



January 19, 2023

Ref: 52932.00

Ms. Marcia Goodnow, Chair  
Madbury Planning Board  
Town Hall  
13 Town Hall Road  
Madbury, NH 03823

Re: Madbury Conditional Use Permit Application  
PSNH 307 Line OPGW Replacement and M183 Structure Replacement Project, Madbury, NH

Dear Ms. Goodnow:

On behalf of Public Service of New Hampshire (PSNH) d/b/a Eversource Energy (Eversource), VHB is submitting this Conditional Use Permit (CUP) Application to the Town of Madbury Planning Board for proposed utility maintenance work on the existing 345kV 307 and 115 kV M183 transmission lines in Madbury, NH. This CUP Application is being submitted in accordance with *Article IX, Wet Area Conservation Overlay District –WC, Section 4.C. Limited and Regulated Uses*, of the Town of Madbury Zoning Ordinance (Revised, March 2017). A CUP is required for the proposed maintenance work to allow temporary impacts to wetlands and wetland buffers protected under the Wet Areas Conservation Overlay District. The project qualifies for a Conditional Use Permit (CUP) approval “only if they are found to be consistent with this ordinance, and do not have an adverse impact on the wet area as determined by a wetland scientist and concurred with by the Planning Board.” As presented herein, we submit that the proposed maintenance project activities are consistent with this ordinance, and will not have an adverse impact on wetlands or areas within 75 feet of wetlands.

#### **NH Department of Environmental Services Notification**

In accordance with NH RSA 482-A:3, XV, routine utility maintenance work is exempt from the standard wetland permitting process at the state level. However, PSNH is required to submit a Utility Maintenance Activity Statutory Permit-by-Notification (SPN) application to the New Hampshire Department of Environmental Services (NHDES) to permit the temporary wetland impacts associated with the use of timber matting within wetlands required to complete the proposed structure replacement work. VHB is currently assisting PSNH with this filing. As part of the permitting process, the Town of Madbury will receive a copy of this filing concurrent with the NHDES submission anticipated for early spring 2023.

#### **Project Description**

PSNH intends to perform maintenance work on the 345kV 307 Transmission Line involving utility structure replacements, and optical ground wire (OPGW) replacement along the existing utility ROW in Madbury and seven other communities. In total, the 307 Transmission Line project extends approximately 19 miles, from the Deerfield Substation, in Deerfield, New Hampshire to the Eliot Substation in Eliot, Maine, although as described below, work is not occurring on all structures along the ROW. In addition, PSNH intends to perform structure replacements on the M183 transmission line in Madbury and Dover. In Madbury, the two

**Engineers | Scientists | Planners | Designers**

2 Bedford Farms Drive  
Suite 200  
Bedford, New Hampshire 03110  
P 603.391.3900  
F 603.518.7495



transmission lines are collocated within a single ROW from the Madbury Substation to a point approximately 1,200 feet west of the Dover municipal boundary where the ROWs split, with the 307 Line ROW continuing in a northeastern direction and the M183 Line ROW oriented in a more easterly direction. No tree clearing or additional widening of the ROWs are proposed. More details on the work on each transmission line is described below.

### **307 Transmission Line Work**

Much of the OPGW work on the 307 Transmission Line will be performed aerially, i.e., by helicopter, but some of the work involves on-the-ground activities. Prior to working on the OPGW, some utility structures will need to be replaced in the same location, i.e., within 10 feet of the current structures. Generally, adjustments are made to pole locations to account for existing conditions in the ROW and for access during construction. Structures 90, 94, 95 and 96, all located in upland, require replacement due to their aged condition and/or inadequacy for the OPGW replacement upgrade. The existing wooden transmission structures will be replaced with weathered steel poles, averaging 5 to 10 feet taller. Pole height increases are necessary to maintain minimum clearance safety standards and balance line sag. In order to access the structures for replacement, construction matting will be needed to cross through some upland and wetland areas as shown on the project permitting plans. This includes work to the south of the Madbury Substation off Miles Lane, where Structure 92 will need to be accessed and a pulling pad will be established east of Madbury Road. Similarly, west of Madbury Road, in order to access Structures 93, 94, 95 and 96 to perform the required work, construction mats will be necessary to cross wetlands for access from Madbury Road. All structure, access and matting locations are shown on the project permitting plans. A pull pad for the OPGW installation will be established east of Freshet Road that will require wetland buffer impacts in Madbury.

