COMMONWEALTH OF MASSACHUSETTS
ENERGY FACILITIES SITING BOARD

Petition and Application of NSTAR Electric Company d/b/a Eversource Energy for a Certificate of Environmental Impact and Public Interest pursuant to G. L. c. 164, §§ 69K-69O	Docket No. EFSB 22-01

PRE-FILED TESTIMONY OF DR. ELIZABETH STANTON

Exhibit CLF-GR-ES

Q. Please state your name, position, and address.

A. My name is Elizabeth A. Stanton and I am the Director and Senior Economist at the Applied Economics Clinic located at 1012 Massachusetts Avenue, Arlington, MA, 02476.

Q. Please describe the Applied Economics Clinic.

A. The Applied Economics Clinic is a non-profit economic and energy consulting group providing expert testimony, analysis, modeling, policy briefs, and reports to public interest groups on the topics of energy, environment, consumer protection, and equity. AEC also serves to train the next generation of expert technical witnesses and analysts by providing applied, on-the-job training to graduate students in related fields and working proactively to support diversity among both student workers and professional staff.

Q. Please summarize your professional and educational background.

A. I earned my Ph.D. in economics at the University of Massachusetts-Amherst, and have taught economics at Tufts University, the University of Massachusetts-Amherst, and the College of New Rochelle, among others. I am the founder and director of the Applied Economics Clinic. I have an extensive publication record, including more than 170 reports, journal articles, books and book chapters as well as more than 50 expert comments and oral and written testimony in public proceedings on topics related to energy, the economy, the environment, and equity. I have submitted expert testimony and comments in Indiana, Illinois, Louisiana, Massachusetts, Minnesota, New Hampshire, Pennsylvania, Puerto Rico, Vermont, and several federal dockets. My work includes testimony and comments on climate plans, efficiency plans, alternatives to fossil fuel infrastructure, proposed pipelines, energy storage, and the equitable implementation of a

new green economy. In my previous position as a principal economist at Synapse Energy Economics, I led studies examining environmental regulation, cost-benefit analyses, and the economics of energy efficiency and renewable energy. Prior to joining Synapse, I was a senior economist with the Stockholm Environment Institute's (SEI's) Climate Economics Group, where I was responsible for leading the organization's work on the Consumption-Based Emissions Inventory (CBEI) model and on water issues and climate change in the western United States.

My articles have been published in Ecological Economics, Renewable Climate Change, Environmental and Resource Economics, Environmental Science & Technology, and other journals. I have published books, including Climate Change and Global Equity (Anthem Press, 2014) and *Climate Economics: The State of the Art* (Routledge, 2013), which I co-wrote with her colleague at Synapse, Dr. Frank Ackerman. I also co-authored *Environment for the People* (Political Economy Research Institute, 2005, with James K. Boyce) and co-editor of Reclaiming Nature: Worldwide Strategies for Building Natural *Assets* (Anthem Press, 2007, with Boyce and Sunita Narain). My curriculum vitae is attached as Exhibit CLF-GR-LS-1.

Q. Please provide a brief history of the current docket.

A. In three 2014 petitions, Eversource requested approval of the Massachusetts Energy Facilities Siting Board ("EFSB") and the Department of Public Utilities ("DPU") to: (1) construct a new 115/14-kilovolt ("kV") substation (the "East Eagle Street Substation") on Company property in East Boston; and (2) construct and operate two new 115-kV underground electric transmission lines in Everett, Chelsea, and East Boston. After having consolidated the Company's three petitions relating to the Project for hearing

before the Siting Board, with the docket number EFSB 14-04/D.P.U. 14-153/14-154, the EFSB's Final Decision—issued in December 2017—approved the need for the substation and directed the Company to work with the City of Boston to relocate the proposed substation slightly and "obtain Siting Board approval under M.G.L. c. 164, § 69J, prior to construction of a proposed energy facility." Eversource filed a siting petition in November 2018 (EFSB 14-04A) to relocate the proposed East Eagle Street Substation by 190 feet, to the west side of the original parcel. The EFSB issued a final decision approving the East Eagle Street Substation in February 2021. GreenRoots appealed the 2021 decision to the Supreme Judicial Court. In February 2022, Eversource filed an Application for a Certificate of Environmental Impact and Public Interest for EFSB-issuance of 15 state and local permits required for construction and operation of a new electric substation at 338 East Eagle Street.

Q. Please state the purpose of your testimony.

A. The purpose of my testimony is to offer my expert analysis and understanding of Eversource's justification of the need for proposed East Eagle Street Substation, as determined by my review of publicly available documentation in docket EFSB 22-01. I offer this testimony on behalf of GreenRoots, Inc. (GreenRoots), a non-profit organization based in Chelsea that represents the residents of Chelsea and East Boston, and Conservation Law Foundation (CLF), which I understand to be intervenors in this proceeding.

Q. What does the Siting Board need to find in this proceeding relating to need?

A. According to M.G.L. c. 164, section 69O, the Energy Facilities Siting Board needs to issue a decision and include therein "its findings and opinions with respect to the

following: (1) the need for the facility to meet the energy requirements of the applicant's market area taking into account wholesale bulk power or gas sales or purchase or other co-operative arrangements with other utilities and energy policies as adopted by the commonwealth."

Q. What is your understanding as to utilities' obligations when pursuing costly capital developments?

A. I understand that, as with any cost to ratepayers, Eversource has an obligation to demonstrate that the expense of the proposed East Eagle Street Substation is in the public good. In its filings and subsequent responses to discovery questions in EFSB 22-01 and 14-04A, Eversource has failed to present sufficient evidence of the need for a new substation, making it impossible to conduct an adequate third-party review of their finding.

Q. What is Eversource's stated justification of the need for the proposed East Eagle Street Substation?

A. Eversource's central claim is that the Chelsea substation is insufficient to maintain reliable electric service in the Chelsea/East Boston/Lynn (C-EB-L) Load Area. However, my review finds that this assertion is not adequately supported by the evidence provided by Eversource.

Q. Has Eversource's justification of the need for the proposed East Eagle Street Substation changed over time?

A. Yes, Eversource's justification of the need for the proposed East Eagle Street Substation has changed over time. The details of the Company's claims have shifted substantially since it filed its original petitions in 2014. Of particular note is the Company's reliance

(in docket EFSB 14-04A) on ISO-New England's (ISO-NE) CELT 2015 load forecast, which projected growing peak electric load in Massachusetts. ISO-NE's most recent projection (CELT 2022), however, tells a different story: Massachusetts peak loads are expected to fall slightly from 2022 to 2024 and remain relatively the same over the next decade.

Q. What are Eversource's key arguments in support of a new East Eagle Street Substation?

A. Eversource supports its claim of a need for the East Eagle Street Substation based on two arguments. First, according to Eversource, the C-EB-L Load Area's growing peak demand will soon surpass ISO-NE's threshold for reliability concerns. Second, Eversource claims that the trend towards electrification and increased renewable resources to meet the Commonwealth's climate goals necessitate an additional substation to maintain reliability.

Q. What critiques of Eversource's arguments do you present in your testimony?

A. I present the following critiques of Eversource's arguments: Eversource's claim of growing peak demand in the C-EB-L Load Area does not appear to be supported by ISO-NE's most recent projections for Massachusetts. Eversource claims that additional capacity will be needed to support the electrification and clean energy efforts laid out in Governor Baker's *Massachusetts 2050 Decarbonization Roadmap* but does not demonstrate an imminent need by documenting actual and proposed electrification and clean energy actions within the C-EB-L Load Area or the energy and peak impacts of these actual and proposed actions. Eversource also neglects the impacts of the energy storage investments also required in the *Massachusetts 2050 Decarbonization Roadmap*

on C-EB-L Load Area peak loads. Finally, Eversource's continued request for approval for costly new transmission infrastructure raises important concerns of neighborhood disruption and unnecessary costs to ratepayers.

