CARMODY
TORRANCE | SANDAK | HENNESSEY LLP

Anthony M. Fitzgerald
Partner
Main: 203-777-5501
Direct: 203-784-3122
Fax: 203-784-3199
afitzgerald@carmodylaw.com

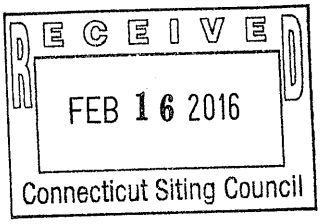
195 Church Street
P.O. Box 1950
New Haven, CT 06509-1950

February 16, 2016

VIA E-MAIL & HAND DELIVERY

Attorney Melanie Bachman
Acting Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

ORIGINAL



Re: **DOCKET NO. 466** - The Connecticut Light & Power Company d/b/a Eversource Energy application for a Certificate of Environmental Compatibility and Public Need for the Frost Bridge to Campville 115-kilololt (kV) electric transmission line project that traverses the municipalities of Watertown, Thomaston, Litchfield, and Harwinton, which consists of: (a) construction, maintenance and operation of a new 115-kV overhead electric transmission line entirely within existing Eversource right-of-way and associated facilities extending approximately 10.4 miles between Eversource's existing Frost Bridge Substation in the Town of Watertown and existing Campville Substation in the Town of Harwinton; (b) related modifications to Frost Bridge Substation and Campville Substation; and (c) reconfiguration of a 0.4-mile segment of two existing 115-kV electric transmission lines across the Naugatuck River in the towns of Litchfield and Harwinton within the same existing right-of-way as the new 115-kV transmission line.

Dear Attorney Bachman:

In connection with the above-referenced Docket No. 466, I enclose the original and fifteen (15) copies of the following pre-filed direct testimony:

- Direct Testimony of Raymond Gagnon, Bradley Bentley, and Jason Cabral concerning Engineering, Design, Route Selection, Project Need, Construction, EMF Characteristics, and Outreach;

- Direct Testimony of Louise F. Mango and Matthew E. Davison concerning Environmental Features, Impacts, and Mitigation Measures; and

- Direct Testimony of Julia Frayer concerning Non-Transmission Alternatives.

I also enclose an original and fifteen (15) copies of a volume of resumes of potential witnesses.

Very truly yours,

Anthony M. Fitzgerald

AMF/cf
Enc.

cc: Service List dated January 21, 2016 attached (w/enc.)

LIST OF PARTIES AND INTERVENORS
SERVICE LIST

Status Granted	Document Service	Status Holder (name, address & phone number)	Representative (name, address & phone number)
Applicant	☒ E-Mail	Eversource Energy	Kenneth P. Roberts Project Manager Eversource Energy 56 Prospect Street Hartford, CT 06103 kenneth.roberts@eversource.com John Morissette Project Manager-Transmission Sting-CT Eversource Energy 56 Prospect Street Hartford, CT 06103 john.morissette@eversource.com Jeffery Cochran, Esq. Senior Counsel, Legal Department Eversource Energy 107 Selden Street Berlin, CT 06037 jeffery.cochran@eversource.com Anthony M. Fitzgerald Carmody Torrance Sandak & Hennessey LLP 195 Church Street New Haven, CT 06509 afitzgerald@carmodylaw.com
Party (Approved on 1/ 21/ 16)	☒ E-Mail	Office of Consumer Counsel	Lauren Henault Bidra Staff Attorney Office of Consumer Counsel Ten Franklin Square New Britain, CT 06051 Lauren.bidra@ct.gov Richard E. Sobolewski Supervisor of Technical Analysis Office of Consumer Counsel Ten Franklin Square New Britain, CT 06051 Richard.sobolewski@ct.gov

STATE OF CONNECTICUT

SITING COUNCIL

DOCKET NO. 466 - The Connecticut Light & Power Company d/b/a Eversource Energy application for a Certificate of Environmental Compatibility and Public Need for the Frost Bridge to Campville 115-kilovolt (kV) electric transmission line project that traverses the municipalities of Watertown, Thomaston, Litchfield, and Harwinton, which consists of (a) construction, maintenance and operation of a new 115-kV overhead electric transmission line entirely within existing Eversource right-of-way and associated facilities extending approximately 10.4 miles between Eversource's existing Frost Bridge Substation in the Town of Watertown and existing Campville Substation in the Town of Harwinton; (b) related modifications to Frost Bridge Substation and Campville Substation; and (c) reconfiguration of a 0.4-mile segment of two existing 115-kV electric transmission lines across the Naugatuck River in the towns of Litchfield and Harwinton within the same existing right-of-way as the new 115-kV transmission line.	**DOCKET NO. 466** February 16, 2016

DIRECT TESTIMONY OF LOUISE F. MANGO AND MATTHEW E. DAVISON ON BEHALF OF THE CONNECTICUT LIGHT AND POWER COMPANY DOING BUSINESS AS EVERSOURCE ENERGY CONCERNING ENVIRONMENTAL FEATURES, IMPACTS, AND MITIGATION MEASURES FROST BRIDGE TO CAMPVILLE 115-kV PROJECT

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1. INTRODUCTION

Q. Would you each please identify yourself and summarize your background regarding environmental matters associated with the Frost Bridge to Campville 115-kV Transmission Project ("the Project")?

A. **Louise Mango**. I am Louise Mango, an environmental consultant from Phenix Environmental, Inc. A copy of my resume is provided in a separate resume volume submitted by Eversource. I am working as a consultant to The Connecticut Light and Power Company doing business as Eversource Energy ("Eversource" or the "Company"). I have been part of Eversource's Frost Bridge to Campville 115-kV Project team for the past year, focusing primarily on environmental matters but also assisting in other aspects of the Project planning and analyses. I worked with others on the Project team to prepare both the Municipal Consultation Filing ("MCF") for the Project, which was published in September 2015, and the December 2015 Application to the Connecticut Siting Council ("Council") for a Certificate of Environmental Compatibility and Public Need ("Application") that is the subject of this Docket 466.

Matthew Davison. I am Matthew Davison, a Senior Environmental Scientist with Tighe & Bond. A copy of my resume is provided in the separate volume of resumes. I am working as a consultant to Eversource. I have been part of Eversource's Frost Bridge to Campville 115-kV Project team for the past year, focusing on environmental matters. I have conducted and reviewed wetland delineations and assessments, coordinated and assisted with vernal pool and breeding bird surveys and assessments, and assisted Eversource with regulatory correspondence relative to rare species. I worked with others on the Project team in drafting environmental sections and

preparing Project mapping for both the MCF for the Project, which was published in September 2015, and the December 2015 Application to the Council for a Certificate of Environmental Compatibility and Public Need that is the subject of this Docket 466. I have also prepared Eversource's Army Corps of Engineers ("USACE") Section 404 and Connecticut Department of Energy and Environmental Protection ("CT DEEP") Section 401 Water Quality Certification (Connecticut Addendum) permit applications.

