YR 6/8	8%	<u> </u>	M	FINE SANDY LOAM		
				-					
¹Type: C=Concentratio	n, D=Depletion,	RM=Reduced Matrix	, MS=Masked Sand Grains.	<u> </u>			² Location: PL=Pore Lining,	M=Matrix.	
Hydric Soil Indicat	orc:						Indicators for Problem		_3.
Hydric 3011 Illuicat	.015.						indicators for Proble	matic Hydric Soil	S :
Histosol (A1	•			elow Surface (S8)	(LRR R,			0) (LRR K, L, MLRA	-
Histic Epipe			MLRA 149	•				edox (A16) (LRR K,	
Black Histic				urface (S9) (LRR R		9B)		at or Peat (S3) (LR	R K, L, R)
Hydrogen St				ky Mineral (F1) (l	_RR K, L)		Dark Surface (S		N
Stratified La		(011)		ed Matrix (F2)				w Surface (S8) (LRF	K K, L)
	elow Dark Surfa Surface (A12)	ice (AII)	X Depleted Mark					ce (S9) (LRR K, L) e Masses (F12) (LF	מואם.
	y Mineral (S1)			ark Surface (F7)				dplain Soils (F19) (
	ed Matrix (S4)		Redox Depre					A6) (MLRA 144A,	
Sandy Redox				233.0.13 (1.0)			Red Parent Mat		1.0, 1.00,
	X (55)							ark Surface (TF12)	
Stripped Ma			3 _{Ir}	ndicators of hydr	ophytic veg	etation and	very strailow D	aik Juliace (11 12)	
		/ILRA 149B)		ndicators of hydr land hydrology n			Other (Explain i		
Dark Surface	atrix (S6) e (S7) (LRR R, N	/ILRA 149B)		land hydrology n	nust be pre				
	atrix (S6) e (S7) (LRR R, N	/ILRA 149B)		land hydrology n	nust be pre	sent, unless			
Dark Surface Restrictive Layer (atrix (S6) e (S7) (LRR R, N if observed): ee:	/ILRA 149B)		land hydrology n	nust be pre	sent, unless	Other (Explain i		YES
Dark Surface Restrictive Layer (Typ Depth (inches	atrix (S6) e (S7) (LRR R, N if observed): ee:	/ILRA 149B)		land hydrology n	nust be pre	sent, unless	Other (Explain i	in Remarks)	
Dark Surface Restrictive Layer (atrix (S6) e (S7) (LRR R, N if observed): ee:	/ILRA 149B)		land hydrology n	nust be pre	sent, unless	Other (Explain i	in Remarks)	

Absolute % Cover	Sp?	Indicator Status	Dominance Test Worksheet: # Dominants OBL, FACW, FAC:6(A)
		Status	
	· ——		# DOMINIANTS OBL, FACW, FAC. (A)
			# Dominants across all strata: 7 (B)
			% Dominants OBL, FACW, FAC: 86% (A/B)
			Prevalence Index Worksheet:
	= Total	Cover	Total % Cover of: Multiply By:
	•		OBL 17 x 1 = 17
			FACW 105 x 2 = 210
			FAC 25 x3 = 75
	. ——		
			UPL x5 =
			Sum: <u>167</u> (A) <u>382</u> (B)
			Prevalence Index = B/A = 2.29
	= Total	Cover	Hydrophytic Vegetation Indicators:
	•		X Dominance Test is > 50%
30	х	FACW	X Prevalence Index is <= 3.0
			Problematic Hydrophytic Vegetation ¹ (explain)
			<u> </u>
10		FACW	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:
50	= Total	Cover	
	•		Tree - Woody plants, excluding woody vines, approximately 20ft
25	x	FAC	(6m) or more in height and 3in (7.6cm) or larger in diameter at breast
			height (DBH).
	<u> </u>		
			Sapling - Woody plants, excluding woody vines, approximately 20ft
10		FACW	(6m) or more in height and less than 3in (7.6cm) DBH.
10		FACU	
2	,	OBL	
			Shrub - Woody plants, excluding woody vines, approximately 3 to
			20ft (1 to 6m) in height.
	· ——		
			Horb All banks and Andrew to distribute to the distributed to the
			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.
107	= Total	Cover	
10	Х	FACU	
	, ,		Woody vine - All woody vines, regardless of height.
			Hydrophytic
	. ——		Vegetation
10	T-1-1		•
10	= Total	Cover	Present? YES
	30 10 10 50 25 25 20 15 10 10 2	= Total 30	= Total Cover 30



Project Site:	S	andbar Su	bstation Sma	art Valve	City/County:	Milton			Samp. Date: 7/	24/2024
Applicant/O	wner: \(\overline{\cutum\chi}\)	/ELCO				State:	VT	Sampling Point:	MI-	6-UPL
Investigator((s): <u>\</u>	/HB (AP)				, Township		Chittenden		
Landform (hi		_	Hillslope		Local relief ((concave, con	_	None	Slope (%):	20- 60%
Subregion (I		-	LRR R		it: 44.612096		Long:	-73.199558	Datum:	NAD 83
Soil Map Uni	_			ocky loam, 20 to 60 perc			/16	and the language of the langua	NWI Class:	Upland
			s on the site y significantly	typical for this time of ye	ear?	Yes No	(If no,	explain in Remarks.)	cumstances?	Voc
-			y significantly y naturally pr			No		(If needed, explain a		Yes
Are vegetati	1011, 3011, 0	і пуштою	y naturany pi			NU			ily aliswers ill Ne	:iiiaiks.)
					mple point loc	cations, t	ransects	s, important features, e	etc.	
Hydrophytic	-	n Present	?	NO				1: 6		110
Hydric Soil P				NO				Is This Sample Area Within	a Wetland?	NO
Wetland Hyd	drology Pr	esent?		NO						
Remarks: Data	collected	d on terra	ced upland	hillslope adjacent to w	vetland.					
HYDROLO	OGY									
Wetland Hyd	drology Inc	dicators:						Secondary Indicators (minin	num of two requ	iired)
Primary Indi	icators (mi	nimum of	one is require	ed; check all that apply)				Surface Soil Cracks (B6	1	
	ce Water (A	-		Water-Stained Lea	ives (B9)			X Drainage Patterns (B10)	
·	Water Table	e (A2)		Aquatic Fauna (B1	•			Moss Trim Lines (B16)		
	ation (A3)			Marl Deposits (B1				Dry-Season Water Tabl	e (C2)	
	r Marks (B1			Hydrogen Sulfide				Crayfish Burrows (C8)		
	nent Deposi				eres on Living Root	:s (C3)		Saturation Visible on A		
	Deposits (B			Presence of Reduc		CC)		Stunted or Stressed Pla		
	Mat or Crus				tion in Tilled Soils (C6)		Geomorphic Position (I	J2)	
	Deposits (B5 lation Visibl	-	(B7)	Thin Muck Surface Other (Explain in F				Shallow Aquitard (D3) Microtopographic Relie	of (D4)	
			Surface (B8)	Other (Explain in r	Nemarks)			FAC-Neutral Test (D5)	1 (04)	
		cu concave								
Field Observ		2		Double Cook or	٠.					
Surface Wate				Depth (inches	·					
Water Table Saturation P				Depth (inches Depth (inches			V	Wetland Hydrology Present?		NO
		/ - t		oring well, aerial photos,	,	:\ :6	.11-1-1-			
Remarks:										
SOIL										
	rintion: (D	escribe to	the denth nec	eded to document the inc	dicator or confirm	the ahsen	ce of indic	ators)		
Depth		Matrix	are departmen		Redox Features		00 01 1114101	410.01,		
(in)	Color (m		%	Color (moist)	%	Type ¹	Loc ²	Texture	Re	marks
0-11	2.5Y 5,	<u>'-</u>	65%	2.5Y 5/1	30%	.,,,,		SILT LOAM	The last	marks
				7.5YR 4/4	5%					
11-16	2.5Y 5,	/4	90%	2.5Y 5/1	10%			SILT LOAM		
				-						
			-	-				-		
¹ Type: C=Conce	antration D-	Depletion Pl	A-Reduced Mate	rix, MS=Masked Sand Grains.				² Location: PL=Pore Lining, M=Matr	iv	
		Depletion, Ki	vi=iteuuceu iviati	ix, ivi3-iviaskeu sailu Grailis.					-	
Hydric Soil Ir	ndicators:							Indicators for Problematic F	lydric Soils ³ :	
Histos	sol (A1)			Polyvalue	Below Surface (S8)	(LRR R,		2 cm Muck (A10) (LRR	K, L, MLRA 149B)	
Histic	Epipedon (A2)		MLRA 1	49B)			Coast Prairie Redox (A1	16) (LRR K, L, R)	
Black	Histic (A3)			Thin Dark	Surface (S9) (LRR R,	, MLRA 149E	3)	5 cm Mucky Peat or Pe)
	ogen Sulfide				ıcky Mineral (F1) (LF	RR K, L)		Dark Surface (S9) (LRR		
	fied Layers				eyed Matrix (F2)			Polyvalue Below Surface		
	eted Below I		e (A11)		Matrix (F3)			Thin Dark Surface (S9)		-,
	Dark Surfac				k Surface (F6)			Iron-Manganese Masse		
	Mucky Mir				Dark Surface (F7)			Piedmont Floodplain S		
	y Gleyed Ma			Redox Dep	oressions (F8)			Mesic Spodic (TA6) (M		(מצ
	y Redox (S5)				31 maliantan - Elici I			Red Parent Material (F.		
	oed Matrix (Surface (S7)		RΛ 1/ΩD\		Indicators of hydro			Very Shallow Dark Surf		
Darks	Surface (S7)	LLNN K, IVIL	NA 1438)	W	etland hydrology m	iust be prese turbed or pro		Other (Explain in Rema	100)	
Restrictive La	aver (if oh	served):			uist	arbed of pro	ooicilialit.			
	Type:							Hydric	Soil Present?	NO
Depth (i								1.74.10		
Remarks:								•		

Sampling Point: MI-6-UPL

	Absolute	Dom	Indicator	1		
Tree Streeture (Diet size) 201 DAD		Dom.		Daminana Tast Markshast.		
Tree Stratum (Plot size: 30' RAD)	% Cover	Sp?	Status	Dominance Test Worksheet:	•	(.)
1. Tsuga canadensis	40	X	FACU	# Dominants OBL, FACW, FAC:	3	(A)
2. Betula alleghaniensis	15	X	FAC			
3. Betula papyrifera	10		FACU	# Dominants across all strata:	6	(B)
4. Quercus rubra	5		FACU			
5. Acer saccharum	2		FACU	% Dominants OBL, FACW, FAC:	50%	(A/B)
6.						
7.				Prevalence Index Worksheet:		
··	72	= Total	Cover	Total % Cover of:	Multiply By	
Sapling Stratum (Plot size: 15' RAD)		- TOtal	Cover		Multiply By	_
		.,		OBL x 1 =		_
Tsuga canadensis	10	X	FACU	FACW x 2 =		_
2. Fagus grandifolia	5	X	FACU	FAC 85 x 3 =	255	_
3. Betula alleghaniensis	5	X	FAC	FACU 90 x 4 =	360	
4				UPL 2 x 5 =	10	_
5				Sum: 177 (A)	625	(B)
6.						_
7.				Prevalence Index = B/A =	3.53	
<u>-</u>						_
	20	= Total	Cover	Hydrophytic Vegetation Indicators:		
Shrub Stratum (Plot size: 15' RAD)		1000	-0.0.	Dominance Test is > 50%		
·						
1.				Prevalence Index is <= 3.0		
2.				Problematic Hydrophytic Vegetati		
3				Rapid Test for Hydrophytic Vegeta	ation	
4		-		Morphological Adaptations		
5				¹ Indicators of hydric soil and wetland hydrology mu	ust be present, u	nless
6				disturbed or problematic.		
7				Definitions of Vegetation Strata:		
		= Total	Cover			
Herb Stratum (Plot size: 5' RAD)				Tree - Woody plants, excluding woody vines, appr	oximately 20ft (6	im) or
1. Dryopteris intermedia	60	х	FAC	more in height and 3in (7.6cm) or larger in diameter	er at breast heigh	t (DBH).
2. Phegopteris connectilis			FACU			
3. Polystichum acrostichoides			FACU			
			FAC	Conling Westerless and discount discount		ft (C)
4. Arisaema triphyllum				Sapling - Woody plants, excluding woody vines, a more in height and less than 3in (7.6cm) DBH.	ipproximately 20	it (biii) or
5. Tussilago farfara			FACU	more in neight and less than sin (7.5cm) bbn.		
6. Epipactis helleborine	2		UPL			
7						
8				Shrub - Woody plants, excluding woody vines, ap	proximately 3 to	20ft (1 to
9				6m) in height.		
10						
11				Herb - All herbaceous (non-woody) plants, includ		
12.				regardless of size. Includes woody plants, except w	oody vines, less t	han
	85	= Total	Cover	approximately 3ft (1m) in height.		
Woody Vines (Plot size: 15' RAD)						
1.						
າ				Woody vine - All woody vines, regardless of hei	ght.	
3.					_	
4.		-		Hydrophytic		
5.				Vegetation		
5		- Takal	<u></u>	_	NO	
		= Total	Cover	Present?	NO	_
Remarks: (If observed, list morphological adaptations below).						



