



To: Green Mountain Power
Taftsville Substation Relocation
Project File

Date: August 18, 2026

Memorandum

Project #: R176454.000

From: Daniel Graves, Environmental Scientist, and Ryan Scott, CPESC, PWS, Team Lead –
Energy Utilities

Re: Section 248 Natural Resources Assessment

At the request of Green Mountain Power ("GMP" or "Petitioner"), VHB conducted natural resources assessments in support of the decommissioning and relocation of the GMP Taftsville Substation and associated transmission line modifications ("Project"), located in Woodstock, Hartford, and Hartland, Vermont (see Natural Resources Map, Attachment 1). The substation is currently located at 2693 East Woodstock Road, in Woodstock, and will be relocated southwest of the intersection of US Route 4 and VT Route 12, in Hartland, where a temporary substation currently operates. Modifications to GMP's TL105, TL107, and TL108 overhead transmission lines ("TL105", "TL107", "TL108") will occur between the existing and proposed locations and within existing rights of way ("ROW"). This technical memorandum presents the results of database and field assessments of natural resources and addresses potential impacts from proposed Project activities to certain natural resources criteria, as defined in 30 V.S.A. Section 248(b)(5).

The natural resources assessments for the Project were designed to include an evaluation for the presence/absence of each natural resources type, and potential impacts to the following Act 250 Criteria, given due consideration by the Vermont Public Utility Commission ("PUC") under 30 V.S.A. Section 248 review for a Certificate of Public Good ("CPG"):

- Outstanding Resource Waters (10 V.S.A. § 1424a248(d));
- Headwaters (§ 6086(a)(1)(A));
- Waste Disposal (§ 6086(a)(1)(B));
- Floodways (§ 6086(a)(1)(D));
- Streams (§ 6086(a)(1)(E));
- Shorelines (§ 6086(a)(1)(F));
- Wetlands (§ 6086(a)(1)(G));
- Soil Erosion (§ 6086(a)(4));
- Rare or Irreplaceable Natural Areas ("RINA") (§ 6086(a)(8));
- Necessary Wildlife Habitat and Endangered Species (§ 6086(a)(8)(A)); and,
- Primary Agricultural Soils (10 V.S.A. § 6001(15)).

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

In preparing this memorandum, VHB relied upon Project information provided by the Petitioner to assist in determining the areal extent of the assessment and evaluating potential Project impacts to natural resources. The following sections of this memorandum contain a description of the Project, a description of existing conditions, and an overall summary of the resource assessments warranting further discussion beyond what is covered in the Site

Screening Table (Attachment 2). Supporting technical information is contained in the attachments to this memorandum.

Project Description

The Project consists of relocating the Taftsville Substation from its existing location at 2693 East Woodstock Road in Woodstock to a new location southwest of the intersection of US Route 4 and VT Route 12, in Hartland, Vermont. The Project includes construction of a new substation yard, and installing proposed substation equipment together with the installation of a new fence, oil containment system, security, lights, animal fence, surface material, and ground grid. An existing drive will be used to access the proposed substation and construction will also include adding a parking area. The proposed substation maintains its 46kV networked system with modification to the TL105, TL107, and TL108 transmission lines that currently supply the existing substation. New equipment includes, but is not limited to, the installation of four new 46 kV transmission line breakers, a new 10/14 MVA 46 kV/12.47 kV transformer, two 12.47 kV distribution breaker, six new circuit regulators, remote terminal unit, switches, a battery bank for protection and control, new control building, and other standard equipment necessary for modern substation construction. The existing substation, including steel structures and foundations, will be retired from service and removed from the existing Taftsville Substation site. The hydro generation facility interconnection at the existing Taftsville Substation site will be transferred from the 46kV bus to the TA-G12 12.47 kV distribution feeder, and several spans of transmission conductor will be removed, thus modifying these facilities from a double-circuit configuration to a single-circuit configuration.

The Project will disturb approximately 1.7 acres and require approximately 2.6 acres of tree clearing to accommodate the proposed substation and associated overhead tie-line.

The Project also includes modifications to three GMP transmission lines consisting of retirement, replacing structures in-kind, re-spanning, and the installation of 8 new structures (six for TL105 and two for TL108) near the proposed substation. With the exception of pole installations outside the proposed substation, all work will occur within existing and maintained overhead transmission line ROW.

Existing Conditions

Based on information provided by the Petitioner, VHB used the entire existing and proposed substation properties, as well as the transmission line corridors, as the focus for assessments to capture the Project activity and potential natural resources/buffer constraints (the "Study Area"). VHB conducted natural resources field assessments throughout the Study Area at the proposed substation parcel, the existing substation location, and on the TL107 transmission corridor north of the Ottauquechee River. VHB relied on delineations and natural resource surveys conducted between 2017 and 2022 for the TL105 line replacement project (Case No. 22-3085-PET) for the portion of the transmission line corridor between the existing and proposed substation locations. The approximately 58-acre Study Area is in the Southern Vermont Piedmont biophysical region, which is characterized by variable climate and mostly forested rolling hills. Northern hardwoods dominate most of the region, especially at higher elevations, whereas oak and pine are common in the Connecticut River Valley. (Thompson et al. 2019). The Study Area is located within the Ottauquechee River watershed and is variably sloped, with elevations ranging from approximately 630 to 1,180 feet above mean sea level ("amsl"). Based on Natural Resources Conservation Service ("NRCS") soil mapping, the dominant soil types within the Study Area are Buckland loam (3-35% slope), Berkshire-Tunbridge complex (15-35% slope, very stony), Lyman-

Rock outcrop complex (35-60% slope), and Vershire-Dummerston complex (25-60% slope, rocky). For depictions of on-site mapped natural resources and representative site photographs, refer to Attachments 1 and 3, respectively.

The Study Area is predominantly managed shrubby and herbaceous vegetation within the existing ROW, with mixed forested vegetation present throughout the parcel for the proposed substation.

Section 248 Natural Resources Criteria Summary and Conclusions

VHB Ecologists conducted natural resources field assessments for the Project on September 16, and September 18, 2025, and reviewed assessments from the TL105 line replacement project conducted between 2017 and 2022. Results of VHB's database review and field assessments, including an analysis of potential collateral permitting, are summarized in the *Section 248 Natural Resources Site Screening Table* (Attachment 2). There are no Outstanding Resource Waters or Headwaters within the Study Area. On-site natural resources that required additional discussion beyond the content able to be provided in Attachment 2 are discussed briefly below.

Regarding the Section 248 criterion for **Headwaters (§ 6086(a)(1)(A))**, the Study Area is not located in a headwaters area. The Lower Ottauquechee watershed (VT10-02) and its tributaries are not primarily comprised of steep slopes or shallow soils, the Ottauquechee River has a drainage area of approximately 197 square miles at the Project site, the Project will not adversely affect groundwater or surface water or associated steep slopes, and the Study Area is located entirely below 1,500 feet in elevation. The Project will meet applicable Health and Environmental Department regulations regarding the quality of groundwater and surface waters. Construction-phase soil disturbance and associated erosion prevention will be performed in accordance with the Project's construction stormwater permit. As such, the Project will not adversely impact ground or surface water quality, and the Project will meet applicable health and the Department of Environmental Conservation ("DEC") regulations regarding the quality of groundwater and surface waters.

Regarding the Section 248 criterion for **Waste Disposal (§ 6086(a)(1)(B))**, the Project proposes 17,765 square feet of new impervious surface, does not involve a total of more than an acre of new and existing impervious, and will not require authorization under an operational stormwater permit. GMP will update the Taftsville substation Spill Prevention Control and Countermeasures plan within six months of project completion. GMP will dispose of all construction debris that cannot be re-used or recycled in accordance with all applicable regulations, including Best Management Practices Associated with the Use of Pentachlorophenol-treated Utility Poles in Vermont. By implementing these practices, the Project will meet health and environmental conservation department regulations regarding the disposal of waste and will not involve the injection of waste material or any harmful or toxic substances into groundwater or wells.

Regarding the Section 248 criterion for **Floodways (§ 6086(a)(1)(D))**, the existing substation is located within ANR River Corridor associated with the Ottauquechee River. The FEMA Floodway and 100-year floodzone associated with the Ottauquechee River are also located within the Study Area, though no work is proposed within FEMA Floodway or any Special Flood Hazard Area. Work proposed within ANR-mapped River Corridor consists of removal of the existing substation equipment, replacement of four poles south of the Ottauquechee River, and in-kind replacement of one pole north of the river. All work within the River Corridor will be within existing developed areas and will not result in new areas of development or fill, and in-kind structure replacements will not move closer to the floodway. As such, the Project will comply with the Flood Hazard Area and River Corridor Rule and will not restrict or divert the flow of flood waters, or endanger the health, safety, and welfare of the public or of riparian owners during flooding.

Regarding the Section 248 criterion for **Streams (§ 6086(a)(1)(E))**, VHB conducted stream delineations in 2025 and reviewed assessments conducted between 2017 and 2022 for the TL105 project. 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.

Based on this review, there are three streams in the Study Area, including two intermittent streams and one ephemeral stream. Intermittent stream S01 and ephemeral stream S35 flow north across the TL105 corridor. Intermittent stream 2025-SC-100 flows east between Wetland 2025-1 to Wetland 2025-W63 in the southern portion of the Study Area. VHB assigned a 50-foot riparian buffer from the delineated edge of streams or boundary of directly adjacent wetlands, if applicable. For additional technical details pertaining to the streams' character, refer to the Summary of Delineated Streams table in Attachment 4.

The Project proposes pole replacement and retirement work within the 50-foot riparian stream buffer for S01. All work will occur within existing and managed ROW and will not result in any new areas of fill. Vegetation management and on-going maintenance will continue to follow GMP's Integrated Vegetation Management Plan ("IVMP") to avoid and minimize impacts to the riparian buffer.

While work is proposed proximal to the stream, the Project will maintain the natural condition of the stream, and will not endanger the health, safety, or welfare of the public or of adjoining landowners. The ROW will be managed in accordance with the IVMP and there will be no changes to the vegetative composition of the riparian buffer.

Regarding the Section 248 criterion for **Shorelines (§ 6086(a)(1)(F))**, the Ottauquechee River intersects the northern portion of the Study Area. No work is proposed between mean annual high water and mean annual low water, and Project activity adjacent to the shoreline will consist of substation retirement and in-kind structure replacements on the north and south sides of the river. The shoreline associated with the Ottauquechee River will remain in its current condition as the Project will use existing access and will not result in any new disturbed areas near the shoreline. The shoreline and waters will maintain existing conditions, and no changes in access will result from the Project. GMP will employ BMPs and adhere to the terms of the Project's construction stormwater permit to avoid adversely impacting the Ottauquechee River and the associated shoreline.

Regarding the Section 248 criterion for **Wetlands (§ 6086(a)(1)(G))**, VHB conducted wetland delineations in 2025 and reviewed assessments conducted between 2017 and 2022 for the TL105 project. VHB's 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 Vermont Wetland Rules ("VWR") Section 5 (ANR 2023). 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.

Based on this assessment, there are six proposed significant Class II wetlands within the Project Study Area. VHB delineated five proposed Class II wetlands in the Study Area associated with the proposed substation. One Class II wetland was previously mapped in the TL105 corridor between the existing and proposed substation locations. No wetlands were observed in the Study Area associated with the existing substation. An additional six proposed Class III wetlands were delineated within the Study Area. Wetland boundaries and classifications delineated by VHB in 2025 will be reviewed by DEC during the 2026 field season to confirm wetland boundaries and assigned classification. The wetland delineated within the TL105 corridor was reviewed and approved by DEC in 2022. For additional technical details pertaining to the Wetlands criterion, refer to the Summary of Delineated Wetlands table in Attachment 4, and Wetland Determination Data Forms in Attachment 5.

Project activities will avoid impacts to wetlands and/or associated buffers to the extent practicable. Temporary impacts associated with the retirement of the existing TL108 line and modifications to the existing TL105 line will occur within W66 and its associated 50-foot buffer. Temporary and permanent impacts associated with tree clearing and fill for the proposed substation will occur within the 50-foot buffer of 2025-W100.

USACE Section 404 Jurisdiction:

As currently designed the Project will not require permit approval from the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act. All work related to the substation removal and relocation is located outside of wetlands. VHB received a determination of "No Effect" to northern long-eared bat and tricolored bat for Project work within USACE jurisdictional areas by the U.S. Fish and Wildlife Service ("USFWS") Information for Planning and Consultation ("IPaC") determination key. Therefore, all work within wetlands qualifies as non-reporting under USACE Nationwide Permit 57, including construction matting, pole removal, and above-ground pole modifications.

