City of Keene, New Hampshire

CONSERVATION COMMISSION

Tuesday, February 16, 2021 4:30 PM ZOOM

Commission Members

Alexander Von Plinsky, IV, Chair  Councilor Robert Williams
Eloise Clark, Vice Chair  Brian Reilly, Alternate
Kenneth Bergman  Thomas P. Haynes, Alternate
Art Walker  Steven Bill, Alternate
Andrew Madison  John Therriault, Alternate

- This meeting will be conducted using the online meeting platform, Zoom. The public may view the meeting online by visiting www.zoom.us/join and enter the Meeting ID: 868 3840 7352.*
- More info on how to access this meeting is available on the Conservation Commission webpage at https://ci.keene.nh.us/conservation-commission
- If you encounter any issues accessing this meeting, please call (603) 209-4697 during the meeting.

1. Call to Order

2. Approval of Meeting Minutes – January 19, 2020

3. Communication and Notifications

4. Informational
   a. Subcommittee reports
      • Outreach Subcommittee
      • Arm Fund Subcommittee
   b. NHACC Legislative Update 2021
      • www.nhacc.org

5. Discussion Items
   a. Planning Board referral re Surface Water Ordinance – Eversource
      SWP-CUP-01-21 -- Structure Replacement Project D108 Transmission Line
      SWP-CUP-02-21 -- Structure Replacement Project L163 Transmission Line
   b. Continued discussion – Greater Goose Pond Forest Management Plan Stewardship Committee
      • Greater Goose Pond Stewardship Plan Adopted 5/2/2019
   c. Update – Bee City designation
   d. Discussion -- Garlic Mustard Challenge

6. New or Other Business

7. Adjournment – Next meeting date Monday, March 15, 2021

*In Emergency Order #12, issued by the Governor pursuant to Executive Order #2020-04, which declared a COVID-19 State of Emergency, the requirement that a quorum of a public body be physically present at the meeting location under RSA 91-A:2, III(b), and the requirement that each part of a meeting of a public body be audible or otherwise discernible to the public at the meeting location under RSA 91-A:2, III(c), have been waived. Public participation may be provided through telephonic and other electronic means.
City of Keene
New Hampshire

CONSERVATION COMMISSION
MEETING MINUTES

Tuesday, January 19, 2021 4:30 PM Remote Meeting via Zoom

Members Present:
Alexander Von Plinsky, IV, Chair
Eloise Clark, Vice Chair
Councilor Bobby Williams
Ken Bergman
Art Walker
Andrew Madison
Brian Reilly, Alternate (Non-Voting)
John Therriault, Alternate (Voting)

Members Not Present:
Thomas Haynes, Alternate

1) Call to Order
Chair Von Plinsky called the meeting to order at 4:30 PM and read the Executive Order
authorizing a remote meeting: Emergency Order #12, issued by the Governor of the State of New
Hampshire pursuant to Executive Order #2020-04. Pursuant to this order, members present stated
their locations and whether calling alone. Steven Bill, Alternate, was participating in this meeting
as a member of the public having not yet sworn his oath.

2) Vote for Chair and Vice Chair 2021
Mr. Walker nominated Sparky Von Plinsky to continue serving as Chairman of the Conservation
Commission for the 2021 calendar year, which Councilor Williams seconded, and the
nomination passed with a unanimous roll call vote in favor
Chair Von Plinsky nominated Eloise Clark to continue serving as the Vice Chair of the
Conservation Commission for the 2021 calendar year, which Mr. Therriault seconded, and the
nomination passed with a unanimous roll call vote in favor.

3) Approval of Meeting Minutes – December 21, 2020
Vice Chair Clark moved to approve the minutes of December 21, 2020, which Mr. Walker seconded, and the motion passed with a unanimous roll call vote in favor.

4) Communication and Notifications
   a. NHACC Donation Request – December 1, 2020

Mr. Lamb explained that no actual request for donation was made at this time but rather this was a notice that they would begin issuing requests for donations soon; the Commission usually received formal donation requests during the spring. The Chairman stated his preference to wait to make the donation until spring regardless, particularly to ensure sufficient funds would be available in case individuals want to be sponsored to attend the NH Invasives Academy, as discussed at the previous meeting.

Vice Chair Clark noted that Mr. Lamb should have received a communication from the Ashuelot River Local Advisory Committee sharing their annual report. Mr. Lamb would share the report with the Commission.

5) Informational
   a. Subcommittee Reports
      i. Outreach Subcommittee

Vice Chair Clark recalled that she had been sending "Nature Nuggets" to Ms. Marcou regularly for posting on the City website and Community Development Department social media. Mr. Bohannon noted that he shares those posts as well to the Parks and Recreation social media and stated that they are among their most popular.

      ii. ARM Fund Subcommittee

Chair Von Plinsky and Mr. Bergman hoped to meet and discuss ideas before the February meeting. Mr. Lamb recalled discussion at the previous meeting about seeking ARM Funds for Japanese knotweed management on the west bank of Beaver Brook across from the Russell Park redesign, which the Chairman would keep in mind during subcommittee discussions.

6) Discussion Items
   a. Continued Discussion – Invasive Species Management

Mr. Bohannon shared that he was contacted by an individual experienced in forestry and invasives management who moved to Keene recently from the Midwest and he shared information about this Commission's focus on invasives as well as that of the Ashuelot River Park Advisory Board (ARPAB). This individual also registered for the NH Invasives Academy and had submitted an application to join either this Commission or the ARPAB as an alternate member. Chair Von Plinsky offered his contact information and willingness to share information about this Commission with the individual should Mr. Bohannon want to share it. Mr. Bohannon
stated that he has agendized invasives and pollinators for the ARPAB’s foreseeable meetings. A member of his Staff is also interested in attending the NH Invasives Academy should the Commission have funds for sponsorship.

The Chairman stated that he reviewed the Russell Park Master Plan, which he said looked like a great opportunity for ARM funding. He asked when the next round of ARM funding would be. Mr. Lamb thought that applications were solicited typically when funds are available and assigned to different regions. The Chairman had spoken with someone from the NH Department of Environmental Services on this matter and would inquire again. Vice Chair Clark stated that when inquiring about the cemetery project last year she was informed that there is a set schedule for proposals beginning in early spring, and so now would be the time to begin acting.

Mr. Bergman stated that he also reviewed the Master Plan for Russell Park, which cited a study prepared by Jeff Littleton titled Natural Resource Inventory of Stream Riparian Buffers – Conservation and Priority Plan for Keene, NH, and Mr. Bergman thought that plan might be useful for the Commission to review. Mr. Lamb stated that the study was prepared during 2008-2010 approximately, that it was included as background research for the Russell Park project, and that some of Mr. Littleton’s ideas were included in the Russell Park Master Plan. Mr. Lamb would make it available to the Commission. Mr. Bohannon added that an aforementioned grant application for Russell Park – Soak Up the Rain NH, provided through the Water Management Bureau – had no funding available at this time.