Q. Has Eversource presented convincing evidence of a need for the East Eagle Street Substation?

A. No, Eversource has not presented convincing evidence of the need for the proposed East Eagle Street Substation. Eversource has not provided an updated location-specific forecast, without which it is impossible to verify Eversource's claims: Eversource's surprising failure to update its filing on the proposed East Eagle Street Substation based on currently available, up-to-date load forecasts from ISO-NE appears to result in the Company's overestimation of electric needs in the C-EB-L Load Area.

Q. What load forecasts did Eversource rely on in its initial and project change filing?

A. In its original filing (EFSB 14-04/D.P.U. 14-153 and 14-154), Eversource utilized ISO-NE's 2013 Capacity, Energy, Loads, and Transmission (CELT) Report to develop load forecasts for the C-EB-L Load Area.

Q. Did EFSB staff offer any critique of Eversource's load forecasts?

A. Yes, ESFB staff questioned Eversource's use of the ISO-NE's CELT 2013 load forecast when a more up-to-date load forecast (CELT 2015) was available. In addition, EFSB staff raised questions regarding the accuracy of the ISO-NE forecast.

Q. What, if any, updates did Eversource make to these original load forecasts?

A. In response to EFSB staff's questions in 2017 regarding the use of an outdated load forecast, Eversource updated the forecast to the most recent version available at the time,

which was the 2015 CELT forecast.[1] Table 1 presents Eversource's updated forecast based on CELT 2015 showing a steep rise in net system peak over the 2018 to 2023 time period.

Table 1. Electrical Demand in the Chelsea/East Boston/Lynn Load Area Based on the 2015 CELT Report

	Chelsea/East Boston/Lynn Load Area	
	2018 (MW)	**2023 (MW)**
Demand at System Peak	332.5	366.7
Demand Response and Solar PV	-29.1	-29.8
Energy Efficiency	N/A	-13.9
Net Demand	**303.4**	**323.0**

Note: For the year 2018, the 2015 CELT Report peak demand is already net of energy efficiency resources and therefore separate energy efficiency values are not provided in Table 1.

Sources: Tr. 9, at 1585, 1600-1601; RR-EFSB-3; RR-EFSB-59.

Source: Reproduced from Table 1, page 15 in: Commonwealth of Massachusetts Energy Facilities Siting Board. December 1, 2017. Final Decision. EFSB 14-04, D.P.U. 14-153 and D.P.U. 14-154.

In response to EFSB staff questions regarding the accuracy of the ISO-NE forecast, Eversource provided its own internal data "on the actual and the 90/10 weather-adjusted historical peak demand in the Chelsea/East Boston/Lynn Load Area for comparison with forecast 2018 and 2023 load levels."[2] Table 2 presents Eversource's historical actual and weather-adjusted load for the C-EB-L Load Area, which are significantly lower than its projections.

[1] EFSB 14-04, Siting Board Final Decision, December 1, 2017, Page 14.
[2] Ibid. Page 15.

Table 2. Chelsea/East Boston/Lynn Load Area Historical Coincident Peak Demand and Weather Adjusted Demand as Presented by Eversource

Year	Actual Summer Coincident Peak Load (MW)	90/10 Weather Adjusted Summer Coincident Peak Load (MW)
2005	269.3	276.4
2006	278.5	277.9
2007	232.8	245.6
2008	235.6	251.0
2009	272.1	292.7
2010	279.8	289.5
2011	297.4	298.6
2012	286.4	300.9
2013	301.0	303.4
2014	265.5	285.3
2015	248.4	265.8

Source: RR-EFSB-5.

Source: Reproduced from Table 2, page 16 in: Commonwealth of Massachusetts Energy Facilities Siting Board. December 1, 2017. Final Decision. EFSB 14-04, D.P.U. 14-153 and D.P.U. 14-154.

The Company's most recent peak load forecast provides peak load estimates for 2021 through 2030 (see Table 3 below), which are far lower than its previous projections but do not refer to the same Load Area making it, again, making it impossible to conduct an adequate third-party review of Eversource's findings and verify its claims.

Table 3. Chelsea Substation Peak Demand Forecast as Presented by Eversource

YEAR	PEAK LOAD (MVA)	% OF CHELSEA SUBSTATION FIRM CAPACITY
2021	**125.0**	**93%**
2022	**129.4**	**96%**
2023	**131.7**	**98%**
2024	**133.9**	**99%**
2025	**136.3**	**101%**
2026	**138.9**	**103%**
2027	**139.5**	**103%**
2028	**140.2**	**104%**
2029	**140.9**	**104%**
2030	**141.8**	**105%**

Reproduced from: EFSB 22-01, Eversource Application at p. 18.

Q. What did Eversource conclude regarding the electric needs of the C/EB/L Load Area?

A. EFSB also summarized Eversource's argument stating that it would be "reasonable to assume that the area will reach the forecasted peak load level of greater than 300 MW by 2018."[3] That point, combined with ISO-NE's reliability concern regarding loads exceeding 300 MW, led to the Company's determination of the need for a new East Eagle Street Substation before 2018.

[3] Ibid.

Q. Has the C/EB/L Load Area's peak load exceeding the ISO-NE's 300 MW reliability threshold in past years?

A. Yes, C/EB/L peak load exceeded 300 MW in 2012 and 2013 (see Table 2) but more recent peak loads have declined.

Q. Has Eversource's 2017 determination of need for the East Eagle Street Substation by 2018 proved accurate?

A. No, Eversource's determination that the East Eagle Street Substation would be needed for reliability purposes by 2018 has not proven accurate. The year 2018 has come and gone without the addition of the East Eagle Street Substation and East Boston customers are still being served reliably.

Q. Is ISO-NE's 2015 CELT an appropriate load forecast to use for 2022 decision making?

A. No, the 2015 CELT load forecast is not appropriate to use for decision making regarding costly and potentially disruptive new transmission infrastructure in 2022. It is always best practice to utilize the most recent load forecasts available—as evidenced by ESFB staff's request that Eversource update their CELT 2013 forecast to the CELT 2015 forecast back in 2017. Using up-to-date load forecasting is especially important in current New England planning because the CELT 2015 forecast projected increasing peak load in Massachusetts while the 2022 CELT forecast projected peak load falling slightly from 2022 to 2024 and remaining flat thereafter in Massachusetts.

Q. What is the most recent CELT forecast available from ISO-NE?

A. The most recent CELT forecast available from ISO-NE is their 2022 forecast released on May 1, 2022. ISO-NE also released forecasts on April 30, 2021, April 30, 2020, April 30, 2019, May 9, 2018, May 1, 2017, and May 2, 2016.