Vermont Wetland Rule Jurisdiction

As currently designed the de-commissioning and line maintenance portions of the Project would be considered an Allowed Use under the current VWR. VHB understands the retirement of existing overhead line, poles, and substation components will be performed in accordance with VWR Allowed Use 6.08. The proposed substation is sited to avoid impacts to Class II wetlands and associated buffers to the extent practicable; however, temporary and permanent impacts to Class II wetland buffers for tree clearing and fill for the substation parking area are proposed.

Construction matting will be utilized as applicable during construction, all temporary impact areas will be restored to pre-existing conditions post construction, and a Vermont Wetland Permit for unavoidable impacts to a Class II wetland buffer will be obtained by the Petitioner prior to construction. As such the Project will have no adverse effect on state-significant or otherwise regulated wetlands and will comply with the Vermont Wetland Rules.

Regarding the Section 248 criterion for **Rare and Irreplaceable Natural Areas (RINA) (10 V.S.A. § 6086(a)(8))**, VHB reviewed the Vermont Natural Heritage Inventory ("NHI") Database within a three-mile radius of the Project. As part of this review, VHB identified six element occurrences ("EOs") of significant natural communities in the Project vicinity (Attachment 7), though none of the EOs overlap the Study Area. VHB surveyed the Study Area for these and other significant natural communities in September 2025. VHB observed a Northern Hardwood Talus Woodland (S3) in the southwest corner of the Study Area, which is a state uncommon natural community. No Project work is proposed

within the Northern Hardwood Talus Woodland. As such the Project will have no adverse effect on state-significant natural communities.

Regarding the Section 248 criterion for **Necessary Wildlife Habitat and Endangered Species (§ 6086(a)(8)(A))**, there are state and federal listed endangered species known from the vicinity of the Project, but none mapped within the Study Area.

There is an ANR-mapped deer wintering area ("DWA") in the southern portion of the Study Area, southwest of the proposed substation location, and south and west of the TL105 ROW. While Project activities consisting of transmission line work and tree clearing will occur within 300 feet of the DWA, it is VHB's opinion that indirect impacts of the Project on DWA habitat will be de minimis. The Petitioner will conduct tree work within the line ROW and line work within 300-feet of DWA outside of the overwintering period unless snow totals are less than 12 inches and VFWD provides written acknowledgement that work can occur between December 15 and April 15 in a given year. While a small portion of the proposed substation is located within 300 feet of DWA, the closest point is related to substation grading and is 291 feet from DWA and the perimeter of the substation fence is 355 feet at its closest point. Therefore, most of the work related to the proposed substation will be beyond 300 feet from DWA. Work associated with the transmission line modifications and retirement will occur within 300 feet of DWA. Further, based on VHB's natural resources assessment of the Study Area, the DWA adjacent to the Project site is located on north- and east-facing steep slopes, which is not optimal DWA.

As part of VHB's three-mile radius review of the NHI Database, 10 EOs of state-protected plant species and 6 EOs of state-protected animal species are known in the Project vicinity (Attachment 7), though none of the EOs overlap the Study Area. The Study Area includes potential habitat for RTE species identified in the database inquiry but none was identified during natural resource assessments. In addition, a VHB Botanist conducted a general plant inventory on September 18, 2025, and VHB reviewed the plant inventory associated with the TL105 line replacement project conducted on October 5, 2022. VHB botanists conducted the plant inventory in accordance with ANR's *Guidance for Conducting Rare, Threatened, and Endangered Plant Inventories in Connection with Section 248 Projects* (ANR 2016a). All plant species identified in the inventory were checked against the current *Rare and Uncommon Native Vascular Plants of Vermont* list (ANR 2024), as well as the *Endangered and Threatened Plants of Vermont* (FWD 2022), to determine their rarity ranks and any potential protections under endangered species law. VHB observed one rare plant species in this inventory, obedient plant (*Physostegia virginiana*, S2), which occurs in the northern portion of the Study Area on the north bank of the Ottauquechee River. However, VHB understands that the Vermont Nongame and Natural Heritage Program believes all obedient plant populations outside of Lake Champlain to be non-native. As such, this occurrence does not warrant protection. VHB also identified three state-uncommon species within the Study Area, consisting of Frank's love-grass (*Eragrostis frankii*, S3), hemlock-parsley (*Conioselinum chinense*, S3), and butternut (*Juglans cinerea*, S3). These occurrences will be avoided by the Project. As VHB understands that GMP will follow the guidance in its ANR-approved integrated vegetation management plan for access and vegetation management regarding work near uncommon and RTE species, there will be no undue adverse impacts to RTE plants from the Project activities.

Regarding RTE animals, VHB identified EOs related to three state-threatened or state-endangered species in the vicinity of the Project in the NHI Database, including northern long-eared bat (*Myotis septentrionalis*, S1), little brown bat (*Myotis lucifugus*, S1), and eastern whip-poor-will (*Antrostomus vociferus*, S2A). A review of the IPaC database determined that the Study Area occurs within the known summer range of the federal-threatened and Vermont-endangered northern long-eared bat. As of July 2026, no critical MYSE habitat within or adjacent to the Project has

been designated for this species by USFWS (See Attachment 6 for the USFWS Official Species List). There are no known bat occurrences within one mile of the Study Area, and as such, the proposed project is within potential summer habitat of northern long eared bat. Proposed tree clearing is less than one percent of the surrounding forested areas and based on Vermont Fish and Wildlife Department's *Regulatory Review for Protecting Northern Long-Eared Bats and their Habitats* (2017), no further conservation measures are proposed.

Two EOs related to little brown bat are located within three miles of the Project site. However, both EOs are more than one mile from the Project site. In addition, the Project will not involve the removal of any enclosed structures. As such, the Project will avoid impacts to little brown bat.

The EO related to eastern whip-poor-will is located approximately 2.3 miles east of the Project site. Given that the documented occupied habitat is more than one mile from the Project site, it is VHB's opinion that impacts to eastern whip-poor-will are unlikely to occur as a result of the Project.

During natural resource assessments for the TL105 line replacement project in 2019, a potential sighting of Fowler's toad (*Anaxyrus fowleri*, S1) occurred approximately 4.3 miles south of the Project. Further toad surveys and daily construction-stage monitoring for Fowler's toad for the TL105 project did not result in any observations of Fowler's toad within the TL105 corridor. VHB performed an assessment of potential Fowler's Toad habitat within the TL105 ROW in 2022. This review determined that Fowler's Toad habitat likely does not exist within the portion of the TL105 corridor that overlaps the Project. As the location of the probable observation is over three miles from the Project and given the lack of observations during the TL105 line replacement project, it is VHB's opinion that impacts to Fowler's toad are unlikely to result from the Project.

There are no mapped or otherwise observed bear feeding habitats in the Study Area. No potential vernal pools were identified with the Study Area. As such, the Project will not destroy or significantly imperil any Necessary Wildlife Habitat or known endangered species.

Regarding the Section 248 criterion for **Primary Agricultural Soils 10 V.S.A. § 6001(15)** ("PAS"), a portion of the Study Area is mapped by the Natural Resources Conservation Service ("NRCS") as PAS, including Hinckley sandy loam (0-8% slope, Statewide), Buckland loam (3-8% slope, Prime), Ninigret fine sandy loam (0-8% slope, Prime), and Cabot silt loam (8-15% slopes, Statewide (b)) (see Natural Resources Map in Attachment 1). Project impacts to PAS are minimal and confined to previously disturbed areas (existing substation facilities and existing transmission structures). The areas proposed for ground disturbance have been impacted by current land use and the location of the disturbance within PAS is within heavily developed areas, primarily between US Route 4 and the Ottauquechee River, which is not suitable for agriculture. Due to the location of the Project within areas of existing impact, it is VHB's conclusion that the Project will not reduce the potential for agricultural use and there will be no undue adverse effects to farming, farming potential, or PAS as a result of the Project.

Conclusion

Based on VHB's assessment of the Project, with respect to the natural resources criteria listed above and assessed by VHB, VHB concludes that the Project will not have any undue adverse effects to the natural environment.

Attachments

1. Natural Resources Map

2. Section 248 Natural Resources Site Screening Table
3. Representative Site Photographs
4. Summary of Delineated Wetlands and Streams
5. Wetland Determination Data Sheets
6. USFWS IPaC Official Species List
7. Potential Rare, Threatened, and Endangered Species and Significant Natural Communities Summary in the Project Region and Onsite Habitats
8. Species List – Partial Floristic Inventory

References

Cowardin et al. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. US Department of the Interior Fish and Wildlife Service Office of Biological Services Washington, D.C. December 1979.

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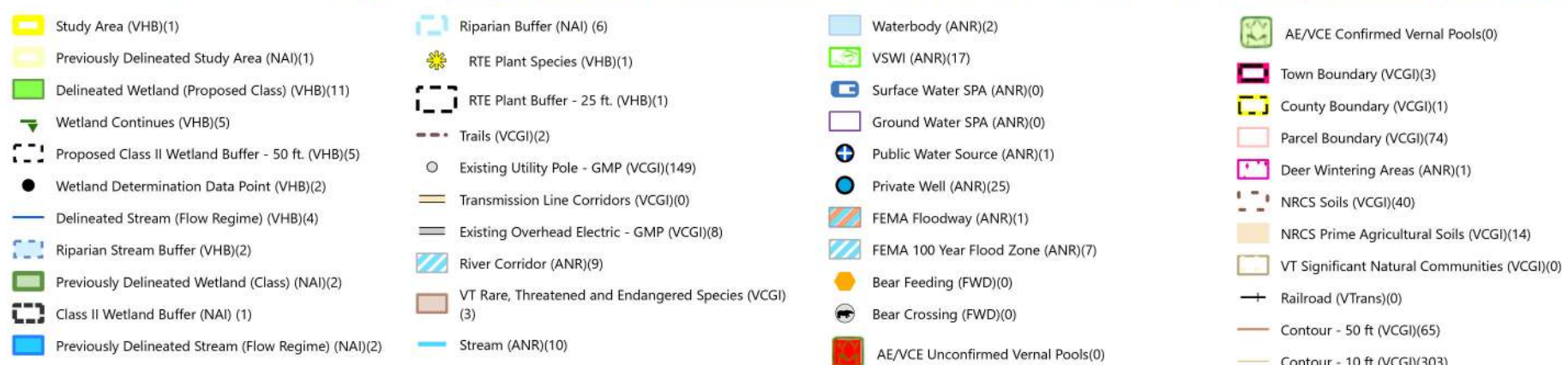
ANR 2022. *Endangered and Threatened Plants of Vermont*. Natural Heritage Inventory, Fish and Wildlife Department. Effective February 10, 2022.

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

ANR. 2005. *Guidance for Agency Act 250 and Section 248 Comments Regarding Riparian Buffers*. State of Vermont. Effective December 9, 2005.