Councilor Williams recalled a discussion at the December 2020 meeting about the Garlic Mustard Challenge and suggested that now would be the time to establish an event. Following questions on when the plant blooms most commonly, Vice Chair Clark confirmed that garlic mustard does not bloom until the end of April or into May. The Chairman and Mr. Lamb would agendize the matter as a priority item for the February meeting to establish a foundational plan. Councilor Williams would reach out to the NH Garlic Mustard Challenge coordinator for ideas.

b. Continued Discussion – Greater Goose Pond Forest Stewardship Plan

Mr. Lamb continued the discussion that began at the previous meeting about establishing a stewardship committee for the Greater Goose Pond Forest Stewardship Plan. He recalled that the Commission agreed that the stewardship committee should report directly to City Council and include representatives from the Conservation Commission. He and Mr. Bohannon sought further input from the Commission at this meeting on the committee’s make-up and charge – a two/three sentence statement of the committee’s priorities and objectives so Council knows what they are assigning people to do. To begin, Mr. Lamb shared an email from Mr. Haynes that proposed a main group of seven committee members with the following stakeholders:

1. Representative from Parks & Recreation – possibly Mr. Bohannon
2. Representative from Conservation Commission to perhaps act as the Chair
3. Ecologist/Biologist – Ideas include Mr. Littleton and Mr. Bergman
4. Forester – perhaps from the Forest Preservation Society, which holds the property's easements.
5. Representative from the mountain biking community
6. An abutter to the property
7. Outreach coordinator – someone to promote and oversee educational opportunities
   a. If members of the Conservation Commission wanted Mr. Haynes to serve on the stewardship committee, he felt he would fit best in this role.

Mr. Haynes' email concluded mentioning that he liked the Chairman's idea to have openings on the committee for interested Antioch and Keene State College (KSC) students, providing them an opportunity for hands-on learning. He suggested that a member of the Antioch Bird Club could help potentially with bird surveys or studies. Mr. Lamb thought that Mr. Haynes' suggestions were a great start and built well upon the broader stakeholder ideas discussed in December 2020.

The Chairman recalled the goal for this meeting to establish recommendations on the stewardship committee's proposed membership so that Mr. Lamb and Mr. Bohannon could draft a charge for the committee, which the Commission to vote on in February and forward to Council. He thought that having one or two Conservation Commission representatives would be feasible due to the passion within this group, he thought that it would be easy to recruit a member of the New England Mountain Bike Association (NEMBA) as well as an abutting property owner, recalling that City Councilor Kate Bosley is an abutter. The Chairman thought it logical to have staff from the Parks & Recreation Department attend the meetings but not be a member of the committee. He said he and Mr. Lamb agreed this would be more appropriate than staff being a voting member. He was hesitant to have so strong a focus on ecologists/biologists/foresters should it not be easy to recruit these busy professionals. Finally, the Chairman stated support for including students.

Vice Chair Clark recalled that a local forester, Tad Lacey, served on the original committee that developed the Stewardship Plan and stated that there are professionals available in the area.

Consensus was reached on Mr. Haynes' proposed composition of the stewardship committee and so Mr. Lamb and Mr. Bohannon would draft a charge and motion to pass this recommendation along to Council. The Chairman would contact KSC and Antioch to gauge interest from students and professors.

Mr. Bill noticed that a Keene City Planner served on the original stewardship plan committee and asked if that would be an important role to include. Mr. Lamb thought that City Staff can attend to advise the committee and recommended against staff listed in the membership. Mr. Bill questioned whether a member of a local hiking group should be included if NEMBA would be represented. The Chairman was unaware of a local hiking group as organized as NEMBA. Mr. Lamb thought it was a good point given that there are multiple trail uses in the greater Goose.
Pond Forest and potential for conflict exists, for which it would be prudent to create balance on
the stewardship committee if possible. The Chairman suggested including a few open slots on
the committee for general public users of the park.

Regarding the inclusion of students, Mr. Bergman stated that Antioch students are at the graduate
level, usually older, and more mature and experienced in topics related to this Stewardship Plan.
Though he said it could be possible to find highly motivated KSC undergraduate students.

c. Continued Discussion – Bee City Designation

Mr. Therriault explained that following the previous meeting, he worked with Mr. Lamb to draft
a resolution that included necessary details about Keene and the standard language of Bee City
USA proclamations nationwide that the organizing agency – The Xerces Society – seeks for
continuity. Mr. Therriault submitted the draft resolution to the Xerces Society and received
approval. Next, the resolution would be presented to City Council for approval, at which time
Mr. Therriault would submit the requisite fee to the Xerces Society. Mr. Lamb thought the
resolution would be presented to Council at their February 7 meeting.

7) New or Other Business

Vice Chair Clark reminded all that the NH Invasives Academy would begin March 4 and run
through April 8 on Thursdays from 4:00 PM-5:30 PM. Mr. Lamb would review the budget to
determine how many individuals could have their $35 registration fees sponsored by the
Conservation Commission; he would follow-up via email.

Mr. Bergman asked whether the program is interactive. Councilor Williams recalled attending
the Academy previously, said it was interactive, and that he thought there would be good
discussions still despite limitations of a virtual format.

The Chairman stated his intention to attend. Vice Chair Clark offered to lead a more hands-on
tour of local invasives after the classes conclude to supplement interactivity that might be lacking
with a virtual format.

8) Adjournment – Next Meeting Date: TUESDAY, February 16, 2021

There being no further business, Chair Von Plinsky adjourned the meeting at 5:18 PM.

Respectfully submitted by,
Katie Kibler, Minute Taker
January 25, 2020
At NHACC, we work in the legislature and on state committees to ensure conservation commissions are represented. We are keeping an eye on proposed legislation and tracking proposed bills that would affect conservation commissions or natural resources in NH. Please review the links to the general court website and let me know if you have any concerns or comments on these proposed bills.

**HB 82** This bill proposes language that amends RSA 477:46 to allow a governmental body and a landowner to change the terms of an established conservation easement. NHACC plans to testify in opposition to this bill because we feel this bill is not necessary and could have a negative
system by removing municipalities local control. It would remove the potential for net metering options for local producers that help save on energy costs, increase resilience, and generate more renewable energy. The NHACC Legislative Committee recommends we sign in opposition to this bill.

HB 426 This bill requires an assessment study for certain septic systems prior to the sale of certain developed waterfront properties. This recommendation came out of the Shoreland Septic Study Commission that NHACC sat on last year. The Commission made several recommendations including the requirement of a site assessment and septic system evaluation before a property is sold or transferred, for properties within 250 feet of shoreland. NHACC supports this bill and provided written testimony to the House Resources, Recreation and Development Committee.

HB 621 This bill will impact money going to LCHIP by allowing registers of deeds to retain a portion of the land and community heritage investment program surcharge. LCHIP is funded by a modest $25 deed registration fee. It has funded many exceptional land conservation projects in NH and it is the only state source of funding for land protection. Diverting funds from this small fee would result in fewer projects being funded through this program. NHACC opposes this bill and will provide written testimony at the committee public hearing.

SB 48 This bill provides that the formula used by the department of revenue administration and current use board to determine current use tax rates shall not be considered confidential and shall be available to the public. It was voted ought to pass in committee. NHACC has not taken a position on this bill but we will continue to watch it and keep our members informed.

