

STATE OF NEW HAMPSHIRE

Inter-Department Communication

DATE: January 5, 2021

AT (OFFICE): NHPUC

FROM: Kenneth Walsh *KGW*
Utility Analyst IV – Safety Division

SUBJECT: Docket No. DE 20-195 Public Service New Hampshire d/b/a
Eversource Energy
Petition for a License Amendment to Construct and Maintain Electric
Lines Over and across the public waters of the Lamprey River in the
Town of Deerfield, New Hampshire
Staff Recommendation

TO: Debra Howland, Executive Director
Thomas Frantz, Director, Electric Division
Richard Chagnon, Assistant Director, Electric Division
Lynn Fabrizio, Staff Attorney
Randall Knepper, Director, Safety Division
Paul Kasper, Assistant Director, Safety Division

The Safety Division's review of the above petition consisted of the following elements:

- Petition contents and Revised Petition contents and history;
- Applicable State Statute;
- Review of the existing crossing(s) previously licensed by the PUC;
- Review of land ownership of existing pole structures;
- Review of NESC code requirements as described in Puc 300;
- Review of public need and public impact, including applicability of other State regulations; and
- Conclusions and Recommendations.

1. Petition contents and history

On December 8, 2020, Public Service New Hampshire d/b/a Eversource Energy (ES), filed a petition for a license amendment pursuant to RSA 371:17 to construct, maintain and operate the Eversource 373 line over public waters, which is a three phase 345 kV transmission line. Subsequent to this initial filing, on December 22, 2020, ES filed a revised petition to correct errors identified by Safety Staff as found on their original submittal petition. This single crossing span was previously licensed by the PUC in DE19-097, Order 26,281. This is a project to replace one (1) of two existing shield wires with communications fiber optical ground wire (OPGW) over the Lamprey River in Deerfield. The existing six (6) conductors and second shield wire will remain

unchanged. This project will complete the reliability upgrades between terminating substations for the 373 line.

The scope of this project in Deerfield begins at Structure #212 north of Route 107 also known as Raymond Road and then crossing southward over Route 107 and the Lamprey River to Structure # 213. See a detailed NHPUC Safety Division map/schematic in the Attachment of this recommendation.

In ES Exhibit #2, existing steel Structures #212 and #213 remain unchanged. All (6) existing ACSR 850.8 kcmil conductors along with (1) existing 7#8 Alumoweld static wires also remain unchanged with (1) existing static wire to be replaced with (1) 48 fiber optical ground wire (OPGW). The static wire and the OPGW telecommunication line will be vertically attached above the conductors. The conductor cable clearance requirements were met using the National Electrical Safety Code (NESC) conditions at 285 deg F. This scenario was the governing condition, which yielded the greatest sag and lowest clearance. In its petition, ES provides sufficient detail to show how the required clearance from the conductor cables to the 100-year flood elevation water surface will be maintained (at 41.0 feet). Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition. Only 23.2 feet clearance is required by the NESC Table 232-1 for water areas not suitable for sail boating. Although the revised petition notes a span of 996.6 feet between structures 212 and 213, the revised exhibit # 2 depicts a span of 997.1 feet with 305.2 feet spanning public waters. Safety Staff utilized the 997.1 foot span for review and recommendation. Additionally, ES at the request of Safety Staff provided sufficient details to clarify the clearance discrepancy between this petition submittal and the submittal exhibits for DE 19-097.

The water clearances to the projected 100-year flood elevations were confirmed by Safety Division staff. The water clearances are taken from the projected 100 year flood levels. This is more conservative than the 10 year flood levels allowed by the NESC (note 18 to Table 232-1).

2. New Hampshire statute referenced in petition

371:17 Licenses for New Poles. – Whenever it is necessary, in order to meet the reasonable requirements of service to the public, that any public utility should construct a pipeline, cable, or conduit, or a line of poles or towers and wires and fixtures thereon, over, under or across any of the public waters of this state, or over, under or across any of the land owned by this state, it shall petition the commission for a license to construct and maintain the same. For the purposes of this section, "public waters" are defined to be all ponds of more than 10 acres, tidewater bodies, and such streams or portions thereof as the commission may prescribe. Every corporation and individual desiring to cross any public water or land for any purpose herein defined shall petition the commission for a license in the same manner prescribed for a public utility.