Project Site: Applicant/Owner:	VELCO	ubstation Smart	Valve	_ City/County: _	Milton State:	VT	Sampling Point:	Samp. Date: 7/	24/2024 6-WET
Investigator(s):	VHB (AP)					nip, Range:	Chittenden		
Landform (hillslope, te	errace, etc.):	Hillslope		Local relief	(concave, co	onvex, none):	None	Slope (%):	20- 60%
Subregion (LRR or	MLRA):	LRR R	Lat	: 44.612217		Long:	-73.199588	Datum:	NAD 83
Soil Map Unit:			y loam, 20 to 60 perce					NWI Class:	PFO/PEM
Are climatic/hydrolo	ogic conditio	ons on the site typ	oical for this time of year	ir?	Yes	(If no,	explain in Remarks.)		
Are Vegetation, Soil	, or Hydrolo	gy significantly di	sturbed?		No		Normal Ci	rcumstances?	Yes
Are Vegetation, Soil	, or Hydrolo	gy naturally prob	ematic?		No		(If needed, ex	kplain any answe	rs in Remarks.)
SUMMARY OF I	FINDINGS	- Attach site	map showing sam	nple point lo	cations,	transects	s, important featu	ıres, etc.	
Hydrophytic Vegeta		:?	YES						
Hydric Soil Present?		_	YES			Is This	Sample Area Within	a Wetland?	YES
Wetland Hydrology	Present?		YES						
Remarks: Large fores	ted seep in	hemlock stand	. Drained by intermi	ttent stream.					
HYDROLOGY									
Wetland Hydrology	Indicators:						Secondary Indicators	s (minimum of tv	vo required)
Primary Indicators (minimum of	one is required;	check all that apply)				Surface Soil Cr	acks (B6)	
Surface Water	(A1)		Water-Stained Leav	res (B9)			X Drainage Patte	rns (B10)	
High Water Ta	ible (A2)	_	Aquatic Fauna (B13	3)			Moss Trim Line	es (B16)	
X Saturation (A3	3)	_	Marl Deposits (B13)			Dry-Season Wa	ater Table (C2)	
Water Marks (-	_	Hydrogen Sulfide O	•			Crayfish Burro		
Sediment Dep		_	Oxidized Rhizosphe		ts (C3)			ble on Aerial (C9)	
Drift Deposits		_	Presence of Reduce		.5 (05)			essed Plants (D1)	
Algal Mat or C		_	Recent Iron Reduct		(6)		X Geomorphic P		
Iron Deposits		_	Thin Muck Surface	,	(0)		Shallow Aquita		
Inundation Vis			Other (Explain in Re	. ,			X Microtopograp		
Sparsely Vege		· · · —	Other (Explain III No	zmarks)			X FAC-Neutral Te		
		2 3011000 (200)						.50 (05)	
Field Observations:			5 (; 1)						
Surface Water Prese			Depth (inches)						
Water Table Present			Depth (inches)			Wetlan	d Hydrology Present?		YES
Saturation Present?		X	Depth (inches) ng well, aerial photos, i						
Remarks:									
SOIL									
Profile Description:	•	the depth neede	d to document the indi		the abse	ence of indica	ators.)		
Depth	Matrix			edox Features	1	2			
	(moist)	%	Color (moist)	%	Type¹	Loc ²	Texture	Re	marks
<u> </u>	/ 4/1	90%	7.5YR 3/4	10%			SILT LOAM		
7-16 5GY	/ 4/1	92%	7.5YR 4/6	8%			SILT LOAM		
<u> </u>				-					
¹Type: C=Concentration.	D=Depletion, P	M=Reduced Matrix. I	MS=Masked Sand Grains.		——		² Location: PL=Pore Lining	. M=Matrix.	
									1.3.
Hydric Soil Indicator	5.						Indicators for Proble	matic Hydric Soi	IS:
Histosol (A1)			Polyvalue B	selow Surface (S8)	(LRR R,		2 cm Muck (A1	.0) (LRR K, L, MLRA	149B)
Histic Epipedo	n (A2)		MLRA 14	9B)			Coast Prairie R	edox (A16) (LRR K,	L, R)
Black Histic (A	.3)		Thin Dark S	urface (S9) (LRR R	, MLRA 149	9B)	5 cm Mucky Pe	eat or Peat (S3) (LR	R K, L, R)
Hydrogen Sulf	ide (A4)		Loamy Muc	ky Mineral (F1) (L	RR K, L)		Dark Surface (S	9) (LRR K, L, M)	
Stratified Laye	rs (A5)		X Loamy Gley	ed Matrix (F2)			Polyvalue Belo	w Surface (S8) (LR	R K, L)
Depleted Belo	w Dark Surfac	ce (A11)	X Depleted M	1atrix (F3)			Thin Dark Surfa	ace (S9) (LRR K, L)	
Thick Dark Sur	face (A12)		Redox Dark	Surface (F6)			Iron-Mangane	se Masses (F12) (L	RR K, L, R)
Sandy Mucky	Mineral (S1)		Depleted D	ark Surface (F7)			Piedmont Floo	dplain Soils (F19) (MLRA 149B)
Sandy Gleyed	Matrix (S4)		Redox Depr	ressions (F8)			Mesic Spodic (TA6) (MLRA 144A,	145, 149B)
Sandy Redox (Red Parent Ma		
Stripped Matr			31	ndicators of hydro	onhytic ves	etation and		ark Surface (TF12)	
Dark Surface (LRA 149B)		tland hydrology m	ust be pre	sent, unless	Other (Explain		
Restrictive Layer (if	observed):			dist	turbed or p	oroblematic.			
Type:							Hvdrid	Soil Present?	YES
Depth (inches):									
Remarks:									

MI-6-WET

	6 Cover 40 35	Dom.	Indicator Status	Dominance Test Worksheet:
1. Tsuga canadensis 2. Betula alleghaniensis 3. Ulmus americana 4. Acer saccharum 5.	40 35			
2. Betula alleghaniensis 3. Ulmus americana 4. Acer saccharum 5.	35	Х	FACU	# Dominants OBL, FACW, FAC: 3 (A)
 3. Ulmus americana 4. Acer saccharum 5. 6. 		<u>X</u>	FAC	(1)
4. Acer saccharum 5. 6.	2		FACW	# Dominants across all strata: 4 (B)
5. 6.	2		FACU	" Dominants deloss di strata.
6.		· ——	TACO	% Dominants OBL, FACW, FAC: 75% (A/B)
		· ——		// Dominants Obl., FACW, FAC
<i>'</i> .		· ——		Prevalence Index Worksheet:
	79	= Total	Cover	
Sapling Stratum (Plot size: 15' RAD)	7.5	_ TOtal	COVE	Total % Cover of: Multiply By: OBL
1. Betula alleghaniensis	10	х	FAC	FACW 67 x2 = 134
	10		170	
3				
4				UPL x5 =
5				Sum:(A)(B)
6				2.7
7				Prevalence Index = B/A = 2.87
	10		•	
	10	= Total	Cover	Hydrophytic Vegetation Indicators:
Shrub Stratum (Plot size:15' RAD)				X Dominance Test is > 50%
1				X Prevalence Index is <= 3.0
2				Problematic Hydrophytic Vegetation ¹ (explain)
3				Rapid Test for Hydrophytic Vegetation
4				X Morphological Adaptations
5				¹ Indicators of hydric soil and wetland hydrology must be present,
6.				unless disturbed or problematic.
7.				Definitions of Vegetation Strata:
		= Total	Cover	
Herb Stratum (Plot size: 5' RAD)		•		Tree - Woody plants, excluding woody vines, approximately 20ft
1. Impatiens capensis	60	Х	FACW	(6m) or more in height and 3in (7.6cm) or larger in diameter at breast
2. Prunella vulgaris	20		FAC	height (DBH).
3. Circaea canadensis	10		FACU	
4. Fraxinus pennsylvanica	5	· ——	FACW	Sapling - Woody plants, excluding woody vines, approximately 20ft
5. Carex flava	5		OBL	(6m) or more in height and less than 3in (7.6cm) DBH.
6. Trillium sp.	2	· ——		
7.				
8.				Shrub Waadu plants avaluding waadu vines approximately 2 to
· · · · · · · · · · · · · · · · · · ·				Shrub - Woody plants, excluding woody vines, approximately 3 to 20ft (1 to 6m) in height.
9				2010 (2 to only in neight)
10.				Hade and the second sec
11.				Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines,
12.		· —		less than approximately 3ft (1m) in height.
	102	= Total	Cover	
Woody Vines (Plot size: 15' RAD)				
1				
2				Woody vine - All woody vines, regardless of height.
3				
				Hydrophytic
4				Vegetation
5.		= Total	Cover	Present? YES
-				rieseiit: ILS



Project Sit	_		ubstation Sma	art Valve	City/County:			Consuling Doints	Samp. Date: 7/2	•
Applicant/ Investigate	-	VELCO VHB (AP)			Soctio	State: n, Township	VT n Pango:	Sampling Point:	IV	II-11-UPL
	(hillslope, terr		Hillsland			f (concave, con		Chittenden	Slope (%):	0-3%
	(LRR or N		Hillslope		Lat: 44.606457	(concave, con	_	None -73.203821	Datum:	NAD 83
Soil Map L	•		LRR R	-	Lat. 44.000437		Long:	-73.203021	NWI Class:	Upland
		Limerick s		typical for this time	of year?	Yes	(If no	explain in Remarks.)	INVVI Class.	Opialiu
	. , .		gy significantly	"	or year:	No	(11 110, 1		rcumstances?	Yes
_			gy naturally pr			No			plain any answers	
Alle Vegeti	ation, 3011, t	or riyaroro	By Hatarany pr	obiematic.		110			tpidiii diry diisweis	in Remarks.)
					sample point lo	cations, 1	transects	s, important featu	ıres, etc.	
	tic Vegetati	on Presen	ir	NO			In This	Causala Ausa 14/:+la:u	- 14/-4 4 2	NO
Hydric Soi				NO NO			15 11115	Sample Area Withir	a wellandr	NO
Remarks:	lydrology P	resent?		NO						
		radient o	f wetland in	maintained utility	ROW.					
HYDROL	LOGY									
Wetland F	lydrology In	dicators:						Secondary Indicator	s (minimum of two	required)
			f one is require	ed; check all that app	ly)			Surface Soil Cr		•
Sur	face Water (A1)		Water-Staine	d Leaves (B9)			Drainage Patte	rns (B10)	
Hig	h Water Tabl	e (A2)		Aquatic Faun	a (B13)			Moss Trim Line	es (B16)	
Sati	uration (A3)			Marl Deposit	s (B13)			Dry-Season Wa	ater Table (C2)	
Wa	ter Marks (B	1)		Hydrogen Sul	fide Odor (C1)			Crayfish Burro	ws (C8)	
Sed	liment Depos	sits (B2)		Oxidized Rhiz	ospheres on Living Ro	ots (C3)		Saturation Visi	ble on Aerial (C9)	
Drif	ft Deposits (E	33)			Reduced Iron (C4)			Stunted or Stre	essed Plants (D1)	
	al Mat or Cru				teduction in Tilled Soils	(C6)		Geomorphic P		
	n Deposits (B	-		Thin Muck Su	` '			Shallow Aquita		
	ndation Visib			Other (Explai	n in Remarks)			Microtopograp		
Spa	irsely Vegeta	ted Concav	e Surface (B8)					FAC-Neutral Te	est (D5)	
Field Obse										
	ater Presen			Depth (in	· · · · · · · · · · · · · · · · · · ·					
Saturation	ole Present?			Depth (in Depth (in			wetian	d Hydrology Present?		NO
		. t / a t		oring well, aerial pho			-: - - -			
Remarks:										
SOIL										
	scription: (D		the depth nee	eded to document th		m the absen	ice of indic	ators.)		
Depth		Matrix			Redox Features	_ 1	. 2			
(in)	Color (n		%	Color (moist)) %	Type ¹	Loc ²	Texture		Remarks
0-12	2.5Y 4		100%	-				SILT LOAM		
12-16	2.5Y 5	0/4	100%	-				SILT LOAM		
			-	-						
			-			· — — —				
¹Type: C=Cor	ncentration, D	=Depletion, F	(M=Reduced Matr	ix, MS=Masked Sand Grai	ins.			² Location: PL=Pore Lining	, M=Matrix.	
Hydric Soi	I Indicators:							Indicators for Proble	matic Hydric Soils	3:
Hie	tosol (A1)			Polyn	ralue Below Surface (S8	\ /I RR R			.0) (LRR K, L, MLRA 1	
	tic Epipedon	(A2)			.RA 149B)	, (LIXIX IX,			edox (A16) (LRR K, L,	
	ck Histic (A3)				Dark Surface (S9) (LRR	R MIRA 149F	R)		eat or Peat (S3) (LRR	
	drogen Sulfid				ıy Mucky Mineral (F1) (-,		69) (LRR K, L, M)	
	atified Layers				y Gleyed Matrix (F2)	, -,			w Surface (S8) (LRR I	(, L)
	oleted Below		ce (A11)		eted Matrix (F3)				ace (S9) (LRR K, L)	, ,
	ck Dark Surfa		, ,		x Dark Surface (F6)				se Masses (F12) (LRR	K, L, R)
	ndy Mucky M				eted Dark Surface (F7)				dplain Soils (F19) (M	
	ndy Gleyed M				x Depressions (F8)				TA6) (MLRA 144A, 14	•
	ndy Redox (S5							Red Parent Ma		
	pped Matrix				³ Indicators of hyd	rophytic vege	tation and		ark Surface (TF12)	
Dar	k Surface (S7	') (LRR R, N	LRA 149B)		wetland hydrology			Other (Explain	in Remarks)	
-					di	sturbed or pr	oblematic.	I		
Restrictive	Layer (if ol	oserved):						11	Call Duna +2	
Donth	Type: _ n (inches):				=			Hydric	Soil Present?	NO
Remarks:	i (menes).							<u> </u>		

Troc	Stratum (Plot size: 30' RAD)	Absolute % Cover	Dom. Sp?	Indicator Status	Dominance Test Worksheet:	
1.	·		· ——		# Dominants OBL, FACW, FAC:	(A)
2.					# Dominants Obe, FACW, FAC.	(A)
3.					# Dominants across all strata: 3	(B)
4.						(5)
5.					% Dominants OBL, FACW, FAC:	(A/B)
6.			· ——			(, , - ,
7.					Prevalence Index Worksheet:	
			= Total	Cover	Total % Cover of: Multiply	By:
Sapl	ing Stratum (Plot size: 15' RAD)		-		OBL x 1 =	
1.					FACW 15 x 2 = 30	
2.					FAC x 3 =	
3.			-		FACU 150 x 4 = 600	
4.					UPL x 5 =	
5.					Sum: 165 (A) 630	(B)
6.						
7.					Prevalence Index = B/A = 3.82	
			= Total	Cover	Hydrophytic Vegetation Indicators:	
Shru	b Stratum (Plot size: 15' RAD)				Dominance Test is > 50%	
1.	Lonicera morrowii	40	X	FACU	Prevalence Index is <= 3.0	
2.	Rhus hirta	10		FACU	Problematic Hydrophytic Vegetation ¹ (exp	lain)
3.	Rubus allegheniensis	5		FACU	Rapid Test for Hydrophytic Vegetation	
4.	Ilex verticillata	5		FACW	Morphological Adaptations	
5.					¹ Indicators of hydric soil and wetland hydrology must be pre	esent, unless
6.					disturbed or problematic.	
7.	-				Definitions of Vegetation Strata:	
		60	= Total	Cover		
	Stratum (Plot size: 5' RAD)				Tree - Woody plants, excluding woody vines, approximatel	
	Solidago canadensis	85	X	FACU	in height and 3in (7.6cm) or larger in diameter at breast heig	ght (DBH).
2.	Onoclea sensibilis	5		FACW		
3.	Impatiens capensis	5		FACW		
4.	Lonicera morrowii	5		FACU	Sapling - Woody plants, excluding woody vines, approxim	ately 20ft (6m) or
5.					more in height and less than 3in (7.6cm) DBH.	
6.						
7.						
8.					Shrub - Woody plants, excluding woody vines, approximat 6m) in height.	ely 3 to 20ft (1 to
9.					om, m neight	
10.					Horb All back and for a constant of the first back.	
11.					Herb - All herbaceous (non-woody) plants, including herba regardless of size. Includes woody plants, except woody vin-	
12.	-	100		Cover	approximately 3ft (1m) in height.	,
Mod	ody Vines (Plot size: 15' RAD)		= Total	Cover		
	Vitis labrusca	5	х	FACU		
	Vitis labi usca			TACO	Woody vine - All woody vines, regardless of height.	
٠,					The state of the s	
2.			. ——		Hudrophytic	
3.						
3. 4.					Hydrophytic Vegetation	
3.			= Total	Cover	Vegetation Present? NO	



WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project Site:	Sandhar S	ubstation Sma	rt Valve	City/County:	Milton			Samp. Date: 7/2	25/2024
Applicant/Owner:	VELCO	abstation sinc	ii vaive	city/county	State:	VT	Sampling Point:		/II-11-WET
Investigator(s):	VHB (AP)			Section	, Township	, Range:	Chittenden		
Landform (hillslope, te	rrace, etc.):	Flat		Local relief	(concave, conv	vex, none):	None	Slope (%):	0-3%
Subregion (LRR or	MLRA):	LRR R		at: 44.606422		Long:	-73.203805	Datum:	NAD 83
Soil Map Unit:	Limerick s							NWI Class:	PEM
	-		typical for this time of y	ear?	Yes	(If no,	explain in Remarks.)		
Are Vegetation, Soil,	•	, ,			No			cumstances?	Yes
Are Vegetation, Soil,	or Hydrolo	gy naturally pr	oblematic?		No		(If needed, ex	plain any answer	s in Remarks.)
SUMMARY OF F	INDINGS	- Attach sit	te map showing sa	mple point lo	cations. t	ransects	s. important featu	ires, etc.	
Hydrophytic Vegetat			YES		1		.,		
Hydric Soil Present?		•	YES			Is This	Sample Area Within	a Wetland?	YES
Wetland Hydrology I	Present?		YES						
Remarks:			-		<u> </u>				
PEM portion	n of large v	vetland com	plex associated with t	he Lamoille Rive	er. Bisecte	d by road	ls and maintained w	ithin utility ROV	v.
HYDROLOGY									
Wetland Hydrology I							Secondary Indicators		o required)
		one is require	d; check all that apply)				Surface Soil Cra		
Surface Water			Water-Stained Le	` '			Drainage Patte		
High Water Tal			Aquatic Fauna (B:	•			Moss Trim Line		
Saturation (A3)	•		Marl Deposits (B1				Dry-Season Wa		
Water Marks (-		Hydrogen Sulfide	٠,,			Crayfish Burrov		
Sediment Depo				heres on Living Root	ts (C3)			ole on Aerial (C9)	
Drift Deposits			Presence of Redu		(66)			ssed Plants (D1)	
Algal Mat or Cr			Thin Muck Surfac	ction in Tilled Soils ((C6)		X Geomorphic Po		
Iron Deposits (Inundation Vis	-	(P7)	Other (Explain in	. ,			Shallow Aquita Microtopograp		
Sparsely Veget			Other (Explain iii	Remarks)			X FAC-Neutral Te		
	ateu concavi	Surface (Bb)			1			31 (03)	
Field Observations: Surface Water Prese	n+2		Donth (incho	.c.\.					
		-	Depth (inche	·		14/-41	d I bodon la mo Don a cost 2		VEC
Water Table Present Saturation Present?			Depth (inche Depth (inche			wetian	d Hydrology Present?		YES
)_+_ /_+		oring well, aerial photos		:> : f	:labla:			
Remarks:									
SOIL									
	Describe to	the depth nee	eded to document the in	dicator or confirm	1 the absence	ce of indic	ators.)		
Depth	Matrix	are department		Redox Features			aco. 51,		
(in) Color (%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks
0-7 2.5Y	- 1-	92%	10YR 4/4	8%	.,,,,		SILT LOAM		Hemanis
7-16 2.5Y		85%	7.5YR 4/4	15%			SILT LOAM		
	•	-	-						
1= 0 0							2, 8, 8,		
Type: C=Concentration, I	D=Depletion, R	M=Reduced Matr	ix, MS=Masked Sand Grains.				² Location: PL=Pore Lining,		
Hydric Soil Indicators	s:						Indicators for Proble	matic Hydric Soils	s ³ :
Histosol (A1)			Polyvalue	Below Surface (S8)	(LRR R,		2 cm Muck (A1	0) (LRR K, L, MLRA	149B)
Histic Epipedor	n (A2)		, MLRA 1		•			edox (A16) (LRR K, I	
Black Histic (A3			Thin Dark	Surface (S9) (LRR R	, MLRA 149B	3)		at or Peat (S3) (LRR	
Hydrogen Sulfi	de (A4)			ucky Mineral (F1) (L				9) (LRR K, L, M)	
Stratified Layer	rs (A5)			eyed Matrix (F2)			Polyvalue Belo	w Surface (S8) (LRR	K, L)
Depleted Belov	w Dark Surfac	ce (A11)	X Depleted	Matrix (F3)			Thin Dark Surfa	ice (S9) (LRR K, L)	
Thick Dark Surf	face (A12)		Redox Da	rk Surface (F6)			Iron-Manganes	e Masses (F12) (LR	R K, L, R)
Sandy Mucky N	Mineral (S1)		Depleted	Dark Surface (F7)			Piedmont Floo	dplain Soils (F19) (N	/ILRA 149B)
Sandy Gleyed I	Matrix (S4)		Redox De	pressions (F8)			Mesic Spodic (ΓA6) (MLRA 144A, 1	L45, 149B)
Sandy Redox (S	S5)						Red Parent Ma	terial (F21)	
Stripped Matri	x (S6)			³ Indicators of hydro	ophytic veget	tation and	Very Shallow D	ark Surface (TF12)	
Dark Surface (S	57) (LRR R, M	LRA 149B)	v	vetland hydrology m			Other (Explain	in Remarks)	
Restrictive Layer (if o	observed):			aisi	turbed or pro	oblematic.			
Type:	o o o o o o o o o o o o o o o o o o o						Hydric	Soil Present?	YES
Depth (inches):							,		1 - 5
Remarks:							!		

nee	Stratum (Plot size: 30' RAD)	Absolute % Cover	Dom. Sp?	Indicator Status	Dominance Test Worksheet:		
1	Fraxinus pennsylvanica	10	X	FACW	# Dominants OBL, FACW, FAC:	8	(A)
	Salix nigra		$\frac{\lambda}{X}$	OBL	# Dollillants OBL, I ACW, I AC.	•	(A)
3.					# Dominants across all strata:	8	(B)
4.					_		_``
5.					% Dominants OBL, FACW, FAC:	100%	(A/B)
6.					_		
7.					Prevalence Index Worksheet:		
		15	= Total	Cover	Total % Cover of:	Multiply By:	
Sapl	ng Stratum (Plot size: 15' RAD)				OBL 83 x 1 =	83	
1.	Salix nigra	5	X	OBL	FACW 45 x 2 =	90	_
2.					FAC 15 x 3 =	45	_
3.					FACU x 4 =		_
4.					UPL x 5 =		_
5.					Sum:(A)	218	(B)
6.							
7.					Prevalence Index = B/A =	1.52	_
		5	= Total	Cover	Hydrophytic Vegetation Indicators:		
Shru	b Stratum (Plot size: 15' RAD)				X Dominance Test is > 50%		
1.	Alnus incana	15	X	FACW	X Prevalence Index is <= 3.0		
2.	Salix bebbiana	5	X	FACW	Problematic Hydrophytic Veg	getation ¹ (explain)	
3.					Rapid Test for Hydrophytic V	egetation	
4.					Morphological Adaptations		
5.					¹ Indicators of hydric soil and wetland hydrolo	ogy must be present, u	nless
6.					disturbed or problematic.		
7.					Definitions of Vegetation Strata:		
		20	= Total	Cover			
Herb	Stratum (Plot size: 5' RAD)				Tree - Woody plants, excluding woody vines		
1.	Leersia oryzoides	50	X	OBL	in height and 3in (7.6cm) or larger in diamete	er at breast height (DBI	H).
2.	Equisetum arvense	15	X	FAC			
3.	Eutrochium maculatum	15	X	OBL			
4.	Impatiens capensis	10		FACW	Sapling - Woody plants, excluding woody v		Oft (6m) or
5.	Typha latifolia	8		OBL	more in height and less than 3in (7.6cm) DBH	l.	
6.	Onoclea sensibilis	5		FACW			
7.	Rumex palustris	5					
8.					Shrub - Woody plants, excluding woody vin	es, approximately 3 to	20ft (1 to
9.					6m) in height.		
10.							
10.					Herb - All herbaceous (non-woody) plants, i		
11.							
					regardless of size. Includes woody plants, exc		
11. 12.		108	= Total	Cover			
11. 12.	dy Vines (Plot size:15' RAD)	108	= Total	Cover	regardless of size. Includes woody plants, exc		
11. 12.	dy Vines (Plot size:15' RAD)	108	= Total	Cover	regardless of size. Includes woody plants, exc approximately 3ft (1m) in height.	ept woody vines, less	
11. 12. Woo 1. 2.	dy Vines (Plot size:15' RAD)	108	= Total	Cover	regardless of size. Includes woody plants, exc	ept woody vines, less	
11. 12. Woo	dy Vines (Plot size:15' RAD)	108	= Total	Cover	regardless of size. Includes woody plants, exc approximately 3ft (1m) in height. Woody vine - All woody vines, regardless	ept woody vines, less	
11. 12. Wood 1. 2. 3. 4.	dy Vines (Plot size:15' RAD)	108	= Total	Cover	regardless of size. Includes woody plants, exc approximately 3ft (1m) in height. Woody vine - All woody vines, regardless Hydrophytic	ept woody vines, less	
11. 12. Wood 1. 2. 3.	dy Vines (Plot size:15' RAD)	108			regardless of size. Includes woody plants, exc approximately 3ft (1m) in height. Woody vine - All woody vines, regardless Hydrophytic Vegetation	ept woody vines, less	
11. 12. Wood 1. 2. 3. 4.	dy Vines (Plot size:15' RAD)	108	= Total		regardless of size. Includes woody plants, exc approximately 3ft (1m) in height. Woody vine - All woody vines, regardless Hydrophytic	ept woody vines, less	



WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project Site:	Sandbar S	ubstation Smar	t Valve	City/County:	Milton			Samp. Date: 7/3 0	0/2024
Applicant/Owner:	VELCO				State:	VT	Sampling Point:	MI	-11-2UPL
Investigator(s):	VHB (AP)				, Township		Chittenden		
Landform (hillslope, te		Hillslope		Local relief	(concave, con	_	None	Slope (%):	0-3%
Subregion (LRR or		LRR R		at: 44.604768		Long:	-73.203755	Datum:	NAD 83
Soil Map Unit:		very fine sandy	loam ypical for this time of ye	າລະວີ	Voc	/If no	ovalain in Domarks \	NWI Class:	Upland
Are Vegetation, Soil,	-			al f	Yes No	(11 110, 1	explain in Remarks.)	rcumstances?	Yes
Are Vegetation, Soil,	, ,	0, 0 ,			No			xplain any answers	
, are vegetation, son,	or riyarolog	sy natarany pro			110			Apiani any answers	iii Nemarks.)
SUMMARY OF F	INDINGS	- Attach site	e map showing sar	mple point lo	cations, t	ransects	s, important feat	ures, etc.	
Hydrophytic Vegetat		?	YES						
Hydric Soil Present?			NO			Is This	Sample Area Within	n a Wetland?	NO
Wetland Hydrology I	Present?		NO						
Remarks: Forested up	land locat	ed upgradient	from large wetland	complex.					
HYDROLOGY									
Wetland Hydrology I							Secondary Indicator		required)
		one is required	l; check all that apply)				Surface Soil C		
Surface Water		,	Water-Stained Lea				Drainage Patt		
High Water Tal	, ,		Aquatic Fauna (B1				Moss Trim Lin		
Saturation (A3)			Marl Deposits (B1					ater Table (C2)	
Water Marks (I	-		Hydrogen Sulfide	odor (C1) neres on Living Roo	tc (C2)		Crayfish Burro	ible on Aerial (C9)	
Drift Deposits		-	Presence of Reduc	-	is (C3)			essed Plants (D1)	
Algal Mat or Cr				ction in Tilled Soils	(C6)		Geomorphic F		
Iron Deposits (•	Thin Muck Surface	e (C7)	• •		Shallow Aquit	ard (D3)	
Inundation Vis	ible on Aerial	(B7)	Other (Explain in F	Remarks)			Microtopogra	phic Relief (D4)	
Sparsely Veget	ated Concave	Surface (B8)					FAC-Neutral T	est (D5)	
Field Observations:									
Surface Water Prese	nt?		Depth (inches	s):					
Water Table Present	.?		Depth (inches			Wetlan	d Hydrology Present?		NO
Saturation Present?			Depth (inches	s):					
Describe Recorded D	ata (stream	ı gauge, monito	ring well, aerial photos,	, previous inspect	ions), if ava	ailable:			
Not available yet									
Remarks:									
SOIL									
Profile Description: (Describe to	the depth need	ded to document the inc	dicator or confirm	the absen	ce of indic	ators.)		
Depth	Matrix		<u> </u>	Redox Features					
(in) Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	į	Remarks
0-13 2.5Y		95%	10YR 3/6	5%	С	M	FINE SANDY LOAM		
13-16 2.5YF	₹4/2	84%	7.5YR 3/4	8%		M	FINE SANDY LOAM		
			5YR 5/1	8%	<u> </u>	M			
 -									
								-	
¹ Type: C=Concentration, I	D=Depletion, R	M=Reduced Matrix	, MS=Masked Sand Grains.				² Location: PL=Pore Lining	g, M=Matrix.	
Hydric Soil Indicators	s:						Indicators for Proble	ematic Hydric Soils ³	
•								·	
Histosol (A1)	- /A2\			Below Surface (S8)	(LRR R,			10) (LRR K, L, MLRA 1	
Histic Epipedor Black Histic (A3			MLRA 1	496) Surface (S9) (LRR R	MIDA 1/0D	2)		Redox (A16) (LRR K, L, eat or Peat (S3) (LRR I	-
Hydrogen Sulfi	-			ucky Mineral (F1) (L		,,		S9) (LRR K, L, M)	ν, ε, ιν
Stratified Layer				eyed Matrix (F2)	1., 2,			ow Surface (S8) (LRR k	(, L)
Depleted Belov		ce (A11)		Matrix (F3)				ace (S9) (LRR K, L)	, ,
 Thick Dark Surf		, ,		rk Surface (F6)				se Masses (F12) (LRR	K, L, R)
Sandy Mucky N	vineral (S1)		Depleted '	Dark Surface (F7)			Piedmont Floo	odplain Soils (F19) (M	LRA 149B)
Sandy Gleyed I	Matrix (S4)		Redox De	pressions (F8)			Mesic Spodic	TA6) (MLRA 144A, 14	15, 149B)
Sandy Redox (S	35)						Red Parent M	aterial (F21)	
Stripped Matri				³ Indicators of hydro	ophytic vege	tation and		Dark Surface (TF12)	
Dark Surface (S	57) (LRR R, M	LRA 149B)	w	etland hydrology n			Other (Explain	in Remarks)	
Restrictive Layer (if o	hserved).			dis	turbed or pro	opiematic.	1		
Type:	nosci veaj.						Hvdri	Soil Present?	NO
Depth (inches):	-						, -		
Remarks:		-							