Additional bills of interest: RSA 91-A Right-to-Know laws

HB108 AN ACT relative to minutes and decisions in nonpublic sessions under the right-to-know law. This bill requires that for meetings in a nonpublic session where the minutes or decisions were determined not be subject to public disclosure, a list shall be kept which shall include certain information. The list shall be made available for public disclosure.
Conditional Use Permit Application
Eversource Energy
D108 Transmission Line Structure Replacement Project
February 4, 2021
File No. 04.0190999.29

City of Keene
Planning Board
Attn: Chris Cusack, Chairman
3 Washington Street
Keene, New Hampshire 03431

Re: Conditional Use Permit Application
Eversource Energy
2020 D108 Transmission Line Structure Replacement Project
Keene, New Hampshire

Dear Chairman Cusack:

This letter transmits a Conditional Use Permit Application on behalf of Public Service Company of New Hampshire doing business as Eversource Energy (Eversource), for the D108 Transmission Line Structure Replacement Project (see attached Figure 1, Locus Plan). On behalf of Eversource, GZA GeoEnvironmental, Inc. (GZA) is requesting consideration of a Conditional Use Permit Application for required impacts within the City of Keene Surface Water Protection Overlay District.

The overall proposed project includes the permanent removal of two utility structures and replacement of 17 utility structures along the existing D108 Transmission Line in Keene, New Hampshire. Additionally, OPGW is proposed to be installed to replace existing static wire which will improve the transmission line by serving to shield conductor wires below it from lightning and also serve as a telecommunications path for internal and third party communications. The D108 Transmission Line ROW is approximately 1.3 miles in length, beginning at the North Keene Substation and ending at the Emerald Street Substation, and has a width of approximately 270 feet. See Figure 3 – Access and Permitting Plans for a depiction of the proposed project. The Site crosses through residential, commercial, and rural properties, as well as five public roads including NH Route 12, NH Route 9, West Street, Island Street and Emerald Street. Natural cover within the ROW includes upland shrublands and wetland emergent and scrub-shrub habitats.

In total, the proposed project requires approximately 79,114 sq. ft. of temporary wetland impact for equipment access and work pad placement. The proposed
The proposed project is necessary in order to support current and future electricity demands in the region. The proposed structure replacements were selected based on a line load modeling evaluation. When modeled with OPGW wire replacement specifications, it was determined that these structures needed to be replaced in order to meet current electrical standards. The existing wood structures will be replaced with wood equivalent steel structures in order to increase the long-term reliability of the line. There are no proposed expansions to the ROW or construction of new lines associated with this project.
In addition to this Conditional Use Permit, Eversource will also be filing a Statutory Permit by Notification (SPN) with the Department of Environmental Services (DES); Wetlands Bureau. A Shoreland Permit by Notification will also be filed for impacts to the protected shoreland adjacent to the Ashuelot River.

Wetlands were delineated by GZA in 2016 in accordance with the United States Army Corps of Engineers (ACOE) Wetlands Delineation Manual using the Routine Determinations Method, and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual as required by the New Hampshire Department of Environmental Services (NHDES) Wetlands Bureau and the ACOE. GZA photographed resources and recorded data relevant to functions and values provided by these natural resources within the ROW in October 2020. GZA classified wetlands in accordance with the “Classification of Wetlands and Deepwater Habitats of United States” (Federal Geographic Committee, 2013). The area of evaluation included approximately 1.4 miles of ROW.

In accordance with Section 102-1488 of the Keene Zoning Ordinance, a conditional use permit (CUP) issued by the Planning Board shall be required for a proposed use listed in Section 102-1489 when the proposed use is located on land within the Surface Water Overlay Protection District. The proposed D108 Transmission Line Replacement Project includes the installation of replacement structures and creation and/or improvement of existing dirt/gravel access roads and work pads in the Surface Water Overlay Protection District, and would thus fall under 102-1489 (b) “Construction of a new structure or expansion of an existing structure that expands the footprint of that structure within the Surface Water Protection Overlay District,” and 102-1489 (c) “Construction of new roads, driveways for non-residential uses, and parking lots within the Surface Water Protection Overlay District.” In accordance with the Surface Water Protection Conditional Use Permit (SWP CUP) Application form, the following criteria are addressed below.

A. **Why proposed use or activity cannot be placed outside of Overlay District.** The proposed work area is located within the existing cleared D108 Transmission Line ROW which is generally bordered by mature forest communities, as well as residential and commercial properties. Many of the proposed structure replacements are located in remote stretches of ROW that are 0.5 miles or more from the nearest access point. Due to these various site constraints, some travel through the Surface Water Overlay District is required. Additionally, some structure replacements and associated work pads must be located in the Surface Water Overlay District due to span requirements, which are required to meet electrical safety standards. Wherever possible, structure replacements, work pads, and access roads are proposed to be outside of wetlands and the Surface Water Overlay District.

B. **How encroachment into buffer zone has been minimized to maximum extent possible.** The project area is an existing ROW and therefore there are inherent limitations to significant changes in work locations. However, Eversource and the project team analyzed alternative structure replacement locations and access routes in order to minimize buffer impacts to the extent practicable. Where possible, access is designed at existing trails in the ROW. To the extent practicable, buffer zone impacts were avoided by a careful design of the project. Specifically, impacts related to structure replacements were avoided in Wetlands KW-1, KW-2, KW-10, KW-11, KW-13, and KW-14. Impacts were minimized to the extent practicable by utilizing existing access roads and avoiding permanent impacts to wetlands by placing structures outside of the wetland and buffer zone where possible. Best Management Practices (BMP) will be implemented along work areas in the ROW to reduce/limit potential effects.
C. **How proposed use was designed to avoid adverse impacts to surface water resources.** The least impacting alternative is to utilize the existing Eversource ROW to the greatest extent possible, which was accomplished by utilizing an existing ROW. The project has been designed to utilize existing access routes along the ROW, where possible, to minimize impacts to wetlands. Where temporary wetland impacts are proposed, the contractor will use wetland matting to minimize impacts. Disturbed wetland and upland areas will be graded and seeded with an appropriate seed mix, as necessary. The utility structures have been sited to avoid direct impacts to wetlands to the extent practicable. Utility structures 4, 5, 6, 10, and 11 have been sited to be replaced outside of wetlands in order to minimize wetland impact to the greatest extent practicable.

D. **How the buffer will be maintained in a natural state.** The proposed project will maintain the natural state of surface water buffers to the extent practicable. The majority of proposed impact is temporary, and permanent impact is limited to small areas associated with the installation of utility structures. Access roads installed within the surface water buffer and within the City of Keene floodplain overlay shall be restored by removing gravel temporarily placed for access and work pads. In addition, existing topsoil will be regraded to original contours to the greatest extent practicable. Seed and mulch will be applied to promote vegetation growth of disturbed areas. During construction, appropriate siltation prevention measures will be implemented along with additional BMPs such as perimeter controls (straw wattle, silt fence, etc.), stabilized construction entrances, check dams, water bars, sediment traps, and restoration methods such as seeding with native seed mixes, and mulching, as necessary, to prevent sedimentation and siltation impacts to surface waters and wetlands within the project area. The project includes the preparation of a Storm Water Pollution Prevention Plan and associated erosion control monitoring during and after construction, to monitor the progress of restoration. GZA is currently retained to provide erosion control monitoring, and advise Eversource on the installation and maintenance of erosion control measures during construction and restoration.

E. **Location and connectivity of surface water in relation to surrounding watershed.** The project area is located in the Middle Ashuelot River watershed. The majority of wetlands in the ROW are large scrub-shrub and scrub-shrub/emergent systems. Wetlands in the project area typically drain in a southerly direction into the Ashuelot River, which ultimately drains to the Connecticut River.

