Erin Whoriskey
Lead Environmental Scientist
NE Environmental Permitting

Christopher Newhall
Sr. Environmental Specialist
Licensing & Permitting

June 30, 2023

Secretary Rebecca Tepper
Executive Office of Energy and Environmental Affairs
Attn: MEPA Office
100 Cambridge Street, Suite 900
Boston, Massachusetts 02114

Subject: New England Power Company d/b/a National Grid and
NSTAR Electric Company d/b/a Eversource Energy
Acushnet to Fall River Reliability Project
Single Environmental Impact Report – EEA No. 15941
Acushnet, New Bedford, Dartmouth and Fall River, Massachusetts

Dear Secretary Tepper:

The New England Power Company d/b/a National Grid (NEP) and NSTAR Electric Company d/b/a Eversource Energy (Eversource) (collectively, the Companies) are pleased to submit the enclosed Single Environmental Impact Report (SEIR) for the Acushnet to Fall River Reliability Project (AFRRP) located in the municipalities of Acushnet, New Bedford, Dartmouth and Fall River.

An Expanded Environmental Notification Form (EENF) was submitted to the Massachusetts Environmental Policy Act (MEPA) Unit on November 15, 2018, and Noticed in the Environmental Monitor on November 21, 2018. The Certificate on the EENF was issued on December 28, 2018, allowing the Companies to prepare and submit a SEIR. This SEIR was prepared in accordance with the Secretary's Certificate on the EENF and in compliance with 301 CMR 11.07(6) of the MEPA regulations. The SEIR provides a summary of minor project modifications made since the filing of the EENF, and addresses the items scoped in the Secretary's Certificate, including responding to comments received from parties who commented on the EENF. Concurrent with the filing of this SEIR, the Companies are also submitting the enclosed Notice of Project Change (NPC) due to a lapse of time as more than three years has passed since the publication of the Environmental Notification Form (ENF) and the publication of the notice of the availability of the SEIR. There has been no material change in the Project, and, as demonstrated in the following narrative, the unavoidable environmental impacts have not changed significantly since the EENF filing.

The proposed Project will address the ISO New England, Inc. (ISO-NE) determination of a need for additional transmission capacity within a load pocket consisting of Fall River, Westport, Dartmouth, Freetown, New Bedford, Acushnet, Fairhaven, Rochester, Mattapoisett, Marion, and Wareham in Massachusetts, as well as Jamestown, Newport, Middletown, Portsmouth, Tiverton, and Little Compton in Rhode Island.

The Companies respectfully request that the Notice of Availability for this EENF be published in the July 10, 2023 issue of the *Environmental Monitor* to initiate the public review and comment period, which will extend for a period of 30 days through August 9, 2023. The Secretary's Certificate will be issued on August 16, 2023, in accordance with 301 CMR 11.08(4). Copies of the SEIR have been distributed in accordance with 301 CMR 11.16 (see attached Circulation List).

A digital version of the SEIR can be accessed on the Project website at https://www.southcoastreliabilityprojects.com/Acushnet-FallRiver/index.html. A paper copy of the SEIR will be made available for review by the general public in the Acushnet, New Bedford, Dartmouth, and Fall River Public Libraries. Paper copies of the SEIR can be made available upon request.

Thank you in advance for your consideration of the AFRRP. Please do not hesitate to contact me at 781 907-3598, or Erin.Whoriskey@nationalgrid.com, or Chris Newhall, 508-735-0387 or christopher.newhall@eversource.com, if you have any questions or require additional information.

Sincerely,

Erin Whoriskey
Lead Environmental Scientist
National Grid

Christopher Newhall
Sr. Environmental Scientist
Licensing & Permitting

Attachments

cc: Circulation List (attached)
D. Beron, NEP
L. Palone-Clarke, Eversource
W. Levine, NEP
L. Peloquin Shea, NEP
K. Hanecak, POWER
J. Durand, POWER

June 30, 2023

NSTAR ELECTRIC COMPANY d/b/a EVERSOURCE ENERGY

AND NEW ENGLAND POWER COMPANY d/b/a NATIONAL GRID

Acushnet to Fall River Reliability Project

Single Environmental Impact Report

Filed in Accordance with the Massachusetts Environmental Policy Act 301 CMR 11.00

PROJECT NUMBER:
146784 and 151783

PROJECT CONTACT:
Jamie Durand
EMAIL:
jamie.durand@powereng.com
PHONE:
401-439-3020

POWER ENGINEERS

Acushnet to Fall River Reliability Project

Single Environmental Impact Report

Filed in Accordance with the Massachusetts Environmental Policy Act 301 CMR 11.00

PREPARED FOR:

NSTAR ELECTRIC COMPANY d/b/a EVERSOURCE ENERGY
AND NEW ENGLAND POWER COMPANY d/b/a NATIONAL GRID

PREPARED BY:

POWER ENGINEERS CONSULTING, PC
2 HAMPSHIRE STREET
FOXBOROUGH, MA 02035

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TABLES:

APPENDICES:

ACRONYMS AND ABBREVIATIONS

AFRRP	Acushnet to Fall River Reliability Project
ANSI	American National Standards Institute
APE	Area of Potential Effects
ASAPP	Archaeological Site Avoidance and Protection Plan
BLSF	Bordering Land Subject to Flooding
BMP	Best Management Practice
BVW	Bordering Vegetated Wetland
BWSC	Bureau of Waste Site Cleanup
CBO	Community-based organizations
Certificate	Certificate of the Secretary of Energy and Environmental Affairs
C.F.R.	Code of Federal Regulations
CMP	Conservation and Management Permit
CMR	Code of Massachusetts Regulations
CO	Carbon Monoxide
Companies	NEP and Eversource (together, the Companies)
CWA	Clean Water Act
EE	energy efficiency
EENF	Expanded Environmental Notification Form
EFI	Environmental Field Issue
EFSB	Energy Facilities Siting Board
EIR	Environmental Impact Report
EJ	Environmental Justice
EJ Mapper Tool	EOEEA's Massachusetts Environmental Justice Populations Mapping Tool
ENF	Environmental Notification Form
EOEEA	Executive Office of Energy and Environmental Affairs
Eversource	NSTAR Electric Company d/b/a Eversource Energy
FAC	Facilities Design, Connections and Maintenance
GHG	Greenhouse Gas
GHG Protocol	MEPA Greenhouse Gas Policy and Protocol
I&METL	Installation and Maintenance of Electric Transmission Lines
IB	Inland Bank
IEEE	Institute of Electrical and Electronics Engineers
ISO-NE	Independent System Operator – New England
IVM	Integrated Vegetation Management
kV	Kilovolt
LGP	Low Ground Pressure
LID	Low Impact Development
LUW	Land Under Waterbodies and Waterways
MA	Massachusetts
MA DCR	Massachusetts Department of Conservation and Recreation
MA DFW	Massachusetts Division of Fisheries and Wildlife
MA DPH	Massachusetts Department of Public Health
MA DPU	Massachusetts Department of Public Utilities
MAID	Minimum Air Insulation Distances
MassDEP	Massachusetts Department of Environmental Protection
MassDFG	Massachusetts Department of Fish and Game
MassDOT	Massachusetts Department of Transportation
MA WPA	Massachusetts Wetlands Protection Act
MEPA	Massachusetts Environmental Policy Act

MESA	Massachusetts Endangered Species Act
M.G.L.	Massachusetts General Law
MHC	Massachusetts Historical Commission
MVAR	megavolt-ampere reactive
MVCD	Minimum Vegetation Clearance Distances
MW	megawatt
NEP	New England Power Company
NERC	North American Electric Reliability Corporation
NESC	National Electric Safety Code
NHESP	Natural Heritage and Endangered Species Program
NOI	Notice of Intent
Nox	Nitrogen Oxides
NPC	Notice of Project Change
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OPGW	Optical Groundwire
ORW	Outstanding Resource Waters
OWR	Outstanding Resource Waters
PAL	Public Archaeology Laboratory
PM	Particulate Matter
psi	per square inch
PV	photovoltaic
RAO	Response Action Outcome
RFA	Riverfront Area
RMAT	Resilient Massachusetts Action Team
ROW	Right-of-Way
Secretary	Secretary of Energy and Environmental Affairs
Section 106	Section 106 of the National Historic Preservation Act
SEIR	Single Environmental Impact Report
SEMA-RI	Southeastern Massachusetts and Rhode Island
Sox	Sulfur Oxides
State Register	State Register of Historic Places
SWPPP	Stormwater Pollution Prevention Plan
TMP	Traffic Management Plan
TVMP	Transmission Vegetation Management Program
ULSD	ultra-low sulfur diesel
USACE	United States Army Corps of Engineers
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VMP	Vegetation Management Plan
VOCs	Volatile Organic Compounds
WISCP	Wetland Invasive Species Control Plan

NOTICE OF PROJECT CHANGE FORM

Commonwealth of Massachusetts

Executive Office of Energy and Environmental Affairs ■ MEPA Office

Notice of Project Change

The information requested on this form must be completed to begin MEPA Review of a NPC in accordance with the provisions of the Massachusetts Environmental Policy Act and its implementing regulations (see 301 CMR 11.10(1)).

