

STATE OF NEW HAMPSHIRE

Inter-Department Communication

DATE: February 29, 2016

AT (OFFICE): NHPUC

FROM: Robert Wyatt, Assistant Director, Safety Division 

SUBJECT: Docket No. DE 15-370 NHEC Lake Winnepesaukee Crossing
Petition for a License to Construct and Maintain Cable beneath State
Waters and Lands
Staff Recommendation- Revised

TO: Debra Howland, Executive Director
Tom Frantz, Director, Electric Division
Randy Knepper, Director, Safety Division
Amanda Noonan, Director, Consumer Services and External Affairs
David Shulock, Director, Legal Division
Les Stachow, Assistant Director, Electric Division
Service List

Commission Staff submits this **Revised Staff Recommendation** to correct an error in its original recommendation, as filed earlier today. On page 3, lines 9-10 of testimony supporting its Petition, NHEC did confirm that the design, construction and operation of this line will be in compliance with the National Electric Safety Code. Staff inadvertently overlooked this important fact. The correction results in edits to the second paragraph of Staff's original conclusion and the deletion of the first condition in its original recommendation.

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

- Petition contents, testimony, project overview and history
- Regulatory Requirements
- Private Property, Property Rights
- Public Interest
- Conclusions
- Recommendations

A. Petition Contents, Project Overview and History

On September 8, 2015, on behalf of Hart Realty Trust, New Hampshire Electric Coop (NHEC) filed a petition, pursuant to RSA 371:17 and RSA 371:20, to construct and maintain electric cable and conduits crossing under the public waters of Lake Winnepesaukee in the Town of Tuftonboro, New Hampshire. According to the petition, the re-constructed electrical cable and conduits are necessary to provide electric service

to single private residences located on each of the Twin Islands. The new electric cable will actually tie into two existing meters on a post located on the most easterly Twin Island. See a map diagram in Attachment RJW-1.

In its petition NHEC asserts the electric power cable currently serving Twin Islands was damaged by lake ice during the winter of 2014-15 and needs to be replaced. The service is currently being provided by a temporary setup. The petition states that in order to meet the reasonable requirements of service to the public, it is necessary that the NHEC approved contractor re-construct a distribution line to the shore of and lay cable under Lake Winnepesaukee to Twin Island.

The new facilities will consist of a 7,200 Volt submarine cable, aluminum conductor, size 1/0, Triplex insulation with an insulation thickness of 1.720 inches (manufactured by Okonite). The new underground electric line will begin at existing NHEC Pole #16503.2/7 located at the Paveglio Trust Property to the shore line (re. NHEC Petition, Exhibit A). Specifically, the project plans are as follows:

- NHEC Pole #16503.2/7 is located Paveglio Trust Property (re. Tuftonboro Tax Map 2, Lot 66 on Allen Road in the Melvin Village section of Tuftonboro).
- The cable and Schedule 80 PVC conduit will extend approximately 98 feet from NHEC Pole #16503.2/7 in a trench approximately 36-40 inches deep to the shore of Lake Winnepesaukee.
- The installation process will extend below the lake bed using shallow trenching and direct burial of the cable and conduit protected with ASTM C39-72 concrete covers to a point where the underwater depth is 6 feet at mean high water, per NHEC construction standard IUSUB.
- At that point the cable will exit the conduit and continue for a distance of approximately 1,700 feet on the lake floor to a similar conduit leading the cable to the shore line of the Hart Realty Trust property, on the most easterly Twin Island.
- The cable will continue underground to concrete pad #16503.2/7.1, where the line will be connected to the member's meter located a short distance from the pad.
- Total distance from NHEC Pole #16503.2/7 to concrete pad #16503.2/7.1 will be approximately 2,000 feet. The underwater portion of this cable will span a distance of approximately 1,800 feet).
- The electric meters will be a short distance from the concrete vault.

When the project is completed, NHEC will take ownership of the cable and will be responsible for its maintenance.

B. Regulatory Requirements

As defined in RSA 371:17, a license is required to place utility service facilities under or across Lake Winnepesaukee, as is the case with any other New Hampshire public waters of more than 10 acres. Lake Winnepesaukee is listed on the Department of Environmental Services Water Division's official list of Public Waters.