Q. Has Eversource updated its C/EB/L substation needs assessment to reflect the ISO-NE's 2022 CELT forecast?

A. No, Eversource did not update its substation needs assessment in its initial filing on November 15, 2018 in docket EFSB 14-04A to reflect the most up-to-date CELT load forecasts at that time. When requested to update its assessment to use CELT forecasts from 2018, the Company demurred, suggesting that such an update was unnecessary. As an intervenor in siting docket EFSB 14-04A, GreenRoots filed several information requests. In information request GR-ESRN-1, GreenRoots asked:

Has Eversource conducted, or is it otherwise aware of, any studies or assessments of transmission reliability in the Chelsea/East Boston/Lynn Load Area that incorporate the more recent CELT 2018 load forecasts by ISO-New England? If so, identify and provide any such studies.[4]

In response, Eversource provided its justification for its decision not to use updated CELT load forecasts:

ISO-NE's current assessment of transmission reliability, the Boston 2028 Needs Assessment, assumes that the Mystic-East Eagle-Chelsea 115-kV lines and the East Eagle Street Substation are in-service and part of the existing transmission network.[5]

In this docket, EFSB 22-01, CLF and GreenRoots will be submitting information requests to Eversource concerning the Company's forecasting, including whether it updated its

[4] Zbikowski, R.C. May 21, 2019. Information Request: GR-ESRN-1. EFSB 14-04A/D.P.U. 14-153A/14-154A.
[5] Ibid.

needs assessment using the most up-to-date CELT load forecasts in its Petition and Application.

Q. Has Eversource provided up-to-date evidence that the C-EB-L Load Area will surpass ISO-NE 300 MW reliability threshold for the area?

A. No. The Company asserts but does not demonstrate that C-EB-L Load Area customers' electric needs are growing. Its latest peak demand projections refer to a Load Area with different boundaries and, presumably, different thresholds for reliability, but Eversource does not explain these new forecasts in the context of the previous 300 MW threshold and its related peak forecasts. In its Notice of Intent filing as required in docket 14-04A with EFSB, Eversource asserts:

[NSTAR's Mystic-East Eagle-Chelsea Reliability Project] is designed to address capacity and reliability needs in the surrounding community and to meet customers' growing electricity requirements.[6]

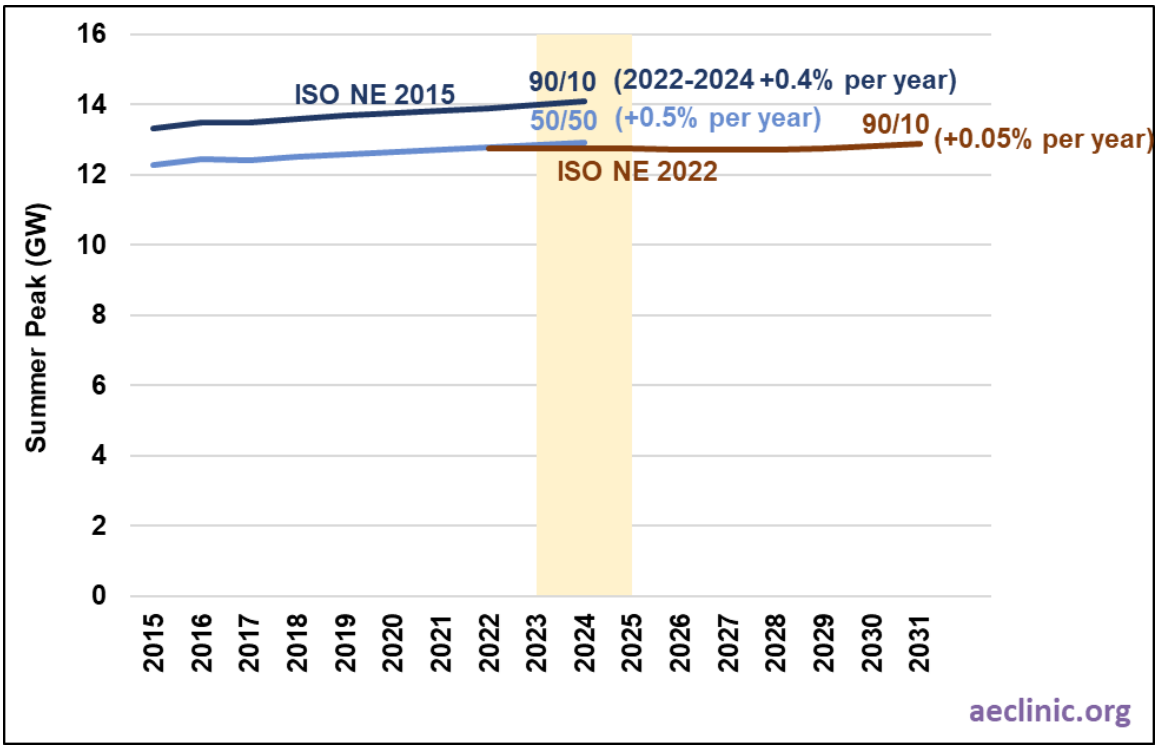
Q. How have ISO-NE's peak load forecasts changed for Massachusetts since 2015?

A. In 2015, ISO-NE's peak load forecasts were projected to increase; in 2022, ISO-NE's peak load forecasts are projected to remain relatively constant.[7] In its 2022 forecast, ISO-NE expects Massachusetts summer peak loads in 2022 to be 1.4 GW lower than predicted in their 2015 forecast—an 11 percent reduction as a share of current-day peaks.[8] In contrast, ISO-NE's 2015 forecast of Massachusetts peak load showed a 0.4 percent

[6] Eversource. December 5, 2018. Eversource Substation: Notice of Intent. Attachment A, Page 11. Available at: https://www.boston.gov/sites/default/files/imce-uploads/2019-01/eversource_substation_noi_12-5-18.pdf, and attached hereto as Exhibit CLF-GR-E-3.
[7] ISO-NE. May 1, 2015. CELT Report: 2015-2024 Forecast Report of Capacity, Energy, Loads, and Transmission. Available at: https://www.iso-ne.com/static-assets/documents/2015/05/2015_celt_report.xls.
[8] ISO-NE. May 1, 2022. CELT Report: 2022-2031 Forecast Report of Capacity, Energy, Loads, and Transmission. Available at: https://www.iso-ne.com/static-assets/documents/2022/04/2022_celt_report.xlsx.

annual increase from 2022 to 2024; their latest forecast shows a -0.1 percent decrease over the same period (see Figure 1).

Figure 1. ISO-NE forecast of Massachusetts summer peak load (GW)



Sources: 1) ISO-NE. 2015. Forecast Data File. 2015 CELT & RSP Forecast Detail: ISO-NE Control Area, New England States, RSP Sub-areas, and SMD Load Zones. 2) ISO-NE. 2022. Forecast Data File. 2022 CELT Forecast Detail: ISO-NE Control Area, New England States, RSP Sub-areas, and SMD Load Zones. Note: The labels "50/50" and "90/10" both describe summer peak conditions; 50/50 represents typical weather conditions while 90/10 represents extreme weather conditions (i.e. the upper bound of possible summer peak conditions).

Q. What C-EB-L peak load does Eversource anticipate for 2023?

A. According to Eversource's 2022 Override application, Eversource's projection of expected growth raises the newly defined C-EB-L load from 125 MW in 2021 up to 142

MW in 2030, an annual increase of 1.2 percent (or 1.8 percent based on the forecast provided in EFSB-PA-1).

Q. Has Eversource provided an updated estimate for C-EB-L peak load for 2030 based on ISO-NE most current forecasts?

A. No, Eversource does not appear to have updated its C-EB-L peak load forecast according to the 2022 ISO-NE CELT, though GreenRoots and CLF have filed one or more information requests seeking this information.

Q. Based on growth rates drawn from ISO-NE's latest publicly available forecasts, how might Eversource's C-EB-L peak load forecast change if it were updated?

A. Replacing Eversource's expected peak load growth rate from 2022 with ISO-NE's current peak load growth rate for Massachusetts results in a 2030 peak load projection of 142 MW (a 12 MW decrease from the Eversource's 2030 peak load projection—that's a 10 percent reduction) (see Table 3).