EEA # 15941		
Project Name: Acushnet to Fall River Reliability Project		
Street Address: Existing overhead electric transmission line rights-of-way within Acushnet, New Bedford, Dartmouth, and Fall River.		
Municipality: Acushnet, New Bedford, Dartmouth, and Fall River, Massachusetts	Watershed: Mount Hope Bay/ Narragansett Bay/ Buzzards Bay	
Universal Transverse Mercator Coordinates: UTM 18N NAD83 (Meters) Start: 825,445.6 Easting, 4,628,034.3 Northing End: 842,725.3 Easting, 4,623,958.7 Northing	Latitude: Start: -71.0858151 End: -70.8791877 Longitude: Start: 41.737431 End: 41.6963926	
Estimated commencement date: April 2024	Estimated completion date: May 2025	
Project Type: Utility, new transmission line	Status of project design: ~90 %complete	
Proponent: NSTAR Electric Company d/b/a Eversource Energy; New England Power Company d/b/a National Grid		
Street Address: NEP: 170 Data Drive, Waltham, MA 02451; Eversource: 247 Station Drive, Westwood, MA 02090		
Municipality:	State:	Zip Code:
Name of Contact Person: Karen Hanecak		
Firm/Agency: POWER Engineers Consulting, PC	Street Address: 2 Hampshire Street, Suite 301	
Municipality: Foxborough	State: MA	Zip Code: 02035
Phone: (774) 643-1821	Fax: (774) 643-1899	E-mail: Karen.Hanecak@powereng.com

With this Notice of Project Change, are you requesting:

a Single EIR? (see 301 CMR 11.06(8))	☒ Yes	☐ No
a Special Review Procedure? (see 301CMR 11.09)	☐ Yes	☒ No
a Waiver of mandatory EIR? (see 301 CMR 11.11)	☐ Yes	☒ No
a Phase I Waiver? (see 301 CMR 11.11)	☐ Yes	☒ No

Which MEPA review threshold(s) does the revised project meet or exceed (see 301 CMR 11.03)? Identify any new or modified review threshold(s) associated with the project change.

The Project meets and/or exceeds MEPA review threshold for an Environmental Impact Report (EIR):
***Wetlands, Waterways and Tidelands**, Alteration of one or more acres of bordering vegetated wetlands (301 CMR 11.03(3)(a)(1)(a)).*

The Project meets and/or exceeds MEPA review threshold for an Environmental Notification Form (ENF):

***State-listed Species under M.G.L c. 131A**, greater than two acres of disturbance of designated priority habitat, as defined in 321 CMR 10.02, that results in a take of a state-listed endangered or threatened species or species of special concern (301 CMR 11.03(2)(b)(2)).*

Wetlands, Waterways and Tidelands, *alteration of 5,000 or more sf of bordering or isolated vegetated wetlands (301 CMR 11.03(3)(b)(1)(d)).*

No new or modified review thresholds are associated with this project change.

Which Agency Permits does the revised project require?

AGENCY/ REGULATORY AUTHORITY	PERMIT AND/OR PURPOSE OF APPROVAL
Federal	
US Army Corps of Engineers (USACE)	Pre-Construction Notification under Section 404 of Clean Water Act for discharge or dredge of fill material into waters of the United States; National Historic Preservation Act Section106 Consultation
US Environmental Protection Agency (USEPA)	National Pollutant Discharge Elimination System (NPDES) Construction Storm Water General Permit
State	
Massachusetts Energy Facilities Siting Board (EFSB)	Approval to construct and operate the Project pursuant to G.L. c. 164, § 69J
Massachusetts Department of Public Utilities (DPU)	Approval to construct and operate the Project pursuant to G.L. c. 164, § 72
MassDEP	Individual Section 401 Water Quality Certification
MassDEP	Chapter 91 License Minor Modification
NHESP	MESA Review and approval of a Conservation Management Plan
MHC	MHC and Protection of Properties Included in the State Register of Historic Places (950 CMR 70 and 71) –PNF
MA DCR	Construction and Access Permit (potential)
Massachusetts Department of Transportation (MassDOT)	State and Interstate Highway Right-of-Way Encroachment Permit and Crossing Permit
Local	
Fall River, Dartmouth, Acushnet and New Bedford Conservation Commissions	Order of Conditions – Massachusetts WPA and Rivers Protection Act and Local Bylaws

Identify any financial assistance or land transfer from an Agency of the Commonwealth for the revised project, including the Agency name and the amount of funding or land area in acres:

Not applicable, no financial assistance or land transfers from an Agency of the Commonwealth is associated with this project.

PROJECT INFORMATION

In 25 words or less, what is the project change? The project change involves . . .

There has been no material change in the Project itself. Rather, the Project change involves more than three years of elapsed time between the publication of the ENF and the publication of the notice of the availability of the EIR. The unavoidable environmental impacts related to the Project have not changed significantly since the ENF filing. Additionally, community outreach by the Companies has continued throughout this lapse of time.

See full project change description beginning on page 3. [This NPC is solely for lapse of time (see 301 CMR 11.10(2)), project change description is not applicable. Proceed directly to **ATTACHMENTS & SIGNATURES**.]

Date of publication of availability of the ENF in the Environmental Monitor: (Date: November 21, 2018)

Was an EIR required? ☒Yes ☐No; if yes,
was a Draft EIR filed? ☐Yes (Date:) ☒No
was a Final EIR filed? ☐Yes (Date:) ☒No
was a Single EIR filed? ☐Yes (Date:) ☒No

Have other NPCs been filed? ☐Yes (Date(s):) ☒No

If this is an NPC solely for lapse of time (see 301 CMR 11.10(2)) proceed directly to **ATTACHMENTS & SIGNATURES**.

PERMITS / FINANCIAL ASSISTANCE / LAND TRANSFER

List or describe all new or modified Agency permits, financial assistance, or land transfers not previously reviewed: **include list of Agency Actions (e.g., Agency Project, Financial Assistance, Land Transfer, List of Permits)**

Are you requesting a determination that this project change is insignificant such that an EIR should not be required (***note that the Proponent may also seek an advisory ruling under 301 CMR 11.10(6)***)? A change in a Project is ordinarily insignificant if it results solely in an increase in square footage, linear footage, height, depth or other relevant measures of the physical dimensions of the Project of less than 10% over estimates previously reviewed, provided the increase does not meet or exceed any review thresholds. A change in a Project is also ordinarily insignificant if it results solely in an increase in impacts of less than 25% of the level specified in any review threshold, provided that cumulative impacts of the Project do not meet or exceed any review thresholds that were not previously met or exceeded. (see 301 CMR 11.10(6))

☐**Yes** ☐**No; if yes, provide an explanation of this request in the Project Change Description below.**

FOR PROJECTS SUBJECT TO AN EIR

If the project requires the submission of an EIR, are you requesting that a Scope in a previously issued Certificate be rescinded?
☐**Yes** ☐**No; if yes, provide an explanation of this request_____.**

If the project requires the submission of an EIR, are you requesting a change to a Scope in a previously issued Certificate?
☐**Yes** ☐**No; if yes, provide an explanation of this request_____.**

SUMMARY OF PROJECT CHANGE PARAMETERS AND IMPACTS

Summary of Project Size & Environmental Impacts	Previously reviewed	Net Change	Currently Proposed
LAND			
Total site acreage			
Acres of land altered			
Acres of impervious area			
Square feet of bordering vegetated wetlands alteration			
Square feet of other wetland alteration			
Acres of non-water dependent use of tidelands or waterways			
STRUCTURES			
Gross square footage			
Number of housing units			
Maximum height (in feet)			
TRANSPORTATION			
Vehicle trips per day			
Parking spaces			
WATER/WASTEWATER			
Gallons/day (GPD) of water use			
GPD water withdrawal			
GPD wastewater generation/ treatment			
Length of water/sewer mains (in miles)			

Does the project change involve any <u>new or modified</u>:

1. conversion of public parkland or other Article 97 public natural resources to any purpose not in accordance with Article 97? ☐**Yes** ☐**No**
2. release of any conservation restriction, preservation restriction, agricultural preservation restriction, or watershed preservation restriction? ☐**Yes** ☐**No**

3. impacts on Rare Species**?** ☐**Yes** ☐**No**

4. demolition of all or part of any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?
☐**Yes** ☐**No**

5. impact upon an Area of Critical Environmental Concern? ☐**Yes** ☐**No**

If you answered 'Yes' to any of these 5 questions, explain below:

PROJECT CHANGE DESCRIPTION (attach additional pages as necessary). The project change description should include:

(a) a brief description of the project as most recently reviewed,

(b) a description of material changes to the project as previously reviewed,

(c) if applicable, the significance of the proposed changes, with specific reference to the factors listed 301 CMR 11.10(6), and

(d) measures that the project is taking to avoid Damage to the Environment or to minimize and mitigate unavoidable environmental impacts. If the change will involve modification of any prior mitigation commitments or previously issued Section 61 Finding, include a description of any such changes and a draft of the modified Section 61 Finding (or it will be required in Supplemental EIR).