<https://anr.vermont.gov/sites/anr/files/documents/Guidance%20for%20Agency%20Act%20250%20and%20Section%20248%20Comments%20Regarding%20Riparian%20Buffers.pdf>

ATTACHMENT 1

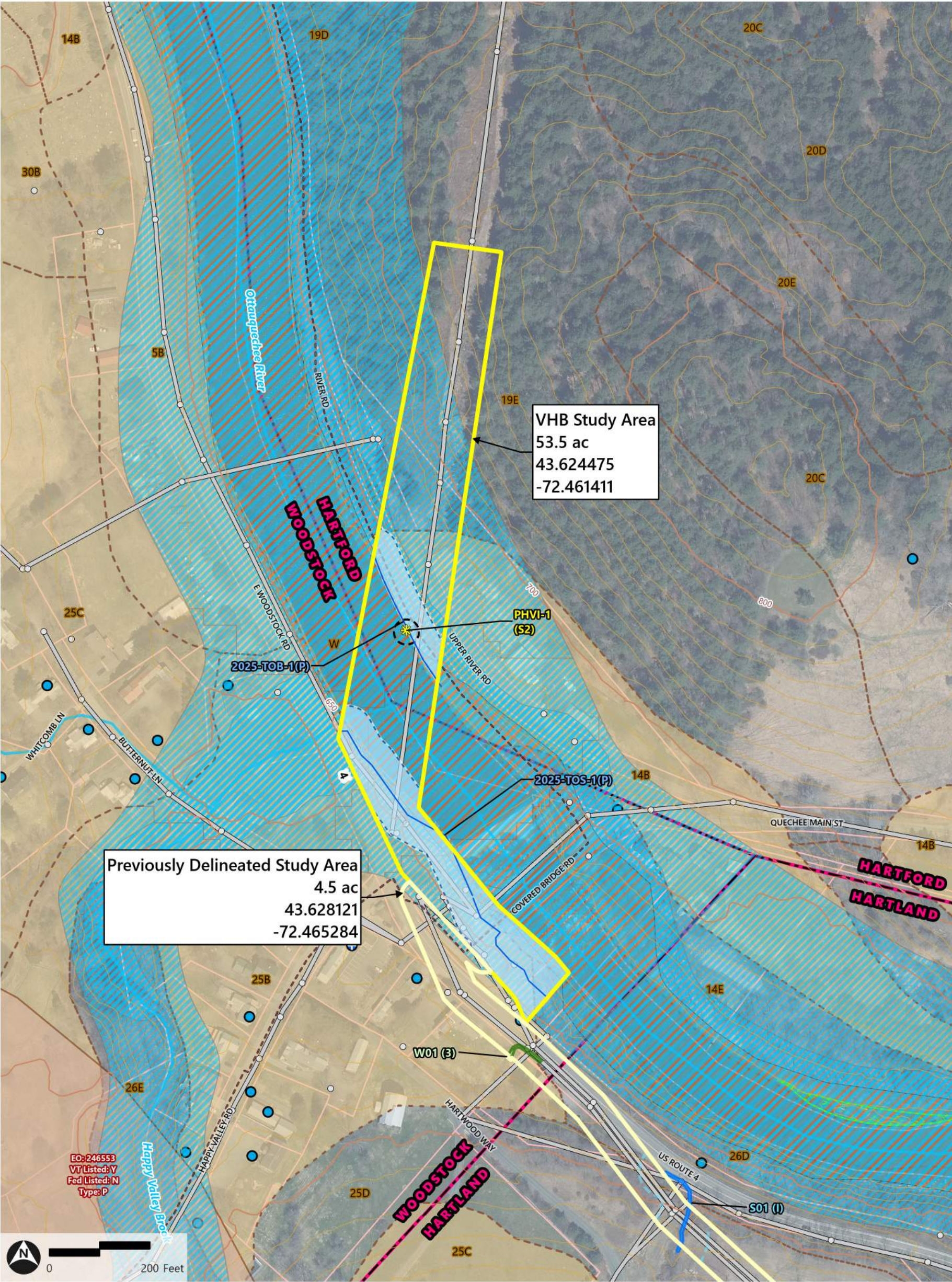


NOTE: (#) indicates the count of layer features within the map extent.

Sources: Background imagery by VCGI (Collected in 2024); ANR (Vermont Agency of Natural Resources - Various Dates); VCGI (Vermont Center for Geographic Information - Various Dates); VTTrans (Vermont Agency of Transportation - Hosted Feature Service); NAI (Normandeau Associates, Inc. - 2021); VHB (Vannasse Hangen Brustlin - 2025).

Delineation Notes -

1. Natural resource investigations by VHB (A. Pierce, M. Jackman and W. Durkin) during September 16-18, 2025.
2. Previous wetland and stream delineations were completed by Normandeau Associates, Inc. in 2021.



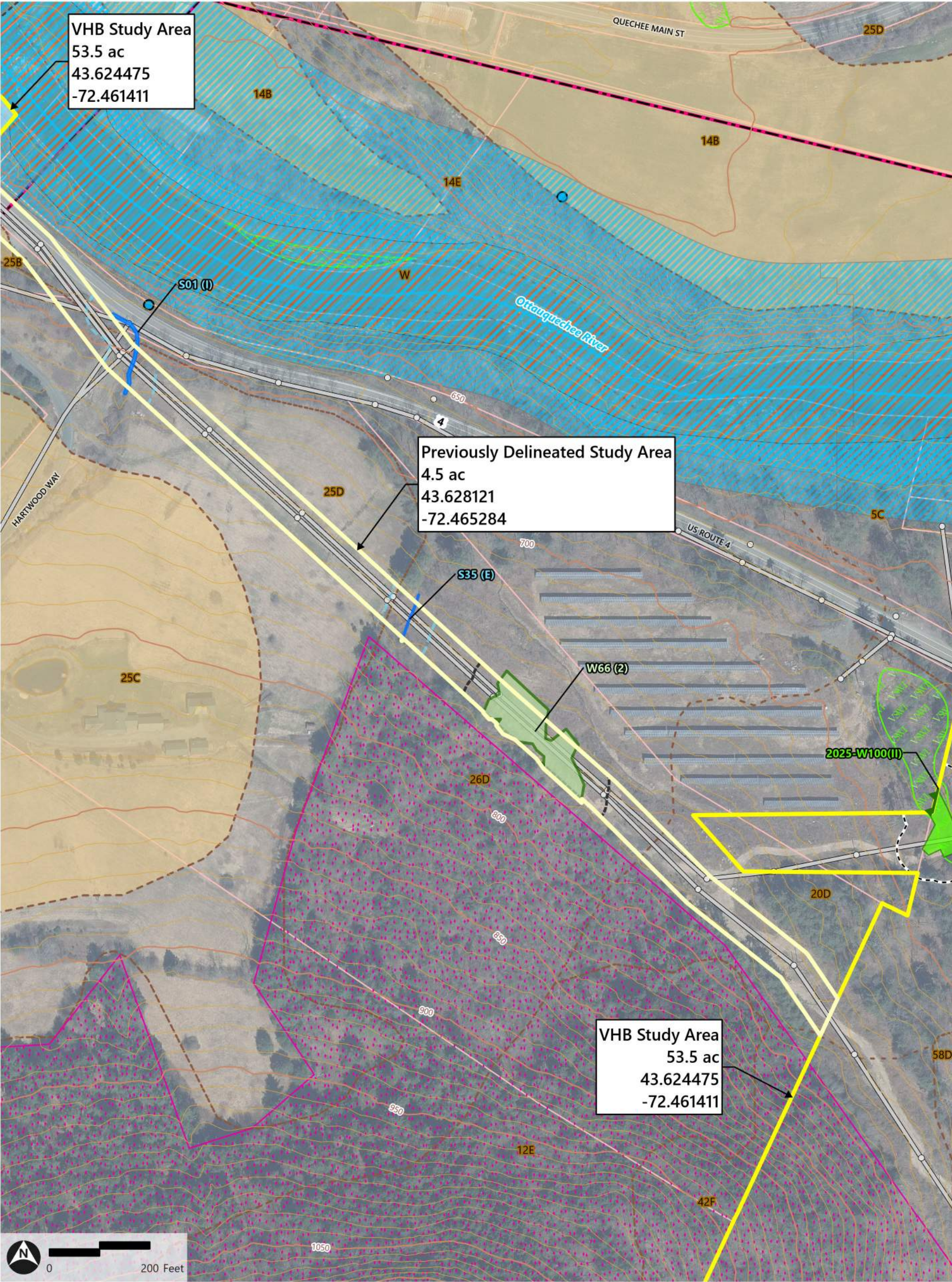
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Study Area (VHB)(1) Previously Delineated Study Area (NAI)(1) Delineated Wetland (Proposed Class) (VHB)(1) Wetland Continues (VHB)(1) Proposed Class II Wetland Buffer - 50 ft. (VHB)(1) Wetland Determination Data Point (VHB)(0) Delineated Stream (Flow Regime) (VHB)(0) Riparian Stream Buffer (VHB)(1) Previously Delineated Wetland (Class) (NAI)(1) Class II Wetland Buffer (NAI) (1) Previously Delineated Stream (Flow Regime) (NAI)(2)	Riparian Buffer (NAI) (6) RTE Plant Species (VHB)(0) RTE Plant Buffer - 25 ft. (VHB)(0) Trails (VCGI)(1) Existing Utility Pole - GMP (VCGI)(42) Transmission Line Corridors (VCGI)(0) Existing Overhead Electric - GMP (VCGI)(5) River Corridor (ANR)(2) VT Rare, Threatened and Endangered Species (VCGI) (0) Stream (ANR)(1)	Waterbody (ANR)(0) VSWI (ANR)(3) Surface Water SPA (ANR)(0) Ground Water SPA (ANR)(0) Public Water Source (ANR)(0) Private Well (ANR)(2) FEMA Floodway (ANR)(1) FEMA 100 Year Flood Zone (ANR)(2) Bear Feeding (FWD)(0) Bear Crossing (FWD)(0) AE/VCE Unconfirmed Vernal Pools(0)	AE/VCE Confirmed Vernal Pools(0) Town Boundary (VCGI)(3) County Boundary (VCGI)(1) Parcel Boundary (VCGI)(24) Deer Wintering Areas (ANR)(1) NRCS Soils (VCGI)(14) NRCS Prime Agricultural Soils (VCGI)(4) VT Significant Natural Communities (VCGI)(0) Railroad (VTrans)(0) Contour - 50 ft (VCGI)(11) Contour - 10 ft (VCGI)(52)
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NOTE: (#) indicates the count of layer features within the map extent.

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GMP Taftsville Substation | Hartford, Hartland and Woodstock, Vermont

August 04, 2026



- | | | | |
|---|--|--|--|
|  Study Area (VHB)(1) |  Riparian Buffer (NAI) (0) |  Waterbody (ANR)(1) |  AE/VCE Confirmed Vernal Pools(0) |
|  Previously Delineated Study Area (NAI)(1) |  RTE Plant Species (VHB)(0) |  VSWI (ANR)(10) |  Town Boundary (VCGI)(1) |
|  Delineated Wetland (Proposed Class) (VHB)(11) |  RTE Plant Buffer - 25 ft. (VHB)(0) |  Surface Water SPA (ANR)(0) |  County Boundary (VCGI)(1) |
|  Wetland Continues (VHB)(5) |  Trails (VCGI)(0) |  Ground Water SPA (ANR)(0) |  Parcel Boundary (VCGI)(15) |
|  Proposed Class II Wetland Buffer - 50 ft. (VHB)(5) |  Existing Utility Pole - GMP (VCGI)(49) |  Public Water Source (ANR)(0) |  Deer Wintering Areas (ANR)(1) |
|  Wetland Determination Data Point (VHB)(2) |  Transmission Line Corridors (VCGI)(0) |  Private Well (ANR)(0) |  NRCS Soils (VCGI)(13) |
|  Delineated Stream (Flow Regime) (VHB)(1) |  Existing Overhead Electric - GMP (VCGI)(6) |  FEMA Floodway (ANR)(0) |  NRCS Prime Agricultural Soils (VCGI)(3) |
|  Riparian Stream Buffer (VHB)(1) |  River Corridor (ANR)(2) |  FEMA 100 Year Flood Zone (ANR)(2) |  VT Significant Natural Communities (VCGI)(0) |
|  Previously Delineated Wetland (Class) (NAI)(1) |  VT Rare, Threatened and Endangered Species (VCGI)(0) |  Bear Feeding (FWD)(0) |  Railroad (VTrans)(0) |
|  Class II Wetland Buffer (NAI) (1) |  Stream (ANR)(1) |  Bear Crossing (FWD)(0) |  Contour - 50 ft (VCGI)(25) |
|  Previously Delineated Stream (Flow Regime) (NAI)(0) | |  AE/VCE Unconfirmed Vernal Pools(0) |  Contour - 10 ft (VCGI)(110) |

NOTE: (#) indicates the count of layer features within the map extent.

Sources: Background imagery by VCGI (Collected in 2024); ANR (Vermont Agency of Natural Resources - Various Dates); VCGI (Vermont Center for Geographic Information - Various Dates); VTrans (Vermont Agency of Transportation - Hosted Feature Service); NAI (Normandeau Associates, Inc. - 2027); VHB (Vanasse Hangen Brustlin - 2025).

Delineation Notes -

1. Natural resource investigations by VHB (A. Pierce, M. Jackman and W. Durkin) during September 16-18, 2025.
2. Previous wetland and stream delineations were completed by Normandeau Associates, Inc. in 2021.