Source. 1921, 82:1. PL 244:8. RL 294:16. 1951, 203:48 par.17. 1953, 52:1, eff. March 30, 1953. 2013, 82:1, eff. June 19, 2013.

3. Review of existing license(s) and permissions previously granted by the PUC for this location of the Lamprey River in Deerfield.

The single public water crossing over the Lamprey River was previously licensed by the PUC in DE 19-097, Commission Order 26,281.

The Lamprey River, from the juncture of Nicholls Brook is listed under the category “Public Rivers And Streams” in the Official List of Public Waters (OLPW), under the category “List of freshwater Public Rivers and Streams”. The entire list of public waters can be accessed through the following web link:

<https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/olpw.pdf>

ES asserts no environmental impacts from this project; thus no permit requirements.

The U.S. Army Corps of Engineers (USACOE) does not regulate the subject portion of the Lamprey River in Deerfield as federal-designated navigable waters. Therefore, no crossing permit is required from USACOE.

4. Review of land ownership of proposed pole structures

In its petition, ES specifies that the replacement of the static wire with OPGW is over the public waters of the Lamprey River in the Town of Deerfield, New Hampshire.

5. Review of NESC code requirements as described in Puc 300

Under N.H. Code Admin. Rules Puc 306, each utility is required to construct, install, operate and maintain its plant, structures and equipment and lines, as follows:

In accordance with good utility practice;

After weighing all factors, including potential delay, cost and safety issues, in such a manner to best accommodate the public; and

To prevent interference with other underground and above ground facilities, including facilities furnishing communications, gas, water, sewer or steam service.

For purposes of that section, “good utility practice” means in accordance with the standards established by the “National Electrical Safety Code C2-2012.”

ES states that the current crossings have been designed and will be re-constructed, maintained, and operated in accordance with the NESC C2-2012.

Safety Division Staff reviewed the specifications related to the design and re-construction of this crossing project as described in the petition, the attachments, and all supplemental support documents, and found them to be in conformance with the applicable sections of NESC C2-2012 and Puc 300.

6. Review of public need and public impact

In order to meet the reasonable requirements of electric service to the public, ES proposes to replace an existing static wire with OPGW and maintain a three-phase 345 kV transmission line, designated as the 373 line, conductors, and related fiber optic communication cables over and across public waters of the Lamprey River in the Town of Deerfield, New Hampshire. This transmission line is an integral part of ES's electric transmission system in this area.

ES asserts in the petition that the existing crossing will be exercised without substantially affecting the rights of the public in the public waters of the Lamprey River in Deerfield. Minimum safe line clearances above the river surfaces and affected shorelines will be maintained at all times. The use and enjoyment of the rivers by the public will not be diminished in any material respect as a result of the overhead line crossings.

Safety Division Staff concludes the impact to the public will be de minimis and not measurable. The crossing does not appear to affect the rights of the public in the public waters because minimum safe line clearances above the land surface will be maintained at all times.