The project change description should include a comprehensive description of the proposed project change, including a description of any work or activities associated with the original project that have occurred to date. At the discretion of the MEPA Office, an alternatives analysis for the changed component(s) of the project may be required, including a summary of alternatives considered and associated environmental impacts at a level of detail commensurate with the scope and scale of the proposed change. In addition to the required attachments, the filing should include supporting technical data (e.g., a Traffic Impact and Access Study, Stormwater Report, etc.) as appropriate. It should include a full list of mitigation commitments that remain unchanged from the previously reviewed project.

ATTACHMENTS & SIGNATURES

Attachments:
1. Secretary's most recent Certificate on this project
2. Plan showing most recent previously reviewed proposed build condition
3. Plan showing currently proposed build condition
4. Original U.S.G.S. map or good quality color copy (8-1/2 x 11 inches or larger) indicating the project location and boundaries
5. List of all agencies and persons to whom the proponent circulated the NPC, in accordance with 301 CMR 11.10(7)

Signatures:

Date	Signature of Responsible Officer or Proponent	Date	Signature of person preparing NPC (if different from above)
6/30/23		6/30/23	
Name (print or type)	Erin Whoriskey Christopher Newhall	Name (print or type)	Karen Hanecak
Firm/Agency	New England Power Company Eversource Energy	Firm/Agency	POWER Engineers Consulting, PC.
Street	170 Data Drive 247 Station Drive	Street	2 Hampshire Street
Municipality/State/Zip	Waltham, MA 02451 Westwood, MA 02090	Municipality/State/Zip	Foxboro, MA 02035
Phone	781 907-3598 508-735-0387	Phone	774-266-5301

INDEX OF MEPA SCOPE ITEMS FROM CERTIFICATE AND RESPONSE LOCATION

ACUSHNET TO FALL RIVER RELIABILITY PROJECT EEA NO. 15941		
Topic Area / Agency	**Item**	**Response**
Project Description and Permitting	1. Include detailed description of the proposed Project including any changes that have occurred since filing of the EENF and any proposed phasing of the AFRRP. Project descriptions to break down each individual component and associated environmental impacts with each separate component.	Sections 1.3-1.5
	2. Include updated site plans as necessary to reflect modifications to infrastructure design, access roadways, wetland impact areas, and mitigation areas.	Refer to Figures in Appendix B
	3. Include brief description and analysis of applicable statutory and regulatory standards and requirements, and a description of how the Projects will meet those standards.	Section 1.8
	4. Include a list of required State Agency Permits, Financial Assistance, or other State approvals and provide an update on the status of each of these pending actions.	Section 1.6
	5. Clarify whether Phase 1 of the Project will be permitted separately from AFRRP.	Section 1.2
	6. Include an update on the federal permitting process, including coordination efforts and anticipated compliance with regulatory and permitting standards and mitigation requirements.	Sections 1.7 and 1.8
	7. Summarize consultation regarding impacts to archaeological resources.	Section 1.8.8
	8. Identify the applicable standards set by MA DPU or other applicable regulatory agencies that govern the required minimum distances between structures, transmission lines and related equipment, vegetation management requirements, and other design criteria to inform evaluation of whether the Proponent has demonstrated that it will avoid, minimize, and mitigate Damage to the Environment to the maximum extent practicable.	Section 1.9
Land Alteration	9. Describe construction access and individually identify the amount of land alteration in upland and wetland areas associated with access, swamp mat placement, work pads, and tree clearing for each component of the Project.	Section 3.1.1
	10. Clearly identify on Project plans the extent of proposed tree clearing within wetland resource areas along access roadways (permanent or temporary), within upland portions of these access roadways, and along the ROW itself.	Refer to Figures in Appendix B
	11. Discuss how the ROW and access routes will be maintained over time to limit encroachment by vegetation (native or invasive), limit impacts to habitat and wildlife, and identify the type and frequency of maintenance activities.	Sections 3.1.1 and 3.1.2
	12. Discuss implementation of measures to limit unauthorized access to the permanent access roadways by off-highway vehicles.	Sections 3.1.2 and 7.1
	13. Discuss the Proponent's policies and procedures of notifying municipalities and property owners about proposed clearing and vegetation management along the ROW in conjunction with the Project.	Sections 11.3 and 12.3
	14. Characterize the type of land clearing proposed (e.g., stump removal and grinding, use of wood chips), selective retention of low-growth vegetation, and invasive species removal.	Sections 7.1.1 and 7.1.3
	15. Type and extent of restoration efforts should be clearly described and identified on the Project plans.	Refer to Figures in Appendix B

ACUSHNET TO FALL RIVER RELIABILITY PROJECT EEA NO. 15941		
Topic Area / Agency	**Item**	**Response**
	16. If AFRRP Project requires access for construction vehicles across the Bioreserve or MA DCR's Acushnet Cedar Swamp State Reservation, then a MA DCR Construction and Access Permit will be required.	Sections 1.8.6 and 14.1
	17. MA DCR requests that an SEIR include a clarification of land ownership along the portion of the Eversource ROW that passes through the Bioreserve and an explanation of potential construction and access needs. (*The Companies believe this comment pertains to the NEP not Eversource ROW*).	Sections 1.8.6 and 14.1
Rare Species	18. Demonstrate that the Project has avoided, minimized, and mitigated impacts to state-listed species consistent with the following performance standards listed below:	Section 5
	19. Adequately assess alternatives to both temporary and permanent impacts to the state-listed species.	Section 5.1
	20. Demonstrate that an insignificant portion of the local population will be impacted.	Section 5.0
	21. Develop and agree to carry out a conservation and management plan that provides a long-term net benefit to the conservation of state-listed species.	Section 5.3
	22. Provide and update of meetings and/or correspondence with NHESP which identify Project impacts and measures to avoid, minimize, and mitigate impacts to Priority and Estimated Habitat for state-listed species including any habitat management plan or other mitigation measures.	Sections 1.7 and 5.2
	23. Identify and design revisions or conditions adopted to prevent a Take of state-listed species habitat.	Section 5.1
Wetlands and Stormwater	24. Demonstrate the Project will avoid, minimize, or mitigate wetland resource area impact to the maximum extent practicable.	Section 4.2
	25. Clearly outline a comprehensive wetland mitigation program that meets USACE, MassDEP, and local bylaw requirements and performance standards.	Section 4.4
	26. Mitigation program should include construction period measures, post-construction period monitoring and restorations, and measures to promote wildlife habitat and to remove/prevent the establishment of invasive species.	Section 4.4
	27. Identify the cumulative amount of permanent impacts and temporary wetland alteration for each municipality in a tabular format, identify the Project's consistency with the MA WPA, identify proposed wetland replication amounts and locations, and demonstrate compliance with 401 Water Quality Certification standards at 314 CMR 9.06 that require the Project to avoid, minimize, and mitigate the placement of fill in BVW.	Sections 1.5, 4.1, 4.4 and 13.2
	28. Wetland replication areas should be designed consistent with the MassDEP Inland Wetlands Replication Guidance document.	Section 4.4
	29. Discuss specifically how the locations of replacement or new utility structures were determined to avoid wetland impacts while meeting engineering requirement of utility pole space and conductor clearance.	Section 4.2
	30. Identify the location of proposed compensatory flood storage to mitigate fill within BLSF.	Section 4.4
	31. Clarify how the Project will meet the performance standards for redevelopment within RFA.	Section 1.8.3
	32. If applicable, include the results of a Wildlife Habitat Evaluation completed pursuant to the Wetlands Regulations (310 CMR 10.60) and the procedures and methods detailed in MassDEP's Massachusetts Wildlife Habitat Protection Guidance for Inland Wetlands.	Refer to Appendix D

ACUSHNET TO FALL RIVER RELIABILITY PROJECT EEA NO. 15941		
Topic Area / Agency	**Item**	**Response**
	33. Identify impacts to wetland resource areas (i.e. associated with use of swamp mats and general construction activities) that will be subject to the USACE review. USACE regulations and guidance categorize wetland impacts as either permanent (fill), temporary (disturbance), or secondary.	Section 1.5
	34. Identify applicable USACE performance standards and regulations to assist in determining the potential overlap or potential conflicts with state wetland permitting requirements.	Section 1.8.1
	35. Include narrative and supporting data or graphics as necessary to demonstrate that the project can meet all applicable performance standards and regulations. If these standards cannot be met describe how construction of the project may otherwise proceed (e.g., a variance).	Section 1.8.1
	36. Include an update on coordination with various regulatory agencies and stakeholders undertaken since the filing of the EENF.	Section 1.7
	37. Discuss how the use of swamp mats will be effectively managed to limit permanent impacts to wetland resource areas.	Section 3.1.1
	38. Discuss measures the Proponent will implement to prevent the introduction of invasive species into the ROW such as washing swamp mats prior to installation.	Sections 1.8.1, 3.1.1, and 4.2
	39. Describe how construction sequencing will be conducted to minimize impacts to wetland resource areas.	Section 7.0
	40. Describe potential monitoring and mitigation (e.g., supplemental plantings, regrading) efforts to ensure that wetlands will not be permanently impacted and to limit the likelihood of repopulation with invasive species.	Sections 4.2 and 4.4
	41. Any proposed mitigation program should include a discussion of how pre-construction grades and natural wetland vegetation will be restored.	Sections 4.4 and 7.1.7
	42. Include a discussion of providing a vegetative buffer at roadway crossings.	Section 3.1.3
	43. Evaluate potential impacts from stormwater runoff during construction and post-construction. Demonstrate that source controls, pollution prevention measures, erosion and sedimentation control measures, and any required post-construction drainage system will be designed in compliance with Stormwater Management Regulations of the Wetlands Regulations	Section 4.2
	44. Consider use of low impact development measures and as applicable.	Section 4.4
	45. Address MassDEP's comments regarding the requirement of c.91 licensing unless crossings over jurisdictional areas are associated with a bridge or are located underground.	Sections 1.8.7 and 14.3
	46. Include if the Proponent will request that MassDEP exercise its discretionary authority to review and approve Project elements which qualify as Activities Not Requiring a License.	Sections 1.8.4 and 14.3
	47. Proponent should consult with MassDEP prior to filing the SEIR and the SEIR should provide an update.	Sections 1.7, 1.8.4 and 14.3
Traffic and Transportation	48. Identify jurisdictional roadway crossings and provide an update on any consultation with MassDOT.	Section 8.0
	49. Include a draft Traffic Management Plan for review by MassDOT	Refer to Appendix E
	50. Proponent and MassDOT should coordinate appropriate times, lengths, and management of roadway shutdowns to limit impacts to travelers	Section 8.0
Climate Change Adaptation and Resiliency	51. Discuss potential effects of climate change on the Project in the context of improving reliability and resiliency of the system.	Section 9.0
	52. Identify any potential impacts and address how the Project will be designed to adapt and/or sustain such impacts.	Section 9.0

ACUSHNET TO FALL RIVER RELIABILITY PROJECT EEA NO. 15941		
Topic Area / Agency	**Item**	**Response**
	53. To assist in the evaluation of climate change resiliency and adaptation measures, the Proponent should review the 2018 Massachusetts State Hazard Mitigation and Climate Adaptation Plan at www.resilientma.com and review data available through the Climate Change Clearinghouse for the Commonwealth. (https://www.mass.gov/files/documents/2018/10/26/SHMCAP-September2018-Full-Plan-web.pdf)	Section 9.0
Greenhouse Gas Emissions	54. The Project is subject to the MEPA Greenhouse Gas Policy and Protocol (GHG Protocol) because it exceeds thresholds for a mandatory Environmental Impact Report. The GHG Policy includes a *de minimis* exemption for the projects that will produce minimal amounts of GHG emissions. Given the nature of the Project, it was concluded the Project falls under the *de minimis* exception: therefore, the Proponent is not required to prepare a GHG analysis. The Proponent should continue to incorporate measures to avoid and minimize GHG emissions (and other air pollutants) during the construction period.	Section 10.0
Historic & Archaeological Resources	55. Provide an update on the Project's potential impacts to historical and archaeological resources and the outcome of any consultations with USACE and MHC.	Section 6.0
	56. Describe additional field work or surveys and the development of avoidance and mitigation plans.	Section 6.0
Construction Period	57. Project must comply with MassDEP's Solid Waste and Air Pollution control regulations, pursuant to M.G.L. c.40, s.54	Section 10.0 and Section 13.3
	58. Discuss the use of alternative types of equipment for the construction of all, or part, of the Project that may serve to reduce overall wetland impacts (e.g., smaller low-pressure equipment).	Section 11.2
	59. Clearly identify the proposed locations of both permanent and temporary (i.e. construction period only) access roads to and within the ROW.	Refer to Figures in Appendix B
	60. Identify existing access routes which may require maintenance and improvements to facilitate equipment movement, including the placement of gravel to provide a level surface within the access route and clearing or pruning of overgrown vegetation.	Refer to Figures in Appendix B
	61. Discuss how temporary access routes will be restored to original conditions subsequent to the conclusion of the construction period.	Section 3.1.1
	62. Clarify if restoration of temporary access roads will be limited to those within wetland resource areas or if it will also include roads within the 100-foot buffer zone to BVW.	Section 3.1.1
	63. Describe how phasing of the Project may be developed to avoid, minimize or mitigate Damage to the Environment	Section 7.1
	64. Construction phasing and Project schedule should be included, and, as appropriate, mitigation associated with each phase should be identified.	Section 7.1
	65. Incorporate construction and demolition recycling activities as a sustainable measure for the Project, as allowed.	Section 11.2
Mitigation and Section 61 Findings	66. Include a separate chapter summarizing proposed mitigation measures. This chapter should include draft Section 61 Findings for each State Agency that will issue permits for the Project.	Section 13.0
	67. Detail commitments to implement mitigation measures, estimate the individual cost of each proposed measure, identify the parties responsible for implementation, and contain a schedule for implementation.	Sections 7.0 and 13.1
	68. Include a copy of the Certificate and a copy of each comment letter received.	Refer to Appendix A

ACUSHNET TO FALL RIVER RELIABILITY PROJECT EEA NO. 15941		
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Responses to Comments / Circulation	69. In order to ensure that the issues raised by commenters are addressed, the SEIR should include direct responses to comments to the extent that they are within MEPA jurisdiction.	Section 14.0
	70. Circulate the SEIR to those parties who commented on the EENF, to any State Agencies from which the Proponent will seek permits or approvals, and to any additional parties specified in Section 11.16 of the MEPA Regulations.	See enclosed circulation list
	71. A copy of the SEIR should be made available for review at the Acushnet, Dartmouth, Fall River, and New Bedford public libraries.	See enclosed circulation list
MA Department of Conservation and Recreation (MA DCR)	72. If the Project will include access for construction vehicles across DCR Bioreserve land or MA DCR's Acushnet Cedar Swamp State Reservations, then a MA DCR Construction and Access Permit will be required.	Section 1.8.6
	73. The SEIR should include a clarification of land ownership along the portion of the Eversource ROW that passes through the Bioreserve and explanation of potential construction and access needs. (*The Companies believe this comment pertains to the NEP ROW, not the Eversource ROW*).	Section 1.8.6
	74. Continue the ongoing collaboration between the Proponent and the Bioreserve managing partners related to installation and maintenance of gates in key locations to mitigate unauthorized access by off-highway vehicles.	Section 3.1.2
	75. SEIR should include a summary of rare species occurrences (consistent with public disclosure guidelines) and related protection strategies for the stretches of the ROW that pass through jointly held MA DCR/MassDFG Bioreserve and the Acushnet Cedar Swamp State Reservation.	Section 5
	76. SEIR should include a section on Best Management Practices related to preventing the spread of invasive species, and protocols for post-construction monitoring and treatment	Sections 1.8.1, 3.1.1, and 4.2
Southeast Regional Office of the Department of Environmental Protections (MassDEP): Bureau of Water Resources: (Wetland Comments)	77. The proposed Project will require local Orders of Conditions from the Acushnet, Dartmouth, Fall River, and New Bedford Conservation Commissions and a 401 Water Quality Certification from MassDEP. No work can occur within Areas of Jurisdiction until a Final Order and a 401 Water Quality Certificate is issued.	Sections 1.8.3 and 1.8.4
	78. Per 310 CMR 10.53(3), in determining whether to exercise discretion to approve the limited project, the following factors should be considered: the magnitude of the alteration and the significance of the Project site to the interests identified in M.G.L. c. 131 § 40, the availability of reasonable alternatives to the proposed activity, the extent to which adverse impacts are minimized, and the extent to which mitigation measures, including replication or restoration, are provided to contribute to the protection of the interests identified in M.G.L. c. 131 § 40.	Sections 1.8 and 14.2
	79. A 401 Water Quality Certification Application is required per 314 CMR 9.04 and is subject to the Criteria for Evaluation of Applications for the Discharge of Dredged or Fill Material in 314 CMR 9.06 and the requirements of 314 CMR 4.00.	Section 1.8.3
	80. An alternative analysis must be submitted that demonstrates measures taken to avoid, minimize, and mitigate for the dredging and placement of fill with the 401 Water Quality Application	Sections 1.8 and 14.2
	81. For discharges to bordering or isolated wetlands, such steps shall include a minimum of 1:1 restoration or replication. If restoration or replication of the lost BVW is not possible, then the Project Proponent may seek a Variance pursuant to 314 CMR 9.08.	Section 4.4

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Topic Area / Agency	**Item**	**Response**
	82. Copies of the Notice of Intent (NOI) must be sent to NHESP for their review for compliance with state-listed rare species protection provisions of the MA Endangered Species Act, 321 CMR 10.00	
	83. The proposed Project is subject to the Massachusetts Stormwater Standards; therefore, the Proponent must demonstrate compliance with DEP Stormwater Management Regulations, with 310 CMR 10.05(6)(b) and (k-q).	Section 4.4
Southeast Regional Office of the Department of Environmental Protections (MassDEP): Bureau of Water Resources: (Waterways Comments)	84. After performing a cursory review of its database, the Waterways Program has found a prior Chapter 91 authorization for the area infrastructure, License No. 4374 (issued October 03, 1960)	Sections 1.8.7 and 14.3
	85. Some Project elements may qualify as Activities Not Requiring a License pursuant to 310 CMR 9.05(3), and if requested by the Proponent the Department will exercise its discretionary authority to review and potentially approve such, usually through a Minor Modification Request, pursuant to CMR 9.22(3).	
	86. Any new transmission line or other Project element not located within an existing ROW that is located in, on, over or under a Chapter 91 jurisdictional area may require a Chapter 91 License pursuant to the Waterways Regulations at 310 CMR 9.0.	Sections 1.8.7 and 14.3
	87. The Waterways Program will work with the Proponent to discuss Chapter 91 jurisdictional questions and provide guidance to achieve regulatory authorizations.	Sections 1.8.7 and 14.3
	88. The Project construction activities are scheduled to disturb 28.62 acres of land and therefore, may require a NPDES Stormwater Permit for Construction Activities.	Sections 1.6 and 1.8
	89. The Proponent can access information regarding the NPDES Stormwater Requirements and an application for the Construction General Permit at the USEPA website: https://www.epa.gov/sites/production/files/2017-07/documents/cgp_flow_chart_do_i_need_a_permit2.pdf	
Southeast Regional Office of the Department of Environmental Protections (MassDEP): Bureau of Waste Site Cleanup (BWSC)	90. Based upon the information provided, the BWSC searched its databases for disposal sites and release notifications that have occurred at or might impact the proposed Project area. A disposal site is a location where there has been a release to the environment of oil and/or hazardous material that is regulated under M.G.L. c. 21E, and the Massachusetts Contingency Plan [MCP -310 CMR 40.0000]. Please be advised that there are many listed BWSC disposal sites located in the vicinity of the proposed Project areas. Many of the sites have closed under the MCP, but many other disposal sites are open and require continued response actions under the MCP. A listing and discussion of each MCP site will not be presented here.	Section 14.4
	91. Interested parties may view a map showing the location of BWSC disposal sites using the MassGIS data viewer (Oliver) at http://maps.massgis.state.ma.us/map_ol/oliver.php. Under "Available Data Layers' select "Regulated Areas", and then "DEP Tier Classified 21E Sites." The compliance status and report submittals for specific MCP disposal sites may be viewed using the BWSC Waste Sites/Reportable Release Lookup at: https://eeaonline.eea.state.ma.us/portal#!/search/wastesite.	Section 14.4
	92. The Project Proponent is advised that if oil and/or hazardous materials are identified during the implementation of this Project, notification pursuant to the Massachusetts Contingency Plan (310 CMR 40.0000) must be made to MassDEP, if necessary. A Licensed Site Professional	Section 14.4

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	(LSP) should be retained to determine if notification is required, and if need be, to render appropriate opinions. The LSP may evaluate whether risk reduction measures are necessary if contamination is present. Please contact BWSC for guidance if questions arise regarding assessment and cleanup under the MCP.	
Southeast Regional Office of the Department of Environmental Protections (MassDEP): Bureau of Waste and Air	93. Air Quality: Construction and operation activities shall not cause or contribute to a condition of air pollution due to dust, odor or noise. To determine the appropriate requirements please refer to: 310 CMR 7.09 Dust, Odor, Construction, and Demolition 310 CMR 7. 10 Noise	Section 14.5
	94. GHG Emissions: If the Project involves the use of Gas Insulated Switchgear, the Proponent must follow the state (310 CMR 7.72) and federal regulations to reduce sulfur hexafluoride emissions from that switchgear.	Section 14.5
	95. Construction-Related Measures: MassDEP requests that the Proponent use construction equipment with engines manufactured to Tier 4 federal emission standards, which are the most stringent emission standards currently available for off-road engines. If a piece of equipment is not available in the Tier 4 configuration, then the Proponent should use construction equipment that has been retrofitted with appropriate emissions reduction equipment. Emission reduction equipment includes EPA-verified, CARB-verified, or MassDEP-approved diesel oxidation catalysts or Diesel Particulate Filters.	Section 14.5
	96. Construction-Related Measures: The Proponent should maintain a list of the engines, their emission tiers, and, if applicable, the best available control technology installed on each piece on file for Department review.	Section 14.5
	97. Spills Prevention: A spills contingency plan addressing prevention and management of potential releases of oil and/or hazardous materials from pre- and post-construction activities should be presented to workers at the site and enforced. The plan should include but not be limited to, refueling of machinery, storage of fuels, and potential on-site activity releases.	Section 14.5
	98. Massachusetts Idling Regulation: MassDEP reminds the Proponent the unnecessary idling (i.e., in excess of five minutes), with limited exception, is not permitted during the construction and operation phase of the Project (310 CMR 7.11).	Section 14.5
	99. Massachusetts Idling Regulation Typical methods of reducing idling include driver training, periodic inspections by site supervisors, and posting signage.	Section 14.5
	100. Massachusetts Idling Regulation: To ensure compliance with this regulation once the Project is occupied, MassDEP requests that the Proponent install permanent signs limiting idling to five minutes or less on-site.	Section 14.5
	101. Solid Waste: Asbestos: The Proponent is advised that demolition activity must comply with both Solid Waste and Air Quality Control regulations. Please note that MassDEP promulgated revised Asbestos Regulations (310 CMR 7.15) that became effective on June 20, 2014.	Section 14.5
	102. Solid Waste: Asbestos: In accordance with the revised Asbestos Regulations at 310 CMR 7.15(4), any owner or operator of a facility or a facility component that contains suspect asbestos containing material (ACM) shall, prior to conducting any demolition or renovation, employ a MA Department of Labor and Work Force Development, Division of Labor Standards (DLS) licensed asbestos inspector to thoroughly inspect	Section 14.5

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	the facility of facility component, to identify the presence, location, and quantity of any ACM or suspect ACM and to prepare a written asbestos survey report. As part of the asbestos survey, samples must be taken of all suspect asbestos containing building materials and sent to a DLS certified laboratory for analysis, using USEPA approved analytical methods.	
	103. Solid Waste: Asbestos: If ACM is identified in the asbestos survey, the Proponent must hire a DLS licensed asbestos abatement contractor to remove and dispose of any ACM from the facility or facility component in accordance with 310 CMR 7.15, prior to conducting any demolition or renovation activities. The removal and handling of asbestos from our facility or facility components must adhere to the Specific Asbestos Abatement Work Practice Standards required at 310 CMR 7.15(7). The Proponent asbestos contractor will be responsible for submitting an Asbestos Notification Form ANF-001 to MassDEP at least 10 working days prior to beginning any removal of the ACM as specified at 310 CMR 7.15(6).	Section 14.5
	104. Solid Waste: Asbestos: The Proponent shall ensure that all asbestos containing waste material from any asbestos abatement activity is properly stored and disposed of at a landfill approved to accept such material in accordance with 310 CMR 7.15(7). The Soil Waste Regulations at 310 CMR 19.061(3) list the requirements for any solid waste facility handling or disposing of asbestos waste. Pursuant to 310 CMR 19.061(3) (b) a, no ACM; including VAT, asphaltic-asbestos felts or shingles; may be disposed at a solid waste combustion facility.	Section 14.5
	105. Solid Waste: Asbestos: In accordance with the Air Quality Regulations at 310 CMR 7.09(2), the Proponent must submit a BWP AQ 06 Notification Prior to Construction or Demolition form to MassDEP for any construction or demolition of an industrial, commercial, or institutional or residential building with 20 or more dwelling units at least 10 working days prior to initiation of said construction or demolition Project. The Proponent should propose measures to prevent or alleviate dust, noise, and odor nuisance conditions, which may occur during the demolition.	Section 14.5
	106. Solid Waste Comments: All waste materials generated during the Project that are determined to be solid waste (e.g., construction and demolition waste) and/or recyclable material (e.g., wood, metal, asphalt, brick, and concrete) shall be disposed, recycled, and/or otherwise handled in accordance with the Solid Waste Regulations: including 310 CMR 19.017: Waste Bans.	Section 11.2 and Section 14.5
	107. Asphalt, brick, and concrete (ABC) rubble, such as the rubble generated by the demolition of buildings must be handled in accordance with MA solid waste regulations. These regulations allow, and MassDEP encourages, the recycling/reuse of ABC rubble. The Proponent should refer to MassDEP's Information Sheet, entitled "Using or Processing Asphalt Pavement, Brick and Concrete Rubble, revised February 27, 2017," that answers commonly asked questions about ABC rubble and identifies the provisions of the solid waste regulations that pertain to recycling/reusing ABC rubble. This policy can be found online at the MassDEP website: https://www.mass.gov/files/documents/2018/03/19/abc-rubble.pdf. Please contact Cynthia Baran at (508) 946-2887 if you should have any questions pertaining to the Asbestos program comments or Mark Dakers at (508) 946-2847 with any questions pertaining to the Department's comments on solid waste management.	Section 14.5

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Topic Area / Agency	**Item**	**Response**
	108. Proposed s.61 Findings: The "Certificate of the Secretary of Energy and Environmental Affairs on the Environmental Notification Form" may indicate that this Project requires further MEPA review and the preparation of an Environmental Impact Report. Pursuant to MEPA Regulations 301 CMR 1l.12(5)(d), the Proponent will prepare Proposed Section 61 Findings to be included in the EIR in a separate chapter updating and summarizing proposed mitigation measures.	Sections 13.0 and 14.5
	109. Proposed s.61 Findings: In accordance with 301 CMR 1l.07(6)(k), this chapter should also include separate updated draft Section 61 Findings for each State agency that will issue permits for the Project. The draft Section 61 Findings should contain clear commitments to implement mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and contain a schedule for implementation.	Sections 13.0 and 14.5
MA Historical Commission (MHC)	110. MHC will continue to review the results of archaeological site examinations at six identified archaeological sites with the AFRRP project impact area, and to provide consultation to avoid, minimize, or mitigate adverse effects to significant historic and archaeological resources.	Section 6.0 and 14.6
	111. There were no historic or archaeological resources found in the Bell Rock Substation, including the M13 Bypass portion of the Project. No further surveys are recommended for these areas.	
MA Division of Fisheries and Wildlife NHESP	112. The Division's review of Phase 2 pursuant to the Massachusetts Endangered Species Act (MESA) remains ongoing. The Division anticipates Phase 2 will likely result in a Take (321 CMR 10.18(2)(b)) of the Eastern box turtle and long-leaved panic-grass and rigid flax. The Division is currently working with the Proponent to assess temporary and permanent impacts and determine if a Take of state-listed plants can be avoided through Project redesign.	Section 5.0 and 14.7
	113. The Proponent is coordinating with the Division to assess alternative strategies for avoiding, minimizing, and mitigating impacts of Phase 2 to state-listed species and their habitats.	Sections 5.0 and 14.7
	114. The details of the long-term net benefit required under a Conservation and Management Permit (CMP) have not yet been finalized. The Division does anticipate being able to resolve any outstanding concerns related to state-listed species during the MESA review process.	Sections 5.0 and 14.7
	115. The Division will not render a final decision until the MEPA review process and associated public and agency comment period is completed, and until all required MESA filing materials are submitted to the Division.	Sections 5.0 and 14.7
	116. As the MESA review for Phase 2 of the Project remains ongoing, not alteration to the soil, surface, or vegetation and no work associated with Phase 2 shall occur until the Division has made a final decision relative to the CMP.	Sections 5.0 and 14.7

1.0 PROJECT DESCRIPTION AND PERMITTING

1.1 Introduction

This Single Environmental Impact Report (SEIR) responds to the December 28, 2018 Certificate of the Secretary of Energy and Environmental Affairs (Certificate) on the Expanded Environmental Notification Form (EENF) for the Acushnet to Fall River Reliability Project (AFRRP or Project) (EEA No. 15941). The Certificate and a subsequent Final Record of Decision dated January 25, 2018 granted a Phase 1 Waiver to allow the Bell Rock Substation Rebuild Project to proceed to permitting prior to completing the SEIR for the AFRRP. The status of the Bell Rock Substation Rebuild Project is provided below. The Certificate and comment letters are included in Appendix A.

This SEIR addresses the scope of issues outlined in the Certificate and responds to all comments received, as required per the Massachusetts Environmental Policy Act (MEPA) (Massachusetts General Law [M.G.L.] c. 30 §§ 61-62H) and MEPA regulation (301 Code of Massachusetts Regulations [CMR] 11.00). The main chapters of the SEIR are organized according to the following key scope items identified in the Certificate by the Secretary of Energy and Environmental Affairs (Secretary):

1. Project Description and Permitting
2. Alternatives Analysis
3. Land Alteration
4. Wetlands and Stormwater
5. Rare Species
6. Historic and Archaeological Resources
7. Construction Sequencing
8. Traffic and Transportation
9. Climate Change Adaptation and Resiliency
10. Greenhouse Gas Emissions
11. Construction Period and Anticipated Schedule
12. Environmental Justice
13. Mitigation and Section 61 Findings
14. Response to Comments/Circulation

Appendices A through H include relevant supplemental information, e.g., figures and plans, the Certificate, and comment letters. In addition to covering the special scope items, the Secretary also asked New England Power Company (NEP) and NSTAR Electric Company d/b/a Eversource Energy (Eversource) to "submit a Single EIR in accordance with the Scope included in the Certificate" (Page 1).

Concurrent with the filing of this SEIR, NEP and Eversource (together, the Companies) are also submitting the enclosed Notice of Project Change (NPC) due to a lapse of time as more than three years has passed since the publication of the Environmental Notification Form (ENF) and the publication of the notice of the availability of the SEIR. There has been no material change in the Project and as demonstrated in the following narrative, the unavoidable environmental impacts have not changed significantly since the EENF filing.

1.2 Status of Bell Rock Substation Rebuild Project

The Bell Rock Substation Rebuild Project includes the rebuild and expansion of the existing Bell Rock Substation to accommodate the termination of the existing M13 Line at the substation. The Bell Rock Substation Rebuild Project involves the rebuild and expansion of certain facilities and includes the following elements:

1. Expand the existing substation footprint by approximately 0.51 acre (22,000 square feet).
2. Expand the existing substation perimeter security fence line.
3. Install a new control building to replace the existing control building.
4. Install new substation-related equipment.
5. Upgrade the stormwater management system.
6. Temporarily reroute the existing M13 transmission line to bypass the existing substation to the south for the purposes of facilitating the rebuild of the substation.

In accordance with the Final Record of Decision, which granted a Phase 1 Waiver allowing the Bell Rock Substation Rebuild Project to proceed to permitting prior to the AFRRP, the permits referenced in Table 1-1 were secured separately to facilitate the completion of the Bell Rock Substation Rebuild Project.

TABLE 1-1 SUMMARY OF PERMITS AND APPROVALS OBTAINED FOR THE BELL ROCK SUBSTATION REBUILD PROJECT

PERMIT NAME	ISSUING AGENCY
Federal	
Pre-Construction Notification under Section 404 of Clean Water Act for discharge of dredge of fill material into waters of the United States	United States Army Corps of Engineers (USACE) – New England District
National Historic Preservation Act Section 106 Consultation	USACE – New England District
National Pollutant Discharge Elimination System (NPDES) Construction Storm Water General Permit Massachusetts Department of Environmental Protection (MassDEP) WM 15 NPDES General Permit Notice of Intent	United States Environmental Protection Agency
Information for Planning and Conservation Consultation	United States Fish and Wildlife Service
State	
Massachusetts Environmental Policy Act (MEPA; M.G.L. c. 30 § 61-62I) and Section 11.06 of MEPA regulations (301 CMR 11.00) Secretary's Certificate approving a Phase I Waiver Request allowing the Bell Rock Substation Project to proceed.	Commonwealth of Massachusetts – Executive Office of Energy and Environmental Affairs (EOEEA)
Section 401 of the federal Clean Water Act (Water Quality Certificate): Massachusetts Clean Water Act	MassDEP
Massachusetts Endangered Species Act Project Review Checklist State-Listed Species Protection Plan	Natural Heritage and Endangered Species Program (NHESP)
Standards for Field Investigations as defined in M.G.L. c. 9 § 26A and 27C (950 CMR 70)	Massachusetts Historical Commission (MHC)
Authorization under National Historic Preservation Act of 1966, as amended (36 C.F.R. 800), M.G.L. c. 9 § 26-27C (950 CMR 70-71) and MEPA (301 CMR 11)	MHC
Plumbing (Bathroom) Variance	The Board of State Examiners of Plumbers and Gas Fitters

PERMIT NAME	ISSUING AGENCY
Local	
Order of Conditions – Massachusetts Wetlands Protection Act and Rivers Protection Act and Local Bylaws	Fall River Conservation Commission
Major Site Plan Review	Fall River Site Plan Review Committee
Variance for control building setback	Fall River Zoning Board of Appeals

Construction activities associated with the temporary reroute of the existing M13 transmission line to bypass the existing substation to the south commenced during the summer 2020 and were completed in January of 2021. Substation construction commenced in the fall of 2021 and will be ongoing with an anticipated completion in the summer of 2023.

1.3 Acushnet to Fall River Reliability Project

The proposed Project described in this SEIR is a joint endeavor by the Companies and involves the installation of a new 115-kilovolt (kV) electric transmission line extending from Eversource's Industrial Park Tap in Acushnet west to NEP's Bell Rock Substation in Fall River. The AFRRP includes the installation of approximately 12.1 miles of new electric transmission located within existing rights-of-way (ROW) currently occupied by several other electric transmission lines. Of the 12.1 miles, approximately 7.9 miles are in Eversource service territory traversing Acushnet, New Bedford and Dartmouth, and approximately 4.2 miles are in NEP service territory traversing Fall River (refer to Figure 1-1 in Appendix B).

1.3.1 Existing Conditions

The existing transmission line ROW within which the new AFRRP will be installed extends from the Industrial Park Tap to the existing Bell Rock Substation (approximately 12.1 miles) traversing the towns of Acushnet, New Bedford, Dartmouth, and Fall River (refer to Figure 1-2 in Appendix B). From the Industrial Park Tap in Acushnet to the Industrial Park Substation in New Bedford (approximately 4.2 miles), the existing transmission line is located on single circuit H-frame structures and co-located with an existing distribution line within an approximately 150- to 210-foot-wide ROW. The transmission line continues from the Industrial Park Substation to the High Hill Switching Station in Dartmouth (approximately 2.4 miles) on single-circuit, H-frame structures and is co-located with an existing distribution line within an approximately 150-foot-wide ROW. From the High Hill Switching Station to the Bell Rock Substation in Fall River (approximately 5.4 miles), the existing transmission line is located on single-circuit, H-frame structures within an approximately 150-foot-wide ROW.

1.3.2 Proposed Conditions

The addition of the new AFRRP transmission line will be consistent with the current use of the existing utility ROW. The new line is to be constructed predominantly overhead but does involve the construction of two short sections of underground cable (a total of approximately 600 linear feet) to avoid multiple overhead line crossings at the Eversource Industrial Park Tap and at the Eversource High Hill Switching Station. Based on engineering design, approximately 118 new structures will be installed for the Project. The Project will generally be constructed on self-weathering or galvanized steel H-frame and monopole structures directly embedded into the ground. Structures located at angle points, dead-end structures, and certain select structure locations within the ROW will consist of self-supported steel pole structures on concrete caisson foundations (refer to Figure 1-3 in Appendix B).

The self-weathering or galvanized steel structures range in height from approximately 47 to 112 feet. The structures will support aluminum steel reinforced conductors both in horizontal and vertical configurations. One 3/8-inch extra high strength steel shield wire and one optical ground wire (OPGW) will be installed to support high speed relaying and communications requirements. Typical cross-sections of the ROW showing existing and proposed structure size and placement are provided in Figure 1-4 in Appendix B.

Vegetation removal and mowing of proposed work areas and access will be required within both Companies' ROW at the start of construction to provide access to the proposed structure locations, to facilitate safe vehicular and equipment passage, and to provide safe work sites for personnel. Additionally, tree removal will be required within the NEP ROW for a distance of approximately 4.2 miles to expand the cleared ROW width approximately 60 feet to the south side of the ROW. All tree and vegetation removal are to occur within the boundaries of the Companies' existing utility ROWs.

1.4 Substation Modifications

1.4.1 Protection and Control Upgrades

To accommodate installation of a new 115-kV overhead transmission line along the ROW, the following upgrades to the protection and control schemes at Bell Rock, Tremont, and Acushnet Substations would be required:

- Replace existing relays in existing panels or install new relay panels in the control enclosures.
- Install new conduit/cable trench and control cable from yard equipment to the control enclosures.
- Modify the telecommunication architecture to accommodate new relay systems.
- Program new relays to operate as a three-terminal line between Bell Rock, Tremont, and Acushnet Substations.
- Test and commission new relay and communication equipment.

At the Bell Rock Substation, protection and telecommunications changes, including installation of a 115-kV line trap and tuner, will be implemented and commissioned to complete the termination for the new line.

All work necessary to accommodate the substation modifications will occur within the previously disturbed and existing fenced-in substation yards utilizing existing access driveways.

1.5 Summary of Project Changes Since Filing of the Expanded Environmental Notification Form

Table 1-2 provides an overview of Project changes since the filing of the EENF. The Project changes reflect minor engineering design modifications for several transmission line structure locations as well as a shift to installation of temporary construction matting as opposed to permanent access road installation across wetlands along the Eversource alignment. Due to the time lapse between the EENF submittal and this SEIR, the Companies have also reconfirmed wetland delineation boundaries, reconfirmed and/or performed new vernal pool surveys, and performed new wetland delineation along off-ROW access roads. Anticipated wetland impacts have been updated to reflect these design refinements and additional data collection. Table 1-3 presents a comparative overview of the EENF and SEIR wetland impacts.

TABLE 1-2 SUMMARY OF PROJECT CHANGES SINCE THE EENF

ACTIVITY	TYPE OF CHANGE	DESCRIPTION OF CHANGE	CHANGE IN IMPACT	APPLICABLE MAP SHEET (REFER TO APPENDIX B FIGURE 1-3)
Reconfirmation of wetland delineation and performed new wetland delineation along off-ROW access roads as necessary; reconfirmation of NEP vernal pools and performed new vernal pool surveys along EVS ROW	New Resource Areas identified	• Addition of 3 new wetlands within the existing ROW (D11A, D25A, D38A)	• 2 of the new wetlands in the ROW will be temporarily impacted by the Project	Pages 9, 13, and 22 of 28
		• Addition of 16 new wetlands along off ROW access	• One of the new wetlands will be temporarily impacted by the Project	Pages 2, 3, 4, 15, and 26 of 28
		• Addition of 1 intermittent stream within the existing ROW (SD-27A)	NA	Page 13 of 28
		• Addition of 1 intermittent stream along off ROW access.	NA	Page 4 of 28
		• Addition of 20 new vernal pools within the existing ROW	• 2 of the vernal pools will be temporarily impacted by the Project	Pages 1-15 and 21 of 28
		• Addition of 7 new vernal pools along off ROW access	NA	Pages 3, 4, 25, 21 and 26 of 28
Reconfirmation of Priority Habitat Data	Project traverses a new Priority Habitat polygon	NHESP identified a new Priority Habitat Polygon (PH 424) in the Project area	An additional 35.7 acres of the ROW is located in Priority Habitat. The new polygon is in the Town of Acushnet and City of New Bedford	Pages 5-8 of 28
Eversource Access Roads	Reduction in permanent wetland impacts	Change from proposed permanent access road installation in wetlands to temporary timber construction mat crossings	Change from 0.84 acre of permanent access road installation in wetland to temporary.	Pages 1-15 of 28
Eversource Access Roads	Use of off-ROW access roads	Reduction in the number of wetland crossings	• Avoidance of crossing Wetland D58 • Reduction in crossing length of wetland D55	Pages 3 and 4 of 28