Q. Ms. Mango, have you served in a similar capacity on other Eversource projects?

A. Yes. I performed similar functions during the planning, siting, and permitting phases for the Interstate Reliability Project ("Interstate"), Greater Springfield Reliability Project ("GSRP"), Manchester-Meekville Junction Project ("MMP"), Middletown-to-Norwalk ("MN") Project, and Glenbrook Cables ("Glenbrook") Project. For all of those projects, I also had a role in environmental management and compliance during construction. Since the fall of 2013, I have assisted Eversource and its project management and engineering consultant, Burns & McDonnell, Inc. (Burns & McDonnell) during the construction of the Interstate Project, serving as environmental compliance manager. For the GSRP and MMP projects, I also worked with Burns & McDonnel to design and implement environmental training programs for Project construction personnel and served as a consultant on the environmental compliance team for those projects. I served as an environmental inspector during the construction of both the MN and Glenbrook projects.

Q. What personal responsibilities did each of you have regarding the preparation of Eversource's Application for this Project?

A. **Louise Mango**. Working with others on the Project team, including Burns & McDonnell and Eversource's environmental consultant, Tighe & Bond, I principally drafted or reviewed the portions of the Application relating to the overall Project description, environmental resources (particularly land use, recreation, and visual resources), route alternatives, route variations, and transmission line configuration options. I also coordinated with Tighe & Bond regarding the analyses of other environmental resources and reviewed all of the detailed reports concerning specific environmental resource areas that are included in Application Volumes 2 and 3. In addition, I worked with Burns & McDonnell to prepare the Visual Resource Analysis in Volume 3 and reviewed the Volume 5 maps with respect to environmental features.

Matt Davison. I drafted environmental portions of the Application, including Volume 1, Sections 5 and 6 and the *Wetlands and Watercourses Report* (Volume 2). I also assisted in the preparation of, or reviewed, the 100 and 400 scale Project mapping, the *Inventory and Assessment of Vernal Pools*, the *Inventory and Assessment of Breeding Birds*, and the *Rare Species Report* (Volume 3).

Q. Are there any other personnel who may respond to cross examination regarding environmental matters for the Project?

A. Yes. Eric Davison, a specialized consultant to Tighe and Bond, will also be available to respond to inquiries regarding vernal pools and amphibians. His qualifications are also provided in the volume of resumes.

Further, the compilation and analysis of environmental information for the Application involved several other specialized engineering and environmental consultants, any of whom may be called upon to support this testimony by providing responses to inquiries about particular environmental or environmental resource-related topics. For example, Burns & McDonnell conducted construction engineering studies and field constructability reviews that affect environmental planning, alternatives design, line configurations, and the Project construction "footprint" (e.g., limits of vegetation clearing, temporary and permanent access roads, culverts, work pads) within the Project right-of-way ("ROW") and at the Frost Bridge and Campville substations. Burns & McDonnell personnel also performed photo-simulations for visual resource analyses.

In addition, Heritage Consultants, LLC ("Heritage") is the cultural resource consultant for the Project. Heritage conducted cultural resource reconnaissance and field reviews of the Project ROW. In the future, Heritage will perform more detailed investigations of archaeological sites that warrant further field testing.

Eversource personnel responsible for the Company's environmental policies, permitting, and right-of-way management also will be available to testify.

Q. What is the purpose of your testimony?

A. The purpose of this testimony is to summarize the environmental and social/cultural factors that were considered during Project planning in order to avoid, minimize, or mitigate adverse effects on environmental and cultural resources and to describe how such environmental considerations will continue to be important as the final design, certification, permitting, and construction phases of the Project proceed.

Q. How is your testimony organized?

A. Our testimony is organized by the following primary topics:

- Approach used to compile baseline environmental data for the Project, including field investigations.
- Review of environmental resources along the 10.4-mile Proposed Route between Frost Bridge Substation and Campville Substation, as well as on the Eversource property in the vicinity of the developed substation sites
- Discussion of potential environmental effects and mitigation measures for the Project.
- The role of Development and Management ("D&M") Plans in environmental impact mitigation.
- Conclusions.

2. ENVIRONMENTAL DATA COLLECTION APPROACH

Q. What approach was used to characterize existing environmental conditions for the Project?

A. Existing environmental and land-use features along and in the vicinity of the Project ROW and Frost Bridge and Campville substations were compiled and characterized in accordance with the Council's *Application Guide for Electric Transmission and Fuel Transmission Line Facility (April 2010).* These existing conditions were characterized using a combination of baseline research, field investigations, aerial photo-interpretation, and consultations with representatives of environmental agencies. Primary published sources consulted were the Geographic Information System ("GIS") database maintained by the CT DEEP, soil surveys, U.S. Geological Survey ("USGS") topographic maps, Federal Emergency Management Agency ("FEMA") maps, National Wetland Inventory ("NWI") maps published by the U.S. Fish and Wildlife Service ("USFWS"), and federal, state, and town land-use and

recreation plans. Environmental information regarding the Mattatuck State Forest, Black Rock State Park, the Naugatuck River, and the recreational areas associated with federal flood control projects (i.e., Black Rock Lake and Dam, Northfield Brook Dam, Thomaston Dam) was compiled principally from the USACE and the CT DEEP. In addition, data regarding other public recreational and scenic resources , and open space areas, including trails, was compiled from documents and on-line information maintained by CT DEEP, the Connecticut Department of Transportation ("ConnDOT"), and the four towns traversed by the Project ROW, as well as groups such as the Connecticut Forest and Park Association ("CFPA"), which maintains several trails traversed by the Project ROW (i.e., Whitestone-Jericho Connector Trail, Jericho Trail, Mattatuck Trail).

Q. Please summarize the field investigations that have been performed along the Project ROW to characterize the existing environmental and cultural conditions, and indicate whether the results of these studies are reflected in the Application to the Council.

A. Eversource commissioned a variety of environmental and cultural resource field investigations of the Project ROW and substation sites. These investigations are summarized briefly as follows; the results of these field investigations are fully reflected in the Application, Volumes 1, 2, 3, and 5.

Wetlands and Watercourse Delineations. Wetlands and watercourse field investigations were performed in the spring and summer of 2015. The field investigations were performed by Tighe & Bond in accordance with federal and state water resource delineation criteria.