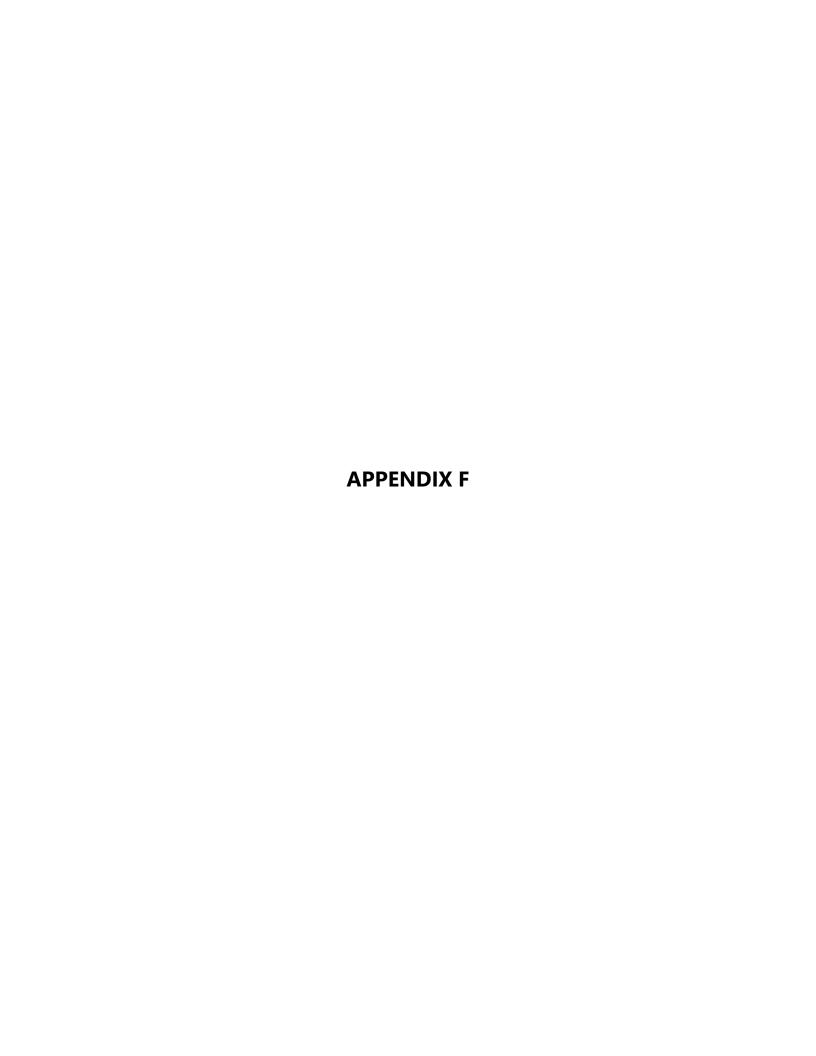
% Cover	Sp?	Status	Dominance Test Worksheet:		
30	X	FACW	# Dominants OBL, FACW, FAC:	5	(A)
10	X	FACW	_		_ (,
5		FACU	# Dominants across all strata:	7	(B)
			_		_` ′
			% Dominants OBL, FACW, FAC:	71%	(A/B)
			_		
			Prevalence Index Worksheet:		
45	= Total	Cover	Total % Cover of:	Multiply By:	_
	_		OBL x 1 =		_
8	X	FACW	FACW 63 x 2 =	126	_
5	Х	FACW	FAC 10 x 3 =	30	_
			FACU 135 x 4 =	540	_
			UPL x 5 =		_
			Sum: <u>208</u> (A)	696	(B)
			Prevalence Index = B/A =	3.35	_
13	= Total	Cover			
					
				1	
	<u>x</u>	FAC			
				egetation	
				ogy must be present, ur	nless
20		Cover	Definitions of Vegetation Strata:		
30	_ = 10tai	Cover	Tree Woody plants evaluding woody vince	annrovimatoly 20ft (6	m) or more
95	Y	EACH			
			Sanling - Woody plants, excluding woody y	ines annroximately 20	ft (6m) or
		- IACO			10 (0111) 01
5		FACU			
			Shrub - Woody plants, excluding woody vir	ies, approximately 3 to	20ft (1 to
			6m) in height.	, , ,	
			Herb - All herbaceous (non-woody) plants,	including herbaceous v	ines,
				ept woody vines, less t	han
125	= Total	Cover	approximately 3ft (1m) in height.		
	_				
			Woody vine - All woody vines, regardless	of height.	
			Woody vine - All woody vines, regardless	of height.	
			Hydrophytic	of height.	
			Hydrophytic Vegetation		
	= Total	Cover	Hydrophytic	of height. YES	
	8 5 13 20 10 30 95 10 5 5 5	13 = Total 20 X 10 X 30 = Total 95 X 10 5 5 5 5	45	## Dominants OBL, FACW, FAC: ## Prevalence Index Worksheet: Total % Cover of: OBL	### ### ##############################



Doe in at 6th an	Carrella a c		at Malan		C'1 /C 1	B. 4114			C D-t 7/3	0/2024
Project Site: Applicant/Owner:	VELCO	ubstation Sma	rt vaive		City/County: _	State:	VT	Sampling Point:	Samp. Date: 7/3	0/2024 -11-2WET
Investigator(s):	VHB (AP)				Section	, Township		Chittenden	1411	-11-2VVL1
Landform (hillslope, t		Hillslope			Local relief			Concave	Slope (%):	0-3%
Subregion (LRR or	MLRA):	LRR R		Lat:	44.604696		Long:	-73.203665	Datum:	NAD 83
Soil Map Unit:		very fine sand					416	1::5	NWI Class:	PSS/PEM
Are climatic/hydrol Are Vegetation, Soi	-		typical for this time of	year:		Yes	(If no,	explain in Remarks.)	cumstances?	Yes
Are Vegetation, Soi			_			No No			plain any answers	
ric vegetation, son	ii, or riyarolo	by naturally pr				140			plant arry answers	, in Kemarks.,
SUMMARY OF	FINDINGS	5 - Attach sit	e map showing s	amp	le point lo	cations, t	transects	s, important featu	ires, etc.	
Hydrophytic Vegeta			YES	- 1-				, , ,	,	
Hydric Soil Present			YES				Is This	Sample Area Within	a Wetland?	YES
Wetland Hydrology	Present?		YES							
Remarks:						•				
Downgrad	ient portio	n of large wet	land complex assoc	iated	with the Lai	moille Rive	er. Bisecte	ed by roads and main	ntained within u	tility ROW.
HYDROLOGY										
Wetland Hydrology	/ Indicators:							Secondary Indicators	(minimum of two	required)
		f one is require	d; check all that apply)				Surface Soil Cra		, ,
Surface Wate	Water-Stained	Leaves	(B9)			Drainage Patte	rns (B10)			
High Water Ta			Aquatic Fauna					Moss Trim Line		
Saturation (A	•		Marl Deposits (Dry-Season Wa		
Water Marks			Hydrogen Sulfic					Crayfish Burrov		
Sediment Dep			Oxidized Rhizos			ts (C3)			ole on Aerial (C9)	
Drift Deposits Algal Mat or (Presence of Rec			(C6)		Geomorphic Po	ssed Plants (D1)	
Iron Deposits			Thin Muck Surf			(CO)		Shallow Aquita		
Inundation Vi		I (B7)	Other (Explain		•			X Microtopograp		
Sparsely Vege	etated Concav	e Surface (B8)						X FAC-Neutral Te	st (D5)	
Field Observations:								<u> </u>		
Surface Water Pres			Depth (incl	nes):						
Water Table Preser	Depth (incl	nes):			Wetlan	d Hydrology Present?		YES		
Saturation Present?	?		Depth (incl	nes):						
Remarks: SOIL										
	•	the depth nee	ded to document the			the absen	ce of indic	ators.)		
Depth	Matrix			Red	ox Features	_ 1	. 2			_
<u> </u>	(moist)	<u>%</u>	Color (moist)		<u></u> %	Type ¹	Loc ²	Texture		Remarks
	Y 3/2 Y 4/2	100% 95%	10YR 3/6		5%		М	FINE SANDY LOAM FINE SANDY LOAM		
	4/1	50%	2.5Y 4/2		45%	С –	M	FINE SANDY LOAM		
			7.5YR 3/4		5%					
¹Type: C=Concentration	D=Depletion F	M=Reduced Matr	ix, MS=Masked Sand Grains					² Location: PL=Pore Lining	M=Matriy	
		IIII-IICaacca Iviati	x, wis-wasked saild Grains	•						3.
Hydric Soil Indicato	115.							Indicators for Proble	,	
Histosol (A1)					ow Surface (S8)	(LRR R,			0) (LRR K, L, MLRA 1	•
Histic Epipedo				4 149B) face (S9) (LRR R	NALDA 1400			edox (A16) (LRR K, L	
Black Histic (A Hydrogen Sul	•				Mineral (F1) (L		9)		at or Peat (S3) (LRR 9) (LRR K, L, M)	K, L, N)
Stratified Lay					Matrix (F2)	Lj			w Surface (S8) (LRR	K. L)
Depleted Beld		ce (A11)	X Deplete						ice (S9) (LRR K, L)	, ,
Thick Dark Su	ırface (A12)		Redox I	Dark Sı	urface (F6)				e Masses (F12) (LRF	R K, L, R)
Sandy Mucky	Mineral (S1)		Deplete	ed Dar	k Surface (F7)			Piedmont Floo	dplain Soils (F19) (N	ILRA 149B)
Sandy Gleyed			Redox I	Depres	sions (F8)			Mesic Spodic (ΓΑ6) (MLRA 144A, 1	45, 149B)
Sandy Redox				2				Red Parent Ma		
Stripped Mat		UDA 4405'			licators of hydro				ark Surface (TF12)	
Dark Surface	(57) (LRR R, M	ILKA 149B)		wetla	nd hydrology m dis	nust be prese turbed or pro		Other (Explain	in Kemarks)	
Restrictive Layer (if	observed):				313					
Туре								Hydric	Soil Present?	YES
Depth (inches)	:									_
Remarks:										

Sampling Point: MI-11-2WET

	Absolute	Dom.	Indicator			
Tree Stratum (Plot size: 30' RAD)	% Cover	Sp?	Status	Dominance Test Worksheet:		
1. Fraxinus pennsylvanica	60	X	FACW	# Dominants OBL, FACW, FAC:	7	(A)
2. Acer saccharinum	30	<u>X</u>	FACW	# Dominants Obl., FACW, FAC.		(^)
			FACVV		0	(D)
3.				# Dominants across all strata:	8	(B)
4						
5				% Dominants OBL, FACW, FAC:	88%	(A/B)
6						
7.				Prevalence Index Worksheet:		
	90	= Tota	Cover	Total % Cover of:	Multiply By:	
Sapling Stratum (Plot size: 15' RAD)				OBL x 1 =		_
1. Ulmus americana	5	х	FACW	FACW 177 x 2 =	354	_
-		<u>x</u>		 -		_
2. Fraxinus pennsylvanica			FACW	FAC 35 x 3 =	105	_
3				FACU 55 x 4 =	220	_
4				UPL x 5 =		_
5				Sum: 267 (A)	679	(B)
6						
7.				Prevalence Index = B/A =	2.54	
				·		
	7	= Tota	Cover	Hydrophytic Vegetation Indicators:		
Shrub Stratum (Plot size: 15' RAD)		- 1018	COVCI			
		.,	EAC::	X Dominance Test is > 50%		
Lonicera morrowii	50	X	FACU	X Prevalence Index is <= 3.0	. 1	
2. Rhamnus cathartica	15	X	FAC	Problematic Hydrophytic Veg	getation* (explain)	
3				Rapid Test for Hydrophytic V	egetation	
4				Morphological Adaptations		
5.				1 Indicators of hydric soil and watered by dealer	and marked the marked to	unla sa
				Indicators of hydric soil and wetland hydrolo disturbed or problematic.	igy must be present, u	iniess
6				Definitions of Vegetation Strata:		
<i>1.</i>				Definitions of Vegetation Strata.		
-1	65	= Tota	Cover			
Herb Stratum (Plot size: 5' RAD)				Tree - Woody plants, excluding woody vines		
Onoclea sensibilis	50	X	FACW	in height and 3in (7.6cm) or larger in diamete	r at breast height (DB	H).
Lysimachia nummularia	25	Х	FACW			
3. Matteuccia struthiopteris	15		FAC			
4. Impatiens capensis	5		FACW	Sapling - Woody plants, excluding woody v	ines, approximately 2	Oft (6m) or
5. Lonicera morrowii			FACU	more in height and less than 3in (7.6cm) DBH		
6. Rhamnus cathartica			FAC			
7.						
8.				Shrub - Woody plants, excluding woody vin	es, approximately 3 to	20ft (1 to
9.				6m) in height.		
10.						
11.				Herb - All herbaceous (non-woody) plants, i	including herbaceous	vines,
12.				regardless of size. Includes woody plants, exc	ept woody vines, less	than
	105	= Tota	Cover	approximately 3ft (1m) in height.		
Woody Vines (Plot size: 15' RAD)		- 1014	COVCI			
(
1				·		
2				Woody vine - All woody vines, regardless	of height.	
3						
4.				Hydrophytic	· 	
5.				Vegetation		
		= Tota	Cover	Present?	YES	
						_
remarks: (If observed, list morphological adaptations below)						
temarks: (If observed, list morphological adaptations below).						