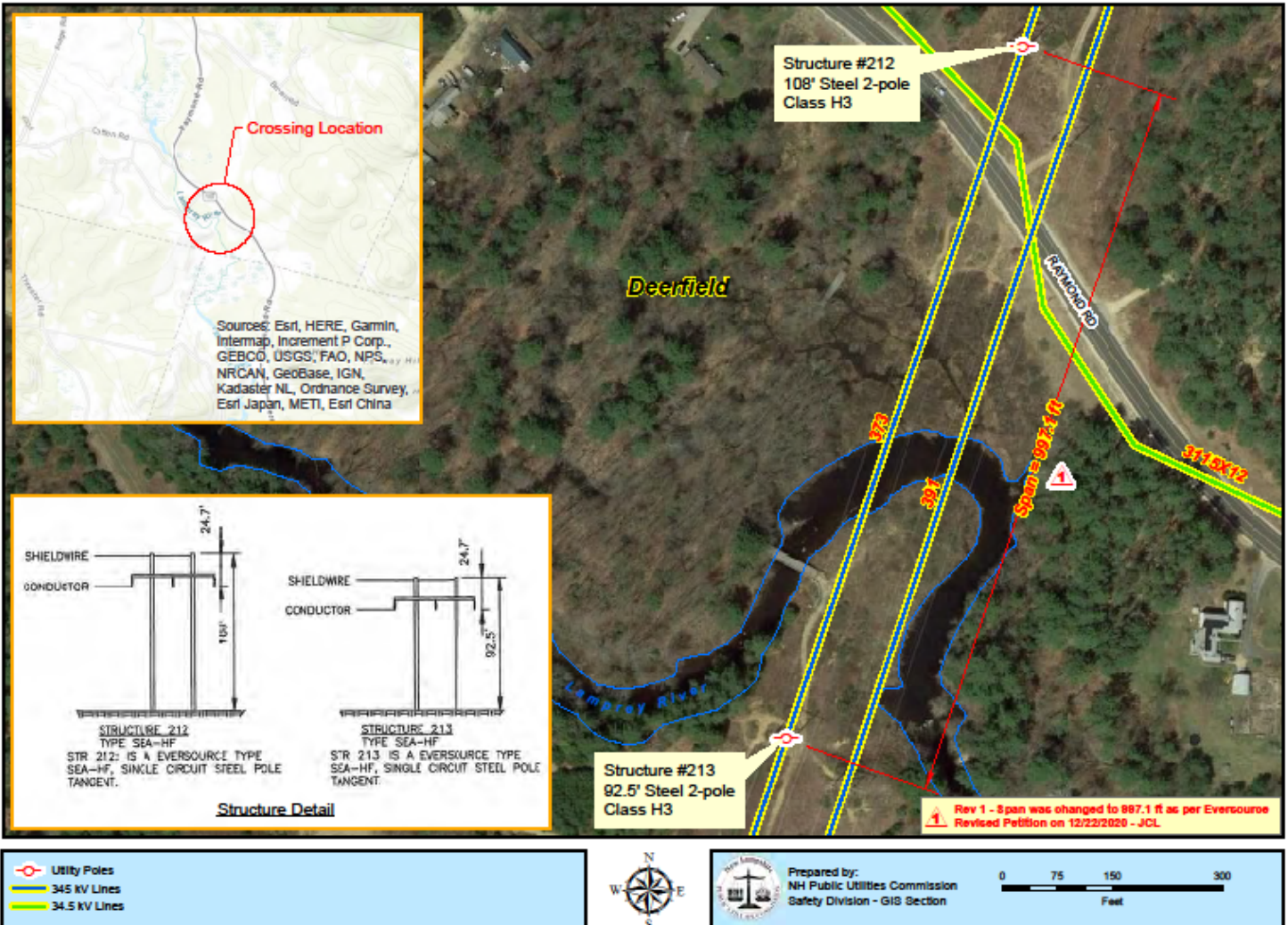
Staff Recommendation:

Based on the results of its review of the petition, its attachments, and all other supporting documents filed to this docket, the Safety Division Staff recommends that the Commission:

- 1) Find that the amended license ES requests in this docket may be exercised without substantially affecting the public rights in public waters which are the subject of the petition;
- 2) Grant ES an amended license to construct, operate and maintain electric lines and telecommunication cables over and across the public waters of the Lamprey River in the Town of Deerfield, New Hampshire, as specified in the petition;
- 3) Issue an Order Nisi and orders for its publication.

Attachment

Lamprey River - DE 20-195 EVERSOURCE Crossing



Public Water as shown above identified in the petition and engineering drawings as State of New Hampshire. The public water crossing is located in the Town of Deerfield. The project will require the Commission to grant a water crossing amended license related to this project. The license will be for the 345 kV 373 transmission line from Structure # 212 south to Structure # 213. This crossing spans approximately 997.1 feet with 305.2 feet crossing public waters over the Lamprey River.

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