### **M183 Transmission Line Work**

Eversource identified the need for maintenance work on the M183 Transmission Line due to the age and condition of the existing wooden electric transmission line structures resulting from woodpecker damage, insect damage, and pole rot. Work on the M183 Transmission Line in Madbury is limited to the replacement of six (6) existing wooden structures with weathered steel poles. These include Structures 1, 1.5, 10, 14, 15, and 19. Similar to the structure replacements on the 307 Transmission Line, the replacement weathered steel structures will be located within 10 feet of the existing wooden structures and will average 5 to 10 feet taller to maintain minimum clearance safety standards and balance line sag. Access to Structure 1 and 1.5 will be provided from Perkins Road and wetland matting will be necessary around Structure 1 as the structure is situated within a wetland. To access Structure 10, access is proposed from two locations from Evans Road. For access within the ROW, a matted wetland crossing will be necessary to reach Structure 10. For the second access point further north on Evans Road, upland matting is necessary to cross an open field area to reach Structure 10. In order to perform the required work on Structures 14, 15 and 19, access to the structures is required from Garrison Lane. No access matting or wetland crossings are necessary along this stretch of the ROW. All structure, access and matting locations are shown on the project permitting plans.

### **Project Need**

The existing 307 Transmission Line OPGW requires replacement to upgrade it to modern standards. In order to support the OPGW replacement, some of the existing wooden utility structures also require replacement. Similarly, several structures on the M183 Transmission Line were identified as requiring replacement due to



their inadequate or compromised condition. The proposed project work is part of PSNH's on-going maintenance program that is conducted to ensure reliable electric service for their customers.

### **Project Execution**

Prior to construction, Eversource contractors will install erosion control and sediment control barriers, including stone-lined construction entrances/exits, in accordance with permitting plans, the New Hampshire Department of Environmental Services (NHDES) permit conditions, and the *Best Management Practices Manual for Utility Maintenance in and Adjacent to Wetlands and Waterbodies in New Hampshire* ('Utility BMP Manual,' March 2019), published by the New Hampshire Department of Natural and Cultural Resources (NHDNCR). Selected BMPs may include silt sock, silt fence, or wood chip/compost berms/tubes. Wetland and stream resources, previously delineated by environmental consultants working for Eversource, were verified by VHB and reflagged to alert crews to the location of the natural resource boundaries prior to the start of construction. Construction crews will utilize existing established access points (where present) within the limits of the ROW corridor off Beech Hill Road, Madbury Road, Perkins Road and Freshet Road to reach the poles targeted for replacement and to establish pull pads along the 307 Transmission Line ROW. For work on the M-183 Transmission Line, as described above, ROW access will be established from Perkins Road, Evans Road, and Garrison Lane.

Construction crews will utilize timber matting to gain access across wetlands in the vicinity of the proposed replacement work. Timber mats will also be set up around the base of the poles if the work pad around the pole intersects wetlands. The timber mats provide a stable work area to stage crews and equipment. The use of timber mats is a routine practice that reduces the impact of heavy equipment on saturated wetland soils by dispersing the equipment weight, preventing the formation of ruts, and minimizing soil erosion. A stream crossing (Beards Creek), located between Structures 93 and 94, will be bridged by timber mats (from bank to bank) in order to avoid direct stream impacts and to not obstruct stream flow. Furthermore, timber mats will be used in some upland areas in the ROW to eliminate the need to construct access roads to the poles. This effort to minimize impacts was negotiated with the underlying landowners.

Traditional augering and installation procedures will be used. All excavated spoils will be spread within an upland area of the project ROW (outside of NHDES jurisdiction) or will be trucked off-site and properly disposed of. Construction laydown areas used to store materials and equipment along the project ROW will be in upland areas or matted areas. Contingent upon permit approval, work is proposed to commence in mid-2023.