Vermont Potential Rare, Threatened, and Endangered Species and Natural Communities in the Project Region and Onsite Habitats Summary

Client: VELCO

Project: Sandbar Station Smartvalve

Prepared by: VHB (A. Peirce) July 17, 2024

Survey Date(s): July 23-25, 30; August 21, 2024; April 15, 2025 (M. Jackman & W. Durkin)



					Vermont Status	Federal Status	EO last Observed			Optimal Survey Time ³	within Study		Surve	Survey Recommended?	
Species	Common Name	Туре	State Rank	Global Rank				Habitat Description ¹	Occurrence Description ²			Potential for Habitat to Occur Onsite?	(yes/no)	Comments	
Acipenser fulvescens	Lake Sturgeon	Animal	S1	G3G4	E	UR	2016	Temperate waters; bottom of river beds or lakes. Clear sand or gravel substrate.	Lamoille River between Peterson Dam and Bear Trap Road bridge.	Summer-Fall	No	No	No	The Project will avoid impacts to aquatic habitat.	
Agalinis paupercula	Smooth Agalinis	Plant	S2	G5	-	-	2019	Fields, roadsides, open ROW, clearings and trail edges.	Edges of mowed access road along old river channel in Lamoille River Delta.	Late Spring- Summer	No	Yes	No	Species is not state or federally listed and occurrence is not within the Study Area.	
Ammocrypta pellucida	Eastern Sand Darter	Animal	S1	G4	Т	-	2019	Sandy- bottomed streams and lake shoals. Clean sand substrates.	Lamoille River Mouth to Dam by West Milton.	Summer	No	No	No	The Project will avoid impacts to aquatic habitat.	
Apalone spinifera	Spiny Softshell	Animal	S1	G5	Т	-	2022	Rivers, lakes, marshes, ponds. Sandy raised areas used for nesting habitat. Open habitats with little vegetation.	Two occurrences. Lamoille River Delta, upstream of fishing access area. And Camp Kiniya Road.	Summer	No	Yes	Yes	Species is state threatened and Study Area contains potential habitat in northeast quadrant bordering river.	
Ardea herodias	Great Blue Heron	Animal	S3S4B	G5	-	-	2015	Rivers, lake edges, marshes. Require tall trees for nesting sites.	Lamoille River Delta- Sandbar WMA.	Summer	No	No	No	Species is not state or federally protected and EC does not intersect the Stuce Area.	
Bidens tripartita ssp. Comosa	Tufted Beggar-ticks	Plant	SU	G5T5	-	-	2019	Shorelines, margins of wetlands, wet depressions and ditches.	East of Sandbar causeway. South side of the road; emergent on lake shore.	Summer	No	Yes	No	Species is not state or federally protected and Ed does not intersect the Students Area.	
Botrychium rugulosm	Rugulose grapefern	Plant	S1	G3	-	-	2013	Open fields, second growth forests. Typically found in sandy soils.	Undeveloped knoll underneath powerlines, Milton, VT.	Spring- Summer	Yes	Yes	Yes	Species is not state or federally protected, howev the EO intersects the Stud Area.	
Bromus kalmii	Wild chess	Plant	S2	G5	-	-	2020	Common in dry-mesic soils of outcrops, open forests, and woodlands.	Sandbar Substation ROW.	Summer	Yes	Yes	Yes	Species is not state or federally protected, however EO does intersect the Studies.	
Calystegia spithamaea ssp. Spithamaea	Low Bindweed	Plant	S2	G4G5T4T5	Т	-	2015	Sandy fields, roadsides and clearings; railroads, woodlands and sandplains.	Two occurrences. Powerline ROW between Bear Trap Road and VELCO substation. And Camp Kiniya Flats.	Summer	Yes	Yes	Yes	Species is state threatened and EO intersects the Stud Area.	

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Client: VELCO

Project: Sandbar Station Smartvalve

Prepared by: VHB (A. Peirce) July 17, 2024

Survey Date(s): July 23-25, 30; August 21, 2024; April 15, 2025 (M. Jackman & W. Durkin)



													Surve	ey Recommended?
Species	Common Name	Туре	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?		(yes/no)	Comments
Carex merritt- fernaldii	Fernald's Sedge	Plant	S1	G5	-	-	2020	Well drained sandy and rocky soils of fields, cliffsides, cliffs and woodlands.	End of cut through road at the edge of a pine plantation Milton, VT.	Spring-Fall	No	Yes	No	Species is not state or federally protected and EC does not intersect the Stud Area.
Carpiodes cyprinus	Quillback	Animal	S1	G5	-	-	1989	Temperate, freshwater habitats; streams, lakes, river channels.	Approximately 4 miles above the mouth of the Lamoille River.	Spring- Fall	No	No	No	The Project will avoid impacts to aquatic habitat
Corallorhiza odontorhiza var. odontorhiza	Autumn Coral-root	Plant	S2	G5T5	Т	-	2020	Dry-mesic to mesic deciduous or mixed deciduous-coniferous forests. Typically open understory.	Slopes east of Crockett Swamp. Found in Limestone Hardwood Forest.	Summer	No	Yes	Yes	Species is state threatened and Study Area contains potential habitat.
Cottus bairdii	Mottled sculpin	Animal	S2	G5	-	-	1998	Small headwaters, streams, small rivers; gravel bottoms and sanddy riffles.	Lamoille River- below West Milton Dam.	Summer	No	No	No	The Project will avoid impacts to aquatic habita
Crocanthemum canadense	Canada Frostweed	Plant	S2S3	G5	-	-	2020	Open, sandy soils of woodlands, roadsides, clearings and sandplains.	Eastern substation Milton, VT.	Summer	Yes	Yes	Yes	Species is not state or federally protected, howev EO does intersect the Stud Area.
Cyperus engelmannii	Engelmann's Flatsedge	Plant	S2S3	G4Q	-	-	2019	Shorelines, muddy depressions, wet sandy areas, meadows.	Lamoille River Delta- Sandbar Refuge South.	Summer	No	No	No	Species is not state or federally protected and EC does not intersect the Stud
Cyperus houghtonii	Houghton's Flatsedge	Plant	S2	G4?	Т	-	2020	Dry- mesic to xeric soils and ledges, including roadsides, woodlands and sandplains.	Two occurrences. Under powerlines adjacent to Sandbar Substation, Milton VT. And Headquarters field.	Summer	Yes	Yes	Yes	Species is state threatened and EO intersects the Stud Area.
Cypripedium arietinum	Rams-head Lady-slipper	Plant	S1	G3	Т	-	2011	Deciduous and mixed evergreen- deciduous forests. Often found in enriched soils due to bedrock influence.	Camp Kiniya Flats, Colchester VT.	May-June	No	Yes	Yes	Species is state protected and Study Area contains potential habitat.
Desmodium cuspidatum	Large-bracted Trick-trefoil	Plant	S1	G5	E	-	2020	Dry to mesic forests and woodlands. Usually on rocky slopes or ROW areas.	Along north side of ROW; 600 meters northeast of Sandbar Substation.	Summer	Yes	Yes	Yes	Species is state endangere and EO intersects the Stud Area.

Client: VELCO

Project: Sandbar Station Smartvalve

Prepared by: VHB (A. Peirce) July 17, 2024

Survey Date(s): July 23-25, 30; August 21, 2024; April 15, 2025 (M. Jackman & W. Durkin)



													Surve	y Recommended?
Species	Common Name	Туре	State Rank	Global Rank	Vermont Status			Habitat Description ¹	Occurrence Description ²	Optimal Survey Time ³	EO Mapped within Study Area?	Potential for Habitat to Occur Onsite?	(yes/no)	Comments
Desmodium perplexum	Perplexed Trick-trefoil	Plant	S2	G5	-	-	2019	Dry-mesic forests and woodlands, forest borders.	100 meters west of WMA headquarters.	Summer	No	Yes	No	Species is not state of federally protected and does not intersect the S Area.
Eutrochium purpureum var. purpureum	Sweet Joe-pye Weed	Plant	\$2\$3	G5T5	-	-	2020	Woodlands, forests, pastures and fields.	Hills on the northside of Lamoille River. Milton, VT.	Spring- Summer	Yes	Yes	Yes	Species is not state of federally protected, how EO does intersect the S Area.
Gomphaeschna furcillata	Harlequin Darner	Animal	S2S3	G5	-	-	2020	Peatlands, bogs, hardwood swamps and fens.	Sandbar WMA, Milton. Fields between US 2 and Lamoille River.	Summer	No	No	No	Species is not state federally protected an does not intersect the S
Hackelia deflexa ssp. Americana	Nodding Stickseed	Plant	S2	G5T5	Т	-	1990	1990 Rocky forests and cliff bases. Regions with high pH bedrock.		Summer	Yes	Yes	Yes	Species is state threat and EO intersects the s
Ichthyomyzon unicuspis	Silver lamprey	Animal	S2	G5	-	-	2019	Large, clear rivers and lakes. Spawning grounds found in medium sized rivers with gravel substrate.	Lower extent of Lamoille River; Sandbar WMA.	Summer-Fall	No	No	No	The Project will avimpacts to aquatic ha
Ixobrychus exilis	Least bittern	Animal	S2B	G4G5	-	-	1994	Stream banks, marshes, wetland areas with thick vegetation for nesting and feeding.	Lower Lamoille River Oxbow area.	Summer	No	No	No	Species is not state federally protected and does not intersect the Area.
Lampsilis ovata	Pocketbook	Animal	S2	G5	E	-	2019	Found in larger rivers with loose to firmly packed sand, gravel sand or silty sand substrates.	Lower extent of Lamoille River; Delta Island, Peterson Dam Impoundment.	Summer	No	No	No	The Project will avo
emna turionifera	Turion Duckweed	Plant	SU	G5	-	-	1967	Mesotrophic and/or eutrophic waters of lakes, ponds and rivers.	Sandbar Waterfowl Area, West Milton.	Summer	No	No	No	Species is not state federally protected and does not intersect the Area.
Leptodea fragilis	Fragile Papershell	Animal	S2	G5	E	-	2003	Various sized water bodies; substrates preferred include mud, gravel and sand. Wooded/ riparian bank areas.	Lamoille River adjacent to delta island within main channel.	Summer	No	No	No	The Project will avo
Lythrum alatum ssp. alatum	Winged-loosestrife	Plant	S1	G5T5	Т	-	Low fields and meadows; river banks, marshes,		Along powerline access road northeast of Sandbar Substation.	Summer	Yes	Yes	Yes	Species is state threa and EO intersects the Area.
Moxostoma macrolepidotum	Shorthead Redhorse	Animal	S2	G5	-	-	2001	Streams, lakes and rivers; loose substrate such as gravel or sand.	Lower section of the Lamoille River.	Summer	No	No	No	The Project will av

Client: VELCO

Project: Sandbar Station Smartvalve

Prepared by: VHB (A. Peirce) July 17, 2024

Survey Date(s): July 23-25, 30; August 21, 2024; April 15, 2025 (M. Jackman & W. Durkin)



														Surve	ey Recommended?
	Species	Common Name	Туре	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?	(yes/no)	Comments
1 Mile Radiu	Myotis lucifugus	Little Brown bat	Animal	S1	G3G4	E	UR	2015	Forested lands near water. Often roost in buildings, trees, under rocks and wood piles.	Sandbar WMA Lamoille River Delta.	Spring-Summer	No	Yes	No	The Project will avoid impacts to this species.
Occurrences-	Necturus maculosus	Mudpuppy	Animal	S2	G5	-	-	2022	Streams, lakes and ponds. Use cover such as logs and rocks within substrate.	Lamoille River, proximal to Peterson Dam, Milton.	Summer	No	No	No	The Project will avoid impacts to aquatic habitat.
Element C	Piptatheropsis pungens	Slender Mountain-rice	Plant	S2	G5	Т	-	2001	Deciduous or mixed evergreen woodlands and barrens. Dry mesic to xeric openings.	Sandbar WMA on slope leading down to wetland area.	Summer	No	Yes	Yes	Species is state threatened and Study Area contains potential habitat.
	Podilymbus podiceps	Pied-billed Grebe	Animal	S2S3B	G5	-	-	2002	Freshwater ponds or lakes with emergent vegetation providing nesting habitat.	Lamoille River Delta- Sandbar WMA.	Summer	No	No	No	Species is not state or federally listed and Study Area does not include potential habitat.
	Potamilus alatus	Pink Heelsplitter	Animal	S2	G5	Т	-	2013	Various substrate types within slow moving water habitats.	Lamoille River, upstream of US 2 bridge overpass.	Summer	No	No	No	The Project will avoid impacts to aquatic habitat.
	Pterospora andromedea	Pinedrops	Plant	S1	G5	E	-	1915	Deciduous to mixed evergreen- deciduous forests.	A hill in Colchester that was worked by a marble company.	Spring-Summer	No	Yes	Yes	Species is state endangered and the Study Area contains potential habitat.
	Pyganodon grandis	Giant Floater	Animal	S2S3	G5	Т	-	2013	Lakes or slower moving waters. Found in substrates of mud or sand.	Lower Lamoille River, Peterson Dam and West Milton Bridge areas.	Spring- Fall	Yes	Yes	No	The Project will avoid impacts to aquatic habitat.
	Schoenoplectiella smithii var. smithii	Smith's bulrush	Plant	S2	G5?TNR	-	-	2019	Areas with fluctuating water levels; tidal river shores, pond shores.	Camp Kiniya Beach, Lamoille River Delta	Summer	No	No	No	Species is not state or federally protected and EO does not intersect the Study Area.
	Setophaga cerulea	Cerulean Warbler	Animal	S1S2B	G4	-	-	1994	Deciduous floodplain forests. Breed in wooded swamps, mesic uplands and wet bottomlands.		Summer	No	No	No	The Project will avoid impacts to habitat.