This 12 MW extra "headroom" in the C-EB-L reliability threshold is more than Eversource's expected "step load" impact ("atypical large changes in electric load"[9]) through 2025, making additional capacity unnecessary through at least 2026.[10]

Q. How does this tentative estimate of C-EB-L peak load in 2030 (consistent with ISO-NE's 2022 load forecast) compare to ISO-NE's 300 MW reliability threshold for the area?

A. Utilizing up-to-date CELT 2022 peak load forecasts to estimate C-EB-L peak load results in a peak load that is lower than Eversource's stated reliability threshold of 135 MW for the entire forecast period (see Table 4, which includes Eversource's peak load forecasts

[9] EFSB-N-6.
[10] EFSB-N-6 and EFSB-PA-1.

from both its 2022 Application to the EFSB for a Certificate of Environmental Impact and Public Interest (EFSB 22-01) and Table EFSB-PA-1 on page 1 of 4 of its response to EFSB-PA-1.

Table 4. Chelsea/East Boston/Lynn peak load comparing Eversource 2022 assumptions to adjustment using CELT 2022 (MW)

	2022	2023	2024	2025	2026	2027	2028	2029	2030	Annual % Change
Eversource 2022 load update (2022-2030)	129.4	131.7	133.9	136.3	138.9	139.5	140.2	140.9	141.8	1.2%
Adjustment using 2020 CELT growth rate (2022-2030)	129.4	129.5	129.5	129.5	129.5	129.5	129.5	129.5	129.5	0.05%
Eversource 2022 load update, EFSB-PA-1 (2022-2030)	128.7	133.6	135.6	137.4	143.3	145.2	147.3	147.6	148.0	1.8%
Adjustment using 2020 CELT growth rate (2022-2030)	128.7	128.8	128.8	128.8	128.8	128.8	128.8	128.8	128.8	0.05%

Sources: AEC calculations based on page 18 of Eversource's Application in: Commonwealth of Massachusetts Energy Facilities Siting Board. 2022. EFSB 22-01. and ISO-NE. 2022. Forecast Data File. 6.2 Forecasts Used in Transmission Planning and EFSB-PA-1 Table 2.

Q. What is your understanding as to when an EFSB decision is expected with regards to the East Eagle Street Substation?

A. My understanding is that an EFSB decision on the East Eagle Street Substation is expected in late 2022 at the earliest (given the procedural schedule of Docket EFSB 14-04A and the permit delays described in Docket EFSB 22-01).

Q. Based on the tentative estimate of C-EB-L peak load provided in Table 3 above, in what year would the area's peak load exceed ISO-NE's reliability threshold?

A. The tentative C-EB-L peak load forecast provided in Table 4 above indicates that the C-EB-L Load Area would not exceed ISO-NE's 135 MW reliability threshold before 2030.

Q. Has Eversource provided sufficient information to allow third-party review of its needs assessment for the East Eagle Street Substation?

A. No, Eversource has not provided sufficient information to allow adequate third-party review of its needs and reliability assessment of the proposed East Eagle Street Substation.

Q. What information would Eversource need to provide to allow a thorough third-party review of its needs assessment for the East Eagle Street Substation?

A. Eversource would need to provide detailed information regarding the C-EB-L Load Area's changing electric needs and the alternative solutions considered for addressing these needs. Without these materials, it is not possible to independently assess the need for additional transmission infrastructure. The materials submitted by Eversource to date neither demonstrate this need nor provide an up-to-date load and supply assessment for the area that would be served by an East Eagle Street Substation.

Q. Does Eversource offer any additional arguments for the need for an East Eagle Street Substation?

A. Yes, Eversource also suggests that electrification efforts and the increase in renewable energy resources may result in a reliability issue in the long run. However, the 2022 CELT forecast for Massachusetts, which accounts for electrification, predicts a significantly lower growth rate in demand (0.05 percent per year from 2022 to 2030), not

Eversource's high rate (1.2 to 1.8 percent per year from 2022 to 2030). Eversource's assumption of rising peak with electrification runs contrary to the ISO's expectations.

Q. Has Eversource explored alternative methods for maintain reliability in the C-EB-L Load Area without the new substation?

A. No, Eversource has not explored alternatives to a new East Eagle Street Substation.

Q. Has Eversource substantiated its argument that a new East Eagle Street Substation is needed to maintain reliability in the C-EB-L Load Area?

A. No, Eversource has not substantiated its argument that a new East Eagle Street Substation is needed to maintain reliability in the C-EB-L Load Area. Eversource has not made available its analysis of reliability issues in the C-EB-L Load Area and what year these issues might reasonably be expected to arise. According to Eversource's 2019 filing in Docket 14-04A and Eversource's 2022 filing in Docket 22-01, the reliability concerns are, first, increasing customer demand (and there are reasons to be highly skeptical of this claim, as addressed elsewhere in this testimony, due to the fact that ISO-NE's current load forecast are projected to remain relatively the same) and, second, that the transition towards clean energy and electrification efforts will increase peak (a claim that is contradicted by ISO-NE's CELT forecasts). In addition, Eversource's claims of need are based on two faulty assumptions:

1) That "step load" impacts from new commercial or industrial facilities will increase the C-EB-L Load Areas reliability requirement beyond the existing substation's capacity. Examination of Eversource's own forecasts together with ISO-NE's CELT forecast growth rates reveals that the existing substation provides sufficient capacity through at least 2025.

2) That renewable energy in the C-EB-L Load Area cannot impact on peak load: "No amount of solar photovoltaic ("PV") resources would address the need because solar facilities are highly intermittent and non-dispatchable resources that could reduce the load only temporarily during hours of the day when there is sunlight available but would not be available to reduce peak loads when needed."[11] Eversource's assessment does not include the important potential use of battery storage in shifting demand away from peak and/or renewable generation on to peak, thereby lowering reliability requirements. Massachusetts' Energy Storage Initiative requires 1,000 MWh of battery storage installed by 2025.[12] As of 2021, Massachusetts' electric distributors reported the installation of 179 MWh of batteries and an additional 874 MWh planned or in progress.[13]

Q. Does this conclude your testimony?

A. Yes.

[11] EFSB-PA-1.
[12] An Act to Advance Clean Energy, Chapter 227 of the Acts of 2018 ("Act"), Section 20.
[13] https://www.mass.gov/info-details/esi-goals-storage-target.

Exhibit CLF-GR-ES-1

CURRICULUM VITAE OF ELIZABETH A. STANTON

Applied Economics Clinic
Economic and Policy Analysis of Energy, Environment and Equity

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PROFESSIONAL EXPERIENCE

Applied Economics Clinic, Arlington, MA. *Director and Senior Economist*, February 2017 – Present.

The Applied Economics Clinic provides technical expertise to public service organizations working on topics related to the environment, consumer rights, the energy sector, and community equity. Dr. Stanton is the Founder and Director of the Clinic (www.aeclinic.org).

Liz Stanton Consulting, Arlington, MA. Independent Consultant, August 2016 – January 2017.

Providing consulting services on the economics of energy, environment and equity.

Synapse Energy Economics Inc., Cambridge, MA. *Principal Economist*, 2012 – 2016.

Consulted on issues of energy economics, environmental impacts, climate change policy, and environmental externalities valuation.

Stockholm Environment Institute - U.S. Center, Somerville, MA. *Senior Economist*, 2010 – 2012; *Economist*, 2008 – 2009.