Vernal Pool Habitat. Vernal pool surveys were performed along the Project ROW and at the Company's substation properties in the spring of 2015. The surveys were conducted to identify both species richness and abundance of indicator species. Survey methods used included visual surveys to identify adults, larvae and egg masses, audial surveys to record breeding choruses and dip-net surveys to identify amphibian larvae.

Avian Surveys. A Project breeding bird inventory was developed by documenting birds observed along the Project ROW, including at the substations, in the spring of 2015. All birds seen or heard within suitable breeding habitat were noted as observed in the inventory and are considered "possible" breeders. In addition to the records of the birds observed during the field surveys, the breeding bird inventory was compiled by reviewing published data on the breeding birds of the state. Various resources were analyzed and compiled in order to develop a list of all bird species known to breed in the vicinity of the Project. The primary source utilized was *The Atlas of Breeding Birds of Connecticut (Atlas)*, which is the result of a five-year study (1982-1986) of all bird species known to breed in the state.

Visual Resource Survey and Photo-Simulations (Leaf-off and Leaf-on). Areas along and in the vicinity of the Project were investigated pursuant to the Council's December 23, 2009 memorandum to routine applicants / participants, concerning, among other issues, the consideration of scenic quality and aesthetic attributes of land that might be affected by projects under the Council's jurisdiction. In this memorandum, the Council advised applicants to use photographs of such areas, particularly for use in photo-simulations, which depict the environmental setting in the absence of deciduous

vegetation (i.e., under "leaf off" conditions, which would tend to represent "worst case" (or maximum) views of potential project facilities).

Accordingly, Eversource first conducted research to identify potential scenic, recreational, open space, and historic properties (referred to collectively for the purposes of the study as potential "visual sites") in the vicinity of the Project and subsequently conducted "leaf off" field inspections of such areas. Field investigations were performed to photo-document sites under "leaf off" conditions in April 2015, with follow-up field visits to the same sites performed to document "leaf on" conditions in late May 2015. Burns & McDonnell and Louise Mango conducted these investigations: Burns & McDonnell personnel took high resolution photographs that were then used to prepare photo-simulations of sites under both "leaf off" and "leaf on" conditions.

Cultural Resource Studies. Heritage conducted an assessment survey of cultural resources in the Project vicinity was in 2015; the results of this study are reflected in the cultural resources report included in the Application, Volume 3.

Constructability Reviews. In the spring and early summer of 2015, Eversource commissioned constructability reviews of the Project ROW. The purpose of these reviews was to assess the proposed locations and dimensions of the areas required for Project construction, including construction access roads, work pads (e.g., at structure, wire pulling, and guard structure sites), taking into consideration the terrain and accessibility along the ROW and recent experience with construction contractors on the Interstate and similar recent projects. During the constructability reviews, proposed structure locations and construction support areas (work pads, access roads) were shifted to avoid or minimize impacts to water resources to the extent practical and, in some

locations, to reduce potential impacts to property owners. These constructability reviews also served to verify construction assumptions for use in estimating temporary, permanent, and secondary water resource impacts. An assessment of such potential water resource impacts is critical for determining appropriate mitigation, which will be required by the USACE and CT DEEP.

Q. In identifying and evaluating environmental resources in the Project area, did Eversource consult with the public or representatives of the municipalities in which the Project would be located?

A. Yes. Eversource solicited public and agency input prior to, during, and after the MCF process, including during pre-application consultations with agencies such as the USACE and CT DEEP. Environmental resource issues identified through such venues have been and continue to be taken into consideration in the planning for the Project, and in the environmental impact and mitigation analyses included in the Application (Volume 1, Section 6).

Q. Since the publication of the Application in December 2015, have there been any changes in agency policies that affect the environmental resource analyses for the Project?

A. Yes. The USFWS issued a final 4(d) rule on January 14, 2016 regarding the northern long-eared bat *(Myotis septentrionalis)*, a federally-listed threatened species that Eversource identified, using the USFWS IPaC system, as potentially occurring in the Project area. Subsequently, Eversource evaluated the Project using the final 4(d) rule framework and key, as prescribed by the USFWS, for streamlined Section 7 consultation[1] for federal actions that may affect the northern long-eared bat, but will not cause

[1] Pursuant to the federal Endangered Species Act (16 U.S.C. §§ 1531-1544, 87 Stat. 884), as amended.

prohibited take. As determined by this evaluation, the Frost Bridge to Campville 115-kV Project is excepted from the incidental taking prohibitions of the final 4(d) rule. This determination was based primarily on the fact that the Project will not: 1) remove a northern long-eared bat known occupied maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree during the pup season from June 1 through July 31; or 2) remove any trees within 0.25 mile of a northern long-eared bat hibernaculum at any time of year. This determination will be provided to the USACE as a part of the Project's Section 404 permit application.

3. ENVIRONMENTAL FEATURES ALONG THE PROPOSED ROUTE

Q. Please describe generally the proposed Project.

A. Except for a short underground cable segment exiting from Frost Bridge Substation, the new 10.4-mile 115-kV line is proposed for location in an overhead configuration within an existing, long-established Eversource ROW that varies in width from approximately 250 to 400 feet. The proposed new line will be aligned adjacent to an existing 115-kV line (the 1191 Line) throughout its entire length; however, in some areas, the ROW also is occupied by other existing overhead 115-kV lines and a 345-kV line. The primary segments of the Proposed Route are summarized as follows:

Town	ROW Characteristics		Cross-Section (refer to Application Section 3, Volume 1, and Volume 5, Exhibit 4)
	Length (Miles)	Width Range (Feet, Typical)	
Watertown	0.1 (UG) 0.1 (OH) 4.5	Frost Bridge Substation exit 250 – 400	XS-1 (Underground Cable) XS-2, XS-3
Thomaston	2.6	250	XS-3, XS-4
Litchfield	1.8	250	XS-4, XS-5
Harwinton	1.3	250	XS-5, XS-6
Total	**10.4**		

Approximately 0.94 mile (9%) of the 10.4-mile Proposed Route crosses Eversource-owned property.

Project activities to modify Frost Bridge Substation will occur within the developed portion of the substation. The planned modifications to Campville Substation will require a minor expansion of the substation, which will be on Eversource property.

Q. What are the vegetative characteristics of the Proposed Route?

A. Eversource's 10.4-mile ROW encompasses a total of 368 acres. Within the ROW, Eversource conducts vegetation management in the vicinity of its existing transmission lines to ensure consistency with transmission line use and clearance requirements. The managed portions of the ROW range in width from approximately 90 feet to 400 feet. In addition to Eversource's vegetation management, portions of the ROW traverse agricultural areas or urban/suburban areas characterized by lawn or ornamental vegetation. Overall, approximately 200 acres (54%) of the ROW are either actively managed by Eversource to promote scrub-shrub or other low-maturing vegetative communities or maintained by private landowners in agricultural use or other types of low-growth vegetation. Approximately 114 of the remaining acres within the entire ROW are currently unmanaged and consist of deciduous and coniferous forested upland, whereas approximately 18 acres (5% of the ROW) are forested wetlands.