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Client: VELCO

Project: Sandbar Station Smartvalve

Prepared by: VHB (A. Peirce) July 17, 2024

Survey Date(s): July 23-25, 30; August 21, 2024; April 15, 2025 (M. Jackman & W. Durkin)



													Surve	y Recommended?
Species	Common Name	Туре	Habitat Description'		Optimal Survey Time ³	EO Mapped within Study Area?	Potential for Habitat to Occur Onsite?	(yes/no)	Comments					
Solidago squarrosa	Squarrose Goldenrod	Plant	S2S3	G4G5	-	-	2019	Roadsides, forest edges, open banks, fields and clearings.	Two occurrences. Roadcut into sandplains bank in openings above Cub Road. Headquarters Northwest building.	Summer	No	Yes	No	Species is not state or federally protected and EC does not intersect the Stud Area.
Sternotherus odoratus	Eastern Musk Turtle	Animal	S2	G5	-	-	2013	Permanent wetlands such as lakes, ponds, rivers and swamps. Shallow water dwelling.	Two occurrences. Face of island at Lamoille River Delta. And Camp Dudley off Kiniya Flats Road.	Summer	No	Yes	No	Species is not state or federally protected and EC does not intersect the Stud Area.
Thalictrum venulosm	Border Meadow-rue	Plant	\$2\$3	G5	-	-	1982	Lakeshores and northern river shores with high pH bedrock.	Dry, rocky ridge located northwest of Clay Point Road, Colchester VT.	Summer	No	Yes	No	Species is not state or federally protected and EC does not intersect the Stud Area.
A	alder Swamp	Natural Community	S4	-	-	-	2002	Speckled alder is the dominant tall shrub of this low lying complex. Saturated and experience seasonal flooding. Soils range from high organic to deep muck or peat.	On Sandbar WMA, north of Lamoille River Access Area	Spring-Fall	No	No	No	Study Area does not contains suitable conditions for this Natural Community.
Deep	o Bulrush Marsh	Natural Community	S4	-	-	-	1983	Permanently inundated with water depths from 1-3 feet. Coarse mineral soils with tall slender stems of soft and hard stem bulrush.	Sandbar WMA at the Lamoille River Delta	Spring-Fall	No	No	No	Study Area does not contai suitable conditions for this Natural Community.
Dry Oak-Ma	aple Limestone Forest	Natural Community	S3	-	-	-	2015	Dominant tree species include red oak, white pine, shagbark hickory and basswood. Soils consist of shallow organic layer over bedrock.	Throughout Niquette Bay State Park. Steeper ledgy slopes with exposed bedrock in many places.	Spring-Fall	No	Yes	Yes	Check northwestern upland quadrant of Study Area.
Dry Oak-Hicko	ory-Hophornbeam Forest	Natural Community	S3	-	-	-	1992	Red oak, shagbark hickory and hophornbeam are common canopy dominants. Sugar maple, white ash, white oak abundant. Hilltops, gentle ridgelines, shallow soils with various bedrock conditions.	Hills on north side of the	Spring-Fall	Yes	Yes	Yes	Check forested portions of Study Area- northwest and eastern quadrants.

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Client: VELCO

Project: Sandbar Station Smartvalve

Prepared by: VHB (A. Peirce) July 17, 2024

Survey Date(s): July 23-25, 30; August 21, 2024; April 15, 2025 (M. Jackman & W. Durkin)



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Species	Common Name	Туре	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?	(yes/no)	Comments
Dry Pine- Oak	:- Heath Sandplain Forest	Natural Community	S1	-	-	-	2018	Well drained sand soils that are acidic and nutrient poor. Dominant canopy tree species include pitch pine, white pine, red maple and red oak. Blueberry and hazel species are abundant in the understory.	Inland from lakeshore at southernmost portion of the Lamoille Delta. Adjacent to Kiniya Beach	Spring- Fall	No	No	No	Study Area does not conta suitable conditions for th Natural Community.
Lak	ke Sand Beach	Natural Community	S2	-	-	-	2019	A relatively flat area that receives wave action and a beach berm above it. Requires a supply of sand and a force to move it. Annual herbs such as nodding bur marigold and clammyweed are present.	Small sliver extending into Study Area from Camp Kiniya lakeshore on the Lamoille River Delta.	Spring-Fall	No	No	No	Study Area does not conta suitable conditions for th Natural Community.
Lakeside	e Floodplain Forest	Natural Community	\$3	-	-	-	2019	Occurring in former lake coves, this system sits on silt or clay loams. Dominant canopy species are typically silver maple and green ash. Very few shrubs or saplings grow in these annually flooded areas.	the Lamoille River within		No	No	No	Study Area does not conta suitable conditions for th Natural Community.
Maple (Green Ash Swamp	Natural Community	\$3	-	-	-	2002	Deep, decomposed organic soil deposits with hummocks and water-filled hollows. Canopy dominated by green ash and red maple. Dogwood and holly species fill in the understory.	On Sandbar WMA, north of Lamoille River Access Area		No	No	No	Study Area does not conta suitable conditions for th Natural Community.
Mesic	c Clayplain Forest	Natural Community	S 2	-	-	-	1991	White oak, red oak, red maple, white pine are often dominant canopy species with hemlock, beech, basswood and green ash as abundant understory species. Soil fertility is high and soils are generally dense and seasonally wet.		Spring- Fall	No	No	No	Study Area does not conta suitable conditions for thi Natural Community.
Mesic Maple-	-Ash-Hickory-Oak Forest	Natural Community	\$3	-	-	-	2015	This community occurs in warmer climate areas where hickories are common in the forest canopy. Its ground vegetation also shows its southern affinities, but in many respects it is similar to Northern Hardwood Forest, with beech, sugar maple, and red maple common in the canopy	Throughout lower lying slopes of Niquette Bay State Park area.	Spring-Fall	No	No	No	Study Area does not conta suitable conditions for th Natural Community.

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Species	Common Name	Туре	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?	(yes/no)	Comments
Oak- Maple Lin	nestone Talus Woodland	Natural Community	\$3	-	-	-	2009	Found on rock fall slopes beneath cliffs. Soils are nutrient poor due to the accumulation of shale and slate. Sugar maple, red oak, basswood and northern white cedar commonly dominate the canopy.	Below west facing ledge area adjacent to sandy wet flats south of Camp Kiniya, Colchester.	Spring- Fall	No	No	No	Study Area does not contain suitable conditions for this Natural Community.
Sand-C	Over-Clay Forest	Natural Community	S2	-	-	-	2007	Acidic sand layer is found on top of a nutrient rich clay. Red maple or hemlock tend to dominate closed canopies with interspersed red oak and white pine. Witch hazel and prickly ash are common shrub species.	Sandy wet flats south of Camp Kiniya in Colchester.	Spring-Fall	No	No	No	Study Area does not contain suitable conditions for this Natural Community.
Silver Maple- Sens	iitive Fern Floodplain Forest	Natural Community	\$3	-	-	-	1191	Silver maple dominant floodplain forest. Abundance of green ash, swamp white oak and elm. Sensitive herb and winterberry holly are abundant understory species. Sit on alluvial soils that annually receive overbank flooding.	South side of the Lamoille River, north of Walnut Ledge.	Spring-Fall	No	Yes	Yes	Check forested portions of Study Area- northeastern quadrant, adjacent to river.

¹Potential 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

Cornell Lab of Ornithology Bird Guide. Retrieved from: https://www.allaboutbirds.org/guide/

Gilman, Arthur V. 2015. New Flora of Vermont. The New York Botanical Garden.

Gleason, Henry A. and Cronquist, Arthur. 1991. Manual of Vascular Plants of Northeaster United States and Adjacent Canada. The New York Botanical Garden.

Haines, Arthur. 2011. Flora Novae Angliae. New England Wildflower Society/Yale University Press, New Haven, CT . 973 Pp.

Langdon, Richard W., Ferguson, Mark T. and Cox, Kenneth M. 2006. Fishes of Vermont . Vermont Department of Fish and Wildlife.

Newcomb, Lawrence. 1977. Newcomb's Wildflower Guide . Little, Brown, and Company, Boston

Northern Prairie Wildlife Research Center. http://www.npwrc.usgs.gov/resource/distr/insects/tigb/usa/49.htm

Seymour, Frank Conkling. 1982. The Flora of New England. 2d ed. Phytologia Memoirs 5. Plainfield, NJ: Harold N. Moldenke and Alma L. Moldenke. 611 p. [7604]

Thompson, Elizabeth H., Sorenson, Eric R. and Zaino, Robert J. 2019. Wetland, Woodland, Wildland: A Guide to the Natural Communities of Vermont. Vermont Department of Fish and Wildlife and The Nature Conservancy.

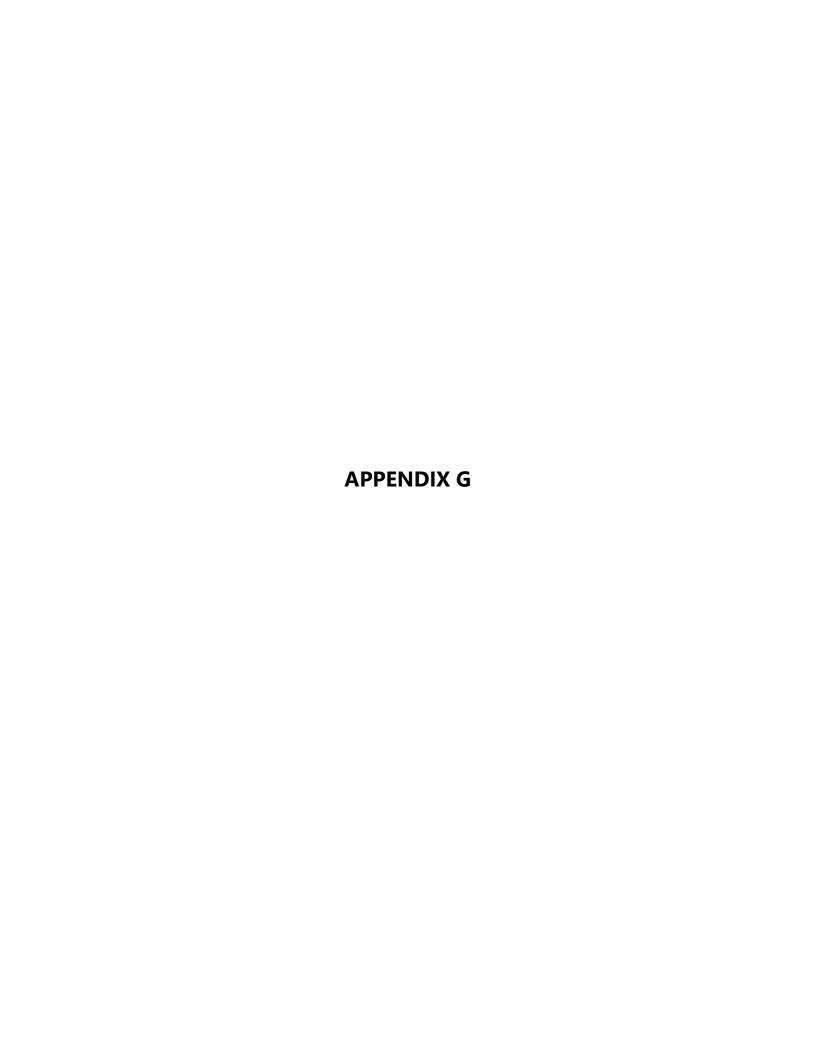
Vermont Natural Resources Atlas, Accessed July 2024. Element Occurrence Reports

²Sources for occurrence description listed below:

Vermont Natural Heritage Inventory - Vermont Fish & Wildlife Department - Element Occurrence Reports.

 ${\tt 3Flowering\ Time: Spring\ (April-May),\ Summer\ (June-July),\ Late\ Summer\ (August-September),\ Fall\ (October-November)}$

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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: 12/10/2024 18:55:46 UTC

Project Code: 2024-0141068

Project Name: VELCO Sandbar Smartvalve

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:

Project code: 2024-0141068

https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review

NOTE Please <u>do not</u> 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: 2024-0141068

Project Name: VELCO Sandbar Smartvalve

Project Type: Operations and Maintenance - Electric Power Transmission and

Distribution Facilities

Project Description: Proposed substation expansion

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@44.609697350000005,-73.20356219081634,14z



Counties: Chittenden County, Vermont

ENDANGERED SPECIES ACT SPECIES

Project code: 2024-0141068

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 Fisheries¹, 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.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Project code: 2024-0141068 12/10/2024 18:55:46 UTC

MAMMALS

NAME

Northern Long-eared Bat Myotis septentrionalis

No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/9045

Tricolored Bat Perimyotis subflavus

No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/10515

Proposed

Endangered

Species profile: https://ecos.fws.gov/ecp/species/10515

INSECTS

NAME STATUS

Monarch Butterfly *Danaus plexippus* Candidate

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743

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.

Project code: 2024-0141068 12/10/2024 18:55:46 UTC

IPAC USER CONTACT INFORMATION

Agency: VHB

Name: Nicole Fenton

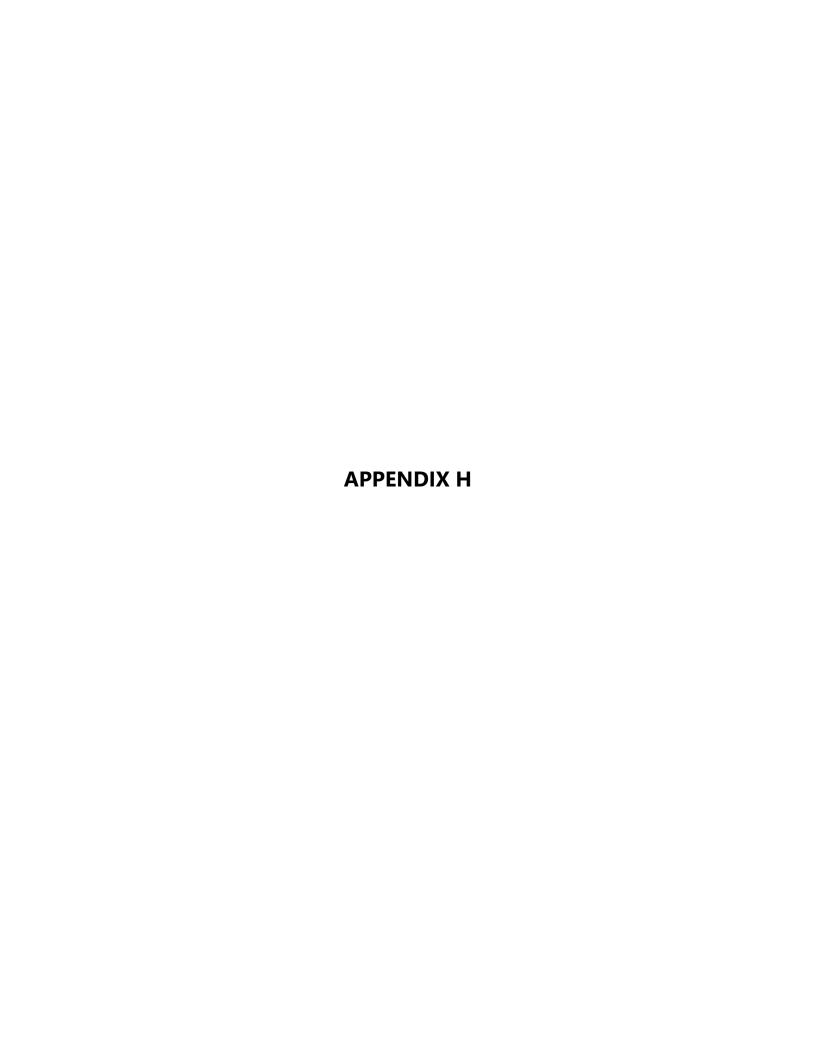
Address: 40 Idx Dr. Building 100 Suite 200