Wrote extensively for academic, policy, and general audiences, and directed studies for a wide range of government agencies, international organizations, and nonprofit groups.

Global Development and Environment Institute, Tufts University, Medford, MA. *Researcher*, 2006 – 2007.

Political Economy Research Institute, University of Massachusetts-Amherst, Amherst, MA. *Editor and Researcher – Natural Assets Project*, 2002 – 2005.

Center for Popular Economics, **University of Massachusetts-Amherst**, Amherst, MA. *Program Director*, 2001 – 2003.

EDUCATION

University of Massachusetts-Amherst, Amherst, MA

Doctor of Philosophy in Economics, 2007

New Mexico State University, Las Cruces, NM

Master of Arts in Economics, 2000

School for International Training, Brattleboro, VT

Bachelor of International Studies, 1994

AFFILIATIONS

Global Development and Environment Institute, Tufts University, Medford, MA.

Senior Fellow, Visiting Scholar, 2007 – 2020

PAPERS AND REPORTS

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Adjunct Professor, Program in Intercultural Management, Leadership, and Service, 2004

CV dated May 2022

EXHIBIT CLF-GR-ES-2

COMMONWEALTH OF MASSACHUSETTS
ENERGY FACILITIES SITING BOARD

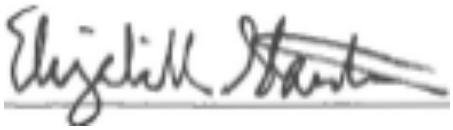
Petition and Application of NSTAR Electric Company d/b/a Eversource Energy for a Certificate of Environmental Impact and Public Interest pursuant to G. L. c. 164, §§ 69K-69O	Docket No. EFSB 22-01

Affidavit of Elizabeth A. Stanton

Elizabeth A. Stanton does hereby depose and say as follows:

I, Elizabeth A. Stanton, on behalf of Conservation Law Foundation and GreenRoots, certify that information and materials provided with this testimony were prepared by me or under my supervision and are true and accurate to the best of my knowledge and belief.

Signed under the pains and penalties of perjury this 20th day of May 2022.



Elizabeth Stanton

Exhibit CLF-GR-ES-3

EVERSOURCE SUBSTATION: NOTICE OF INTENT, ATTACHMENT A

Attachment A
Notice of Intent Narrative

- Introduction
- Site Description
- Work Description
- Mitigation Measures
- Regulatory Compliance
- Conclusion

Attachment A
Notice of Intent Narrative

This Notice of Intent (NOI) is submitted pursuant to the requirements of the Massachusetts Wetlands Protection Act (MGL Chapter 131, Section 40) and its implementing regulations (310 CMR 10.00).

1.1 Introduction

NSTAR Electric Company d/b/a Eversource Energy (Eversource), is proposing preliminary site preparation and soil remediation activities associated with the planned construction of Substation 131 on a previously developed and vacant Eversource-owned parcel of land located at Lot 2 Condor Street in East Boston (the "Project"). Please refer to Figures 1 and 2, which depict the site locus on a USGS topographical map and orthophoto aerial map, respectively.

These preliminary site clean-up activities are necessary to facilitate the planned construction of Substation 131, which is a fundamental component of NSTAR's Mystic-East Eagle-Chelsea Reliability Project ("MEECRP"). MEECRP involves the construction of two new underground electric transmission cables being installed to interconnect the planned new substation into the existing electrical grid at Mystic Substation in Everett and Chelsea Substation in Chelsea. The MEECRP is designed to address capacity and reliability needs in the surrounding community and to meet customers' growing electricity requirements. The planned construction of the substation will be submitted to the Boston Conservation Commission (BCC) for review and approval in a future NOI.

A limited portion of the proposed site preparation and soil remediation activities is located in previously developed and degraded upland areas within the 100-foot buffer zone to coastal bank associated with Chelsea Creek. The site is also located within the Chelsea Creek Designated Port Area. No activities within coastal or inland wetland resource areas are proposed and the Project will be conducted so as to not result in any temporary or permanent impacts to adjacent resources. As such, Eversource respectfully requests that the BCC issue an

Order of Conditions approving the work described in this NOI and as shown on the accompanying plans.

1.2 Site Description

The preliminary site preparation and soil remediation activities are located on an approximately 27,389-square foot parcel of land located in East Boston, Massachusetts. The site, a previously developed property, is generally level, clear of structures and sparsely vegetated. Historically, the site was used for railway and trolley maintenance and municipal public works. Today the site contains stockpiles of dirt, gravel and debris interspersed with abandoned infrastructure and is largely covered with deteriorated pavement. Limited portions of the parcel are overgrown with invasive species and other weedy plants.

The Project site is adjacent to a larger tract of developed land that is owned by the City of Boston. City property surrounds the site to the north, east, and south. The City parcel to the east and south of the site is currently used by the Boston Department of Public Works ("DPW") for storage of equipment, vehicles and salt storage. The site abuts Condor Street to the west. A recreational area that includes playing fields and basketball courts abuts the other side of Condor Street. To the north of the site, beyond an approximately 80-foot wide strip of City-owned land that abuts the property, is Chelsea Creek.

The Project property was once part of the surrounding City parcel and the property has been configured to facilitate the City of Boston's planned construction of a new East Boston Police Station on the corner of Condor and East Eagle Streets immediately south of the Project area. Residential neighborhoods are located further south and west of the site, across from East Eagle and Condor Streets, respectively. A fish processing facility owned by Channel Fish and other industrial uses are located beyond the adjacent City property further to the east.

The Project area is located south of Chelsea Creek, which is a tidally-influenced waterway that separates the City of Chelsea from Boston and Revere. In the area of the Project site, the waterway is used by oil tankers to transport fuel to nearby oil tank facilities. Chelsea Creek eventually turns southwest and discharges into the Mystic River, which empties into Boston Harbor.

According to the most recently available data provided by the Massachusetts Natural Heritage and Endangered Species Program ("NHESP"),[1] no Priority Habitat of Rare Species, Estimated Habitat of Rare Wildlife, or Certified Vernal Pools occur within the Project site. Figure 3 depicts environmental features proximate to the Project site. Additionally, the site is not located within an Area of Critical Environmental Concern ("ACEC"). According to the Massachusetts Department of Environmental Protection ("MassDEP"), the site is not located in an area

[1] NHESP, 2017. Massachusetts Natural Heritage Atlas. 14th Edition.

designated as an Outstanding Resource Water.[2] No portion of the site is located within a Zone II Interim Wellhead Protection Area.[3]

Because the Project area has been previously filled, the Natural Resources Conservation Service[4] soil survey classifies the portion of the site where preliminary site clean-up activities are proposed as urban fill. Adjacent land on East Eagle Street and Condor Street and the surrounding area of East Boston is mapped as urban land, wet substratum. The most recently issued Flood Insurance Rate Map (FIRM)[5] for the area, map number 25025C0019J, indicates that the Project site is not within the mapped floodplain for the 1% annual chance flood event, and the entire site is above the base flood elevation of Chelsea Creek (El. 10 NAVD88, see Figure 4 – FEMA Firmette).

Wetland resource areas proximate to the Site are depicted on the Project plans and in Figure 3 and are described below.

1.2.1 Wetland Resource Area Descriptions

Wetland resource areas adjacent to the site were evaluated and identified by VHB in accordance with methods developed by the DEP[6] and the U.S. Army Corps of Engineers.[7] The following sections describe relevant wetland resource areas that are regulated under the WPA regulations (310 CMR 10.00). Project activities are not proposed within any of the listed wetland resource areas and are limited to developed upland areas within the 100-ft buffer zone only.