Q. What information does the Application provide about the principal types of environmental and land use resources along the Project ROW?

A. The existing environmental characteristics of the Project area are discussed in Volume 1, Section 5 of the Application, whereas the maps in Volume 5 of the Application illustrate the location of the proposed 115-kV transmission facilities

within Eversource's ROW, and identify features along and in the vicinity of the ROW, including Eversource-owned properties, principal vegetation types, water resources, land uses, and transportation and utility corridors. Other environmental and land-use data identified on the aerial photographs and/or described in the Application are:

- Areas of steep slopes and rock outcrops;
- Residential, commercial, and industrial uses;
- Municipal boundaries and zoning classifications;
- Wetlands, watercourses, and floodplains;
- Public recreational, scenic, open space, and other protected areas, including forests, parks, water supplies, hunting/wildlife management areas;
- Schools and community facilities; and
- Existing infrastructure facilities, including roads, railroads, pipelines, and cable crossings.

As the Volume 5 aerial-based maps show, the proposed 115-kV transmission line extends principally through undeveloped or sparsely populated areas that are characterized by segments of rugged terrain. Land uses in the vicinity of the ROW consist predominantly of forested areas, including the Mattatuck State Forest and Black Rock State Park, interspersed with scattered residential uses and some commercial and industrial development near certain road crossings. The principal highways that intersect the transmission line ROW are U.S. Route 6, State Route 8 (spanned twice – once in Watertown and once in Litchfield), and State Routes 109, 262, and 254.

The transmission line ROW extends across 58 watercourses; of these, 20 are perennial streams, rivers, or ponds and 38 are intermittent. Only three of the watercourses are more than 20 feet wide: Branch Brook, Northfield Brook, and the

Naugatuck River. These three watercourses are all part of flood control management areas under the jurisdiction of the USACE. None of these watercourses meet the criteria for federal designation as navigable under Section 10 of the Rivers and Harbors Act. All of the watercourses are presently spanned by Eversource's existing transmission lines and will be spanned by the proposed overhead 115-kV line.

In addition, the ROW encompasses 91 federal and state jurisdictional wetlands; four additional wetlands were delineated along publically-accessible off-ROW roads that Eversource proposes to use during Project construction. Along the Project ROW, the boundaries of the federal and state jurisdictional wetlands coincide in all but two wetlands, which qualify as state but not federal wetlands, within the Naugatuck River floodplain in Watertown and Litchfield; neither of these state-only jurisdictional wetlands would be affected by the Project.[2]

Because the construction, operation, and maintenance of the new 115-kV transmission line will not affect the entire width of the existing Eversource ROW, only 48 of the 95 delineated wetlands will potentially be affected by the Project. Descriptions of all wetlands and watercourses along the ROW are included in the *Inventory and Delineation of Wetlands and Watercourses Report*, which is included in Volume 2 of the Application.

Q. Why were federal jurisdictional wetlands delineated?

A. The boundaries of federal jurisdictional wetlands (the criteria for which are slightly less stringent than the criteria for Connecticut jurisdictional wetlands) were delineated as required for Eversource's Section 404 General Permit Application to the

[2] Wetlands FB-1 (Watertown) and F9 (Litchfield) are state-only wetlands; these wetlands are depicted on the Volume 5 maps.

USACE, New England District. This permit application is expected to be submitted to the USACE in February 2016.

Q. How many of the identified wetlands were identified as also providing vernal pool habitat?

A. As described in the *Inventory of Vernal Pools and Amphibian Breeding Habitat* report (included in Volume 3 of the Application), field investigations identified 22 vernal pools which, in total, supported three vernal pool indicator species - wood frog, spotted salamander and marbled salamander. Fifteen of these pools (68%) are potential Tier I pools due to the fact that they had significant numbers of egg masses (i.e., 25 or more) or they had two or more indicator species breeding.

Four of the pools are characterized as "decoy" vernal pools; all of these are linked to access road activities that have created small ponded areas associated with rutting, culvert inlets (i.e., backwater pool) or culvert outlets (i.e. scour pool). These anthropogenic pools typically lack sufficient hydroperiod to support the successful breeding and development of vernal pool species. Subsequent to the completion of the spring 2015 field investigations, one of the decoy vernal pools (F13-1), which was located within an existing access road, was affected by routine Eversource maintenance activities; thus, a total of 21 vernal pools, including three decoy pools, currently exist within the Project area currently.

Several noteworthy pools were observed within the Project area. These include pools MSF-1, C12-1, C15-1, C21-1, D4-1 and D15-1; all of which contained large numbers of both spotted salamander and wood frog. Pool D4-1 was noteworthy as it contained the only record of marbled salamander within the Project area. Marbled

salamander are uncommon in Connecticut particularly at higher elevations, and this pool represents the only documented breeding location of the species from the Town of Thomaston.

Q. How many of the identified vernal pools are located within the presently managed portions of Eversource's ROW?

A. As illustrated on the Volume 5 maps, of the 21 vernal pools identified during the field studies, 10 are located in whole or in part along portions of the ROW that are presently managed. Another 10 vernal pools are directly adjacent to Eversource's existing on-ROW access roads. Of the 21 vernal pool identified, eight are located within portions of the Project ROW that are not presently incorporated into Eversource's vegetation management program (including two pools located along an existing off-ROW access road in Mattatuck State Forest in the Town of Watertown).

Q. Is the Project ROW in the vicinity of any federally designated threatened or endangered species?

A. No. The northern long-eared bat, which the federal government listed as a threatened species in May 2015, was identified by the USFWS IPaC system as potentially occurring in proximity to the Project ROW. In August 2015, the northern long-eared bat was also State-listed as endangered. However, CT DEEP's Natural Diversity Database (NDDB) data reveals no known occurrences of this species in the Project area. Further, during consultations between Eversource and CT DEEP on July 30, 2015, CT DEEP representatives stated that there are no known records of species occurrences or hibernacula in the vicinity of the Project ROW.

Q. Please summarize the status of Eversource's consultations with CT DEEP regarding state-listed species that may occur in the Project area.

A. Based on a review of CT DEEP NDDB data, four state-listed species were identified as potentially occurring within the Project area: wood turtle and smooth green snake (both state-listed Special Concern species) and northern spring salamander and frosted elfin butterfly (both state-listed Threatened species). Eversource's field investigations indicate that suitable habitat exists for these species along portions of the Project ROW.

Eversource developed proposed protection strategies for these four species, which are described in Volume 1, Section 6 of the Application. These strategies were provided to CT DEEP for concurrence that they are adequately protective. In response letters dated May 19, 2015 (provided as part of the *Rare Species Report* in Volume 3), CT DEEP indicated that if these protection strategies are followed, the Project will not have an adverse impact on these species. This determination is valid for one year.

Subsequently, in August 2015, CT DEEP listed the spotted turtle, which was identified during the spring 2015 vernal pool surveys, as a State-listed Special Concern species. Eversource then developed proposed protection strategies for this species, which were provided to CT DEEP in December 2015 for a determination of adequacy. Upon receipt of a response from CT DEEP, this correspondence will be provided to the Council. The proposed protection strategies for the spotted turtle are also included in Volume 1, Section 6 of the Application.

Q. Please summarize the designated public recreational use areas traversed by the Project ROWs (e.g., state parks, state forests, and trails).

A. In total, approximately 32% (3.3 miles) of the 10.4-mile Proposed Route extends across federal, state, or town recreational or open space areas. Table LFM-1 summarizes the designated public recreational use areas that are traversed by Eversource's ROW and existing overhead transmission and that will be crossed by the new 115-kV line. Table LFM-1 summarizes the typical characteristics and views of the ROW and existing overhead transmission lines from general public vantage points.

Table LFM-1: Recreational Areas Traversed by the Project ROW

Town	Volume 5, 400 Scale Mapsheet No./ Relation to ROW	Recreational Feature Description	Summary Characteristics Based on Field Review
Watertown			
Jericho-Whitestone Connector Trail	1 Follows	The Jericho-Whitestone Connector Trail is a CFPA "blue blaze" trail that connects to the Jericho Trail.	This trail extends from State Route 8 along Echo Valley Road (a busy road bordered in part by commercial uses) and then turns onto the 400-foot-wide Project ROW, following the ROW for approximately 600 feet before
Jericho Trail / Mattatuck State Forest	1 Crosses	The Jericho Trail is a CFPA "blue-blaze" trail that connects to the CFPA's Mattatuck Trail. The Jericho Trail is accessible from Echo Lake Road, through the Mattatuck State Forest.	The Jericho Trail crosses the 400-foot-wide ROW, most of which Eversource presently manages in low-growth vegetation consistent with overhead transmission line use. At the ROW crossing, the Jericho Trail is a relatively wide, asphalt pathway. A steep slope extends to the northwest, limiting views along the ROW in that direction. However, views to the east are unobstructed, with the existing transmission lines and Frost Bridge Substation clearly visible. Due to topography and forest vegetation adjacent to the ROW, views of the transmission lines / ROW from other portions of the trail are precluded or limited.

Town	Volume 5, 400 Scale Mapsheet No./ Relation to ROW	Recreational Feature Description	Summary Characteristics Based on Field Review
Veterans Memorial Park	2 Crosses	Town of Watertown park that provides year-round recreational opportunities	The Eversource ROW crosses the undeveloped northeastern boundary of the park. The new 115-kV line will be located toward the center of the existing 400-foot-wide ROW. The existing transmission lines are slightly visible above the tree line from the park's ball fields that border the ROW, as well as from the park's entrance road, across Jericho Brook Pond.
Black Rock State Park / Mattatuck Trail, Park Red Trail	4 Crosses	CFPA Trail that extends through Black Rock State Park, also connecting to the Park's "Red Trail"	The 250-foot-wide Eversource ROW extends along the western portion of the park, crossing both the Mattatuck Trail and the Red Trail in forested areas of rugged terrain. Views of the ROW are limited to the immediate vicinity of the crossings, due to the topography, dense vegetation, and bends in the trails.
Watertown/Thomaston			
Black Rock Lake Dam Overlook	4 Crosses	Public access on top of dam that offers views of the lake, and to the hills both to the east and north	From portions of this overlook, the existing 115-kV transmission structures are visible on a wooded slope that extends north- northeast from State Route 109.
Thomaston			
Northfield Brook Recreation Area	6 Crosses	"Yellow" trail located north of the recreation area's access road	The "Yellow Trail", a narrow h iking trail, crosses the Eversource ROW, which is occupied by two 115-kV lines. At the trail crossing, the ROW is visible along the hillside to the south of State Route 254, toward Walnut Hill Junction.
Litchfield / Harwinton			
Naugatuck River / Thomaston Dam Trails	8 Crosses	ATV / Snowmobile / hiking trails / fishing area along Naugatuck River greenway	The Eversource ROW spans the river and river valley, limiting views of the existing transmission lines from most areas due to dense vegetation. The colored marker balls on the conductors at this location draw visual attention to the lines, which would otherwise not be particularly evident. ROW and transmission line structures are visible from Valley Road in Harwinton.

Q. Is the Project located within the state-designated coastal boundary?

A. No.

Q. Does the Project traverse any designated wild and scenic or protected rivers?

A. No.

Q. Please summarize the status of the cultural resource studies of the Proposed Route.

A. In 2008-2009, Eversource commissioned UMass Archaeological Services ("UMass") to perform a baseline cultural resource assessment survey of the ROW. In 2015, Eversource retained Heritage to amend and update the UMass study specifically for this proposed 115-kV Project. The Heritage investigations consisted of a preliminary archaeological and historical resources assessment (Phase 1A).

The Heritage study, which is included in Volume 3 of the Application and was submitted to the SHPO, determined that no identified historic structures, known archaeological sites, or properties listed on the National Register of Historic Places ("NRHP")/State Register of Historic Places ("SRHP") are situated within 500 feet of the ROW. However, the previous UMass subsurface testing revealed 14 archaeological sites along the Proposed Route that were thought to contain intact archaeological deposits. Further, Heritage identified portions of the Proposed Route that have a moderate / high potential for yielding intact cultural resource materials.

Eversource anticipates that Heritage will conduct more detailed archaeological field investigations (e.g., Phase 1B testing) in the spring of 2016. Further, Eversource expects to continue to coordinate with the SHPO and involved Native American Tribes

regarding the need for any additional studies that may be required to identify and/or further evaluate known or potentially significant cultural resources in the vicinity of the Project, and subsequently to implement appropriate site avoidance or protection measures where necessary. Such documents are not provided for public review due to the sensitivities regarding the protection of cultural sites.

4. POTENTIAL ENVIRONMENTAL EFFECTS AND MITIGATION MEASURES

Q. Please describe how the potential environmental effects of the Project were identified and evaluated.

A. The Project was evaluated in terms of the potential effects associated with construction activities (typically, short-term) and the operation and management of the transmission line and ROW (typically, long-term). Both positive and negative effects were identified and evaluated. For example, the removal of forested vegetation along the ROW will constitute a long-term change in habitat. As noted in the Application (Volume 1, Section 6.1.3.1.1, p. 6-15), Eversource estimates that approximately 48.9 acres (37%) of the 132 acres of forest vegetation within the ROW would be removed for the Project (42.2 acres of upland and 6.7 acres of forested wetland). This vegetation removal will include approximately 7,000 trees with diameter at breast heights of greater than 5- to 6 inches. However, the resulting conversion of such forested areas to shrubland, and the continued management of the ROW for such shrubland, will have a long-term positive effect on the species that rely on this habitat type for food, cover, and nesting.

Potential Project impacts on environmental resources were estimated by applying standard constructability assumptions regarding access routes through wetlands needed

for clearing crews, permanent and temporary on-ROW access roads, and anticipated work pad (i.e., crane pads, pulling site pads, and guard structure pads) locations and dimensions. These constructability assumptions were developed based on Eversource's recent experiences in constructing other transmission lines and taking into consideration the specific characteristics of this Project area.

Q. What potential effects would the Project have on topography, geology, and soil resources?

A. The construction and operation of the new 115-kV transmission line will have negligible effects on topography and geology, and only minor, generally short-term, and highly localized effects on soils. These effects will be concentrated in the vicinity of work sites along the ROW, or where earth-moving activities, if any, are required at off-ROW Project support areas (e.g., off-ROW access roads, staging areas).

Generally, the construction of the Project will result in minor, localized changes in elevation only at locations where grading and filling are required, such as at structure sites where work pads must be established, or along access roads that must be improved or developed to safely support construction equipment. Grading will not be required, in most instances, where the terrain along the ROW is relatively level, where no access road improvements or new access roads are needed, or where the conductors span the underlying terrain.

However, all activities involving soil disturbance will be performed in accordance with the Eversource and state requirements (including Eversource's *2011 Connecticut Best Management Practices Manual* and the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control,* as well as the CT DEEP's *General Permit for the*

Discharge of Stormwater and Dewatering Wastewaters from Construction Activities). Eversource will prepare a Project-specific *Stormwater Pollution Control Plan* that would incorporate these requirements, including specifications for the deployment and maintenance of temporary erosion and sedimentation control measures during construction and for long-term stabilization of the Project areas affected by construction.

Temporary erosion and sedimentation controls (e.g., silt fence, hay or straw bales, water bars, or equivalent) will be installed, maintained, and routinely inspected during construction. Permanent erosion and sedimentation controls, such as sedimentation basins and water bars along permanent access roads, also may be installed as part of access road development or during the course of construction.

As part of Project restoration, Eversource will typically reseed areas where soils were affected by Project construction and may install permanent erosion and sedimentation controls, as appropriate to site-specific conditions. The objective will be to achieve final stabilization of all areas affected by construction – either by revegetation or – in some cases – the maintenance of permanent access roads and work pads to facilitate future line maintenance work.

Q. What potential effects would the Project have on water resources?

A. The Project has been largely successful at avoiding permanent effects on wetlands through diligent Project design and construction planning. Preliminary design plans took into consideration delineated wetland data, and proposed structures were located outside of wetlands to the extent practical. Eversource's Environmental Affairs personnel and consultants participated in constructability reviews, a process that resulted in further wetland avoidance. As a result, most potential effects to wetlands associated

with the development of the new 115-kV transmission line will be short-term and highly localized, with the exception of tree removal within forested wetlands; the unavoidable placement of one new transmission line structure in a wetland; and the unavoidable use of fill required to improve existing access roads through wetlands. The Project also could cause short-term adverse effects on water quality associated with the installation, use, and removal of temporary construction access roads, as well as from potential erosion and sedimentation from upland portions of the ROW into water resources.

Tree removal within forested wetlands (as required to allow construction and thereafter to maintain safe distances between vegetation and the transmission line conductors) will not represent any loss of wetland habitat, but will constitute a long-term effect by converting the wetland cover type from forested to scrub-shrub and / or emergent. In contrast, both the unavoidable placement of one new transmission line structures within wetlands and the improvement of historic access roads across certain wetlands and streams would involve fill, resulting in a long-term, albeit negligible loss of wetlands.

All of the watercourses that will be crossed by the Project are already spanned by Eversource's existing overhead transmission lines. However, to construct the new 115-kV transmission line, temporary access roads (e.g., consisting of timber mats, culverts, or equivalent) must extend across certain smaller watercourses. Permanent wetland effects will be associated with improvements to an existing access road north of Valley Road in Harwinton (±1,737 square feet), including the replacement of an inadequately-sized culvert crossing of a perennial stream (S-F11) with a properly sized open-bottom structure. In addition, one new transmission structure (Structure No. 95) must

unavoidably be placed in a wetland (W F-15) immediately south of Wildcat Hill Road in Harwinton, resulting in approximately 28 square feet of permanent fill. Appropriate erosion and sedimentation control measures will be employed to avoid and/or minimize impacts at watercourse crossings where temporary or permanent culverts are proposed.

During construction, Eversource would require its construction contractors to adhere to specific procedures designed to avoid or minimize adverse effects to water resources, and to conform to the Project-specific conditions of the Council's Certificate, CT DEEP permits and certificates, and the USACE Section 404 permit. In addition to these Project-specific regulatory conditions, Eversource will require its contractor to implement the mitigation measures that have been identified thus far to avoid or minimize adverse effects on water resources (refer to Volume 1, Sections 4 and 6 of the Application).

The operation of the Project would have minimal effects on water resources, resulting in a total of 1,765 square feet of permanent fill, the majority of which is associated with improvements to an existing access road through wetlands. Eversource will coordinate with the involved regulatory agencies (e.g., CT DEEP, USACE) to define appropriate mitigation for such effects.

Q. Have the potential Project effects on water resources been quantified?

A. Yes. Table 6-2 in the Application summarized the temporary and permanent effects to water resources, as well as secondary effects in terms of the conversion of forested wetlands to scrub-shrub or emergent wetland cover types. However, based on further analyses conducted subsequent to the submission of the Application, Eversource recently updated these impact analyses, as documented in the

Project's UACE Section 404 permit application, which is scheduled to be submitted later this month. A revised Table 6-1 is attached to Eversource's response to Council Interrogatory No. 11.

Q. How will the conversion of forested areas to shrubland or other low-growing vegetation affect vegetation and wildlife resources?

A. The effect on vegetation will be the conversion of forest to predominantly shrubland habitat. The effect on wildlife will vary depending on a particular species' habitat preferences. However as described in the *Inventory and Assessment of Breeding Birds*, shrubland and other early-successional bird species will benefit from the conversion of forest to shrubland.

Statewide, transmission corridors remain critical habitat for shrubland and other early-successional birds. Vegetation management of transmission line corridors is recommended as part of the regional and national conservation strategy to reverse declines of priority shrubland birds in the eastern region. In the Connecticut Audubon Society's 2009 *State of the Birds* report (p.44), it was noted that "*...shrubland birds are benefitting from maintenance of powerline corridors by utility companies which remove tall-growing trees from the vicinity of wires, creating a habitat dominated by shrubs, grass and herbs.*"

Six state-listed species were identified within the Project area as potential or confirmed breeders (five potential, one confirmed). All six of these species are associated within open or early-successional habitats or forest edge habitats as opposed to forest-interior. In addition, a total of 35 species identified as potentially occurring within the Project area are designated as *Species of Greatest Conservation Need* (SGCN) by

Connecticut's Wildlife Action Plan. Of those 35 species, seven are classified as *most important*, 16 as *very important* and 12 as *important*. Of the 35 SGCN identified, 22 are associated with managed early-successional ROW vegetation, edge habitats or agricultural lands. Five of the seven (71%) SGCN classified as *most important* are associated with managed early-successional ROW vegetation.

Q. What effect would the Project have on vernal pools?

No new transmission line structures would be located in any vernal pools. Further, Eversource has planned construction activities to avoid or minimize impacts to vernal pools to the extent practical. Temporary fill (matting) is proposed in only one vernal pool depression (VP C20-1, a surface-water impoundment located along the edge of an existing access road.) Tree removal will be required in four other vernal pools. The principal construction activities that could affect vernal pools include:

- The removal of vegetation within and / or the tree canopy over vernal pools;
- The work within vernal pool envelopes and / or critical terrestrial habitat;
- The movement of vehicles and equipment use on access roads in the vicinity of amphibian migratory routes;
- The potential for erosion and sedimentation into vernal pools;
- The modification of structural habitat features such as pit and mound micro-topography; and
- The development and use of distinct construction areas (work pads constructed from fill material and/or timber mats) in vernal pools during breeding periods, as well as at other times throughout the year.

The potential for adverse impacts on vernal pools may be minimized by implementing a variety of Best Management Practices (BMPs) aimed at mitigating

the effects of both permanent and temporary construction related activities. Potential BMPs, as may be considered for minimization of impacts to each vernal pool, are provided in Table 6-6 in Volume 1, Section 6 of the Application.

The specific measures that would be implemented to protect vernal pool amphibians during construction will be incorporated into the D&M Plan(s) for the Project, and deployed as appropriate based on site-specific conditions and input from biologists.

Q. In your opinions, does the probable environmental impact of the Project facilities conflict with the policies of the state concerning the natural environment, ecological balance, public health and safety, scenic, historic and recreational values, forests and parks, air and water purity and fish, aquaculture and wildlife?

A. No, for the reasons discussed in this testimony and in the Application.

Q. Will the proposed Project be consistent with land use plans and policies?

A. Yes.

Q. Have you reviewed the consistency of the Project with the Federal Power Commission's (now the Federal Energy Regulatory Commission's) "Guidelines for the Protection of Natural Historic Scenic and Recreational Values in the Design and Location of Rights-of-way and Transmission Facilities"?

A. Yes. The Guidelines advocate the collocation of new transmission lines on existing ROWs; the avoidance or minimization of environmental impacts where practical; and the use of good utility practice in the design and construction of overhead transmission lines. The proposed Project is consistent with these guidelines, which are

incorporated into the Council's regulations and standards adopted pursuant to Connecticut General Statutes Section 16-50t.

Q. How would Eversource minimize effects on recreational areas along the ROW as a result of the Project construction and operation?

A. The ROW does not extend across high-use areas within any of the designated public recreational use areas. Further, certain of these recreational areas (e.g., trails associated with Branch Brook, Northfield Brook, and the Naugatuck River) will be spanned completely such that no primary construction activities will affect the recreational uses.

As discussed in the Application, Eversource will consult with representatives of the affected recreational areas to identify site-specific mitigation measures that can be used to avoid conflicts with recreational users. Such measures may include possible scheduling of construction work to avoid key recreational use periods, posting of signs informing recreational users of construction activities, temporarily closing hiking trails across the ROW, and fencing off construction work sites. These or similar types of measures were used successfully during the Interstate Project construction, which also traversed a number of state and federal public recreational areas.

Q. What effects would the Project have on the visual sites identified in the Application?

A. As described in detail in the Application (Volume 1, Sections 5 and 6; Volume 3), in general, the impact of the new line on the visual environment would be incremental because the proposed Project would be aligned along an existing ROW (where the overhead transmission line(s) have been part of the landscape for decades).

For the most part, long views of the proposed transmission line structures from visual sites, such as public recreational use areas, will be limited as a result of the combination of distance from the ROW, topography, dense vegetative cover, and/or intervening land development.

The photo-simulations prepared for the Project illustrate that the new transmission line will have a focused, incremental effect on the visual environment at certain public use areas that are crossed by the ROW. Because of the juxtaposition of the ROW alignment, topography, and vegetation, views of the new transmission line (and the ROW in general) will be most apparent in the foreground at the actual ROW crossing, whereas distant views will be blocked.

Q. What is your opinion regarding the visual effects of the Project?

A. Changes to the landscape are largely a matter of individual perceptions and value judgments. However, the new 115-kV transmission line would alter views from certain specific locations, particularly where the ROW crosses public roads and trails. Vegetation clearing required for the new 115-kV line will make portions of the existing and new transmission line structures more visible in some locations. During the growing season, when trees are leafed out, the structures will generally be less visible than in the winter months. In addition, at certain vantage points, the transmission line structures will be more visible from a panoramic landscape perspective. Generally, however, due to the location of the existing ROW, and the screening afforded by topography and vegetation, the development of the new 115-kV transmission line will not be apparent as a dominant new landscape element.

Q. What effect will the construction and operation of the Project have on transportation and traffic patterns?

A. The construction of the Project would result in limited and localized effects on transportation patterns associated with the movement of construction equipment and vehicles to and from the ROWs. The operation of the Project would have no effect on transportation patterns or traffic.

For the most part, the public road network in the Project region affords access to the ROW for construction vehicles and equipment. During the construction period, construction workers traveling to and from work sites, as well as the movement of construction equipment, would cause temporary and localized increases in traffic volumes on local roads near the transmission line ROW. Eversource would require its construction contractors to employ personnel as necessary to direct traffic at construction work sites where the ROW crosses public roads, as needed, and to erect appropriate traffic signs to indicate the presence of construction work zones.

In general, equipment and vehicular movements along the ROW would be via on-ROW access roads, along with some off-ROW access roads.

The proposed transmission line conductors (wires) would span all roads, as well as all major watercourses (e.g., Branch Brook, Northfield Brook, and the Naugatuck River). None of these overhead spans would affect traffic patterns, except possibly during the limited times when the conductors are installed. To install the conductors over public roads safely, guard structures (or construction equipment) would be positioned on either side of the crossing.

Q. How would Eversource minimize or avoid adverse Project effects on cultural resources?

A. Eversource is committed to conformance to federal and state regulatory requirements for protecting significant cultural resources sites. Accordingly, Eversource expects to continue to work, along with Heritage, with the SHPO, USACE, and any involved Native American Tribes to avoid or minimize adverse effects on significant sites. As Heritage conducts more intensive cultural resource field surveys to determine the significance of sites identified along the ROW, some modifications to construction plans (e.g., work pad dimensions, access road configurations) may be required to avoid or minimize impacts to NRHP/SRHP sites. Similarly, some modifications may be necessary to address Native American concerns regarding tribal areas of interest.

Q. Please summarize how potential noise effects would be minimized during the construction and operation of the Project.

A. The construction of the Project will result in short-term and highly localized increases in sound levels associated primarily with the operation of construction equipment, truck movements, earth-moving activities, structure foundation preparation, structure installation, and work associated with the modifications to the Frost Bridge and Campville substations. Such construction-generated noise will be localized to the vicinity of construction work sites and typically will occur during the daytime. Construction contractors will be required to properly maintain vehicles to prevent excessive noise emissions. However, some construction activities, such as heavy equipment operation in general and any uses of imploding connectors in certain areas will result in short-term and localized increased in ambient sound levels.

5. ROLE OF THE D&M PLAN IN MITIGATING ENVIRONMENTAL EFFECTS

Q. How will the impact mitigation measures identified in Section 6 of the Application be incorporated into the construction plans for the Project?

A. After Council certification of the Project, Eversource will prepare D&M Plans for the Project, consistent with the Council's requirements. Eversource expects to prepare a D&M Plan for the new 115-kV transmission line, as well as a separate D&M Plan for the Frost Bridge and Campville substations. The D&M Plans will include details regarding the environmental mitigation measures proposed in the Application, and will reflect the incorporation of conditions of the Council's approval. Each D&M Plan will be submitted to the Council for review and approval.

Q. What other information will be included in the D&M Plans?

A. Each D&M Plan will conform to the Council's D&M Plan requirements and will reflect the Council's Decision and Order for the Project. Typically, each D&M Plan can be expected to include information concerning the Project facilities and land requirements; construction procedures; environmentally- and culturally-sensitive resource areas (e.g., locations of wetlands and watercourses, vernal pools, state-listed species of concern, areas of archaeological sensitivity, areas of interest to Native American Tribes); procedures for defining and using vegetative clearing access routes, access road development, and water resource crossings; general construction procedures; construction scheduling; work site and public safety during construction; traffic control at road crossings; requirements for erosion and sedimentation controls; requirements for excavation dewatering; and procedures for excess spoil disposition, among other topics.

Typically, D&M Plans are prepared in advance of the receipt of permits and approvals from other state and federal agencies, such as the CT DEEP and USACE. However, approvals from these and other agencies (as applicable) will be part of construction contracts for the Project.

Q. How will environmental compliance with the D&M Plans be monitored?

A. Eversource representatives will be assigned to monitor the conformance of Project construction activities to the D&M Plans and other state and federal regulatory requirements. Eversource also expects to coordinate with construction contractors to pro-actively plan construction tasks in order to avoid or minimize potential environmental impacts base on site-specific conditions, to respond to questions about environmental compliance, and to address issues as they may arise. In addition, on this Project, Eversource expects to use an approach to environmental compliance that would incorporate methods such as:

- Using signs, flagging, snow fencing, etc. to clearly demarcate the boundaries of environmental features (e.g., wetlands, streams, vernal pools, culturally sensitive areas) and limits of work (e.g., edge of vegetation clearing) along the ROW prior to the commencement of construction.

- Conducting basic environmental training to inform all construction workers of Project-specific environmental and cultural resource features and regulatory requirements, including the D&M Plans.

- Providing more detailed environmental training to all construction supervisory and environmental personnel.

- Providing copies of regulatory requirements, including D&M Plans (text and maps), to all construction contractors and key environmental personnel.

Eversource also would be willing to hire, if directed by the Council, an independent environmental inspector to conduct periodic (typically weekly) inspections of environmental aspects of the construction, as detailed in the D&M Plans.

6. CONCLUSIONS

Q. Based on your past experience with transmission line construction projects and analyses and knowledge of the Project ROW, what are your conclusions regarding the potential environmental effects of the Project as proposed by Eversource?

A. As proposed, the new transmission line and associated substation modifications will be located entirely within an existing ROW or on Eversource-owned property that is presently and has historically been dedicated to utility use.

Considerable effort has been devoted to designing and planning the construction of the Project to avoid or minimize adverse effects on environmental resources. Permanent environmental impacts (e.g., fill in wetlands) have been avoided or minimized wherever practical and these measures have resulted in limited (0.04 acre) impacts to wetlands. Further, in all cases, environmental impacts have been balanced with safety considerations, taking into account the relatively rugged terrain along portions of the Proposed Route, and the need to provide appropriately-dimensioned access roads and work pads for the safe operation of construction equipment and the maintenance of appropriate clearances from the adjacent live overhead transmission line(s). The work pad and access road dimensions that were used successfully to construct the Interstate Project with no significant environmental issues were used as a template for this Project.

Overall, the Project will result in minimal permanent or long-term adverse environmental impacts. Short-term (temporary) impacts will be minimize by adherence to Project-specific plans, the conditions of certificate and permit requirements, and by the utilization of Eversource's Best Management Practices for construction. Soil erosion and sedimentation will be avoided or minimized by adherence to Project-specific plans and conformance to CT DEEP permit requirements for stormwater management during construction. Similarly, Eversource will avoid or mitigate adverse effects to significant cultural resource sites, implementing measures approved by the SHPO and the USACE, as appropriate. Further, Eversource expects to continue to consult with representatives of the involved Native American Tribes to devise and implement an effective approach for avoiding or minimizing impacts to Tribal areas of interest during the construction process.

Compensatory mitigation will be used to offset any unavoidable adverse effects to water resources, such as permanent filling in wetlands as a result of structure foundations, etc. Eversource anticipates that the in-lieu fee program will be used in order to mitigate for unavoidable Project wetland impacts, as appropriate.

Q. Does this conclude your testimony?

A. Yes.