F. **Extent to which buffer serves as wildlife habitat.** The buffers in the proposed work area are located within the existing cleared Eversource ROW and are scrub-shrub/early successional dominated due to vegetation maintenance practices. This cover type provides wildlife habitat for a variety of bird, mammal, amphibian, and reptile species. The project is not converting any large cover type areas. As a result, the project is not expected to impact wildlife utilization in the larger landscape. The ROW will continue to provide early successional habitat to a variety of wildlife. Early successional habitat provides important breeding, foraging, and overwintering habitat to a variety of declining songbird species. As a result, the ROW will continue to provide important habitat components. The Natural Heritage Bureau (NHB) determined that although there are NHB records of rare wildlife, plant, and/or natural communities present in the vicinity of the D108 ROW, it is not anticipated that there will be impacts as a result of the proposed structure replacement project.
The project will include rare species BMPs as requested by the New Hampshire Fish and Game Department (NHFG). Prior to daily construction activities, timber matting will be reviewed by a monitor trained in wildlife identification and observed turtles and snakes will be safely relocated out of the active work zone, in similar nearby habitat. Observed turtles and snakes will be moved off of construction access roads to limit and prevent mortality to turtles and snakes during construction and will be reported to NHFG. Erosion control matting, if utilized, will consist of jute matting. Matting with plastic mesh will be avoided to limit unintentional mortality to snakes. In addition, common nighthawk (*Chordeiles minor*) was identified within the vicinity of the project site. Common nighthawks are ground nesting birds that typically nest in exposed gravelly soils. GZA has coordinated with NHB and NHFG and photos of common nighthawk will be incorporated into construction plans. Observations of common nighthawk on the project site will be reported to New Hampshire Fish and Game. At the conclusion of the project, a summary report of any rare species observations will be provided to the NHFG Nongame Program.

If you have additional questions, please contact Ms. Lindsey White at 603-232-8753 or at lindsey.white@gza.com.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Lindsey White, WSA, SSA
Assistant Project Manager

Deborah M. Zarta-Gier
Consultant/Reviewer

Tracy L. Tarr, CWS, CESSWI
Associate Principal

Attachments: Conditional Use Permit Application Form
List of Abutters
Photo Log
Figure 1 – Locus Plan
Figure 2 – Access and Permitting Plans
Application Fee
<table>
<thead>
<tr>
<th>Photo No.</th>
<th>Date</th>
<th>Direction Photo Taken</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10/7/20</td>
<td>Southeast</td>
<td>View of proposed access within wetland KW-16.</td>
</tr>
<tr>
<td>2</td>
<td>10/7/20</td>
<td>Northwest</td>
<td>View of proposed access adjacent to L163 Structure 281.</td>
</tr>
<tr>
<td>Photo No.</td>
<td>Date:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>---------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>10/7/20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Direction Photo Taken:** Southeast

**Description:** View of Structure 282, proposed for replacement.

<table>
<thead>
<tr>
<th>Photo No.</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>10/7/20</td>
</tr>
</tbody>
</table>

**Direction Photo Taken:** South

**Description:** View of Structure 283 and wetland KW-12.
<table>
<thead>
<tr>
<th>Photo No.</th>
<th>Date</th>
<th>Direction Photo Taken</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>10/7/20</td>
<td>North</td>
<td>View of wetland KW-12 and area of proposed access between Structure 283 &amp; 284.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Photo No.</th>
<th>Date</th>
<th>Direction Photo Taken</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>10/7/20</td>
<td>West</td>
<td>View of Structure 285 and proposed impacts within wetland KW-9.</td>
</tr>
<tr>
<td>Photo No.</td>
<td>Date</td>
<td>Direction Photo Taken</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>------------</td>
<td>------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>7</td>
<td>10/7/20</td>
<td>Northeast</td>
<td>View of Structure 285 within wetland KW-9.</td>
</tr>
<tr>
<td>8</td>
<td>10/7/20</td>
<td>Northeast</td>
<td>View of Structure 285.5 within wetland KW-9.</td>
</tr>
<tr>
<td>Photo No.</td>
<td>Date</td>
<td>Direction Photo Taken</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>----------</td>
<td>------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>9</td>
<td>10/7/20</td>
<td>Southeast</td>
<td>View of proposed access between Structure 285.5 and 286.</td>
</tr>
<tr>
<td>10</td>
<td>10/7/20</td>
<td>Southeast</td>
<td>View of proposed access between Structure 286 and 287.</td>
</tr>
<tr>
<td>Photo No.</td>
<td>Date</td>
<td>Direction Photo Taken</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>------------</td>
<td>-----------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>11</td>
<td>10/7/20</td>
<td>Southeast</td>
<td>View of proposed work pad at Structure 287.</td>
</tr>
<tr>
<td>12</td>
<td>10/7/20</td>
<td>North</td>
<td>View of proposed work pad at Structure 288.</td>
</tr>
<tr>
<td>Photo No.</td>
<td>Date</td>
<td>Direction Photo Taken</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>------------</td>
<td>-----------------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>13</td>
<td>10/7/20</td>
<td>Southeast</td>
<td>View of proposed work pad at Structure 289 adjacent to the Ashuelot River.</td>
</tr>
<tr>
<td>14</td>
<td>10/7/20</td>
<td>Northeast</td>
<td>View of proposed work pad at Structure 289.5.</td>
</tr>
<tr>
<td>Photo No.</td>
<td>Date</td>
<td>Direction Photo Taken</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>------------</td>
<td>-----------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>15</td>
<td>10/7/20</td>
<td>Southeast</td>
<td>View of proposed work pad at Structure 290.</td>
</tr>
<tr>
<td>16</td>
<td>10/7/20</td>
<td>West</td>
<td>View of proposed work pad at Structure 292 within wetland KW-4.</td>
</tr>
<tr>
<td>Photo No.</td>
<td>Date:</td>
<td>Direction Photo Taken:</td>
<td>Description:</td>
</tr>
<tr>
<td>----------</td>
<td>-------</td>
<td>------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>17</td>
<td>10/7/20</td>
<td>South</td>
<td>View of proposed work pad at Structure 293.1.</td>
</tr>
<tr>
<td>18</td>
<td>10/7/20</td>
<td>Southeast</td>
<td>View of proposed work pad at Structure 293.2.</td>
</tr>
<tr>
<td>Photo No.</td>
<td>Date</td>
<td>Direction Photo Taken</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>------------</td>
<td>------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>19</td>
<td>10/7/20</td>
<td>South</td>
<td>View of proposed work pads between Structures 296 and 297 adjacent to an unnamed stream and the Emerald Street Substation.</td>
</tr>
<tr>
<td>20</td>
<td>10/7/20</td>
<td>South</td>
<td>View of the Emerald Street Substation.</td>
</tr>
</tbody>
</table>
Conditional Use Permit Application
Eversource Energy
L163 Transmission Line Copperweld Replacement Project
February 4, 2021
File No. 04.0190999.36

City of Keene
Planning Board
Attn: Chris Cusack, Chairman
3 Washington Street
Keene, New Hampshire 03431

Re: Conditional Use Permit Application
Eversource Energy
2020 L163 Transmission Line Copperweld Replacement Project
Keene, New Hampshire

Dear Chairman Cusack:

This letter transmits a Conditional Use Permit Application on behalf of Public Service Company of New Hampshire doing business as Eversource Energy (Eversource), for the L163 Transmission Line Structure Replacement Project (see attached Figure 1, Locus Plan). On behalf of Eversource, GZA GeoEnvironmental, Inc. (GZA) is requesting consideration of a Conditional Use Permit Application for required impacts within the City of Keene Surface Water Protection Overlay District.