The site is located within the Chelsea Creek Designated Port Area. Other state-regulated wetland resource areas identified proximate to the Project location include 25-foot Riverfront Area, Land Subject to Coastal Storm Flowage and 100-foot buffer zone to Coastal Bank and Coastal Beach. These resource areas are described in relation to the Project and defined as under the WPA Regulations as follows:

- Designated Port Areas (DPAs): As defined at 310 CMR 10.26(2), DPAs are areas designated in 301 CMR 25.00 of the Coastal Zone Management Regulations. The Massachusetts Office of Coastal Zone Management ("CZM") has produced maps showing DPA boundaries.[8] As per 310 CMR 10.26(1), only land under the ocean in DPAs is likely to be significant to marine fisheries, storm damage prevention and/or flood control. The entirely of the site is located within the Chelsea Creek DPA.

[2] DEP, 2010. Designated Outstanding Resource Waters of Massachusetts.
[3] DEP, 2012. Approved Wellhead Protection Areas (Zone II).
[4] Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey.
[5] Federal Emergency Management Agency, National Hazard Flood Layer, Digital Flood Insurance Rate Map (DFIRM).
6 DEP, 1995. Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act.
7 USACE, 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0.
8 Massachusetts Office of Coastal Zone Management, 2011. Designated Port Area Boundary Maps.

- Riverfront Area ("RFA"): As defined at 310 CMR 10.58(2)(a), a Riverfront Area is the area of land between a river's mean annual high water line and a parallel line measured horizontally (25 feet in Boston). The RFA may include or overlap other resource areas or their buffer zones. Riverfront Area itself does not have a buffer zone. No activities are proposed within RFA, which is beyond the proposed limit of work.
- Coastal Bank (Buffer Zone Only): As defined by 310 CMR 10.30(2), Coastal Bank is "the seaward face or side of any elevated landform, other than a coastal dune, which lies at the landward edge of a coastal beach, land subject to tidal action, or other wetland." Coastal Bank adjacent to the Project Site was delineated on the plans in accordance with Wetlands Program Policy 99-1, *Definition and Delineation Criteria for Coastal Banks*. No activities are proposed that will alter Coastal Bank, which is outside the limit of work.
- Coastal Beach (Buffer Zone Only): As defined by 310 CMR 10.27(2), Coastal Beach means unconsolidated sediment subject to wave, tidal and coastal storm action which forms the gently sloping shore of a body of salt water and includes tidal flats. Coastal beaches extend from the mean low water line landward to the dune line, coastal bankline or the seaward edge of existing human-made structures, when these structures replace one of the above lines, whichever is closest to the ocean. As Per 310 CMR 10.26(1), Coastal Beaches are not likely to be significant to marine fisheries, storm damage prevention or flood control. No Project activities are proposed within Coastal Beach, which is located within Chelsea Creek and is well outside of the limit of work.
- Land Subject to Coastal Storm Flowage: Land Subject to Coastal Storm Flowage ("LSCSF") is defined in the Act at 310 CMR 10.04 as land subject to any inundation caused by coastal storms up to and including that caused by the 100-year storm, surge of record or storm of record, whichever is greater. No Project activities are proposed within LSCSF.

Designated Port Area

The entirety of the Project area is located within the Chelsea Creek DPA. Under the regulations, in designated port areas coastal beaches, tidal flats, and other coastal resource areas are not likely to be significant to marine fisheries, storm damage prevention or flood control. Designated port areas are portions of developed harbors and, as such, relatively high concentrations of contaminants, from vessel discharges and point and non-point source discharges, are likely to occur in port areas. Water circulation patterns tend to distribute pollution throughout port areas, and to other areas which are likely to be significant to other interests of M.G.L. c. 131, § 40. Land forms in designated port areas are typically greatly altered from their natural shape, and coastal engineering structures often have replaced natural protection for upland areas from storm damage and flooding.

Land under the ocean in designated port areas may be significant to marine fisheries, storm damage prevention and flood control. No Project activities are proposed within land under the ocean. In addition, these preliminary activities are proposed to facilitate the planned substation construction, which is a supporting DPA use and an accessory to a water-dependent use. The planned construction of the substation is integral in function to the operation of water-dependent industrial uses that exist within the DPA, as it will increase the

reliability of the transmission supply supporting those uses, which includes fuel import terminals that are critical to maintaining the regional fuel supplies.

Project activities will incorporate Best Management Practices and an approved erosion control program so as to prevent potential impacts to adjacent resources, such as land under the ocean, that are present within Chelsea Creek.

Riverfront Area

The WPA regulations at 310 CMR 10.58 establish a 25-foot Riverfront Area associated with Chelsea Creek. As Chelsea Creek is a tidal river, the RFA is measured horizontally from mean high water ("MHW"), rather than from the top of the riverbank (310 CMR 10.58(2)(a)(2)(c)). The present MHW shoreline is located at elevation 4.33' NAVD88 (10.8' BCB). There is no buffer zone associated with the RFA. The RFA proximate to the Project site consists of the partially vegetated bank of Chelsea Creek, existing fencing and debris, and adjacent previously developed and degraded impervious areas. No Project activities are proposed within the 25-foot Riverfront Area proximate to the site.

Coastal Bank and Coastal Beach

The WPA regulations at 310 CMR 10.02(2)(b) establish a 100-foot buffer zone from the limits of top of Coastal Bank and the landward limit of Coastal Beach, which is the toe of a Coastal Bank. Since the limit of the buffer to Coastal Bank is further landward than the limit of the buffer to Coastal Beach at the Project site, the former is depicted in Figure 3 and on the Project plans, and as described in this NOI. The buffer zone to Coastal Bank within the Project area consists primarily of previously developed paved surfaces, disturbed areas and debris piles.

Land Subject to Coastal Storm Flowage

There is LSCSF proximate to the site associated with Chelsea Creek. There are no performance standards for LSCSF under the Act and there is no buffer zone associated with LSCSF. No Project activities are located within LSCSF. As such, Project activities will not result in a decrease of flood storage capacity within LSCSF or impact LSCSF's ability to provide storm damage prevention or flood control.

1.3 Work Description

The Project consists of preliminary site preparation, demolition, clean-up and soil remediation activities. The proposed work is entirely within previously developed, disturbed and degraded upland areas; the majority of work being within areas currently consisting of paved surfaces or containing debris and deteriorated infrastructure. The Project will incorporate appropriate Best Management Practices (BMPs) to ensure that jurisdictional wetland resource areas within the vicinity of the Project are not adversely affected as a result of the site-cleanup activities.

Project activities will take place over approximately 5 to 6 months. A limited portion of Project activities and required access will take place on adjacent City of Boston property which will be facilitated through a license agreement with the City for temporary access.

1.3.1 Site Preparation & Demolition

As described above, the site has a history of use for railway and trolley maintenance, but no buildings from that use remain on the property. The substation site and adjacent City of Boston property has more recently been used by the City of Boston Department of Public Works for vehicle and material storage, stockpiling of debris, and parking of school buses and temporary trailers. As such, the 100-foot buffer zone and the site at large currently contain previously developed and degraded paved areas interspersed with old fences, debris piles, and sparse invasive vegetation typical of urban environments.