ATTACHMENT 2

Section 248 Natural Resources Site Screening Table

Project: GMP Taftsville Substation Relocation
Client: Green Mountain Power
Location: Woodstock, Hartford, and Hartland, Vermont
Field Visit Date(s): 9/16/2025 and 9/18/2025
Study Area: 58 Acres

		Outstanding Resource Waters (10 V.S.A. § 1424a(d))	Headwaters (§ 6086(a)(1)(A))	Waste Disposal (§ 6086(a)(1)(B))	Floodways (§ 6086(a)(1)(D))	Streams (§ 6086(a)(1)(E))	Shorelines (§ 6086(a)(1)(F))	Wetlands (§ 6086(a)(1)(G))	Soil Erosion (§ 6086(a)(4))	Rare or Irreplaceable Natural Areas (§ 6086(a)(8))	Wildlife Habitat and Endangered Species (§ 6086(a)(8)(a))	Prime Agricultural Soils 10 V.S.A. § 6001
Section 248 Natural Resources Criteria Assessment	Identification Method	Review of the Natural Resources Board/ Agency of Natural Resources list of Outstanding Resource Waters (ORW) and Prospective Outstanding Resource Waters (ANR)	If not in an intensively developed area, sub-criteria reviewed (as applicable) by evaluating NRCS soils data, contour data; watershed size; ground and surface water protection areas to determine if the site meets the headwater criteria	Review of potential Project wastes includes: sanitary wastes and construction materials (e.g., soil, and woody debris); oil containment/SPCC plan applicability, and operational stormwater runoff (from new impervious area)	Review of floodplain mapping provided by VCGI and FEMA (Community Panel Number 50021C0332D (August 28, 2008); Review of ANR River Corridor Map Layer; Stream flow regime from review of watershed sizes and in- field determinations.	Review of VHD stream mapping provided by VCGI; field review to determine if there are any streams present.	Review of VHD waterbody data provided by VCGI and field review to determine if there are any named waterbodies including lakes, ponds, reservoirs, or rivers present.	Review of VSWI mapping provided by VCGI; field review to delineate potential federal/state jurisdictional features. If present, presumed wetland classifications made per the VT Wetland Rules (VWR) and confirmed in-field with DEC District Wetlands Ecologist.	Review of NRCS-mapped soil survey series and K-factors used to determine potential soil erodibility; soil series are considered to be of "medium" or "high" erodibility ranking (Medium 0.17<K<0.37 and High K>0.36) according to the Vermont Standards and Specifications for Erosion Prevention and Sediment Control	Review of the significant natural community mapping provided by VCGI and corroborated by presence/absence and approximate extent field mapping (if present) for potential rare and significant natural communities .	3-mile radius review of VT NHI database for Rare, Threatened and Endangered Species (RTE) species; review of black bear and deer wintering habitat data provided by VCGI; review of USFWS IPaC database; all database reviews corroborated by field reviews.	Review of NRCS-mapped soil survey series to determine those that would be considered Primary Agricultural Soils (PAS).
	Presence / Absence	Absent	Absent	Present	Present	Present	Present	Present	N/A	Present	Present	Present
	Resource Description	None Present	Two unnamed tributaries flow through the Study Area, which have watershed sizes of less than 20 square miles delineated from the Project location, however the site is situated within the larger Ottauquechee River watershed, which drains an area greater than 20 sq miles. As no sub criteria are met, it is VHB's opinion that the Study Area should not be considered a headwaters location.	The Project proposes 17,765 square feet of new impervious and will not require an Operational Stormwater Permit. Removal of the existing substation will involve disposal of materials, including potential contaminants and construction debris.	Floodway and River Corridor associated with the Ottauquechee River is mapped within the Study Area.	There are two field-delineated streams that are not VHD mapped (2025-SC-100, and S01) within the Study Area. VHB and Normandeau Associates, Inc. flagged the centerlines of these streams and proposed an intermittent flow regime. A 50-foot riparian buffer using ANR requirements and guidance documents was assigned to the streams.	The Ottauquechee River is present within the northern portion of the Study Area near the existing substation. VHB flagged the top-of-slope in the field.	VHB delineated wetland features within the Study Area.	Soils mapped within the Study Area include Castile gravelly fine sandy loam (K- factor=0.10, low erodibility); Rippowam fine sandy loam (K-factor=0.24, medium erodibility); Saco mucky silt loam (K- factor=0.43, high erodibility); Middlebury loam (K-factor= 0.32, medium erodibility); Kingsbury silt loam (K-factor=0.49; high erodibility); and Deerfield loamy sand (K- factor=0.20, medium erodibility)	In the field, VHB identified a Northern Hardwood Talus Woodland (S3) natural community present in the southwestern portion of the Study Area.	State-mapped Necessary Wildlife Habitat ("NWH") is present within the Study Area for Deer Wintering Area; portions of the project will occur within 300-feet. No State-mapped RTE species are present within the Study Area. Field surveys identified occurrences of State-listed plant species: <i>Physostegia virginiana</i> (obedient plant, S2), <i>Coniaselinum chinense</i> (hemlock-parsley, S3), <i>Eragrostis frankii</i> (Frank's love-grass, S3), and <i>Juglans cinerea</i> (butternut, S3). The Project is within the known summer range of northern long-eared bat (<i>Myotis septentrionalis</i>).	VHB's review of PAS is limited to soil types mapped by the NRCS. Based on a review of the ANR Atlas there are three mapped PAS soils on site: Hinckley sandy loam (0- 8% slope, Statewide), Buckland loam (3-8% slope, Prime), Ninigret fine sandy loam (0-8% slope, Prime), and Cabot silt loam (8-15% slopes, Statewide (b))
	Further Survey Recommended?	No	No	No	No	No	No	No	No	No	No	No
	Potential Adverse Impacts (Yes/No)	No	No	No	No	No	No	No	No	No	No	No
	Impact Mitigation Description/ Recommendation	None required or recommended.	VHB recommends adhering to the Project's Construction General Permit (3-9020).	All construction debris will be recycled or disposed of in accordance with applicable state and federal regulations.	No work is proposed within FEMA Floodway. The existing substation and portions of the TL 105 transmission line are within an ANR River Corridor for the Ottauquechee River. Intent of work within the River Corridor is to retire the and remove components of the existing substation and modify the transmission line for compatibility with the new substation. The Project will not result in any development in currently undeveloped areas within the River Corridor. All new structures will either be in- kind replacements of existing structures or will be located within the extent of the existing substation. No structures will be installed closer to the floodway.	The project will avoid stream 2025-SC-100. The stream is located in the southern portion of the Study Area and is located approximately 0.2 miles away from the new substation location. Moreover, the Project will utilize EPSC measures described in the Low-Risk Site Handbook to avoid any construction or stormwater discharge into adjacent streams/waters.	Work will not occur between the mean high-water mark and mean low-water mark of the river. All work proposed adjacent to the Ottauquechee River is related to retirement and removal of the existing substation and modification of the TL 105 transmission line. The work will not change the nature of the shoreline and will not result in any new disturbed areas. Access to the river will not change.	VHB recommends the implementation of best management practices for utility maintenance work, as described in the Vermont Wetland Rules.	The Project will adhere to the Low-Risk Site handbook or the terms of a site- specific EPSC plan approved under a permit, as applicable, and DEC dust control standards for the substation relocation and transmission line modifications.	No work is proposed within the natural community.	The Project will implement best management practices to avoid RTE animals known to occur in the area. All work will be conducted beyond 300 feet from functioning deer wintering habitat. The Project will avoid documented occurrences of state protected RTE plants. Tree clearing will consist of less than 1% of the surrounding forested habitat.	All soil disturbance within areas mapped as PAS will be in previously disturbed areas associated with the existing substation and the existing TL 105 structures.
	Impact Assessment	As there are no ORW present within the Study Area, there would be no impacts to this resource.	As there are no Headwaters present within the Study Area, there would be no impacts to this resource.	The Project will update the current SPCC plan for the Taftsville Substation within six months of construction completion and all construction debris will be recycled or disposed of in accordance with applicable state and federal regulations.	None. All work in Floodway, Flood Hazard Area, and River Corridor will be within existing developed areas and will not result in new areas of development. The Project will not significantly increase the peak discharge of the river or stream within or downstream from the area of development and endanger the health, safety, or welfare of the public or riparian owners during flooding.	No work is proposed within the stream or the associated 50-foot buffer assigned by VHB.	None. No new disturbance will occur adjacent to the Ottauquechee River and the nature of the shoreline and access to the river will not change.	Portions of the Project, as proposed, are considered an Allowed Use under Section 6.08 of the Vermont Wetland Rules, however, the Project proposes permanent impacts to wetland buffer and will obtain authorization through a Vermont Wetlands Permit for unavoidable impacts. Impacts to Waters of the U.S. are anticipated to qualify for Self Verification under Section 404 of the Clean Water Act.	With adherence to EPSC measures during construction, there will be no significant or measurable reduction of the land's capacity to hold water as the nature of this Project will not result in an appreciable change in land form or cover. As the Project will result in more than one acre of earth disturbance, the Project will seek authorization under a construction stormwater permit.	None. No work is proposed within the natural community.	None. The Project will implement best management practices to avoid impacts to RTE species.	None. No new disturbance will occur within PAS. Work occurring in PAS areas is also in heavily developed areas adjacent to existing roads and the Ottauquechee River, which is not suitable for agriculture.
Collateral Environmental Permits (Federal or State)	Applicable Permit(s) (If Required)	None	No specific permits required for Headwaters Criterion; a project must comply with applicable health and environmental regulations	Wastewater System and Potable Water Supply Permit / Operational Stormwater Discharge Permit (GP 3- 9015/INDS)	Flood Hazard and River Corridor Permit (General or Individual)	Clean Water Act Section 404 Permit / Clean Water Act Section 401 WQC / Stream Alteration Permit	Rivers and Harbors Act Section 10 Permit / Shoreland Protection and Lake Encroachment Permits	Clean Water Act Section 404 Permit / Clean Water Act Section 401 WQC / Vermont Wetland Permit	Construction Stormwater Discharge Permit (GP 3-9020/INDC)	None	Endangered Species Takings Permit (None for NWH)	None
	Agency	VT DEC Watershed Management Division	Public Utility Commission / Agency of Natural Resources; VT DEC Stormwater Section; VT FWD	VT DEC Wastewater Section / VT DEC Stormwater Section	VT DEC River Management Section	USACE / VT DEC Watershed Management Division / VT DEC River Management Section	USACE / VT DEC Lakes and Ponds Section	USACE / VT DEC Watershed Management Division / VT DEC Wetlands Section	VT DEC Stormwater Section	VT FWD	VT FWD / USFWS	VT Agency of Agriculture and Food Markets
	Required (Yes/No)	No	No	No	No	No	No	Yes	Yes	No	No	No

ATTACHMENT 3



GMP Taftsville Substation Relocation & Transmission Line Modifications

Photographs: 2025 Natural Resources Assessment

PROJECT NUMBER

R176454.000

US Route 4 & VT Route 12, Hartland, Vermont 05048

Green Mountain Power
2152 Post Road
Rutland, VT 05701



NO. 1 / 09.18.2025

DESCRIPTION

Representative photograph of the Ottawaquechee River, taken on the north bank, facing the existing Taftsville substation.



NO. 2 / 09.18.2025

DESCRIPTION

Representative photograph of the upland right-of-way north of the Ottawaquechee River, taken facing north.



NO. 3 / 09.18.2025

DESCRIPTION

Representative photograph of the upland forest habitat at the proposed substation location, taken facing northwest.



NO. 4 / 09.18.2025

DESCRIPTION

Representative photograph of wetland 2025-W100, in the northern portion of the southern Study Area, taken facing east.



NO. 5 / 09.18.2025

DESCRIPTION

Representative photograph of Wetland 2025-1, located in the southern portion of the southern Study Area.



NO. 6 / 09.18.2025

DESCRIPTION

Representative photograph of Wetland 2025-2, located in the southern portion of the southern Study Area.



NO. 7 / 09.18.2025

DESCRIPTION

Representative photograph of Wetland 2025-3, located in the southern portion of the southern Study Area.



NO. 8 / 09.18.2025

DESCRIPTION

Representative photograph of Wetland 2025-4, located in the central portion of the southern Study Area.



NO. 9 / 09.18.2025

DESCRIPTION

Representative photograph of Wetland 2025-5, located in the central portion of the southern Study Area.



NO. 10 / 09.18.2025

DESCRIPTION

Representative photograph of Wetland 2025-6, located in the central portion of the southern Study Area.



NO. 11 / 09.18.2025

DESCRIPTION

Representative photograph of Wetland 2025-W61, located in the southern portion of the southern Study Area.



NO. 12 / 09.18.2025

DESCRIPTION

Representative photograph of wetland 2025-W62, in the southern portion of the southern Study Area.



NO. 13 / 09.18.2025

DESCRIPTION

Representative photograph of Wetland 2025-W63, located in the southern portion of the southern Study Area.



NO. 14 / 09.18.2025

DESCRIPTION

Representative photograph of wetland 2025-W65, in the central portion of the southern Study Area.



NO. 15 / 09.18.2025

DESCRIPTION

Representative photograph of Stream 2025-SC-100, located in the southern portion of the southern Study Area.