The overall proposed project includes the replacement of 14 utility structures along the existing L163 Transmission Line in Keene, New Hampshire. Additionally, copperweld fiber wire is proposed to be replaced by optical ground wire which will improve the transmission line by serving to shield conductor wires below it from lightning and also serve as a telecommunications path for internal and third party communications. The copperweld fiber replacement requires bucket truck access to 8 utility structures and 3 pull pad locations for equipment. The L163 Transmission Line ROW is approximately 13 miles in length, beginning at the Tuttle Hill Substation in Antrim and ending at the North Keene Substation in Keene, and has a width of approximately 270 feet. See Figure 3 – Access and Permitting Plans for a depiction of the proposed project. The Site crosses through residential and rural properties, as well as five public roads. The natural cover in the ROW includes upland shrublands and wetland emergent and scrub-shrub habitats.

In total, the proposed project requires approximately 58,639 sq. ft. of temporary wetland impact for equipment access and work pad placement. The proposed
project also requires 97,789 sq. ft. of buffer impact in uplands for access and work pad placement. A summary of wetland and buffer impacts is provided in the table below.

**Table 1 – Summary of Wetland and Surface Water Buffer Impacts**

<table>
<thead>
<tr>
<th>Wetland ID</th>
<th>Classification</th>
<th>Temporary Wetland Impact</th>
<th>Temporary Upland Buffer Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>KW-15</td>
<td>PSS/PEM1E</td>
<td>-</td>
<td>9,318</td>
</tr>
<tr>
<td>KW-16</td>
<td>PSS/PEM1E</td>
<td>5,492</td>
<td></td>
</tr>
<tr>
<td>KW-17</td>
<td>PSS1E</td>
<td>15,838</td>
<td>7,157</td>
</tr>
<tr>
<td>KW-18</td>
<td>PSS/PEM1E</td>
<td>1,878</td>
<td></td>
</tr>
<tr>
<td>KW-20</td>
<td>R2UB</td>
<td>-</td>
<td>379</td>
</tr>
<tr>
<td>KW-21</td>
<td>PSS1B</td>
<td>1,773</td>
<td>11,970</td>
</tr>
<tr>
<td>KW-22</td>
<td>PSS1E</td>
<td>3,440</td>
<td>9,889</td>
</tr>
<tr>
<td>KW-23</td>
<td>PEM1F/PFO1F</td>
<td>1,832</td>
<td>2,603</td>
</tr>
<tr>
<td>KW-24</td>
<td>PEM/PSS1G</td>
<td>868</td>
<td>2,946</td>
</tr>
<tr>
<td>KW-25</td>
<td>PEM1G/R3UB1</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>KW-26</td>
<td>PUB4Hb/PEM1G</td>
<td>3,530</td>
<td>7,159</td>
</tr>
<tr>
<td>KW-27</td>
<td>PEM/PSS1E</td>
<td>4,497</td>
<td>12,236</td>
</tr>
<tr>
<td>KW-28</td>
<td>PEM1E</td>
<td>7,166</td>
<td>4,873</td>
</tr>
<tr>
<td>KW-29</td>
<td>PSS1E/PFO1/4E</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>KW-30</td>
<td>PSS1E</td>
<td>-</td>
<td>3,808</td>
</tr>
<tr>
<td>KW-31</td>
<td>PSS1E/F/PFO1/4E</td>
<td>-</td>
<td>3,434</td>
</tr>
<tr>
<td>KW-32</td>
<td>PSS1E/PFO1/4E</td>
<td>2,184</td>
<td>3,637</td>
</tr>
<tr>
<td>KW-33</td>
<td>PSS1E</td>
<td>361</td>
<td>3,923</td>
</tr>
<tr>
<td>KW-34</td>
<td>PFO1/4E/PEM/PSS1E</td>
<td>-</td>
<td>859</td>
</tr>
<tr>
<td>KW-37</td>
<td>PSS1E</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>KW-38</td>
<td>PFO1/4E/PSS/PEM13</td>
<td>9,297</td>
<td>8,977</td>
</tr>
<tr>
<td>KW-51</td>
<td>PSS1E</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>KW-52</td>
<td>PSS1E</td>
<td>366</td>
<td>4,621</td>
</tr>
<tr>
<td>KW-53</td>
<td>PEM1Ex</td>
<td>117</td>
<td></td>
</tr>
<tr>
<td>KW-54</td>
<td>PEM1Ex</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>58,639</td>
<td>97,789</td>
</tr>
</tbody>
</table>

**Key to classifications:**

- **P** = palustrine wetland system  
  - UB = unconsolidated bottom  
  - SS = scrub-shrub, 1 = broad-leaved deciduous  
  - EM = emergent, 1= persistent  

- **R** = riverine  
  - 2 = lower perennial  
  - UB = unconsolidated bottom  
  - SB = stream bed  

**Modifiers**

- **E** = nontidal, seasonally flooded/saturated  
- **F** = nontidal, semi permanently flooded  
- **g** = organic soil  
- **x** = excavated
The proposed project is necessary in order to support current and future electricity demands in the region. The proposed structure replacements were selected based on a line load modeling evaluation. When modeled with copperweld wire replacement specifications, it was determined that these structures needed to be replaced in order to meet current electrical standards. The existing wood structures will be replaced with wood equivalent steel structures in order to increase the long-term reliability of the line. There are no proposed expansions to the ROW or construction of new lines associated with this project.

In addition to this Conditional Use Permit, Eversource will also be filing a Statutory Permit by Notification (SPN) with the Department of Environmental Services (DES); Wetlands Bureau. Shoreland Permits by Notification will also be filed for impacts to protected shoreland adjacent to the Ashuelot River.

Wetlands were delineated by GZA in 2016 in accordance with the United States Army Corps of Engineers (ACOE) Wetlands Delineation Manual using the Routine Determinations Method, and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual as required by the New Hampshire Department of Environmental Services (NHDES) Wetlands Bureau and the ACOE. GZA photographed resources and recorded data relevant to functions and values provided by these natural resources within the ROW in September 2019. GZA classified wetlands in accordance with the “Classification of Wetlands and Deepwater Habitats of United States” (Federal Geographic Committee, 2013). The area of evaluation included approximately 4 miles of ROW.

In accordance with Section 102-1488 of the Keene Zoning Ordinance, a conditional use permit (CUP) issued by the planning board shall be required for a proposed use listed in Section 102-1489 when the proposed use is located on land within the Surface Water Overlay Protection District. The proposed L163 Transmission Line Replacement Project includes the installation of replacement structures and creation and/or improvement of existing dirt/gravel access roads and work pads in the Surface Water Overlay Protection District, and would thus fall under 102-1489 (b) “Construction of a new structure or expansion of an existing structure that expands the footprint of that structure within the Surface Water Protection Overlay District,” and 102-1489 (c) “Construction of new roads, driveways for non-residential uses, and parking lots within the Surface Water Protection Overlay District.” In accordance with the Surface Water Protection Conditional Use Permit (SWP CUP) Application form, the following criteria are addressed below.