In its petition NHEC provided a copy of the Shoreland Permit by Notification (Exhibit D), which ties to the Paveglio Trust Property on Allen Road. The petition also included copies of the two Wetlands and Non-Site Specific Permit Applications, as filed with the NH Department of Environmental Services (DES). Copies of the DES permit applications were filed with the petition as Exhibit E (Paveglio Trust Property) and Exhibit F (Hart Realty Trust Property). These two Wetlands and Non-Site Specific Permit Applications were subsequently approved by DES and authorize the temporary impacts to onshore and beneath the lake bed to facilitate construction. Copies of the two DES permits were filed by NHEC to this PUC docket (DG 15-370) on October 15, 2015 and will expire on September 23, 2020.

C. Private Property, Property Rights

NHEC will use the existing right of way from an easement for access to the Paveglio Trust Property (re. Petition, Exhibit B). NHEC will also use the existing right of way from an easement for access to the Hart Realty Trust Property (re. Petition, Exhibit C). These easements continue to be necessary in order for NHEC to be able to excavate, install and maintain the electric cable and conduit within the agreed upon easement areas. NHEC, and its contractors, will be required to comply with all the terms of the Right of Easements.

D. Public Interest

In its petition NHEC asserts the electric power cable currently serving Twin Islands was damaged by lake ice during the winter of 2014-15 and needs to be replaced. The service is currently being provided by a temporary setup. The petition states that in order to meet the reasonable requirements of service to the public, it is necessary that the NHEC approved contractor re-construct a distribution line to the shore of and lay cable under Lake Winnepesaukee from property on Allen Road in Tuftonboro to Twin Island.

When the project is finished, the electric cable and conduit will be buried underground as it extends from the shore of the Paveglio Trust Property to a depth of 6-feet where the heavily shielded submarine cable will travel along the lake bed to a similarly constructed conduit emerging from the Hart Realty Trust Property.

E. Conclusions

The proposed facilities are required to meet the reasonable requirements of NHEC to provide the necessary electric service to two meters located on the easterly Twin Island, with the first meter tied to the Hart Realty Trust residence and the second meter tied to a residence on the other Twin Island.

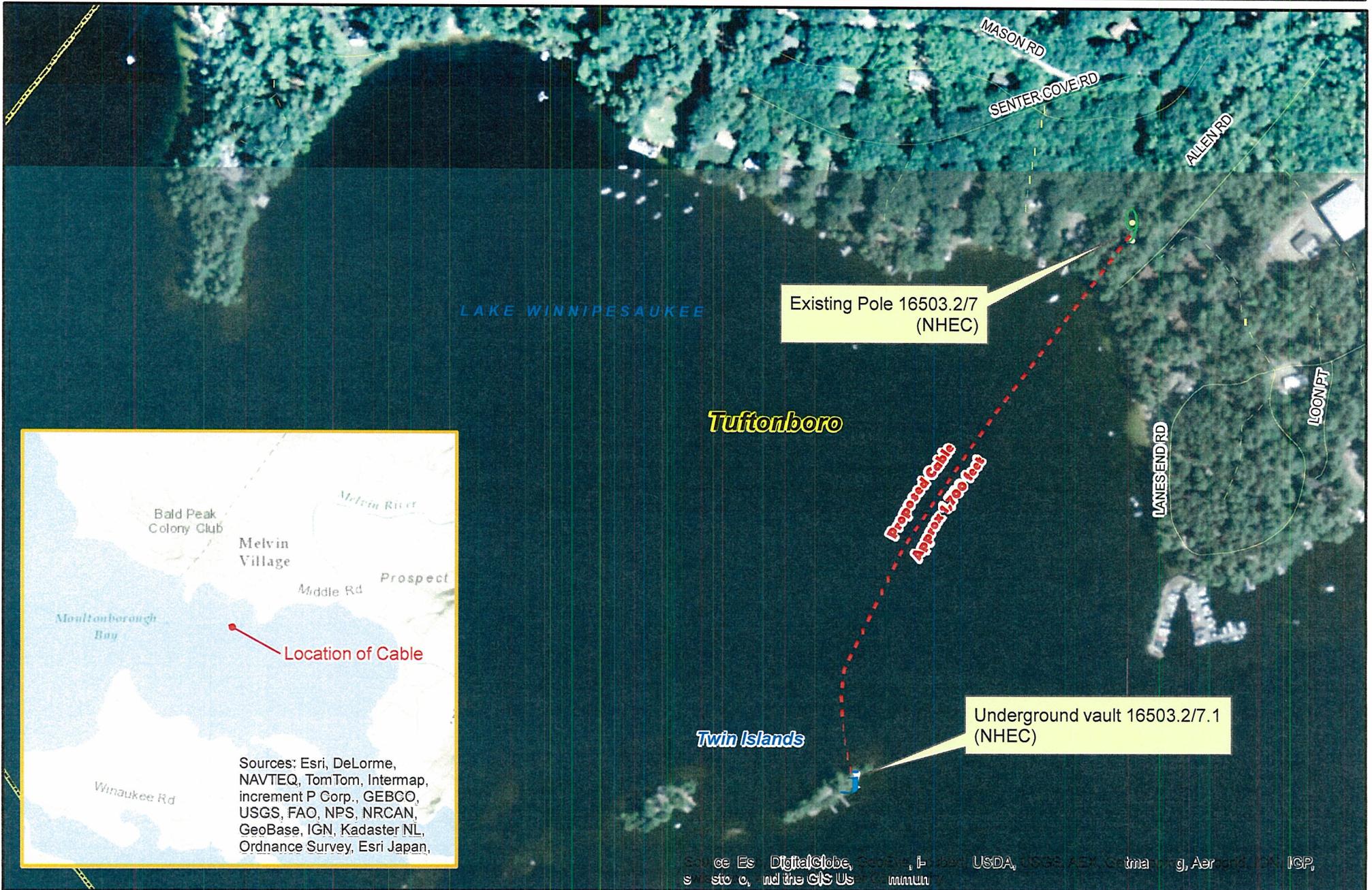
In testimony supporting its petition, NHEC states that the proposed electric cable and conduit facilities will be in compliance with the National Electric Safety Code. Lastly, NHEC affirms that it has successfully used this type of installation, with the submarine, aluminum conductor, size 1/0, Triplex insulated cable and conduits in over 50 similar installations.

1. Recommendations

Staff recommends approval of NHEC's petition for a license to re-construct and maintain cable and conduit beneath public waters (Allen Road, Melvin Village to Twin Islands, Lake Winnepesaukee) in the Town of Tuftonboro, New Hampshire, with the following conditions:

- a. The Commission should require that any future alterations to the proposed electric facilities meet the applicable sections of the National Electric Safety Code in effect at the time of the alteration, and that requests for such alterations be submitted to the Commission for its consideration at least 60 days prior to the start of construction.
- b. That conformance to the conditions imposed by the DES Wetlands and Non-Site Specific Permits included in the petition is required.

Twin Island - DE 15 - 370 NHEC Crossing (Submarine)



Location of Cable

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan,

Source Esri, DigitalGlobe, GeoEye, i-GeoEye, USDA, USGS, AEX, Geomatics, Aermap, IGN, IGP, SNT, and the GIS User Community

Legend

7.2 kV 9 PoleLocations



Prepared by:
NH Public Utilities Commission
Safety Division - GIS Section



Feet

SERVICE LIST - EMAIL ADDRESSES - DOCKET RELATED

Pursuant to N.H. Admin Rule Puc 203.11 (a) (1): Serve an electronic copy on each person identified on the service list.

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FILING INSTRUCTIONS:

- a) Pursuant to N.H. Admin Rule Puc 203.02 (a), with the exception of Discovery, file 7 copies, as well as an electronic copy, of all documents including cover letter with:

DEBRA A HOWLAND
EXECUTIVE DIRECTOR
NHPUC
21 S. FRUIT ST, SUITE 10
CONCORD NH 03301-2429

- b) Serve an electronic copy with each person identified on the Commission's service list and with the Office of Consumer Advocate.
- c) Serve a written copy on each person on the service list not able to receive electronic mail.