ATTACHMENT 4

Summary of Delineated Wetlands

Project: GMP Taftsville Substation Relocation

Client: Green Mountain Power

Location: Woodstock, Hartford, and Hartland, Vermont

Prepared By: VHB (D. Graves)

Delineation Date(s): 9/16/2025 and 9/18/2025



VHB Delineated Wetlands												
Wetland ID	Delineated Area (Square Feet) ¹	Cowardin Classification ²	Hydrology Indicator	Hydric Soil Indicator	Vermont Wetland Rules Classification						Typical Vegetation	Comments
					Contiguous to a VSWI- mapped Wetland?	Riparian Wetland Contiguous to Stream Channel? (Flow Regime) ³	VWR Section 4.6 Presumptions ⁴	VWR Section 5 Functional Criteria Presence / Significance		VHB-Proposed VWR Classification ⁶		
								Type ⁵	VHB-Proposed Significant?			
2025-1	15,078	PEM	Saturation (A3), Geomorphic Position (D2)	Histosol (A1)	No	Yes (I)	a, b	5.1 (P), 5.2 (P)	Yes	II	<i>Hydrocotyle americana,</i> <i>Dryopteris intermedia, Tiarella</i> <i>cordifolia, Athyrium filix-femina</i>	Linear side hill seep with shallow soils.
2025-2	6,974	PEM, PSS	Saturation (A3), FAC-Neutral Test (D5)	Depleted Matrix (F3), Redox Dark Surface (F6)	No	No	None	5.1 (L), 5.2 (L)	No	III	<i>Onoclea sensibilis, Lonicera</i> <i>morrowii, Solidago gigantea,</i> <i>Acer rubrum</i>	Disturbed area with a few natural sources of hydrology.
2025-3	2,370	PEM	Saturation (A3)	Redox Dark Surface (F6)	No	No	None	5.1 (L), 5.2 (L)	No	III	<i>Onoclea sensibilis, Dryopteris</i> <i>intermedia</i>	Disturbed area, wetland mostly confined to old skidder tracks.
2025-4	7,909	PEM	Saturation (A3)	Redox Dark Surface (F6)	No	No	None	5.1 (L), 5.2 (L)	No	III	<i>Osmunda cinnamomea, Onoclea</i> <i>sensibilis</i>	Disturbed area, wetland mostly confined to old skidder tracks.
2025-5	984	PEM	Saturation (A3)	Redox Dark Surface (F6)	No	No	None	5.1 (L), 5.2 (L)	No	III	<i>Osmunda cinnamomea, Onoclea</i> <i>sensibilis</i>	Disturbed area, wetland mostly confined to old skidder tracks.
2025-6	928	PEM	Saturation (A3)	Redox Dark Surface (F6)	No	No	None	5.1 (L), 5.2 (L)	No	III	<i>Osmunda cinnamomea, Onoclea</i> <i>sensibilis</i>	Disturbed area, wetland mostly confined to old skidder tracks.
2025-W61	10,859	PEM	Geomorphic Position (D2), FAC- Neutral Test (D5)	Redox Dark Surface (F6)	Yes	No	a	5.1 (P), 5.2 (P), 5.4 (P)	Yes	II	<i>Spiraea alba, Onoclea sensibilis,</i> <i>Trochim purpureum, Osmunda</i> <i>claytoniana, Trochim purpureum</i>	Wetland extends south and east outside of Study Area
2025-W62	2,273	PSS	Geomorphic Position (D2), FAC- Neutral Test (D5)	Redox Dark Surface (F6)	No	No	a	5.1 (P), 5.2 (P)	Yes	II	<i>Lonicera morrowii, Spiraea alba,</i> <i>Osmunda cinnamomea, Onoclea</i> <i>sensibilis</i>	Edge of swale in ROW
2025-W63	282	PSS	Surface Water (A1), High Water Table (A2), Saturation (A3), Geomorphic Position (D2)	Redox Dark Surface (F6)	No	Yes (I)	a, b	5.1 (P), 5.2 (P), 5.4 (L), 5.10 (L)	Yes	II	<i>Salix sericea, Spiraea alba, Carex</i> <i>spp., Onoclea sensibilis,</i> <i>Pericardia sagittate</i>	Wetland at base of slope and ditch along Route 12.
2025-W65	2,372	PSS	Geomorphic Position (D2), FAC- Neutral Test (D5)	Redox Dark Surface (F6)	No	No	None	5.1 (L), 5.2 (L)	No	III	<i>Spiraea alba, Onoclea sensibilis,</i> <i>Pericardia sagittate</i>	Depression restricted mostly to managed ROW
2025-W100	5,054	PEM/PFO	Geomorphic Position (D2), FAC- Neutral Test (D5)	Redox Dark Surface (F6)	Yes	No	a	5.1 (L), 5.2 (L)	Yes	II	<i>Solidago rugosa, Solidago</i> <i>canadensis, Onoclea sensibilis</i>	PEM wetland continues as PFO wetland outside of Study Area.
W01⁷	523	PEM	-	-	No	No	None	5.2 (L)	No	III	<i>Impatiens capensis, Pericardia</i> <i>hydropiper ides, Carex scoparia,</i> <i>Symphyotrichum novae-angliae</i>	Ditched wetland that continues in minor way outside ROW.

Summary of Delineated Wetlands
Project: GMP Taftsville Substation Relocation
Client: Green Mountain Power
Location: Woodstock, Hartford, and Hartland, Vermont
Prepared By: VHB (D. Graves)
Delineation Date(s): 9/16/2025 and 9/18/2025



VHB Delineated Wetlands												
Wetland ID	Delineated Area (Square Feet) ¹	Cowardin Classification ²	Hydrology Indicator	Hydric Soil Indicator	Vermont Wetland Rules Classification						Typical Vegetation	Comments
					Contiguous to a VSWI- mapped Wetland?	Riparian Wetland Contiguous to Stream Channel? (Flow Regime) ³	VWR Section 4.6 Presumptions ⁴	VWR Section 5 Functional Criteria Presence / Significance		VHB-Proposed VWR Classification ⁶		
								Type ⁵	VHB-Proposed Significant?			
W66 ⁷	18,158	PEM	-	-	No	No	a	5.2 (P), 5.4 (L)	Yes	II	<i>Spiraea alba, Thelypteris palustris, Onoclea sensibilis, Scirpus hattorianus, Carex lurida</i>	Sloping seep wetland.

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 perennial or intermittent stream channel inflows, through flows, and outflows from a delineated wetland (ephemeral channels not typically being subject to ANR Riparian Buffer Guidance). The vegetative assemblage or natural community type is used when determining riparian vegetation function. Flow regime determined based on qualitative observations of instream hydrology indicators and geomorphic characteristic and are subject to professional judgment (P=perennial, I=intermittent, E=ephemeral).

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, 5.4=Wildlife Habitat, 5.5=Exemplary Wetland Natural Community, 5.6=Rare, Threatened or Endangered Species Habitat, 5.7=Education and Research in Natural Sciences, 5.8=Recreational Value and Economic Benefits, 5.9=Open Space and Aesthetics, 5.10=Erosion Control Through Binding and Stabilizing the Soil. (P)= Present, (H)=High, (L)=Low; Correspond to observed level of functionality.

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.

Summary of Delineated Streams

Project: GMP Taftsville Substation Relocation

Client: Green Mountain Power

Location: Woodstock, Hartford, and Hartland, Vermont

Prepared By: VHB (D. Graves)

Delineation Date(s): 9/16/2025 and 9/18/2025



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
2025-SC-100	NA	2025-1, 2025-W63	6	Cobble, Gravel, Boulder	1	1	Intermittent	<0.5	B	No	No	Yes	No flow at time of survey.
2025-TOB/TOS-1	Ottauquechee River	None	200	Cobble, Gravel, Sand	70	7	Perennial	197	B	Yes	Yes	Yes	Ottauquechee River
S35 ⁷	NA	None	2	Cobble, Sand	1	2	Ephemeral	<0.5	B	No	No	No	

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

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

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

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

⁵ List of River Corridors from the ANR Atlas.

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

ATTACHMENT 5



WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2025-1-WET

Project Site:	Taftsville Substation Relocation		City/County:	Hartland		Samp. Date:	9/18/2025	
Applicant/Owner:	GMP		State:	VT		Sampling Point:	2025-1-WET	
Investigator(s):	VHB (MJ, AP)		Section, Township, Range:	Windsor				
Landform (hillslope, terrace, etc.):	Hillslope		Local relief (concave, convex, none):	Concave		Slope (%):	15-35%	
Subregion (LRR or MLRA):	LRR R		Lat:	43.622402		Long:	-72.459712	
Soil Map Unit:	Berkshire-Tunbridge complex, 15 to 35 percent slopes, very stony					Datum:	NAD 83	
Are climatic/hydrologic conditions on the site typical for this time of year?	Yes		(If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed?	No		Normal Circumstances? Yes					
Are Vegetation, Soil, or Hydrology naturally problematic?	No		(If needed, explain any answers in Remarks.)					

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

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

HYDROLOGY

Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply)			Surface Soil Cracks (B6)		
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)		☐ Drainage Patterns (B10)		
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)		☐ Moss Trim Lines (B16)		
☒ Saturation (A3)	☐ Marl Deposits (B13)		☐ Dry-Season Water Table (C2)		
☐ 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)			☐ FAC-Neutral Test (D5)		
Field Observations:			Wetland Hydrology Present? YES		
Surface Water Present?	☐	Depth (inches): ☐			
Water Table Present?	☐	Depth (inches): ☐			
Saturation Present?	☒	Depth (inches): surface			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
0.0" of rain in 5 days prior in Woodstock; VT PDSI -2.34 (Moderate Drought) for week ending 9/20/2025					
Remarks:					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 2/1	100%					MUCK	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.							² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil Indicators:			Indicators for Problematic Hydric Soils ³ :					
☒ Histosol (A1)			☐ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)			☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)		
☐ Histic Epipedon (A2)			☐ Thin Dark Surface (S9) (LRR R, MLRA 149B)			☐ Coast Prairie Redox (A16) (LRR K, L, R)		
☐ Black Histic (A3)			☐ Loamy Mucky Mineral (F1) (LRR K, L)			☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)		
☐ Hydrogen Sulfide (A4)			☐ Loamy Gleyed Matrix (F2)			☐ Dark Surface (S9) (LRR K, L, M)		
☐ Stratified Layers (A5)			☐ Depleted Matrix (F3)			☐ Polyvalue Below Surface (S8) (LRR K, L)		
☐ Depleted Below Dark Surface (A11)			☐ Redox Dark Surface (F6)			☐ Thin Dark Surface (S9) (LRR K, L)		
☐ Thick Dark Surface (A12)			☐ Depleted Dark Surface (F7)			☐ Iron-Manganese Masses (F12) (LRR K, L, R)		
☐ Sandy Mucky Mineral (S1)			☐ Redox Depressions (F8)			☐ Piedmont Floodplain Soils (F19) (MLRA 149B)		
☐ Sandy Gleyed Matrix (S4)						☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
☐ Sandy Redox (S5)						☐ Red Parent Material (F21)		
☐ Stripped Matrix (S6)						☐ Very Shallow Dark Surface (TF12)		
☐ Dark Surface (S7) (LRR R, MLRA 149B)						☐ Other (Explain in Remarks)		
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
Restrictive Layer (if observed):							Hydric Soil Present? YES	
Type: Rock refusal								
Depth (inches): 4								
Remarks:								