### **Erosion and Sediment Control**

Erosion and sediment control barriers will be inspected daily by the construction crews and weekly by an environmental monitor to ensure that the BMPs are maintained throughout the duration of the project. Matting and other construction debris will be removed upon completion of the proposed work. Erosion and sediment control barriers will not be removed until project work is complete, and the project area is stabilized in accordance with NHDES guidance. Due to the use of timber mats, it is anticipated that minimal restoration within the ROW will be needed and that natural vegetative re-colonization of impacted areas will occur during summer vegetative growth periods. VHB will revisit the ROW during this time period to confirm vegetative regrowth. If necessary, an approved upland and/or wetland seed mix outlined in NHDES



guidance manuals, will be applied to any areas where cover is slow to develop. Additionally, straw or weed-free hay will be applied in conjunction with seed.

#### **Conditional Use Permit Procedures and Requirements**

Madbury Zoning Ordinances provide that Conditional Use Permit (CUP) applications can be approved for limited and regulated uses by the Planning Board if it is found that the use is consistent with the ordinances and do not have an adverse impact on the wet areas. A CUP may be issued in accordance with the approval criteria within *Article IV, General Provisions, Section 9. D.*

***1. The site is suitable for the proposed use.***

The site is an existing maintained utility corridor used for electrical power transmission. PSNH holds easements for the overhead transmission lines on the affected properties. The easements currently contain two transmission lines, i.e., 307 Transmission Line and M-183 Transmission Line, collocated for most of the project corridor. In addition, the site includes an approximately 1,200-foot stretch of the M-183 ROW that splits off from the 307 Transmission Line and extends to the Dover municipal boundary. The project proposes maintenance activities on both of the existing transmission lines in the ROW within the Town of Madbury as described within this application. The proposed work will not change the spatial orientation of the lines within the ROW or the use of the site. Access roads will be used to temporarily access the work sites. The existing ROW is not currently or proposed for intentional use by the public. The proposed use does not require public services.

***2. The impacts of the proposed use on abutting properties and the neighborhood shall be no greater than the impacts of adjacent existing uses or other uses permitted in the zone.***

The impacts of the proposed use on abutting properties and the neighborhood will not exceed the impacts of adjacent existing uses because there is no change in use. The proposed project includes the replacement of four (4) existing wood poles with four weathered steel poles and OPGW replacement work associated with the 307 Transmission Line and six (6) pole replacements associated with the M-183 Transmission Line. The replacements will not result in a post-construction increase in traffic, noise, odor, vibrations, dust, fumes, or exterior lighting and glare. The poles will be slightly taller, as described above, and will have a darker brown appearance than the existing wood poles. Crews will operate during daytime hours (7am – 7 pm during the week).

***3. Character of the site development shall be compatible with the established character of the neighborhood and shall mitigate any external impacts of the use on the neighborhood.***

As discussed above, the proposed use is limited to the maintenance of existing transmission poles within existing ROWs that are compatible with the established character of the neighborhood in which the ROWs are situated. The proposed project will not change the nature of the existing site as a transmission line corridor. As described above, the replacement transmission poles will be installed in proximity to the existing poles with only slight differences in visual appearance and height of the poles.



**4. Preservation of natural, cultural, historic, and scenic resources.**

Site visits were conducted to assess resources within and along the project ROW. The project has been carefully designed to avoid and minimize impacts to jurisdictional resource areas to the maximum extent practicable; however, some temporary wetland impacts are unavoidable. The proposed structure replacements require temporary impact to wetlands for access to the existing pole locations and for the establishment of work pads to stage construction equipment and work crews. No permanent wetland impacts are proposed. Table 1 presents the temporary wetland impacts, wetland buffer impacts and upland impacts from matting related to work to be conducted for each transmission line.