City: South Burlington

State: VT Zip: 05403

Email nfenton@vhb.com

Phone: 8024976107





Client: VELCO

Project: Sandbar Station Smartvalve

Survey Date(s): July 23-25, 30; August 21, 2024; April 15, 2025 (M. Jackman & W. Durkin)
Prepared by: VHB (W. Durkin) May 15, 2025

				Observed Habitat			Non-Native Invasive
Scientific Name ¹	Common Name	Family	Natural Communities / Forested Area	Disturbed (ROW, Substation, or Residence)	Wetlands	VT Rarity Rank ^{2,3}	Species ⁴
Acer rubrum L.	red maple	Aceraceae	Х	Х	Х		
Acer saccharinum L.	silver maple	Aceraceae			Х		
Acer saccharum Marshall Acer spicatum Lam.	sugar maple mountain maple	Aceraceae Aceraceae	X X				
Achillea millefolium L.	common yarrow	Asteraceae	^	X	-		
Acorus calamus L.	calamus	Acoraceae			Х		
Actaea rubra (Aiton) Willd.	red baneberry	Ranunculaceae	X				
Adiantum pedatum L.	northern maidenhair	Pteridaceae	Х		X		
Alisma subcordatum Raf. Allium tricoccum Aiton	American water plantain ramp	Alismataceae Liliaceae	Х	X	Х		+
Alnus incana (L.) Moench	gray alder	Betulaceae	~		Х		
Ambrosia artemisiifolia L.	annual ragweed	Asteraceae		X	-		
Amphicarpaea bracteata (L.) Fernald	American hogpeanut	Fabaceae	X	X			
Anemone canadensis L.	Canadian anemone	Ranunculaceae	X X				
Anemone virginiana L. Antennaria neglecta Greene	tall thimbleweed field pussytoes	Ranunculaceae Asteraceae	^	X			+
Apios americana Medik.	groundnut	Fabaceae	Х		Х		
Aquilegia canadensis L.	red columbine	Ranunculaceae	Х				
Aralia nudicaulis L.	wild sarsaparilla	Araliaceae	X				
Aralia racemosa L.	American spikenard	Araliaceae	X				
Arisaema triphyllum (L.) Schott	Jack in the pulpit	Araceae	Х	V			
Artemisia vulgaris L. Asarum canadense L.	common wormwood Canadian wildginger	Asteraceae Aristolochiaceae	Х	X			+
Asclepias quadrifolia Jacq.	fourleaf milkweed	Asclepiadaceae	X				+
Asclepias syriaca L.	common milkweed	Asclepiadaceae		X			
Asplenium platyneuron (L.) Britton, Sterns & Poggenb.	ebony spleenwort	Aspleniaceae	Х				
Asplenium rhizophyllum L.	walking fern	Aspleniaceae	X				
Asplenium ruta-muraria L.	wallrue maidenhair spleenwort	Aspleniaceae	X			1	
Asplenium trichomanes L. Athyrium filix-femina (L.) Roth	common ladyfern	Aspleniaceae Dryopteridaceae	X				+
Berberis vulgaris L.	common barberry	Berberidaceae	X	X	Х		В
Betula alleghaniensis Britton	yellow birch	Betulaceae	Х		-		
Betula papyrifera Marshall	paper birch	Betulaceae	Х	X			
Betula populifolia Marshall	gray birch	Betulaceae		X			<u> </u>
Bidens frondosa L.	devil's beggartick	Asteraceae	X		X		
Boehmeria cylindrica (L.) Sw. Botrychium dissectum Sprenq.	smallspike false nettle cutleaf grapefern	Urticaceae Ophioglossaceae	X	X	Х		+
Botrychium multifidum (S.G. Gmel.) Trevis.	leathery grapefern	Ophioglossaceae		X	-	S3	1
Bromus inermis Leyss.	smooth brome	Poaceae		X			
Bromus pubescens Muhl. ex Willd.	hairy woodland brome	Poaceae	Х	X			
Calystegia spithamaea (L.) Pursh ssp. spithamaea	low false bindweed	Convolvulaceae		X		S2 (T)	
Campanula rotundifolia L. Carex cephalophora Muhl. ex Willd.	bluebell bellflower oval-leaf sedge	Cyporacoae	X	X			
Carex cepnatopriora Main. ex vviita. Carex communis L.H. Bailey	fibrousroot sedge	Cyperaceae Cyperaceae	X				-
Carex deweyana Schwein.	Dewey sedge	Cyperaceae	X		-		1
Carex eburnea Boott	bristleleaf sedge	Cyperaceae	Х				
Carex flava L.	yellow sedge	Cyperaceae			Х		
Carex gracillima Schwein.	graceful sedge	Cyperaceae	Х				
Carex graphes Schwein	Gray's sedge	Cyperaceae	Х		X X	S3	
Carex gynandra Schwein. Carex lupulina Muhl. ex Willd.	nodding sedge hop sedge	Cyperaceae Cyperaceae	X		X		-
Carex lurida Wahlenb.	shallow sedge	Cyperaceae			Х		
Carex pellita Muhl. ex Willd.	woolly sedge	Cyperaceae		X			
Carex pensylvanica Lam.	Pennsylvania sedge	Cyperaceae	Х				
Carex plantaginea Lam.	plantainleaf sedge	Cyperaceae	X		Х		
Carex platyphylla Carey Carex rosea Schkuhr ex Willd.	broadleaf sedge rosy sedge	Cyperaceae Cyperaceae	X X				+
Carex scoparia Schkuhr ex Willd.	broom sedge	Cyperaceae	^	X			
Carex tuckermanii Dewey	Tuckerman's sedge	Cyperaceae			Х		<u> </u>
Carpinus caroliniana Walter	American hornbeam	Betulaceae	Х				
Carya cordiformis (Wangenh.) K. Koch	bitternut hickory	Juglandaceae	X				
Carya ovata (Mill.) K. Koch	shagbark hickory	Juglandaceae	X			1	+
Caulophyllum giganteum (Farw.) Loconte & Blackwell Ceanothus americanus L.	giant blue cohosh New Jersey tea	Berberidaceae Rhamnaceae	^	X			+
Centaurea stoebe L.	spotted knapweed	Asteraceae		X			†
Chelidonium majus L.	celandine	Papaveraceae		X			
Chelone glabra L.	white turtlehead	Scrophulariaceae			Х		
Cicuta maculata L.	spotted water hemlock	Apiaceae			X		
Cinna arundinacea L. Circaea ×intermedia Ehrh. (pro sp.) [alpina × lutetiana]	sweet woodreed	Poaceae	V		X		
Circaea ×intermedia Ehrh. (pro sp.) [alpina × lutetiana] Claytonia caroliniana Michx.	enchanter's nightshade Carolina springbeauty	Onagraceae Portulacaceae	X		Х		+
Comptonia peregrina (L.) J.M. Coult.	sweet fern	Myricaceae	^	X			+
Conopholis americana (L.) Wallr.	American cancer-root	Orobanchaceae	Х			S3	<u> </u>
Conyza canadensis (L.) Cronquist var. canadensis	Canadian horseweed	Asteraceae		X			<u> </u>
Coptis trifolia (L.) Salisb.	threeleaf goldthread	Ranunculaceae	X				<u> </u>
Corpus alternifolia L. f.	summer coralroot	Orchidaceae	X				
Cornus alternifolia L. f. Cornus rugosa Lam.	alternateleaf dogwood roundleaf dogwood	Cornaceae Cornaceae	X X	X			+
Cornus ragosa Lam. Cornus sericea L.	redosier dogwood	Cornaceae	^	X	х		†
Crocanthemum canadense	Canada Frostweed	Cistaceae		X		S2S3	†
Cryptotaenia canadensis (L.) DC.	Canadian honewort	Apiaceae	Х				
Cuscuta gronovii Willd. ex Schult.	scaldweed	Cuscutaceae		X			
Cyperus bipartitus Torr.	slender flatsedge	Cyperaceae		X			
Cyperus esculentus L.	yellow nutsedge	Cyperaceae		X		60 m	
Cyperus houghtonii Torr. Cyperus lupulinus (Spreng.) Marcks	Houghton's flatsedge Great Plains flatsedge	Cyperaceae		X X		S2 (T)	+
	Great FidIIIS Hatseuge	Cyperaceae	1	^		+	+
		Dryopteridaceae	X				
Cystopteris bulbifera (L.) Bernh. Dactylis glomerata L.	bulblet bladderfern orchardgrass	Dryopteridaceae Poaceae	X	X	<u> </u>		<u> </u>



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				Observed Habitat			
Scientific Name ¹	Common Name	Family	Natural Cammunities /	1		VT Rarity Rank ^{2,3}	Non-Native Invasive
			Natural Communities / Forested Area	Disturbed (ROW, Substation, or Residence)	Wetlands		Species ⁴
Deschampsia P. Beauv.	hairgrass	Poaceae	Х	X			
Desmodium canadense (L.) DC.	showy ticktrefoil	Fabaceae Fabaceae		X		C1 (F)	
Desmodium cuspidatum (Muhl. ex Willd.) DC. ex D. Don Desmodium glutinosum (Muhl. ex Willd.) Alph. Wood	largebract ticktrefoil			X		S1 (E)	
Dianthus armeria L.	pointedleaf ticktrefoil Deptford pink	Fabaceae Caryophyllaceae		X			
Dichanthelium clandestinum (L.) Gould	deertongue	Poaceae		X			
Diervilla lonicera Mill.	northern bush honeysuckle	Caprifoliaceae	X	X			
Digitalis grandiflora Mill.	yellow foxglove	Scrophulariaceae		X			
Dryopteris intermedia (Muhl. ex Willd.) A. Gray	intermediate woodfern	Dryopteridaceae	X				
Dryopteris marginalis (L.) A. Gray	marginal woodfern	Dryopteridaceae	X				
Echinochloa crus-galli (L.) P. Beauv.	barnyardgrass	Poaceae		X			
Eleocharis obtusa (Willd.) Schult.	blunt spikerush	Cyperaceae		X	Х		
Elymus hystrix L.	eastern bottlebrush grass	Poaceae	X				
Epifagus virginiana (L.) W.P.C. Barton Epilobium hirsutum L.	beechdrops codlins and cream	Orobanchaceae Onagraceae	Х	X	Х		
Epitobiam misatum E. Epipactis helleborine (L.) Crantz	broadleaf helleborine	Orchidaceae	Х	^	^		
Equisetum arvense L.	field horsetail	Equisetaceae	X	X			
Equisetum hyemale L.	scouringrush horsetail	Equisetaceae	X				
Eragrostis spectabilis (Pursh) Steud.	purple lovegrass	Poaceae		X			
Erigeron annuus (L.) Pers.	eastern daisy fleabane	Asteraceae		X			
Erigeron strigosus Muhl. ex Willd.	prairie fleabane	Asteraceae		X			
Euonymus alatus (Thunb.) Siebold	burningbush	Celastraceae		X			
Eupatorium perfoliatum L.	common boneset	Asteraceae		X	Х		
Euphorbia L.	spurge	Euphorbiaceae		X			
Eurybia divaricata (L.) G.L. Nesom	white wood aster	Asteraceae	X				
Euthamia graminifolia (L.) Nutt.	flat-top goldentop	Asteraceae		X	Х		
Eutrochium maculatum (L.) E.E. Lamont	spotted joe pye weed	Asteraceae		X	Х		
Eutrochium purpureum (L.) E.E. Lamont	sweetscented joe pye weed	Asteraceae	34	X		S2S3	
Fagus grandifolia Ehrh.	American beech	Fagaceae	X	V	Х		
Fragaria virginiana Duchesne Franqula alnus Mill.	Virginia strawberry glossy buckthorn	Rosaceae Rhamnaceae	X	X X		-	В
3			X	X			В
Fraxinus americana L. Fraxinus nigra Marshall	white ash black ash	Oleaceae Oleaceae	^		Х		
Fraxinus pennsylvanica Marshall	green ash	Oleaceae			X		
Galeopsis bifida Boenn.	splitlip hempnettle	Lamiaceae		X	Α		
Galium circaezans Michx.	licorice bedstraw	Rubiaceae	Х				
Galium mollugo L.	false baby's breath	Rubiaceae		X			
Gaylussacia baccata (Wangenh.) K. Koch	black huckleberry	Ericaceae		X			
Geranium robertianum L.	Robert geranium	Geraniaceae	X				
Geum canadense Jacq.	white avens	Rosaceae	X				
Glyceria grandis S. Watson	American mannagrass	Poaceae	X		Х		
Glyceria melicaria (Michx.) F.T. Hubbard	melic mannagrass	Poaceae	X		Х		
Glyceria striata (Lam.) Hitchc.	fowl mannagrass	Poaceae	X		Х		
Gymnocarpium dryopteris (L.) Newman	western oakfern	Dryopteridaceae	X				
Hackelia virginiana (L.) I.M. Johnst.	beggarslice	Boraginaceae	X				
Hamamelis virginiana L.	American witchhazel	Hamamelidaceae	X				
Helianthus decapetalus L.	thinleaf sunflower	Asteraceae	X				
Helianthus divaricatus L. Helianthus strumosus L.	woodland sunflower paleleaf woodland sunflower	Asteraceae Asteraceae	Х	X		S2S3 (T)	
Hepatica nobilis Schreb. var. acuta (Pursh) Steyerm.	sharplobe hepatica	Ranunculaceae	Х	^		3233 (1)	
Hepatica nobilis Schreb. var. obtusa (Pursh) Steyerm.	roundlobe hepatica	Ranunculaceae	X				
Hieracium paniculatum L.	Allegheny hawkweed	Asteraceae	X				
Hieracium scabrum Michx.	rough hawkweed	Asteraceae	X				
Houstonia caerulea L.	azure bluet	Rubiaceae	Х				
Humulus lupulus L.	common hop	Cannabaceae		X			
Hydrocotyle americana L.	American marshpennywort	Apiaceae		X	Х		
Hydrophyllum virginianum L.	eastern waterleaf	Hydrophyllaceae	X				
Hypericum mutilum L.	dwarf St. Johnswort	Clusiaceae	X				
Hypericum perforatum L.	common St. Johnswort	Clusiaceae		X			
Ilex verticillata (L.) A. Gray	common winterberry	Aquifoliaceae	X		X		
Impatiens capensis Meerb.	jewelweed	Balsaminaceae	1	X	X		
Impatiens pallida Nutt.	pale touch-me-not	Balsaminaceae	 	V	Х		
Ionactis linariifolius (L.) Greene Juglans cinerea L.	flaxleaf whitetop aster butternut	Asteraceae Juglandaceae	X	X		1	
Jugians cinerea L. Juncus effusus L.	common rush	Jugiandaceae	^	X	Х	1	
Juncus nodosus L.	knotted rush	Juncaceae		X	X		
Juniperus communis L.	common juniper	Cupressaceae	1	X	^		
Juniperus virginiana L.	eastern redcedar	Cupressaceae	1	X		1	
Lactuca biennis (Moench) Fernald	tall blue lettuce	Asteraceae		X			
Lactuca canadensis L.	Canada lettuce	Asteraceae		X			
Laportea canadensis (L.) Weddell	Canadian woodnettle	Urticaceae	X		Х		
Leersia oryzoides (L.) Sw.	rice cutgrass	Poaceae		X	Х		
Leersia virginica Willd.	whitegrass	Poaceae	X				
Lilium L.	lily	Liliaceae		X			
Linaria vulgaris Mill.	butter and eggs	Scrophulariaceae		X			
Lobelia cardinalis L.	cardinalflower	Campanulaceae	1		Х		_
Lonicera morrowii A. Gray	Morrow's honeysuckle	Caprifoliaceae	1	X			В
Lycopodium clavatum L.	running clubmoss	Lycopodiaceae	v	X			
Lycopodium dendroideum Michx.	tree groundpine	Lycopodiaceae	X				
Lycopodium digitatum Dill. ex A. Braun Lycopus uniflorus Michx.	fan clubmoss northern bugleweed	Lycopodiaceae Lamiaceae	X X		Х		
Lycopus unitiorus Michx. Lysimachia ciliata L.	fringed loosestrife	Primulaceae	^	X	^		
Lysimachia ciliata L. Lysimachia nummularia L.	creeping jenny	Primulaceae	Х	^	Х	<u> </u>	
Lysimachia quadrifolia L.	whorled yellow loosestrife	Primulaceae	^	X	Λ		
Lythrum alatum Pursh var. alatum	winged lythrum	Lythraceae	1	X	Х	S1	
			t				
Lythrum salicaria L.	purple loosestrife	Lythraceae		X	X		В
Lythrum salicaria L. Maianthemum canadense Desf.	purple loosestrife Canada mayflower	Lythraceae Liliaceae	X X	X	Х		В