A. **Why proposed use or activity cannot be placed outside of Overlay District.** The proposed work area is located within the existing cleared L163 Transmission Line ROW which is generally bordered by mature forest communities, as well as residential, commercial, and industrial properties. The ROW is approximately 270 feet wide and has limited access points off five public roads in the City of Keene including Route 12, Court Street, Old Gilsum Road, Route 10 and Ferry Brook Road. Many of the proposed structure replacements are located in remote stretches of ROW that are 0.5 miles or more from the nearest access point. Due to these various site constraints, some travel through the Surface Water Overlay District is required. Additionally, some structure replacements and associated work pads must be located in the Surface Water Overlay District due to span requirements, which are required to meet electrical safety standards. Wherever possible, structure replacements, work pads, and access roads are proposed to be outside of wetlands and the Surface Water Overlay District.
B. **How encroachment into buffer zone has been minimized to maximum extent possible.** The project area is an existing ROW and therefore there are inherent limitations to significant changes in work locations. However, Eversource and the project team analyzed alternative structure replacement locations and access routes in order to minimize buffer impacts to the extent practicable. Where possible, access is designed at existing trails in the ROW. To the extent practicable, buffer zone impacts were avoided by a careful design of the project. Specifically, impacts related to structure replacements were avoided in wetlands KW-15, KW-26, and KW-3. Impacts were minimized to the extent practicable by utilizing existing access roads and avoiding permanent impacts to wetlands by placing structures outside of the wetland and buffer zone where possible. Best Management Practices (BMP) will be implemented along work areas in the ROW to reduce/limit potential effects.

C. **How proposed use was designed to avoid adverse impacts to surface water resources.** The least impacting alternative is to utilize the existing Eversource ROW to the greatest extent possible, which was accomplished by utilizing an existing ROW. The project has been designed to utilize existing access routes along the ROW, where possible, to minimize impacts to wetlands. Where temporary wetland impacts are proposed, the contractor will use wetland matting to minimize impacts. Disturbed wetland and upland areas will be graded and seeded with an appropriate seed mix, as necessary. The utility structures have been sited to avoid direct impacts to wetlands to the extent practicable.

D. **How the buffer will be maintained in a natural state.** The proposed project will maintain the natural state of surface water buffers to the extent practicable. The majority of proposed impact is temporary, and permanent impact is limited to small areas associated with the installation of utility structures and the construction of the gravel access road. Access roads installed within the surface water buffer and within the City of Keene floodplain overlay shall be restored by removing gravel temporarily placed for access and work pads. In addition, existing topsoil will be regraded to original contours to the greatest extent practicable. Seed and mulch will be applied to promote vegetation growth of disturbed areas. During construction, appropriate siltation prevention measures will be implemented along with additional BMPs such as perimeter controls (straw wattle, silt fence, etc.), stabilized construction entrances, check dams, water bars, sediment traps, and restoration methods such as seeding with native seed mixes, and mulching, as necessary, to prevent sedimentation and siltation impacts to surface waters and wetlands within the project area. The project includes the preparation of a Storm Water Pollution Prevention Plan and associated erosion control monitoring during and after construction, to monitor the progress of restoration.

E. **Location and connectivity of surface water in relation to surrounding watershed.** The project area is located in the Middle Ashuelot River and The Branch watershed. The majority of wetlands in the ROW are large scrub-shrub and scrub-shrub/emergent systems. Wetlands in the project area typically drain in a southerly direction into the Ashuelot River, which ultimately drains to the Connecticut River.

F. **Extent to which buffer serves as wildlife habitat.** The buffers in the proposed work area are located within the existing cleared Eversource ROW and are scrub-shrub/early successional dominated due to vegetation maintenance practices. This cover type provides wildlife habitat for a variety of bird, mammal, amphibian and reptile species. The project is not converting any large cover type areas. As a result, the project is not expected to impact wildlife utilization in the larger landscape. The ROW will continue to provide early successional habitat to a variety of wildlife. Early successional habitat
provides important breeding, foraging, and overwintering habitat to a variety of declining songbird species. As a result, the ROW will continue to provide important habitat components. The Natural Heritage Bureau (NHB) determined that although there are NHB records of rare wildlife, plant, and/or natural communities present in the vicinity of the L163 ROW, it is not anticipated that there will be impacts as a result of the proposed structure replacement project.

The project will include rare species BMPs as requested by the New Hampshire Fish and Game Department (NHFG). Prior to daily construction activities, timber matting will be reviewed by a monitor trained in wildlife identification, and observed turtles and snakes will be safely relocated out of the active work zone, in similar nearby habitat. Observed turtles and snakes will be moved off of construction access roads to limit and prevent mortality to turtles and snakes during construction, and will be reported to NHFG. Erosion control matting, if utilized, will consist of jute matting. Matting with plastic mesh will be avoided to limit unintentional mortality to snakes.

We anticipate this submittal addresses the requirements of the CUP review. Should you have any questions, please contact Conor Madison at 603-232-8784 or at conor.madison@gza.com.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Conor Madison, CPESC, CESSWI
Scientist I

Deborah M. Zarta-Gier, CNRP
Consultant/Reviewer

Tracy L. Tarr, CWS, CESSWI
Associate Principal

Attachments:
- Conditional Use Permit Application Form
- List of Abutters
- Photo Log
- Figure 1 – Locus Plan
- Figure 2 – Access and Permitting Plans
- Application Fee
ALL STRUCTURES REQUIRE AERIAL WORK AND/OR CLIMBING FOR UNCLIPPING/CLIPPING AND REMOVAL OF EXISTING ADSS CABLE
ALL STRUCTURES REQUIRE AERIAL WORK AND/OR CLIMBING FOR UNCLIPPING/CLIPPING AND REMOVAL OF EXISTING ADSS CABLE

NOTES:
1. AERIAL IMAGERY WAS OBTAINED FROM UNH GRANIT AND DATED TO 2015.
2. THE LAYER TITLED "NHD FLOWLINE", "DOT ROADS", "PARCEL BOUNDARY", AND "TOWN BOUNDARY" WERE OBTAINED FROM UNH GRANIT.
3. THE LAYER TITLED "WETLAND" WAS DELINEATED BY GZA, GEOENVIRONMENTAL, INC. IN 2016 AND SURVEYED BY DOUCET SURVEY, INC. IN 2016.
4. AERIAL STRUCTURE, L163 TRANSMISSION LINE, AND PARCEL DATA WERE PROVIDED BY EVERSOURCE ENERGY.
5. APPROXIMATE ROW WAS APPROXIMATED USING MILESHEETS AND EXISTING ACCESS
6. POTENTIAL VERNAL POOL AND STATE OWNED PARCEL DATA WAS PROVIDED BY EVERSOURCE ENERGY.
7. FENCE AND STONEWALL DATA WAS APPROXIMATED BASED ON FIELD OBSERVATIONS.
8. 2FT ELEVATION CONTOURS WERE GENERATED USING LIDAR DATA OBTAINED FROM NH GRANIT CLEARINGHOUSE.