Tree Stratum (Plot size: <u>30' RAD</u>)				Absolute % Cover	Dom. Sp?	Indicator Status	Dominance Test Worksheet: # Dominants OBL, FACW, FAC: <u>9</u> (A)	
1. _____							# Dominants across all strata: <u>11</u> (B)	
2. _____							% Dominants OBL, FACW, FAC: <u>82%</u> (A/B)	
3. _____								
4. _____								
5. _____								
6. _____								
7. _____								
					= Total	Cover	Prevalence Index Worksheet: Total % Cover of: _____ Multiply By: _____	
Sapling Stratum (Plot size: <u>15' RAD</u>)							OBL <u>62</u> x 1 = <u>62</u>	
1. <u>Betula alleghaniensis</u>				<u>3</u>	<u>X</u>	<u>FAC</u>	FACW <u>33</u> x 2 = <u>66</u>	
2. <u>Fraxinus pennsylvanica</u>				<u>3</u>	<u>X</u>	<u>FACW</u>	FAC <u>50</u> x 3 = <u>150</u>	
3. <u>Acer saccharum</u>				<u>1</u>		<u>FACU</u>	FACU <u>32</u> x 4 = <u>128</u>	
4. <u>Quercus rubra</u>				<u>1</u>		<u>FACU</u>	UPL _____ x 5 = _____	
5. _____							Sum: <u>177</u> (A) <u>406</u> (B)	
6. _____								
7. _____							Prevalence Index = B/A = <u>2.29</u>	
				<u>8</u>	= Total	Cover	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is > 50% <u>X</u> Prevalence Index is <= 3.0 _____ Problematic Hydrophytic Vegetation ¹ (explain) _____ Rapid Test for Hydrophytic Vegetation _____ Morphological Adaptations	
Shrub Stratum (Plot size: <u>15' RAD</u>)							¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
1. _____							Definitions of Vegetation Strata:	
2. _____							Tree - Woody plants, excluding woody vines, approximately 20ft (6m) or more in height and 3in (7.6cm) or larger in diameter at breast height (DBH).	
3. _____							Sapling - Woody plants, excluding woody vines, approximately 20ft (6m) or more in height and less than 3in (7.6cm) DBH.	
4. _____							Shrub - Woody plants, excluding woody vines, approximately 3 to 20ft (1 to 6m) in height.	
5. _____							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.	
6. _____							Woody vine - All woody vines, regardless of height.	
7. _____							Hydrophytic Vegetation Present? <u>YES</u>	
					= Total	Cover		
Herb Stratum (Plot size: <u>5' RAD</u>)								
1. <u>Hydrocotyle americana</u>				<u>32</u>	<u>X</u>	<u>OBL</u>		
2. <u>Dryopteris intermedia</u>				<u>32</u>	<u>X</u>	<u>FAC</u>		
3. <u>Tiarella cordifolia</u>				<u>15</u>	<u>X</u>	<u>FACU</u>		
4. <u>Athyrium filix-femina</u>				<u>15</u>	<u>X</u>	<u>FAC</u>		
5. <u>Pilea pumila</u>				<u>15</u>	<u>X</u>	<u>FACW</u>		
6. <u>Impatiens capensis</u>				<u>15</u>	<u>X</u>	<u>FACW</u>		
7. <u>Oxalis montana</u>				<u>15</u>	<u>X</u>	<u>FACU</u>		
8. <u>Carex crinita</u>				<u>15</u>	<u>X</u>	<u>OBL</u>		
9. <u>Scutellaria galericulata</u>				<u>15</u>	<u>X</u>	<u>OBL</u>		
10. _____								
11. _____								
12. _____								
				<u>169</u>	= Total	Cover		
Woody Vines (Plot size: <u>15' RAD</u>)								
1. _____								
2. _____								
3. _____								
4. _____								
5. _____								
					= Total	Cover		
Remarks: (If observed, list morphological adaptations below).								



WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

2025-1-UPL

Project Site:	Taftsville Substation Relocation		City/County:	Hartland		Samp. Date:	9/18/2025	
Applicant/Owner:	GMP		State:	VT		Sampling Point:	2025-1-UPL	
Investigator(s):	VHB (MJ, AP)		Section, Township, Range:	Windsor				
Landform (hillslope, terrace, etc.):	Hillslope		Local relief (concave, convex, none):	None		Slope (%):	15-35%	
Subregion (LRR or MLRA):	LRR R		Lat:	43.622488		Long:	-72.459618	
Soil Map Unit:	Berkshire-Tunbridge complex, 15 to 35 percent slopes, very stony					Datum:	NAD 83	
						NWI Class:	UPL	
Are climatic/hydrologic conditions on the site typical for this time of year?								
Yes						(If no, explain in Remarks.)		
Are Vegetation, Soil, or Hydrology significantly disturbed?								
No						Normal Circumstances? Yes		
Are Vegetation, Soil, or Hydrology naturally problematic?								
No						(If needed, explain any answers in Remarks.)		

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

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

HYDROLOGY

Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply)					
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Surface Soil Cracks (B6)			
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Drainage Patterns (B10)			
☐ Saturation (A3)	☐ Marl Deposits (B13)	☐ Moss Trim Lines (B16)			
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Dry-Season Water Table (C2)			
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Crayfish Burrows (C8)			
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Saturation Visible on Aerial (C9)			
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Stunted or Stressed Plants (D1)			
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ Geomorphic Position (D2)			
☐ Inundation Visible on Aerial (B7)	☐ Other (Explain in Remarks)	☐ Shallow Aquitard (D3)			
☐ Sparsely Vegetated Concave Surface (B8)		☐ Microtopographic Relief (D4)			
		☐ FAC-Neutral Test (D5)			
Field Observations:					
Surface Water Present?	☐	Depth (inches):	Wetland Hydrology Present? NO		
Water Table Present?	☐	Depth (inches):			
Saturation Present?	☐	Depth (inches):			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
0.0" of rain in 5 days prior in Woodstock; VT PDSI -2.34 (Moderate Drought) for week ending 9/20/2025					
Remarks:					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix		Redox Features					
(in)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-5	10YR 2/1	100%					LOAM	
5-12	2.5Y 4/3	100%					FINE SANDY LOAM	
12-16	2.5Y 5/4	100%					FINE SANDY LOAM	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.							² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil Indicators:			Indicators for Problematic Hydric Soils ³ :					
☐ Histosol (A1)	☐ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)		☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)					
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9) (LRR R, MLRA 149B)		☐ Coast Prairie Redox (A16) (LRR K, L, R)					
☐ Black Histic (A3)	☐ Loamy Mucky Mineral (F1) (LRR K, L)		☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)					
☐ Hydrogen Sulfide (A4)	☐ Loamy Gleyed Matrix (F2)		☐ Dark Surface (S9) (LRR K, L, M)					
☐ Stratified Layers (A5)	☐ Depleted Matrix (F3)		☐ Polyvalue Below Surface (S8) (LRR K, L)					
☐ Depleted Below Dark Surface (A11)	☐ Redox Dark Surface (F6)		☐ Thin Dark Surface (S9) (LRR K, L)					
☐ Thick Dark Surface (A12)	☐ Depleted Dark Surface (F7)		☐ Iron-Manganese Masses (F12) (LRR K, L, R)					
☐ Sandy Mucky Mineral (S1)	☐ Redox Depressions (F8)		☐ Piedmont Floodplain Soils (F19) (MLRA 149B)					
☐ Sandy Gleyed Matrix (S4)			☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)					
☐ Sandy Redox (S5)			☐ Red Parent Material (F21)					
☐ Stripped Matrix (S6)			☐ Very Shallow Dark Surface (TF12)					
☐ Dark Surface (S7) (LRR R, MLRA 149B)			☐ Other (Explain in Remarks)					
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
Restrictive Layer (if observed):							Hydric Soil Present? NO	
Type:								
Depth (inches):								
Remarks:								

Tree Stratum (Plot size: <u>30' RAD</u>)				Absolute % Cover	Dom. Sp?	Indicator Status	Dominance Test Worksheet:	
1.	<u>Tsuga canadensis</u>	<u>45</u>	<u>X</u>	<u>FACU</u>			# Dominants OBL, FACW, FAC:	<u>2</u> (A)
2.	<u>Acer saccharum</u>	<u>10</u>		<u>FACU</u>				
3.	<u>Betula alleghaniensis</u>	<u>10</u>		<u>FAC</u>			# Dominants across all strata:	<u>6</u> (B)
4.	<u>Fraxinus americana</u>	<u>5</u>		<u>FACU</u>				
5.	<u>Prunus serotina</u>	<u>2</u>		<u>FACU</u>			% Dominants OBL, FACW, FAC:	<u>33%</u> (A/B)
6.							Prevalence Index Worksheet:	
7.							Total % Cover of: <u>72</u> = Total Cover	
Sapling Stratum (Plot size: <u>15' RAD</u>)							Multiply By:	
1.	<u>Betula alleghaniensis</u>	<u>15</u>	<u>X</u>	<u>FAC</u>			OBL	x 1 =
2.	<u>Acer pensylvanicum</u>	<u>5</u>	<u>X</u>	<u>FACU</u>			FACW	<u>5</u> x 2 = <u>10</u>
3.	<u>Acer rubrum</u>	<u>2</u>		<u>FAC</u>			FAC	<u>57</u> x 3 = <u>171</u>
4.	<u>Fagus grandifolia</u>	<u>2</u>		<u>FACU</u>			FACU	<u>73</u> x 4 = <u>292</u>
5.							UPL	<u>35</u> x 5 = <u>175</u>
6.							Sum:	<u>170</u> (A) <u>648</u> (B)
7.							Prevalence Index = B/A = <u>3.81</u>	
Shrub Stratum (Plot size: <u>15' RAD</u>)							Hydrophytic Vegetation Indicators:	
1.	<u>Lonicera morrowii</u>	<u>2</u>	<u>X</u>	<u>FACU</u>			<u> </u> Dominance Test is > 50%	
2.							<u> </u> Prevalence Index is <= 3.0	
3.							<u> </u> Problematic Hydrophytic Vegetation ¹ (explain)	
4.							<u> </u> Rapid Test for Hydrophytic Vegetation	
5.							<u> </u> Morphological Adaptations	
6.							¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
7.							Definitions of Vegetation Strata:	
Herb Stratum (Plot size: <u>5' RAD</u>)							Tree - Woody plants, excluding woody vines, approximately 20ft (6m) or more in height and 3in (7.6cm) or larger in diameter at breast height (DBH).	
1.	<u>Dennstaedtia punctilobula</u>	<u>35</u>	<u>X</u>	<u>UPL</u>			Sapling - Woody plants, excluding woody vines, approximately 20ft (6m) or more in height and less than 3in (7.6cm) DBH.	
2.	<u>Dryopteris intermedia</u>	<u>15</u>	<u>X</u>	<u>FAC</u>			Shrub - Woody plants, excluding woody vines, approximately 3 to 20ft (1 to 6m) in height.	
3.	<u>Betula alleghaniensis</u>	<u>10</u>		<u>FAC</u>			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.	
4.	<u>Onoclea sensibilis</u>	<u>5</u>		<u>FACW</u>			Woody vine - All woody vines, regardless of height.	
5.	<u>Acer rubrum</u>	<u>5</u>		<u>FAC</u>			Hydrophytic Vegetation Present? <u>NO</u>	
6.	<u>Quercus rubra</u>	<u>2</u>		<u>FACU</u>				
7.								
8.								
9.								
10.								
11.								
12.								
Woody Vines (Plot size: <u>15' RAD</u>)								
1.								
2.								
3.								
4.								
5.								

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

ATTACHMENT 6



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To:
Project Code: 2026-0115311
Project Name: GMP Taftsville Substation Relocation

07/13/2026 16:51:56 UTC

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

Updated 4/12/2023 - Please review this letter each time you request an Official Species List, we will continue to update it with additional information and links to websites may change.

About Official Species Lists

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Federal and non-Federal project proponents have responsibilities under the Act to consider effects on listed species.

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested by returning to an existing project's page in IPaC.

Endangered Species Act Project Review

Please visit the “**New England Field Office Endangered Species Project Review and Consultation**” website for step-by-step instructions on how to consider effects on listed

species and prepare and submit a project review package if necessary:

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

NOTE Please do not use the **Consultation Package Builder** tool in IPaC except in specific situations following coordination with our office. Please follow the project review guidance on our website instead and reference your **Project Code** in all correspondence.

Northern Long-eared Bat - (Updated 4/12/2023) The Service published a final rule to reclassify the northern long-eared bat (NLEB) as endangered on November 30, 2022. The final rule went into effect on March 31, 2023. You may utilize the **Northern Long-eared Bat Rangewide Determination Key** available in IPaC. More information about this Determination Key and the Interim Consultation Framework are available on the northern long-eared bat species page:

<https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis>

For projects that previously utilized the 4(d) Determination Key, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective. If your project was not completed by March 31, 2023, and may result in incidental take of NLEB, please reach out to our office at newengland@fws.gov to see if reinitiation is necessary.

Additional Info About Section 7 of the Act

Under section 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether projects may affect threatened and endangered species and/or designated critical habitat. If a Federal agency, or its non-Federal representative, determines that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Federal agency also may need to consider proposed species and proposed critical habitat in the consultation. 50 CFR 402.14(c)(1) specifies the information required for consultation under the Act regardless of the format of the evaluation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/service/section-7-consultations>

In addition to consultation requirements under Section 7(a)(2) of the ESA, please note that under sections 7(a)(1) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Please contact NEFO if you would like more information.

Candidate species that appear on the enclosed species list have no current protections under the ESA. The species' occurrence on an official species list does not convey a requirement to

consider impacts to this species as you would a proposed, threatened, or endangered species. The ESA does not provide for interagency consultations on candidate species under section 7, however, the Service recommends that all project proponents incorporate measures into projects to benefit candidate species and their habitats wherever possible.