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				Observed Habitat			
Scientific Name ¹	Common Name	Family	Natural Campunities /			VT Rarity Rank ^{2,3}	Non-Native Invasive
			Natural Communities / Forested Area	Disturbed (ROW, Substation, or Residence)	Wetlands		Species ⁴
Malus Mill.	apple	Rosaceae		X			
Matteuccia struthiopteris (L.) Todaro Melilotus albus Medik.	ostrich fern white sweetclover	Dryopteridaceae Fabaceae	X	X	Х		
Menispermum canadense L.	common moonseed	Menispermaceae	Х		Х		
Mimulus ringens L. Mitchella repens L.	Allegheny monkeyflower partridgeberry	Scrophulariaceae Rubiaceae	X		Х		
Mitella diphylla L.	twoleaf miterwort	Saxifragaceae	x				
Mollugo verticillata L.	green carpetweed	Molluginaceae		X			
Monarda fistulosa L. Monotropa uniflora L.	wild bergamot Indianpipe	Lamiaceae Monotropaceae	Х	X			
Myosotis scorpioides L.	true forget-me-not	Boraginaceae	X		Х		
Nepeta cataria L. Oclemena acuminata (Michx.) Greene	catnip whorled wood aster	Lamiaceae Asteraceae	X				
Oenothera biennis L.	common evening primrose	Onagraceae	^	X			
Onoclea sensibilis L.	sensitive fern	Dryopteridaceae	X	X	Х		
Oryzopsis asperifolia Michx. Osmorhiza claytonii (Michx.) C.B. Clarke	roughleaf ricegrass Clayton's sweetroot	Poaceae Apiaceae	Х				
Osmunda claytoniana L.	interrupted fern	Osmundaceae	Х				
Osmunda regalis L. Ostrya virginiana (Mill.) K. Koch	royal fern hophornbeam	Osmundaceae Betulaceae	X X		Х		
Oxalis stricta L.	common yellow oxalis	Oxalidaceae	X	X	Х		
Panax quinquefolius L.	American ginseng	Araliaceae	Х			S3	
Panax trifolius L. Parthenocissus quinquefolia (L.) Planch.	dwarf ginseng Virginia creeper	Araliaceae Vitaceae	X X	X			-
Pastinaca sativa L.	wild parsnip	Apiaceae		X			WL
Patis racemosa (Sm.) Romasch., P.M. Peterson & R. J. Soreng	blackseed ricegrass	Poaceae	X	V	-	62	
Pellaea atropurpurea (L.) Link Pellaea qlabella Mett. ex Kuhn	purple cliffbrake smooth cliffbrake	Pteridaceae Pteridaceae	X	X X		S3 S3	+
Penthorum sedoides L.	ditch stonecrop	Crassulaceae		X	Х		
Phalaris arundinacea L.	reed canarygrass	Poaceae		X X	Х		WL
Phleum pratense L. Phragmites australis (Cav.) Trin. ex Steud.	timothy common reed	Poaceae Poaceae		X	Х		В
Phryma leptostachya L.	American lopseed	Verbenaceae	X				
Physalis heterophylla Nees	clammy groundcherry Canadian clearweed	Solanaceae Urticaceae	X	X	V		
Pilea pumila (L.) A. Gray Pinus resinosa Aiton	red pine	Pinaceae	X	X	Х		
Pinus strobus L.	eastern white pine	Pinaceae	X	X			
Pinus sylvestris L. Plantago major L.	Scots pine common plantain	Pinaceae Plantaginaceae	Х	X X			
Poa annua L.	annual bluegrass	Poaceae		X			
Poa compressa L.	Canada bluegrass	Poaceae		X			
Poa L. Polygala paucifolia Willd.	bluegrass gaywings	Poaceae Polygalaceae	Х	X X			
Polygala senega L.	Seneca snakeroot	Polygalaceae	X	A		S2S3	
Polygonatum pubescens (Willd.) Pursh	hairy Solomon's seal	Liliaceae	Х		X		
Polygonum amphibium L. var. stipulaceum Coleman Polygonum pensylvanicum L.	water smartweed Pennsylvania smartweed	Polygonaceae Polygonaceae			X X		
Polygonum virginianum L.	jumpseed	Polygonaceae	Х		-		
Polypodium virginianum L.	rock polypody	Polypodiaceae	X				
Polystichum acrostichoides (Michx.) Schott Populus deltoides W. Bartram ex Marshall	Christmas fern eastern cottonwood	Dryopteridaceae Salicaceae	X	X			
Populus grandidentata Michx.	bigtooth aspen	Salicaceae	Х				
Populus tremuloides Michx. Prenanthes alba L.	quaking aspen white rattlesnakeroot	Salicaceae Asteraceae	Х	X			
Prunella vulgaris L.	common selfheal	Lamiaceae	^	X			
Prunus serotina Ehrh.	black cherry	Rosaceae	Х	X			
Pteridium aquilinum (L.) Kuhn Pyrola elliptica Nutt.	western brackenfern waxflower shinleaf	Dennstaedtiaceae Pyrolaceae	X	X			
Quercus alba L.	waxnower sninlear white oak	Fagaceae	X				
Quercus muehlenbergii Engelm.	chinkapin oak	Fagaceae		X		S3	
Quercus rubra L. Quercus velutina Lam.	northern red oak black oak	Fagaceae Fagaceae	X	X			
Rhamnus cathartica L.	common buckthorn	Rhamnaceae	Х	X			В
Rhus copallinum L.	winged sumac	Anacardiaceae		X			-
Rhus typhina L. Ribes cynosbati L.	staghorn sumac eastern prickly gooseberry	Anacardiaceae Grossulariaceae	Х	X			
Robinia pseudoacacia L.	black locust	Fabaceae		X			
Rorippa palustris (L.) Besser	bog yellowcress	Brassicaceae		X	Х		VAC
Rosa multiflora Thunb. Rubus allegheniensis Porter	multiflora rose Allegheny blackberry	Rosaceae Rosaceae		X X			WL
Rubus canadensis L.	smooth blackberry	Rosaceae	Х				
Rubus flagellaris Willd. Rubus idaeus L.	northern dewberry American red raspberry	Rosaceae Rosaceae	-	X X			
Rubus accidentalis L.	black raspberry	Rosaceae	X	X			
Rubus odoratus L.	purpleflowering raspberry	Rosaceae	Х				
Rudbeckia hirta L. Salix bebbiana Sarq.	blackeyed Susan Bebb willow	Asteraceae Salicaceae		X X	Х		
Salix desolara Sarg. Salix discolor Muhl.	pussy willow	Salicaceae		X	X		
Salix eriocephala Michx.	Missouri River willow	Salicaceae		X	Х		
Salix nigra Marshall Sambucus racemosa L.	black willow red elderberry	Salicaceae Caprifoliaceae	X	X	Х		
Sanguinaria canadensis L.	bloodroot	Papaveraceae	X				
Scirpus atrovirens Willd.	green bulrush	Cyperaceae		X	X		
Scirpus cyperinus (L.) Kunth Scirpus hattorianus Makino	woolgrass mosquito bulrush	Cyperaceae		X X	X X		
Scirpus L.	bulrush	Cyperaceae Cyperaceae		X	X		
Scutellaria lateriflora L.	blue skullcap	Lamiaceae	Х		Х		
Securigera varia (L.) Lassen Solanum dulcamara L.	crownvetch climbing nightshade	Fabaceae Solanaceae		X X			
Solidago altissima L.	Canada goldenrod	Asteraceae		X			
· · · · · · · · · · · · · · · · · · ·				. —		. —	. —



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Survey Date(s): July 23-25, 30; August 21, 2024; April 15, 2025 (M. Jackman & W. Durkin)

Prepared by: VHB (W. Durkin) May 15, 2025

				Observed Habitat			Non-Native Invasive
Scientific Name ¹	Common Name	Family	Natural Communities / Forested Area	Disturbed (ROW, Substation, or Residence)	Wetlands	VT Rarity Rank ^{2,3}	Species ⁴
Solidago caesia L.	wreath goldenrod	Asteraceae	Х				
Solidago canadensis L.	Canada goldenrod	Asteraceae		X			
Solidago flexicaulis L.	zigzag goldenrod	Asteraceae	Х				
Solidago gigantea Aiton	giant goldenrod	Asteraceae		X	Х		
Solidago nemoralis Aiton	gray goldenrod	Asteraceae		X			
Solidago rugosa Mill.	wrinkleleaf goldenrod	Asteraceae		X	Х		
Sorbaria sorbifolia (L.) A. Braun	false spiraea	Rosaceae	Х				WL
Spiraea alba Du Roi	white meadowsweet	Rosaceae		X	Х		
Staphylea trifolia L.	American bladdernut	Staphyleaceae	Х				
Streptopus amplexifolius (L.) DC.	claspleaf twistedstalk	Liliaceae	X				
Symphyotrichum cordifolium (L.) G.L. Nesom	common blue wood aster	Asteraceae	X				
Symphyotrichum lateriflorum (L.) Á. Löve & D. Löve	calico aster	Asteraceae	X	X			
Symphyotrichum novae-angliae (L.) G.L. Nesom	New England aster	Asteraceae	<u> </u>	X	Х		
Taraxacum officinale F.H. Wigg.	common dandelion	Asteraceae		X			
Thalictrum dioicum L.	early meadow-rue	Ranunculaceae	Х				
Thelypteris palustris Schott	eastern marsh fern	Thelypteridaceae		X	Х		
Thuja occidentalis L.	arborvitae	Cupressaceae	Х				
Tilia americana L.	American basswood	Tiliaceae	Х				
Toxicodendron radicans (L.) Kuntze	eastern poison ivy	Anacardiaceae	Х	X			
Tragopogon dubius Scop.	yellow salsify	Asteraceae		x			
Trientalis borealis Raf.	starflower	Primulaceae	Х				
Trifolium aureum Pollich	golden clover	Fabaceae		X			
Trifolium pratense L.	red clover	Fabaceae		X			
Trifolium repens L.	white clover	Fabaceae		X			
Trillium cernuum L.	whip-poor-will flower	Liliaceae	Х			S3	
Trillium erectum L.	red trillium	Liliaceae	Х				
Trillium grandiflorum (Michx.) Salisb.	white trillium	Liliaceae	Х				
Triosteum aurantiacum E.P. Bicknell var. aurantiacum	orangefruit horse-gentian	Caprifoliaceae		X		S3	
Tsuga canadensis (L.) Carrière	eastern hemlock	Pinaceae	Х				
Tussilago farfara L.	coltsfoot	Asteraceae		X			
Typha latifolia L.	broadleaf cattail	Typhaceae		X	Х		
Ulmus americana L.	American elm	Ulmaceae	Х	X			
Urtica dioica L.	stinging nettle	Urticaceae	Х				
Uvularia sessilifolia L.	sessileleaf bellwort	Liliaceae	Х				
Vaccinium angustifolium Aiton	lowbush blueberry	Ericaceae		X			
Verbascum thapsus L.	common mullein	Scrophulariaceae		X			
Verbena urticifolia L.	white vervain	Verbenaceae		X			
Veronica officinalis L.	common gypsyweed	Scrophulariaceae	Х	X			
Viburnum acerifolium L.	mapleleaf viburnum	Caprifoliaceae	Х		-		
Viburnum nudum L.	possumhaw	Caprifoliaceae	Х		X		
Viburnum opulus L.	European cranberrybush	Caprifoliaceae		X	Х		
Vicia cracca L.	bird vetch	Fabaceae		X			
Viola L.	violet	Violaceae	Х		Х		
Vitis aestivalis Michx.	summer grape	Vitaceae		X			
Vitis labrusca L.	fox grape	Vitaceae	Х	X	Х		
Vitis riparia Michx.	riverbank grape	Vitaceae	Х	X			

 $[\]boldsymbol{X}$ - Plant species was found in this community type.

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.

¹ Nomenclature follows USDA-NRCS PLANTS database (plants.usda.gov/) (2025).

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", version dated February 10, 2022.