EXISTING STRUCTURE
STRUCTURE REPLACEMENT
EXCAVATION AND ELEVATION REMOVAL
FLOODPLAIN AREA
WETLAND
DRAINAGE FLOWLINE
WATER MAPPING
EXISTING ACCESS
EXISTING ACCESS ROW
DRAINAGE ROW
200FT GROUND SURFACE ELEVATION Contour
APPROXIMATE ROW
DOT ROADS
NHD FLOWLINE
WETLAND
POTENTIAL VERNAL POOL
STATE OWNED PARCEL
STATE OWNED PARCEL
STATE OWNED PARCEL
CHANGE DATABASE
ALL STRUCTURES REQUIRE AERIAL WORK AND/OR CLIMBING FOR UNCLIPPING/CLIPPING AND REMOVAL OF EXISTING ADSS CABLE

KEENE, NEW HAMPSHIRE
PAGE 4 OF 8
ALL STRUCTURES REQUIRE AERIAL WORK AND/OR CLIMBING FOR UNCLIPPING/CLIPPING AND REMOVAL OF EXISTING ADSS CABLE

NOTES:
1. AERIAL IMAGERY WAS OBTAINED FROM UNH GRANIT AND DATED TO 2015.
2. THE LAYERS TITLED "WETLAND," "DOT ROADS," "NHD FLOWLINE," AND "TOWN BOUNDARY" WERE OBTAINED FROM UNH GRANIT.
3. THE LAYER TITLED "WETLAND" WAS DELINEATED BY GZA, GEOENVIRONMENTAL, INC. IN 2016 AND SURVEYED BY DOUCET SURVEY, INC. IN 2016.
4. THE LAYERS TITLED "NHD FLOWLINE," "DOT ROADS," "PARCEL BOUNDARY," AND "TOWN BOUNDARY" WERE OBTAINED FROM UNH GRANIT.
5. EXISTING STRUCTURE, L163 TRANSMISSION LINE, AND PARCEL DATA WAS PROVIDED BY EVERSOURCE ENERGY.
6. APPROXIMATE ROW WAS APPROXIMATED USING MILESHEETS PROVIDED BY EVERSOURCE ENERGY.
7. EXISTING STRUCTURE WAS APPROXIMATED BASED ON FIELD OBSERVATIONS.
8. 2FT ELEVATION CONTOURS WERE GENERATED USING LIDAR DATA OBTAINED FROM NH GRANIT CLEARINGHOUSE.

Eversource Energy
Copperweld Retirement Project
Access and Permitting Plans
February 08, 2021

Keene, New Hampshire
Page 6 of 8

Index Map

EXISTING STRUCTURE
STRUCTURE REPLACEMENT
TRANSMISSION LINE
EROSION AND SEDIMENT CONTROLS
FLOODPLAIN AREA
WETLAND
OUT-WETLAND BUFFER TO BE RESTORED
UPLAND WETLAND SATURATION
UNDERGROUND CONDUIT ALIGNMENT
APPROPRIATED ACCESS
EXISTING ACCESS
APPROXIMATE WETLAND IMPACT
PULL PAD
WORK PAD
2FT GROUND SURFACE ELEVATION CONTOUR

L163 TRANSMISSION LINE
Copperweld Retirement Project
Access and Permitting Plans
February 08, 2021

Keene, New Hampshire
Page 6 of 8

NOTES:
1. AERIAL IMAGERY WAS OBTAINED FROM UNH GRANIT AND DATED TO 2015.
2. THE LAYERS TITLED "WETLAND," "DOT ROADS," "NHD FLOWLINE," AND "TOWN BOUNDARY" WERE OBTAINED FROM UNH GRANIT.
3. THE LAYER TITLED "WETLAND" WAS DELINEATED BY GZA, GEOENVIRONMENTAL, INC. IN 2016 AND SURVEYED BY DOUCET SURVEY, INC. IN 2016.
4. THE LAYERS TITLED "NHD FLOWLINE," "DOT ROADS," "PARCEL BOUNDARY," AND "TOWN BOUNDARY" WERE OBTAINED FROM UNH GRANIT.
5. EXISTING STRUCTURE, L163 TRANSMISSION LINE, AND PARCEL DATA WAS PROVIDED BY EVERSOURCE ENERGY.
6. APPROXIMATE ROW WAS APPROXIMATED USING MILESHEETS PROVIDED BY EVERSOURCE ENERGY.
7. EXISTING STRUCTURE WAS APPROXIMATED BASED ON FIELD OBSERVATIONS.
8. 2FT ELEVATION CONTOURS WERE GENERATED USING LIDAR DATA OBTAINED FROM NH GRANIT CLEARINGHOUSE.
ALL STRUCTURES REQUIRE AERIAL WORK AND/OR CLIMBING FOR UNCLIPPING/CLIPPING AND REMOVAL OF EXISTING ADSS CABLE

NOTES:
1. AERIAL IMAGERY WAS OBTAINED FROM UNH GRANIT AND DATED TO 2015.
2. THE LAYERS TITLED "WATER FLOWLINE," "DOT ROADS," "PARCEL BOUNDARY," AND "TOWN BOUNDARY" WERE OBTAINED FROM UNH GRANIT.
3. THE LAYER TITLED "WETLAND" WAS DELINEATED BY GZA, GEOENVIRONMENTAL, INC. IN 2016 AND SURVEYED BY DOUCET SURVEY, INC. IN 2016.
4. EXISTING STRUCTURE, L163 TRANSMISSION LINE, AND PARCEL DATA WAS PROVIDED BY EVERSOURCE ENERGY.
5. APPROXIMATE ROW WAS APPROXIMATED USING MILESHEETS PROVIDED BY EVERSOURCE ENERGY.
6. POTENTIAL VERNAL POOLS WERE IDENTIFIED BY GZA IN 2016.
7. FENCE AND STONEWALL DATA WAS APPROXIMATED BASED ON FIELD OBSERVATIONS.
8. 2FT ELEVATION CONTOURS WERE GENERATED USING LIDAR DATA OBTAINED FROM NH GRANIT CLEARINGHOUSE.
ALL STRUCTURES REQUIRE AERIAL WORK AND/OR CLIMBING FOR UNCLIPPING/CLIPPING AND REMOVAL OF EXISTING ADSS CABLE
<table>
<thead>
<tr>
<th>Photo No.</th>
<th>Date</th>
<th>Direction Photo Taken</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/18/20</td>
<td>Southeast</td>
<td>View of proposed access (right) and Wetland KW-16 (left) towards Structure 215 to be replaced.</td>
</tr>
<tr>
<td>2</td>
<td>1/18/20</td>
<td>Northwest</td>
<td>View of proposed access and work pad through Wetland KW-17 towards Structure 214 to be replaced.</td>
</tr>
<tr>
<td>Photo No.</td>
<td>Date</td>
<td>Direction Photo Taken</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>-----------</td>
<td>------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>3</td>
<td>1/18/20</td>
<td>Southwest</td>
<td>View of Structure 205, proposed for replacement.</td>
</tr>
<tr>
<td>4</td>
<td>1/18/20</td>
<td>East</td>
<td>View of proposed access (left) and wetland KW-21 (right) towards Structure 284 to be replaced.</td>
</tr>
</tbody>
</table>
### Client Name:
Eversource Energy