Migratory Birds

In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity 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: 2026-0115311
Project Name: GMP Taftsville Substation Relocation
Project Type: Transmission Line - New Constr - Above Ground
Project Description: The Project consists of reconstructing and relocating the Taftsville Substation from its existing location at 2693 East Woodstock Road, in Woodstock to a new location at the intersection of US Route 4 and VT Route 12, in Hartland.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@43.6274523,-72.46435743729933,14z>



Counties: Windsor County, Vermont

ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA 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. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-Eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

INSECTS

NAME	STATUS
Monarch butterfly <i>Danaus plexippus</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Daniel Graves
Address: 20 Winooski Falls Way
Address Line 2: Suite 400B
City: Winooski
State: VT
Zip: 05404
Email: dgraves@vhb.com
Phone: 8024976116

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army Corps of Engineers

ATTACHMENT 7

Vermont Potential Rare, Threatened, and Endangered Species and Natural Communities in the Project Region and Onsite Habitats Summary
 Client: Green Mountain Power
 GMP Taftsville Substation Relocation
 Field Survey Date(s): September 16 & 18, 2025
 Prepared by: VHB (D. Graves) on July 21, 2026

Species	Common Name	Type	State Rank	Global Rank	VT Status	Federal Status	Last Observed Date	Habitat Description ¹	Occurrence Description ²	Flowering/ Fruiting Time ³	EO Mapped within Study Area (Yes/ No)	Potential for Habitat to Occur Onsite?	Survey Recommended	
													(Yes/No)	Comments
<i>Carex garberi</i>	Garber's sedge	Plant	S1	G5	T	-	2020	Wet sandy, gravelly or marly soils; shores, fens	Riverside seep in David Chang Conservation Area	Summer to late-summer	No	Yes	Yes	Species is T with potential habitat on-site
<i>Diphasiastrium sabinifolium</i>	Ground-fir	Plant	S1	G4	-	-	1932	Forests, meadows	Dry land near Eshqua Bog	Summer to late-summer	No	Yes	No	Not a state or federally listed species
<i>Panax quinquefolius</i>	American ginseng	Plant	S3	G3G4	-	-	2002	Forests, swamps	Steep hemlock-northern hardwood forest slope near Quechee Gorge	Summer	No	Yes	No	Not a state or federally listed species
<i>Dryopteris filix-mas</i> ssp. <i>brittonii</i>	Male fern	Plant	S2	G5T5	T	-	1906	Forests, talus and rocky slopes	Taftsville	N/A	No	Yes	Yes	Species is T with potential habitat on-site
<i>Hypericum ascyron</i>	Great St. John's-wort	Plant	S2	G5	T	-	2007	River or stream floodplains, marshes, meadows and fields, shores of rivers or lakes.	Cobble shore in David Chang Conservation Area	Summer to late-summer	No	Yes	Yes	Species is T with potential habitat on-site
<i>Botrychium tenebrum</i>	Shade moonwort	Plant	S1	G5T4?	-	-	2017	Forests, shores of rivers or lakes, swamps, wetland margins	Roadside near Eshqua Bog	Summer	No	Yes	No	Not a state or federally listed species
<i>Veronicastrum virginicum</i>	Culver's-root	Plant	S1	G4	E	-	2002	Anthropogenic, forests, meadows and fields	Quechee Gorge	Summer to late-summer	No	Yes	Yes	Species is E with potential habitat on-site
<i>Anemone multifida</i> var. <i>multifida</i>	Early thimbleweed	Plant	S1	G5T5	E	-	1980	High-pH river shore outcrops	Quechee Gorge	Spring to late summer	No	No	No	No potential habitat on-site
<i>Erigeron hyssopifolius</i>	Hyssop-leaved fleabane	Plant	S2	G5	-	-	2019	Cliffs, gorges, and river shore ledges in regions of high-pH bedrock	Quechee Gorge	Summer to late-summer	No	No	No	No potential habitat on-site
<i>Carex cryptolepis</i>	Northeastern sedge	Plant	S2S3	G4G5	-	-	2002	Shorelines and other open, wet areas, usually on sandy or peaty substrate; calcifuge	Quechee Gorge	Summer to late-summer	No	No	No	No potential habitat on-site
<i>Myotis septentrionalis</i>	Northern long-eared bat	Animal	S1	G2G3	E	E	2010	Forests	North Hartland Reservoir & Quechee Gorge	N/A	No	Yes	No	Species is endangered with potential summer habitat on-site
<i>Ambystoma jeffersonianum</i>	Jefferson salamander	Animal	S3	G3G4	-	-	2014	Woodland vernal pools for breeding and deciduous forests with rocky outcrops non-breeding	Mount Peg	N/A	No	Yes	No	Not a state or federally listed species
<i>Glyptemys insculpta</i>	Wood turtle	Animal	S3	G2G3	-	UR	2024	Streams for wintering and breeding; hardwood forests and meadows for foraging	Babcock Brook	N/A	No	Yes	No	Not a state or federally listed species
<i>Myotis lucifugus</i>	Little brown bat	Animal	S1	G3G4	E	UR	2007	Human-made structures, trees, caves; open areas near water for foraging	North Hartland Reservoir & Quechee Gorge	N/A	No	Yes	No	Species is endangered with potential summer habitat on-site
<i>Antrastomus vociferus</i>	Eastern whip-poor-will	Animal	S2B	G5	T	-	2012	Open-understory forest for roosting and nesting and open lands and forest edges for foraging.	North Hartland Reservoir & Quechee Gorge	N/A	No	Yes	No	Species is threatened with potential habitat on-site
<i>Ardea herodias</i>	Great blue heron	Animal	S3S4B	G5	-	-	1995	Freshwater and brackish marshes; nests in trees	North Hartland Reservoir - Entrance Dike	N/A	No	Yes	No	Not a state or federally listed species
Sugar maple floodplain forest		Natural Community	S2	-	-	-	2007	Locations with infrequent and short duration flooding; generally associated with high energy rivers	Adjacent to Ottauquechee River in Woodstock	N/A	No	Yes	No	No occurrences found in site boundary
Dry red oak-white pine forest		Natural Community	S3	-	-	-	2007	Warm slopes and rocky hills. Typically south and southwest facing slopes	Mount Tom, Woodstock Town Forest	N/A	No	Yes	No	No occurrences found in site boundary
River cobble shore		Natural Community	S2	-	-	-	2007	Inside bends of high energy rivers	Ottawaquechee River in Woodstock	N/A	No	Yes	No	No occurrences found in site boundary
Boreal calcareous cliff		Natural Community	S2	-	-	-	2014	Calcareous cliffs, generally at high elevation with variable rock type	Quechee Gorge	N/A	No	No	No	No occurrences found in site boundary

Species	Common Name	Type	State Rank	Global Rank	VT Status	Federal Status	Last Observed Date	Habitat Description ¹	Occurrence Description ²	Flowering/ Fruiting Time ³	EO Mapped within Study Area (Yes/ No)	Potential for Habitat to Occur Onsite?	Survey Recommended	
													(Yes/No)	Comments
	Rich fen	Natural Community	S2	-	-	-	2016	Gentle slopes with shallow peat accumulations.	Eshqua Bog	N/A	No	Yes	No	No occurrences found in site boundary
	Hemlock balsam fir black ash seepage swamp	Natural Community	S4	-	-	-	2019	Small basins or gentle slopes. Most common at lower elevations	Eshqua Bog	N/A	No	Yes	No	No occurrences found in site boundary

¹Potential sources for habitat description listed below:

EFloras.org. <http://www.efloras.org/index.aspx>

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

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

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

Thompson, Elizabeth H. and Sorenson, Eric R. 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 March 2018, last accessed 2023. Element Occurrence Reports

²Sources for occurrence description listed below:

Vermont Natural Heritage Inventory - Vermont Fish & Wildlife Department - Element Occurrence Reports. Database query on March 1, 2024.

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

ATTACHMENT 8

Partial Floristic Inventory

Client: GMP

Project: Taftsville Substation Relocation

Survey Date(s): September 18, 2025 (B. Trowbridge and W. Durkin)

Prepared by: VHB (B. Trowbridge and Daniel Graves) July 21, 2026

Scientific Name ¹	Observed Habitat			VT Rarity Rank ^{2,3}	Non-Native Invasive Species ⁴
	Natural Communities / Forested Area	Disturbed (ROW, Substation, or Residence)	Wetlands		
<i>Abutilon theophrasti</i> Medik.		X		-	-
<i>Acer pensylvanicum</i> L.	X			-	-
<i>Acer rubrum</i> L.	X		X	-	-
<i>Acer saccharinum</i> L.	X			-	-
<i>Acer spicatum</i> Lam.	X			-	-
<i>Achillea millefolium</i> L.		X		-	-
<i>Actaea pachypoda</i> Elliott	X			-	-
<i>Adiantum pedatum</i> L.	X			-	-
<i>Ageratina altissima</i> (L.) R.M. King & H. Rob.	X	X		-	-
<i>Agrostis capillaris</i> L.		X		-	-
<i>Alliaria petiolata</i> (M. Bieb.) Cavara & Grande	X	X		-	B
<i>Alnus glutinosa</i> (L.) Gaertn.		X	X	-	WL
<i>Amaranthus hybridus</i> L.				-	-
<i>Ambrosia artemisiifolia</i> L.		X		-	-
<i>Amphicarpaea bracteata</i> (L.) Fernald	X	X		-	-
<i>Anemone acutiloba</i> (DC.) G. Lawson	X			-	-
<i>Anemone virginiana</i> L.	X			-	-
<i>Anthoxanthum odoratum</i> L.		X		-	-
<i>Anthriscus sylvestris</i> (L.) Hoffm.		X		-	WL
<i>Apios americana</i> Medik.	X	X		-	-
<i>Apocynum androsaemifolium</i> L.		X		-	-
<i>Aralia nudicaulis</i> L.	X	X		-	-
<i>Arctium minus</i> Bernh.		X		-	-
<i>Arisaema triphyllum</i> (L.) Schott	X	X	X	-	-
<i>Asarum canadense</i> L.	X			-	-
<i>Asclepias syriaca</i> L.		X		-	-
<i>Athyrium angustum</i> (Willd.) C. Presl	X	X		-	-
<i>Berberis thunbergii</i> DC.	X	X		-	B
<i>Betula alleghaniensis</i> Britton	X			-	-
<i>Betula papyrifera</i> Marshall	X			-	-
<i>Bidens frondosa</i> L.		X	X	-	-
<i>Brachyelytrum aristosum</i> (Michx.) Trel.	X	X		-	-
<i>Bromus ciliatus</i> L.		X		-	-
<i>Bromus commutatus</i> Schrad.		X		-	-
<i>Bromus inermis</i> Leyss.		X		-	-
<i>Calystegia sepium</i> (L.) R. Br.		X		-	-
<i>Carex appalachica</i> J. Webber & P.W. Ball	X			-	-
<i>Carex arctata</i> Boott ex Hook.	X			-	-
<i>Carex brunnescens</i> (Pers.) Poir.	X		X	-	-
<i>Carex communis</i> L.H. Bailey	X			-	-
<i>Carex debilis</i> Michx.	X	X		-	-
<i>Carex deweyana</i> Schwein.	X			-	-
<i>Carex gracillima</i> Schwein.	X	X	X	-	-
<i>Carex intumescens</i> Rudge	X		X	-	-
<i>Carex lurida</i> Wahlenb.			X	-	-
<i>Carex plantaginea</i> Lam.	X			-	-
<i>Carex projecta</i> Mack.		X	X	-	-
<i>Carex rosea</i> Schkuhr ex Willd.	X			-	-
<i>Carex scabrata</i> Schwein.	X		X	-	-

Partial Floristic Inventory

Client: GMP

Project: Taftsville Substation Relocation

Survey Date(s): September 18, 2025 (B. Trowbridge and W. Durkin)

Prepared by: VHB (B. Trowbridge and Daniel Graves) July 21, 2026

Scientific Name ¹	Observed Habitat			VT Rarity Rank ^{2,3}	Non-Native Invasive Species ⁴
	Natural Communities / Forested Area	Disturbed (ROW, Substation, or Residence)	Wetlands		
<i>Carex sparganioides</i> Muhl. ex Willd.	X			-	-
<i>Carex tosa</i> (Fernald) E.P. Bicknell		X		-	-
<i>Carpinus caroliniana</i> Walter	X			-	-
<i>Carya cordiformis</i> (Wangenh.) K. Koch	X			-	-
<i>Chelidonium majus</i> L.		X		-	-
<i>Chelone glabra</i> L.			X	-	-
<i>Cinna latifolia</i> (Trevis. ex Goepp.) Griseb.	X		X	-	-
<i>Circaea canadensis</i> sensu Fernald	X			-	-
<i>Cirsium vulgare</i> (Savi) Ten.		X		-	-
<i>Clematis virginiana</i> L.	X	X		-	-
<i>Clinopodium vulgare</i> L.		X		-	-
<i>Conioselinum chinense</i> (L.) Britton, Sterns & Poggenb.		X		S3	-
<i>Coreopsis lanceolata</i> L.		X		-	-
<i>Corylus cornuta</i> Marshall		X		-	-
<i>Crocianthemum canadense</i>		X		-	-
<i>Dactylis glomerata</i> L.		X		-	-
<i>Danthonia spicata</i> (L.) P. Beauv. ex Roem. & Schult.		X		-	-
<i>Daucus carota</i> L.		X		-	-
<i>Dendrolycopodium dendroideum</i> (Michx.) A. Haines		X		-	-
<i>Dennstaedtia punctilobula</i> (Michx.) T. Moore		X		-	-
<i>Deparia acrostichoides</i> (Sw.) M. Kato	X			-	-
<i>Dianthus armeria</i> L.		X		-	-
<i>Dichantheium clandestinum</i> (L.) Gould		X		-	-
<i>Digitaria sanguinalis</i> (L.) Scop.		X		-	-
<i>Doellingeria umbellata</i> (Mill.) Nees		X	X	-	-
<i>Dryopteris cristata</i> (L.) A. Gray			X	-	-
<i>Dryopteris intermedia</i> (Muhl. ex Willd.) A. Gray	X			-	-
<i>Dryopteris marginalis</i> (L.) A. Gray	X			-	-
<i>Epifagus virginiana</i> (L.) W.P.C. Barton	X			-	-
<i>Epipactis helleborine</i> (L.) Crantz	X	X		-	-
<i>Equisetum arvense</i> L.		X	X	-	-
<i>Equisetum hyemale</i> L.		X	X	-	-
<i>Equisetum sylvaticum</i> L.		X	X	-	-
<i>Eragrostis frankii</i> C.A. Mey. ex Steud.			X	S3	-
<i>Erechtites hieraciifolius</i> (L.) Raf. ex DC., orth. var.		X	X	-	-
<i>Erigeron annuus</i> (L.) Pers.		X		-	-
<i>Erigeron canadensis</i> L.		X		-	-
<i>Eupatorium perfoliatum</i> L.			X	-	-
<i>Eupatorium purpureum</i> L.		X	X	-	-
<i>Eurybia divaricata</i> (L.) G.L. Nesom	X			-	-
<i>Euthamia graminifolia</i> (L.) Nutt.		X		-	-
<i>Fagus grandifolia</i> Ehrh.	X			-	-
<i>Fallopia cilinodis</i> (Michx.) Holub	X			-	-
<i>Fallopia japonica</i> (Houtt.) Ronse Decr.		X	X	-	B
<i>Festuca subverticillata</i> (Pers.) Alexeev	X			-	-
<i>Fragaria virginiana</i> Duchesne	X	X		-	-
<i>Frangula alnus</i> Mill.		X	X	-	B
<i>Fraxinus americana</i> L.	X			-	-
<i>Galium triflorum</i> Michx.	X			-	-

Partial Floristic Inventory

Client: GMP

Project: Taftsville Substation Relocation

Survey Date(s): September 18, 2025 (B. Trowbridge and W. Durkin)

Prepared by: VHB (B. Trowbridge and Daniel Graves) July 21, 2026

Scientific Name ¹	Observed Habitat			VT Rarity Rank ^{2,3}	Non-Native Invasive Species ⁴
	Natural Communities / Forested Area	Disturbed (ROW, Substation, or Residence)	Wetlands		
<i>Geranium robertianum</i> L.	X			-	-
<i>Geum canadense</i> Jacq.	X	X	X	-	-
<i>Glyceria striata</i> (Lam.) Hitchc.			X	-	-
<i>Hamamelis virginiana</i> L.	X	X		-	-
<i>Hieracium caespitosum</i> Dumort.		X		-	-
<i>Hieracium scabrum</i> Michx.		X		-	-
<i>Hydrocotyle americana</i> L.			X	-	-
<i>Hydrophyllum virginianum</i> L.	X			-	-
<i>Hypericum perforatum</i> L.		X		-	-
<i>Impatiens capensis</i> Meerb.	X	X	X	-	-
<i>Impatiens pallida</i> Nutt.	X		X	-	-
<i>Iris versicolor</i> L.			X	-	-
<i>Juglans cinerea</i> L.	X			S3?	-
<i>Juncus effusus</i> L.		X	X	-	-
<i>Lactuca biennis</i> (Moench) Fernald	X	X		-	-
<i>Laportea canadensis</i> (L.) Weddell	X			-	-
<i>Leersia oryzoides</i> (L.) Sw.			X	-	-
<i>Lobelia inflata</i> L.		X		-	-
<i>Lolium perenne</i> L.		X		-	-
<i>Lonicera morrowii</i> A. Gray	X	X		-	B
<i>Lycopus uniflorus</i> Michx.			X	-	-
<i>Lysimachia terrestris</i> (L.) Britton, Sterns & Poggenb.			X	-	-
<i>Lythrum salicaria</i> L.		X	X	-	B
<i>Maianthemum canadense</i> Desf.	X	X		-	-
<i>Maianthemum racemosum</i> (L.) Link	X	X		-	-
<i>Matteuccia struthiopteris</i> (L.) Todaro	X			-	-
<i>Melilotus albus</i> Medik.		X		-	-
<i>Mimulus ringens</i> L.			X	-	-
<i>Monotropa uniflora</i> L.	X			-	-
<i>Mycelis muralis</i> (L.) Dumort.				-	WL
<i>Oclemena acuminata</i> (Michx.) Greene	X			-	-
<i>Odontites vulgaris</i> Moench		X		-	-
<i>Oenothera biennis</i> L.		X		-	-
<i>Onoclea sensibilis</i> L.		X	X	-	-
<i>Osmorhiza claytonii</i> (Michx.) C.B. Clarke	X			-	-
<i>Osmunda regalis</i> L.			X	-	-
<i>Osmundastrum cinnamomeum</i> (L.) C. Presl			X	-	-
<i>Ostrya virginiana</i> (Mill.) K. Koch	X			-	-
<i>Oxalis montana</i> Raf.	X			-	-
<i>Oxalis stricta</i> L.		X		-	-
<i>Parathelypteris noveboracensis</i> (L.) Ching	X	X		-	-
<i>Parthenocissus quinquefolia</i> (L.) Planch.	X	X		-	-
<i>Pastinaca sativa</i> L.		X		-	WL
<i>Penthorum sedoides</i> L.			X	-	-
<i>Persicaria pensylvanica</i> (L.) Small			X	-	-
<i>Persicaria sagittata</i> (L.) Gross.			X	-	-
<i>Phegopteris connectilis</i> (Michx.) Watt	X		X	-	-
<i>Phleum pratense</i> L.		X		-	-
<i>Phryma leptostachya</i> L.	X			-	-

Partial Floristic Inventory

Client: GMP

Project: Taftsville Substation Relocation

Survey Date(s): September 18, 2025 (B. Trowbridge and W. Durkin)

Prepared by: VHB (B. Trowbridge and Daniel Graves) July 21, 2026

Scientific Name ¹	Observed Habitat			VT Rarity Rank ^{2,3}	Non-Native Invasive Species ⁴
	Natural Communities / Forested Area	Disturbed (ROW, Substation, or Residence)	Wetlands		
<i>Physostegia virginiana</i> (L.) Benth.		X	X	S2 (T)	-
<i>Phytolacca americana</i> L.		X		-	-
<i>Pilea pumila</i> (L.) A. Gray	X			-	-
<i>Pinus strobus</i> L.	X			-	-
<i>Plantago lanceolata</i> L.		X		-	-
<i>Poa compressa</i> L.		X		-	-
<i>Polygonatum pubescens</i> (Willd.) Pursh	X			-	-
<i>Polypodium appalachianum</i> Haufler & Windham	X			-	-
<i>Polystichum acrostichoides</i> (Michx.) Schott	X			-	-
<i>Populus deltoides</i> W. Bartram ex Marshall	X	X		-	-
<i>Populus tremuloides</i> Michx.		X		-	-
<i>Potentilla recta</i> L.		X		-	-
<i>Potentilla simplex</i> Michx.		X		-	-
<i>Prunella vulgaris</i> L.	X	X		-	-
<i>Prunus serotina</i> Ehrh.	X			-	-
<i>Prunus virginiana</i> L.	X	X		-	-
<i>Pseudognaphalium obtusifolium</i> (L.) Hilliard & B.L. Burt		X		-	-
<i>Pteridium aquilinum</i> (L.) Kuhn		X		-	-
<i>Quercus rubra</i> L.	X			-	-
<i>Ranunculus abortivus</i> L.	X			-	-
<i>Ranunculus acris</i> L.		X		-	-
<i>Rhamnus cathartica</i> L.	X	X		-	B
<i>Rhus typhina</i> L.		X		-	-
<i>Ribes cynosbati</i> L.	X	X		-	-
<i>Rubus allegheniensis</i> Porter		X		-	-
<i>Rubus idaeus</i> L.	X	X		-	-
<i>Rubus occidentalis</i> L.	X	X		-	-
<i>Rubus odoratus</i> L.	X			-	-
<i>Rumex obtusifolius</i> L.		X		-	-
<i>Sambucus racemosa</i> L.	X			-	-
<i>Saponaria officinalis</i> L.		X		-	-
<i>Schedonorus arundinaceus</i> (Schreb.) Dumort., nom. cons.		X		-	-
<i>Scirpus cyperinus</i> (L.) Kunth			X	-	-
<i>Scirpus hattorianus</i> Makino	X	X	X	-	-
<i>Setaria pumila</i> (Poir.) Roem. & Schult.		X		-	-
<i>Solanum dulcamara</i> L.		X	X	-	-
<i>Solidago altissima</i> L.		X		-	-
<i>Solidago bicolor</i> L.		X		-	-
<i>Solidago caesia</i> L.	X			-	-
<i>Solidago flexicaulis</i> L.	X			-	-
<i>Solidago gigantea</i> Aiton		X	X	-	-
<i>Solidago juncea</i> Aiton		X		-	-
<i>Solidago nemoralis</i> Aiton		X		-	-
<i>Solidago puberula</i> Nutt.		X		-	-
<i>Solidago rugosa</i> Mill.		X	X	-	-
<i>Spiraea alba</i> Du Roi		X	X	-	-
<i>Spiraea tomentosa</i> L.		X	X	-	-
<i>Spiranthes cernua</i> (L.) Rich.		X		-	-
<i>Swida alternifolia</i> (L. f.) Small	X			-	-

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	Natural Communities / Forested Area	Disturbed (ROW, Substation, or Residence)	Wetlands		
<i>Symphytotrichum cordifolium</i> (L.) G.L. Nesom	X			-	-
<i>Symphytotrichum lateriflorum</i> (L.) Á. Löve & D. Löve	X	X		-	-
<i>Symphytotrichum novae-angliae</i> (L.) G.L. Nesom		X	X	-	-
<i>Symphytotrichum pilosum</i> (Willd.) G.L. Nesom		X		-	-
<i>Symphytotrichum puniceum</i> (L.) Á. Löve & D. Löve		X	X	-	-
<i>Taraxacum officinale</i> F.H. Wigg.		X		-	-
<i>Thalictrum pubescens</i> Pursh		X	X	-	-
<i>Thelypteris palustris</i> Schott			X	-	-
<i>Tiarella cordifolia</i> L.	X			-	-
<i>Tilia americana</i> L.	X			-	-
<i>Toxicodendron radicans</i> (L.) Kuntze	X	X		-	-
<i>Trifolium aureum</i> Pollich		X		-	-
<i>Trifolium pratense</i> L.		X		-	-
<i>Tsuga canadensis</i> (L.) Carrière	X			-	-
<i>Tussilago farfara</i> L.		X		-	-
<i>Typha latifolia</i> L.			X	-	-
<i>Ulmus rubra</i> Muhl.	X			-	-
<i>Urtica dioica</i> L.	X			-	-
<i>Verbascum thapsus</i> L.		X		-	-
<i>Veronica officinalis</i> L.	X	X		-	-
<i>Veronica serpyllifolia</i> L.		X		-	-
<i>Vicia cracca</i> L.		X		-	-
<i>Vincetoxicum nigrum</i> (L.) Moench		X		-	B
<i>Viola cucullata</i> Aiton			X	-	-
<i>Viola rotundifolia</i> Michx.	X			-	-
<i>Viola sagittata</i> Aiton		X		-	-
<i>Vitis aestivalis</i> Michx.		X		-	-
<i>Vitis riparia</i> Michx.		X	X	-	-
<i>Xanthium strumarium</i> L.			X	-	-

X - Plant species was found in this community type.

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

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.