Transmission Line ID	Temporary Wetland Matting Impact (SF)	Temporary Upland Matting Impact (SF)	Temporary 25-foot Buffer Impact (SF)
307	43,403	26,199	23,048
M-183	10,557	26,046	9,015
<b>Totals</b>	<b>53,960</b>	<b>52,245</b>	<b>32,063</b>

A total of approximately **53,960 square feet** of temporary wetland impacts are required for the placement of timber matting. Access will also result in approximately **52,245 square feet** of temporary upland impact and **32,063 square feet** of temporary impact within the 25-foot wetland buffer. All work will be completed in accordance with the Best Management Practices for Utility Maintenance in New Hampshire (Utility BMPs).

Cultural resources (archeological and historic) were reviewed and considered during prior projects within the 307 and M-183 Transmission Line ROWs. Several locations exhibiting potential sensitivity were further surveyed during Phase IA and Phase IB intensive investigations and subsequently found to lack evidence of archeological sensitivity, that is, they were "cleared" and no additional studies were deemed necessary.

**5. Other approval criteria and use restrictions specific to the district(s) (including overlay districts) applicable to the site.**

Portions of the proposed project will take place within the Town of Madbury Wet Areas Conservation Overlay District. The District includes all areas identified as wetland, as defined by the State, poorly drained and very poorly drained soils, and vernal pools as identified in *Article IX, Section 2*. Under *Section 3*, the provisions of *Article IX* apply to all wet areas and adjacent buffers except isolated, non-tidal wet areas with a contiguous surface area of less than 3,000 square feet and wetlands associated with currently functioning and maintained, non-abandoned, man-made swales, basins, etc. Wetland setbacks and buffers are defined in *Section 5*. Building and septic setbacks do not apply to this project, but a 25-foot wetland buffer does apply to jurisdictional wetlands within the proposed project area.

Wetlands within the 307 Transmission Line ROW were previously delineated in support of past Eversource maintenance work on the G128 and L175 Transmission Lines contained within the same ROW in 2020 and



2021. Similarly, wetlands along the M183 Transmission Line ROW were previously delineated and verified as part of maintenance work performed in 2021. Previously delineated wetlands were field verified and reflagged by VHB Environmental Scientists in the fall and winter of 2022/2023 to assist crews prior to the start of construction anticipated for mid-2023. Wetland verification was performed in accordance with the procedures and standards outlined in the *Regional Supplement to the U.S. Army Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0* (January 2012). Wetland delineation will also rely upon the *Field Indicators for Identifying Hydric Soils in New England, Version 4.0*, published by the New England Interstate Water Pollution Control Commission, and the *Field Indicators for Identifying Hydric Soils in the United States, Version 8.2* (published by the Natural Resources Conservation Service). Dominant wetland vegetation was assessed using the *2018 National Wetland Plant List* published by the U.S. Army Corps of Engineers. Wetlands will be classified using the USFWS methodology *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979, revised 1985). Wetland functions and values were assessed using the *U.S. Army Corps of Engineers Highway Methodology Workbook Supplement* (September 1999).

The proposed project will not negatively impact the existing wetlands. Some temporal loss of wetland function as wildlife habitat is expected during construction. However, use of timber mats reduces the timeframe of impact by minimizing impact to the root structure of the plants so that revegetation happens faster.

#### **Property Ownership and Abutters**

All proposed work will occur within the limits of an existing electric utility ROW that is held as easement by the PSNH. All owners of parcels where impacts to the Wet Areas Conservation Overlay District are to occur, as well as owners of parcels who abut or are located across the street from these properties will be notified of the proposed project in accordance with the Town of Madbury's Conditional Use Permit application process. The list of owners and abutters and the associated tax maps are attached. A check in the amount of \$200 is enclosed for the application fee.

Please do not hesitate to contact me if you have any questions at (603) 391-3951 or [strefry@vhb.com](mailto:strefry@vhb.com).

Sincerely,

A handwritten signature in black ink that reads "Sherrie Trefry".

Sherrie Trefry, CSS  
Energy Market Leader

cc: Kurt Nelson, PSNH

#### **Attachments:**

- Town of Madbury Conditional Use Permit Application Form
- Abutter List
- Tax Maps
- Project Plans