To prepare the site for soil remediation and the subsequent planned construction of the substation, the site first needs to be cleared of the existing debris piles; deteriorated infrastructure will be removed (e.g., old utility poles, overhead cables, electric infrastructure, old lighting, a deteriorated shed, and fences); abandoned concrete foundations, concrete slabs and paved areas will be demolished and removed; and small patches of invasive vegetation will be cleared and grubbed. Site preparation and demolition activities will be conducted in accordance with an approved erosion and sedimentation control plan to prevent any transport of sediment or debris beyond the approved limit of work, and all material will be removed from the site and properly disposed of. Please see the Site Preparation Plans in Attachment B prepared by Burns & McDonnell for additional information.

1.3.2 Soil Remediation

Once site preparation and demolition activities are complete, a soil remediation program will be implemented. Two Release Tracking Numbers ("RTNs") have been assigned to the site by the Massachusetts Department of Environmental Protection. RTN 3-30299 was assigned to the site in September 2011 due to the presence of heavy metals at the property at concentrations above reportable concentrations ("RCs") for soil and groundwater. RTN 3-33978 was assigned to the site in December 2016 due to the presence of petroleum constituents and heavy metals at concentrations above RCs for soil. A review of the Phase II Comprehensive Site Assessment ("CSA") Report, Supplemental Phase II CSA Report, and Phase IV Remedy Implementation Plan prepared by Weston & Sampson identified three areas of contamination at the site where levels of lead and cadmium were detected in concentrations above MassDEP Upper Concentration Limits ("UCLs") in soil and cadmium in groundwater. Due to the contamination identified at the site, the planned remediation activities will be conducted under a Release Abatement Measure (RAM). The purpose of the RAM will be to manage soil and groundwater during remediation activities. Remediation of the site will be done in a manner that does not jeopardize public health and safety during cleanup. The planned remediation will improve soil and groundwater quality and mitigate future potential exposure to contaminants from the site.

Soil Remediation & Management

Based on an initial review of soil contamination identified at the site, the volume of soil requiring remediation is approximately 10,000 tons. Soil assessment activities identified four areas requiring remediation as summarized below:

- Area 1 – North Central Portion of Site: 100 feet by 40 feet by 15 feet deep
- Area 2 – Northwestern Portion of Site: 40 feet by 30 feet by 15 feet deep
- Area 3 – Southwestern Portion of Site: 50 feet by 40 feet by 7 feet deep
- Area 4 – Southeastern Portion of Site: 30 feet by 30 feet by 7 feet deep

The proposed soil remediation to be conducted within the 100-foot buffer zone is limited to an approximately 80-foot by 20-foot area associated with Areas 1 and 2 and excavation of soil will be conducted up to 15 feet below grade (please see the Soil Remediation Figures provided in Attachment C). Excavated soil will be stockpiled on-site and segregated by the following soil types, as determined through soil characterization sampling:

- Type C-1 Soil and Type C-2 Soil contain OHM concentrations above RCS-1 but below the criteria for Massachusetts Unlined or Lined Landfills, respectively;
- Type D-1 Soil and Type D-2 Soil contain OHM concentrations above the criteria for Massachusetts Unlined and Lined Landfills, but meet acceptance criteria for a permitted asphalt batch facility or a permitted thermal desorption facility, respectively;
- Type D-3 Soil and Type D-4 Soil do not meet acceptance criteria at Massachusetts Landfills but meet acceptance criteria for a permitted non-hazardous waste out of state Subtitle D landfill as daily cover and for disposal, respectively;
- Type E-1 Soil exceeds federal toxicity characteristic leaching procedure (TCLP) limits or otherwise meets the definition of a state or federal hazardous waste and meets acceptance criteria for a permitted hazardous waste out of state Subtitle B Resource Conservation and Recovery Act (RCRA) treatment facility of Subtitle C RCRA landfill facility.
- Type E-3 Soil includes soils that exceed federal TCLP limits for metals that are treated on Site using soil stabilization techniques to render the soils non-hazardous.

As described above, soil generally fits into two categories: non-hazardous (Types C & D) and hazardous (Type E) and will be managed accordingly. The non-hazardous soils will either be live-loaded and transported directly to the receiving facility or temporarily stored in a designated staging area located on the eastern portion of the site.

The hazardous soils (Type E soil) will be excavated and treated on-site within the Area of Contamination prior to disposal. On-site treatment will consist of metal stabilization, using either Portland cement or an alkaline based reagent (i.e., calcium oxide or calcium phosphate solutions) to render the material non-hazardous prior to off-Site disposal. Post treatment soil samples will be collected and submitted for TCLP analysis, to confirm that the stabilization treatment was successful in rendering the soil non-hazardous.

The soil will be segregated by soil type as described above and placed in separate storage bins. The storage bins will be constructed of concrete jersey barriers and located on an impervious surface (i.e., asphalt pavement, concrete or polyethylene sheeting). The stockpiled material will be placed on and covered with polyethylene sheeting prior to loading and transportation for off-Site disposal. The following BMPs are recommended for implementation during soil remediation and disposal procedures:

- The soil treatment and temporary storage areas will be located outside the 100-foot buffer zone.
- Erosion controls (i.e. straw waddles) and fencing will be placed around the perimeter of the work areas to prevent trespassing runoff.
- Prior to any work within the Type E areas (AOCs 1 and 3), two layers of 10-mil polyethylene sheeting will be installed adjacent to the excavation for stockpiling and along the loading areas.
- Transportation trucks will be staged outside of the staging area until individual loading begins.
- All trucks will be lined with 10-mil polyethylene sheeting prior to loading any Type E Soil.
- For Type E soil, a curtain made of 6-mil polyethylene sheeting will be used to cover the loading side of the trucks and will extend to the 10-mil polyethylene sheeting covering the end of the loading zone to prevent any spillage from the bucket of the loading equipment from contacting the outside of the truck.
- The buckets of the machines that will be excavating soil within Type E areas will be cleaned into the excavation following the remediation activities. Surfaces will also be scraped and/or brushed to remove any soil.
- Material from decontaminating the equipment within the Type E area will be either placed in 55-gallon drums or the Type E stockpile and disposed of according to state and federal regulations.
- Collection and removal of accumulated debris will be performed on a daily basis and disposed of in accordance with state and federal regulations.

Groundwater Management/Remediation

The groundwater table at the site is relatively shallow, at an average depth of 10 feet below grade. Based on the anticipated depths of soil work up to 15 feet below grade, dewatering activities may be necessary to facilitate the required soil work. Dewatered groundwater within the site will receive pretreatment prior to being discharged to a catch basin located on Condor

Street and into stormwater drainage system managed by the Boston Water and Sewer Commission ("BWSC"). This stormwater drainage system ultimately discharges to the Chelsea Creek via BWSC Outfall 29M049. Prior to discharging treated groundwater to the BWSC stormwater drainage system, Eversource will submit a Notice of Intent for coverage under the United States Environmental Protection Agency ("U.S. EPA") Remediation General Permit ("RGP"). A dewatering discharge permit will also be obtained from BWSC prior to the discharging of any treated groundwater to the stormwater drainage system.

Depending on the level of treatment required, the treatment system may be comprised of flocculation tubes, a 10,000 gallon open top fractionation tank with weirs, and/or a series of bag filters/media vessels (i.e., organoclay or granulated activated carbon [GAC]). Dewatered groundwater will be pumped from the trench, through the flocculants tubes and into the open top fractionation tank. From the fractionation tank, the water will be pumped through a series of bag filters and/or media vessels for the removal of total suspended solids ("TSS"), metals, petroleum, polycyclic aromatic hydrocarbons ("PAHs"), and other pollutants identified in the influent, as necessary.