### Site Location:
L163 Transmission Line
Keene, New Hampshire

### Project No.
04.0190999.36

<table>
<thead>
<tr>
<th>Photo No.</th>
<th>Date</th>
<th>Direction Photo Taken</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>1/18/20</td>
<td>Northeast</td>
<td>View of proposed access (left) and Structure 203 (right) to be replaced.</td>
</tr>
<tr>
<td>6</td>
<td>1/18/20</td>
<td>Northeast</td>
<td>View of proposed access through Wetland KW-22 towards Structure 202 to be replaced.</td>
</tr>
<tr>
<td>Photo No.</td>
<td>Date:</td>
<td>Direction Photo Taken:</td>
<td>Description:</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td>-------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>7</td>
<td>1/18/20</td>
<td>Northeast</td>
<td>View of proposed access through Wetland KW-23 towards Structure 201 to be replaced.</td>
</tr>
<tr>
<td>8</td>
<td>1/18/20</td>
<td>Northeast</td>
<td>View of proposed access (left) and Structure 200 (right) to be replaced.</td>
</tr>
<tr>
<td>Photo No.</td>
<td>Date</td>
<td>Direction Photo Taken</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>------------</td>
<td>------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>9</td>
<td>1/18/20</td>
<td>Northeast</td>
<td>View of proposed access through Wetland KW-24 towards Structure 197.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>1/18/20</td>
<td>Southwest</td>
<td>View of proposed access through Wetland KW-27 towards Structure 195 to be replaced.</td>
</tr>
<tr>
<td>Photo No.</td>
<td>Date</td>
<td>Direction Photo Taken</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>------------</td>
<td>-----------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>11</td>
<td>1/18/20</td>
<td>Northeast</td>
<td>View of proposed access through Wetland KW-27 towards Structure 194 to be replaced.</td>
</tr>
<tr>
<td>12</td>
<td>1/18/20</td>
<td>Southwest</td>
<td>View of proposed access towards Structure 192.</td>
</tr>
<tr>
<td>Photo No.</td>
<td>Date:</td>
<td>Direction Photo Taken:</td>
<td>Description:</td>
</tr>
<tr>
<td>----------</td>
<td>-----------</td>
<td>-------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>13</td>
<td>1/18/20</td>
<td>South</td>
<td>View of proposed access (left) for Structure 189 to be replaced in Wetland KW-28 (right).</td>
</tr>
<tr>
<td>14</td>
<td>1/18/20</td>
<td>Northeast</td>
<td>View of proposed access towards Structure 186.</td>
</tr>
<tr>
<td>Photo No.</td>
<td>Date:</td>
<td>Direction Photo Taken:</td>
<td>Description:</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td>------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>15</td>
<td>1/18/20</td>
<td>Northeast</td>
<td>View of proposed access through Wetland KW-32 towards Structure 183 to be replaced.</td>
</tr>
<tr>
<td>16</td>
<td>1/18/20</td>
<td>Northeast</td>
<td>View of proposed access through Wetland KW-33 towards Structure 182 to be replaced.</td>
</tr>
</tbody>
</table>
### Photographic Log

**Client Name:** Eversource Energy  
**Site Location:** L163 Transmission Line  
Keene, New Hampshire  
**Project No.:** 04.0190999.36

<table>
<thead>
<tr>
<th>Photo No.</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>1/18/20</td>
</tr>
</tbody>
</table>

**Direction Photo Taken:** Northeast

**Description:** View of proposed access and work pad for Structure 182 to be replaced.

<table>
<thead>
<tr>
<th>Photo No.</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>1/18/20</td>
</tr>
</tbody>
</table>

**Direction Photo Taken:** West

**Description:** View of Structure 176 to be replaced within Wetland KW-38.
<table>
<thead>
<tr>
<th>Photo No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>1/18/20</td>
</tr>
</tbody>
</table>

**Direction Photo Taken:**
Northwest

**Description:**
View of proposed access through Wetland KW-38 towards Structure 177.

<table>
<thead>
<tr>
<th>Photo No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>1/18/20</td>
</tr>
</tbody>
</table>

**Direction Photo Taken:**
Southwest

**Description:**
View proposed access through Wetland KW-53 towards Structure 166.
Garlic Mustard Challenge in Keene
Topics for discussion – Conservation Commission – 16 February 2021

Prospective Timeline

Feb 16 – Conservation Commission meeting
Feb 22-28 – Invasive Species Awareness Week
March 15 – Conservation Commission meeting
April – Early publicity
April – Acquire supplies
April 19 – Conservation Commission meeting
April 22 – Earth Day
April 24 (Saturday) – Volunteer training
May 1 (Saturday) – Location scouting and flagging. Garlic Mustard Challenge begins!
May 3 (Monday) – Publish map
May 6 (Thursday) – City Council meeting – Mayoral proclamation?
May 16 (Sunday) – Garlic Mustard Challenge ends

Partners

Conservation Commission – Project oversite
Keene City Staff – Operational support
Mayor, City Council – Publicity
UNH Cooperative Extension – Training materials
Nature Groupie – Volunteer recruitment support
Local schools and service organizations
Local restaurants and merchants
Town of Hanover, NH
Ideas

From Nature Groupie:

“Hanover has been working on Garlic mustard management on Town lands and with neighborhood groups on private property since 2010. Nature Groupie is excited to highlight their innovated approach to managing garlic mustard!

After a wide ranging educational effort, the town's Biodiversity Committee has begun to focus on an innovative management approach: neighborhood efforts coordinated by neighborhood leaders. Along trails and roads with Garlic mustard infestations, “pulling stations” were established to promote pulling by individual volunteers. These stations were stocked with educational materials, a movable "PULL HERE" sign post and bags to promote anonymous walkers to pull. Trained volunteers then check all the sites and removed full bags to the landfill.”

From Malin Clyde, UNH Cooperative Extension

1. Share information from Nature Groupie's Garlic Mustard Challenge webpage: [https://naturegroupie.org/resources/garlic-mustard-challenge-new-england](https://naturegroupie.org/resources/garlic-mustard-challenge-new-england) including fact sheet, the interactive map above, the pesto recipe, etc.
2. Look for Nature Groupie's ID videos on Facebook (we'll be sharing them again this spring during the garlic mustard season) and share them on your town's page.
3. You could plan to host a training in the spring to show a few key volunteers how to ID the plant (it's easy during the right season, and I'm sure there are folks in garden clubs or at Keene State or the conservation commission that know the plant). The trained folks could then go out and look for populations in parks or conserved lands. When you have a few key areas identified, you could either encourage people to go pull on their own (and report their bags to you), or you could have the trained volunteers host some small workdays, and submit their # of bags pulled on the Garlic Mustard Challenge website (reporting form)
4. With either of these options, Nature Groupie can help spread the word if you post their training OR the volunteer workdays on the Nature Groupie Calendar, using our "Add an Experience" form. It's free and easy.
5. Wondering when to schedule your workdays or pulls? Check out the interactive map above and look in your region for when other people pulled the plant. To me it looks like early or mid-May is a good time in your region - although it might vary depending on the weather or snowmelt.
Resources

Garlic Mustard Challenge New England:
https://naturegroupie.org/resources/garlic-mustard-challenge-new-england

Garlic Mustard Challenge Map
https://unhcoopext.maps.arcgis.com/apps/Shortlist/index.html?appid=50feda4697984b38b77b9347b1d87d49

Hanover NH Garlic Mustard Website
https://www.hanovernh.org/biodiversity-committee/pages/garlic-mustard-has-invaded-hanover

Least Wanted Plants of the Upper Valley

Poster: