

# STATE OF NEW HAMPSHIRE

Inter-Department Communication

NHPUC 29FEB16 4:54

**DATE:** February 29, 2016

**AT (OFFICE):** NHPUC

**FROM:** Robert Wyatt, Assistant Director, Safety Division *RJW*

**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**

**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 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 Paveglia 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 Paveglia 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 Paveglia 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 (Paveglia 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.

The proposed electric cable and conduit facilities, as proposed, should be in compliance with the National Electric Safety Code C2-2012 Part 3 sections 30 through 37. Staff notes that in its petition, NHEC does not make such a definitive statement. NHEC has previously 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.

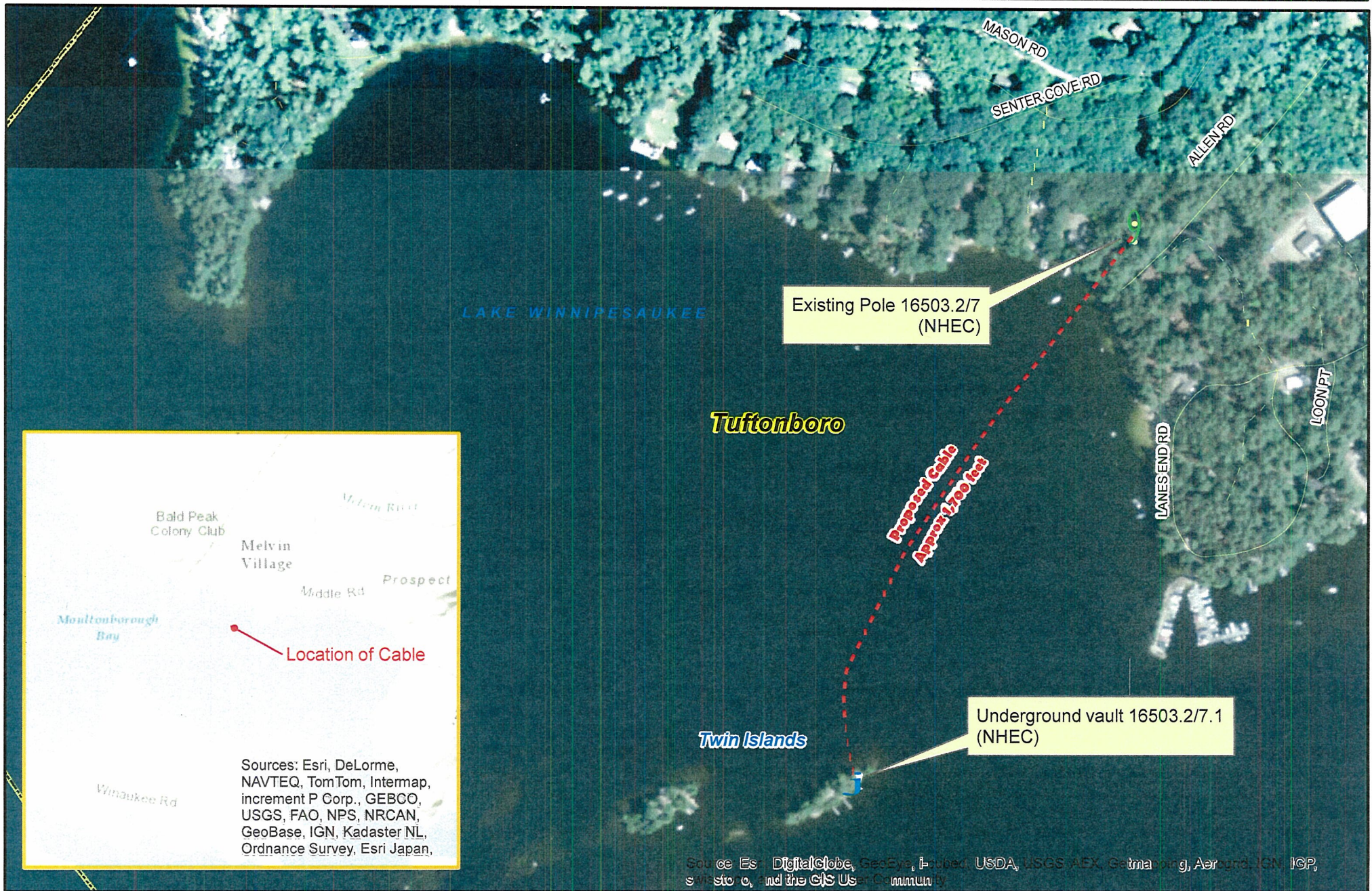
## **1. Recommendations**

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. That NHEC and its contractor(s) are required to re-construct the submarine electric cable and conduits in compliance with the applicable sections of the National Electric Safety Code C2-2012, including (Part 3 sections 30-37).
- b. 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.
- c. 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)



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

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Feet



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**SERVICE LIST - EMAIL ADDRESSES - DOCKET RELATED**

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**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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Docket #: 15-370-1      Printed: February 29, 2016

**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.**