1.3.3 Interim Grading

Subsequent to soil remediation activities, the site will be graded to an interim condition to facilitate the planned construction of the substation (see Interim Grading Plan in Attachment B). Any fill required will consist of clean fill material obtained from an approved off-site source. Reuse of any on-site materials and stockpiles shall be in accordance with the Project's geotechnical investigations. Excavation and backfilling of materials will be coordinated with the Project's soil management and demolition plan.

1.4 Mitigation Measures

A suite of mitigation measures is proposed to prevent the potential for any short- or long-term impacts to wetland resource areas in the vicinity of the Project. Please see the erosion and sedimentation control plan and notes within the Site Preparation Plans provided in Attachment B. BMPs for the soil remediation program are described above in Section 1.3.2. Additional mitigation measures proposed for this Project are described below.

1.4.1 Erosion and Sediment Controls

An erosion and sedimentation control program will be implemented to minimize temporary impacts to wetland resource areas during the proposed preliminary site clean-up and soil remediation activities (see the Erosion and Sediment Control sheet in Attachment B). The

program incorporates BMPs specified in guidelines developed by the DEP[9] and the U.S. Environmental Protection Agency (EPA).[10]

Proper implementation of the erosion and sedimentation control program will:

- Minimize exposed soil areas through sequencing and permanent stabilization;
- Place erosion control structures to manage stormwater runoff and erosion; and
- Establish stabilization of work areas as soon as practicable.

The following sections describe the control options and practices that may be followed during Project activities. These practices comply with criteria contained in the NPDES General Permit for Discharges from Large and Small Construction Activities issued by the EPA.

Non-Structural Practices

Non-structural practices to be used during the Project may include pavement sweeping and dust control. These practices will be initiated as soon as practicable in appropriate areas at the site.

Pavement Sweeping

Paved portions of the site proximal to the work zone shall be swept as needed during Project activities. The sweeping program will remove sediment and other contaminants directly from paved surfaces before their release into stormwater runoff. Pavement sweeping has been demonstrated to be an effective initial treatment for reducing pollutant loading into stormwater.[11]

Dust Control

The erosion and sediment control program includes provisions to minimize the generation of dust during dry and windy conditions. When necessary, larger areas of exposed soil will be wetted to prevent wind borne transport of fine grained sediment. Enough water shall be applied to wet the upper 0.5 inches of soil. The water will be applied as a fine spray in order to prevent erosion. A water truck will be kept on the property (or at a nearby location) to facilitate this practice.

Spill Prevention and Response Plan

During Project activities, a spill containment kit will be kept on site at all times. In the event that there is an accidental release of petroleum or other product into a wetland or waterbody, the Boston Conservation Commission will be notified along with appropriate emergency

[9] DEP, 1997. Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas: A Guide for Planners, Designers, and Municipal Officials.
[10] EPA, 2007. Interim Developing Your Stormwater Pollution Prevention Plan: A Guide for Construction Sites. Office of Water Report EPA 833-R-060-04.
[11] U.S. Environmental Protection Agency, 1979. Demonstration of Nonpoint Pollution Abatement Through Improved Street Cleaning Practices.

response agencies. Equipment will be serviced or maintained offsite and kept in a condition that prevents leakage or discharge of pollutants during the Project period.

Structural Practices

Structural erosion and sedimentation controls that may be used on the site include erosion control barriers, stabilized access points, and catch basin inlet protection (see Erosion and Sedimentation Controls Notes and Details sheet in Attachment B). In addition, a chain link fence will be installed around the property.

Erosion Control Barriers

Prior to any ground disturbance, demolition, or clearing and grubbing, a perimeter barrier of geotextile silt fencing, straw wattles and/or compost filter tubes (i.e., silt sock) or some combination thereof will be installed at the limit of work as shown on the plans provided with this NOI. Where possible, in any unpaved areas, barriers will be staked and entrenched into substrate to the extent practicable to prevent underflow.

If sediment has accumulated to a depth that impairs proper functioning of a barrier, it will be removed by hand or by machinery operating upslope of the barriers. This material will be either reused at the site or disposed of at a suitable offsite location. Any damaged sections of erosion control barriers will be repaired or replaced immediately upon discovery.

Stabilized Access Points

A temporary stone construction entrance will be installed at access points to the work area to prevent the offsite transport of sediment by vehicles. The stabilized entrances and exits will be at least fifty feet long and will consist of a 4-inch thick layer of crushed stone (1.5 to 2.5 inches in diameter). The stone will be placed over a layer of non-woven filter fabric. The anti-tracking pads will remain in place until Project activities are complete (see Temporary Stone Construction Entrance Detail on Erosion and Sedimentation Controls Notes and Details sheet in Attachment B).

Catch Basin Inlet Protection

The inlets of existing catch basins in the vicinity of the work will be protected from sediment inflow during the work period by surrounding them with haybale and fabric drop inlet protection. If sediment has collected in catch basin inlet protection devices to a point where it impairs proper functioning, it will be removed and will be either reused onsite or disposed of at a suitable offsite location.

1.5 Regulatory Compliance

As demonstrated below, the Project complies with all applicable performance standards under the WPA regulations. Project activities are located within the Chelsea Creek DPA and limited

to the 100-foot buffer zone which consists entirely of previously developed and disturbed areas.

1.5.1 Designated Port Areas (310 CMR 10.26)

Project activities will be conducted within the limits of the Chelsea Creek DPA. Performance standards for this resource area only exist when land under the ocean is impacted and is found to be significant to the protection of marine fisheries, storm damage prevention or flood control. The Project will not impact land under the ocean and is therefore not subject to performance standards for DPAs.

1.5.2 100-ft Buffer Zone

A limited portion of the north extent of the Project area is located within the 100-ft buffer zone associated with the top of Coastal Bank (see Site Preparation Plans in Attachment B). As described above, the majority of the area within the 100-ft buffer zone consists of existing impervious (i.e. paved, concrete) surfaces. The Project will not alter the vegetated areas (i.e., existing vegetation growing at the bank of Chelsea Creek) within the buffer zone that is beyond the limit of work, as such, the ability of the existing buffer zone to protect the interests identified in the Act will be maintained or improved.

In addition, work proposed in the 100-foot buffer zone complies with the requirements contained in 310 CMR 10.53(1) of the WPA regulations where, "*the issuing authority should consider the characteristics of the buffer zone, such as the presence of steep slopes, that may increase the potential for adverse impacts on resource areas. Conditions may include limitations on the scope and location of work in the buffer zone as necessary to avoid alteration of resource areas. The issuing authority may require erosion and sedimentation controls during construction, a clear limit of work, and the preservation of natural vegetation adjacent to the resource area and/or other measures commensurate with the scope and location of work with the buffer zone to protect the interests of the Act*."

Project activities will be in compliance with these requirements. A clear limit of work is shown on the Project plans and will be demarcated in the field to prevent any activity beyond the approved Project limits; an erosion and sedimentation control program and suitable BMPs will be implemented to prevent any potential adverse impacts to resource areas proximate to Project activities; and all existing vegetation along the bank of Chelsea Creek will be maintained as this area is well outside the proposed limit of work.

1.6 Conclusion

The proposed site preparation, clean-up and soil remediation activities described herein are located within the Chelsea Creek DPA and outside of all other WPA resource areas; and are limited to the outer 100-ft buffer zone only within previously developed and disturbed areas. No direct temporary or permanent impacts to any wetland resource areas are proposed. Protection of resource areas proximate to the site will be achieved through design planning, BMPs and on-site impact avoidance and minimization. As such, Eversource respectfully

requests that the Boston Conservation Commission find the activities described in this NOI adequately protective of the public interests identified in the WPA and issue an Order of Conditions allowing the Project to proceed as described herein.