ACTIVITY	TYPE OF CHANGE	DESCRIPTION OF CHANGE	CHANGE IN IMPACT	APPLICABLE MAP SHEET (REFER TO APPENDIX B FIGURE 1-3)
Eversource Access Roads	Increase in temporary wetland impact	Modifications to access between proposed Strs. 43 and 44	• Additional temporary wetland impact to wetland D39	Page 9 of 28
Eversource Work Pads and Pull Pads	Increase in land and temporary wetland impact area disturbance	Splice pad added between Strs. 12 and 13 Increase in work and pull pad sizes for proposed Strs. 38 and 39 Additional work pad at proposed Str. 66	• Additional upland land disturbance • Additional temporary wetland impact to D42 • Additional upland land disturbance	Pages 3, 8 and 13 of 28
Eversource Underground spans at Industrial Park Tap and High Hill Switching Station	Reduction in land alteration	Reduced length of proposed underground spans	The two short sections of underground cable proposed in upland areas to avoid utility congestion at High Hill Switching Station and the Industrial park Tap was reduced from 800 feet to 600 feet	Pages 1 and 13 of 28
NEP Forestry Access and Work Areas	Changes in temporary wetland impact	Modifications to locations of temporary wetland construction matting required for tree removal	• D6 reduced wetland construction mats and added upland work area for tree removal • D7 reduced wetland construction mats and added upland work area for tree removal • D12 added temporary wetland construction mats for tree removal • D16A added temporary wetland construction mats for tree removal	Pages 21, 22, and 25 of 28
NEP Work Pads and Pull Pads	Increase in land alteration disturbance	Additional work area identified	• Upland pull pad . added east of Structure No. 1	Page 28 of 28

ACTIVITY	TYPE OF CHANGE	DESCRIPTION OF CHANGE	CHANGE IN IMPACT	APPLICABLE MAP SHEET (REFER TO APPENDIX B FIGURE 1-3)
NEP Access Road Changes	Use of existing Algonquin Gas Transmission pipeline access road Increase in land alteration disturbance	• Added upland permanent pipeline crossing • Added access road realignment / improvement along the existing pipeline access road • Added temporary construction mats in wetlands AR5, AR6, and AR11 along the pipeline access road	• Additional permanent upland disturbance • Added temporary wetland impact	Pages 17-20 of 28
	Use of off-ROW access	• Fill ruts and gullies along Canfield Trail and East Line Trail	• Additional upland land disturbance to improve existing access	Pages 25 and 26 of 28

Note: Acronyms and abbreviations used on this table are defined on the list at the beginning of this report.

TABLE 1-3 COMPARISON OF WETLAND IMPACTS – EENF AND SEIR

RESOURCE AREA	TEMPORARY IMPACTS		PERMANENT IMPACTS	
	EENF	SEIR	EENF	SEIR
Bordering Vegetated Wetland (BVW)	Approximately 306,817 square feet (sf) (7.04 acres) • Construction mats for access routes. • Construction mats for work pads and pull pads.	Approximately 307,061 sf (7.05 acres) • Construction mats for access routes. • Construction mats for work pads and pull pads.	Approximately 128,941 sf (2.96 acres) • Structure foundations and access roads (37,352 sf [0.86 acre]). • Conversion of forested wetlands to scrub-shrub wetlands due to tree removal (91,589 sf [2.10 acres]).	• Approximately 73,274 sf (1.68 acres) • Structure foundations (923 sf [0.02 acre]). • Conversion of forested wetlands to scrub-shrub wetlands due to tree removal (72,351 sf [1.66 acres]).
Inland Bank (IB)	Approximately 202 linear feet (lf) • Construction mats where access roads cross IB.	Approximately 2,180 sf • Construction mats where access roads cross IB.	625 square feet for the installation of one culvert in a stream.	• 1,654 sf of tree removal along the IB of SD11 and SD19. • 515 lf of tree removal along the IB of Copicut Reservoir.
Riverfront Area (RFA)	Approximately 49,309 sf (1.13 acres), where approximately 0.31 acre of these impacts are accounted for as BVW impacts above. • Temporary routes for access routes. • Temporary work space where work pads for construction and pull pads overlap with RFA.	Approximately 45,347.4 sf (1.04 acres), where approximately 0.50 acre of these impacts are accounted for as BVW impacts above. • Temporary routes for access routes. • Temporary work space where work pads for construction and pull pads overlap with RFA.	Approximately 7,226 sf (0.17 acre), where approximately 0.05 acre of these impacts are accounted for as BVW impacts above. • Structure foundations. • Conversion of forested to scrub-shrub due to tree removal.	Approximately 13,767 sf (0.32 acre), where approximately 0.01 acres of these impacts are accounted for as BVW impacts above. • 288 sf for structure foundations. • 8,873 for work pads outside of wetland. • 4,606 sf for the conversion of forested to scrub-shrub due to tree removal.

RESOURCE AREA	TEMPORARY IMPACTS		PERMANENT IMPACTS	
	EENF	SEIR	EENF	SEIR
Bordering Land Subject to Flooding (BLSF)	Approximately 91,707 sf (2.11 acres) where approximately 0.65 acre of these impacts are accounted for as BVW impacts above. • Construction mats for access routes. • Construction mats where work pads for construction and pull pads overlap with BLSF.	Approximately 89,667 sf (2.06 acres), where approximately 1.26 acres of these impacts are accounted for as BVW impacts above. • Construction mats for access routes. • Construction mats where work pads for construction and pull pads overlap with BLSF	Approximately 285 sf (0.01 acre) where approximately 47 square feet of these impacts are accounted for as BVW impacts above. • Structure foundations.	Approximately 8,168 sf (0.19 acre) where approximately 152 square feet of these impacts are accounted for as BVW impacts above. • 342 sf for structure foundations. • 7,826 sf for work pad outside of wetland.

1.6 Permit Requirements and Status

The Companies will obtain all required approvals and permits required by federal, state and local agencies for the Project, and the Project will be constructed and operated to comply fully with state and local environmental performance standards. Table 1-4 describes the filing status of the permits, reviews and approvals required by the Project.

TABLE 1-4 STATE AGENCY PERMITS, REVIEWS, AND APPROVALS

AGENCY/ REGULATORY AUTHORITY	PERMIT AND/OR PURPOSE OF APPROVAL	STATUS
Federal		
USACE	Pre-Construction Notification under Section 404 of Clean Water Act for discharge or dredge of fill material into waters of the United States; National Historic Preservation Act Section106 Consultation	Anticipate filing in Q3 2023
USEPA	NPDES Construction Storm Water General Permit	Anticipate filing in Q4 2023
State		
Massachusetts EFSB	Approval to construct and operate the project pursuant to M.G.L. c. 164, § 69J	Filed on December 22, 2021
MA DPU	Approval to construct and operate the project pursuant to M.G.L. c. 164, § 72	Filed on December 22, 2021
MassDEP	Individual Section 401 Water Quality Certification	Anticipate filing in Q3 2023
MassDEP	Chapter 91 License Minor Modification	Anticipate filing in Q4 2023
NHESP	MESA Review and approval of a Conservation Management Plan	Anticipate filing in Q2 2023
MHC	MHC and Protection of Properties Included in the State Register of Historic Places (950 CMR 70 and 71) –PNF	Consultation with MHC is ongoing
MA DCR	Construction and Access Permit (potential)	Anticipate filing in Q4 2023
MassDOT	State and Interstate Highway Right-of-Way Encroachment Permit and Crossing Permit	Anticipate filing in Q4 2023
Local		
Fall River, Dartmouth, Acushnet and New Bedford Conservation Commissions	Order of Conditions – Massachusetts WPA and Rivers Protection Act and Local Bylaws	Anticipate filing in Q3 2023

Note: Acronyms and abbreviations used on this table are defined on the list at the beginning of this report.

1.7 Agency Interactions Since Filing of the Expanded Environmental Notification Form

Table 1-5 summarizes the primary consultations with federal, state and local agencies that have occurred since the EENF was submitted to MEPA. Additional consultations with these agencies are ongoing.

TABLE 1-5 AGENCY INTERACTIONS SINCE EENF

AGENCY	DATE(S)	NOTES
MA EOEEA	November 27, 2018	MEPA EENF Site Review
USACE New England District	April 20, 2021 September 14, 2022 February 15, 2023	Follow up meeting to re-introduce the Project, discuss Pre-Construction Notification application, Section 106 Consultation, and mitigation.
MA NHESP	March 24, 2021 April 18, 2022 May 18, 2022 August 9, 2022 (Site Visit) December 6, 2022 January 24, 2023 March 30, 2023	Follow up meetings to re-introduce the Project, discuss survey updates/status, the Conservation and Management Plan and mitigation.
Massachusetts Historical Commission	March 31, 2021 April 7, 2022 July 7, 2022 April 24, 2023	MHC issued permit amendments for NEP to extend the State Archaeologist Permit and to amend existing permits for additional field investigations.
Massachusetts Department of Environmental Protection	May 19, 2022 January 19, 2023	Discussion regarding Chapter 91, the crossing of the Acushnet River, and Project wetland mitigation.
City of Fall River	November 15, 2019 January 28, 2020 September 9, 2020 November 19, 2020 February 4, 2021 May 10, 2021 December 20, 2021 February 9, 2022 May 18, 2022 September 21, 2022 October 17, 2022	General status updates and follow up regarding the new 115 kV line.
Fall River Conservation Commission	January 5, 2023	Project status update and mitigation
Town of Acushnet	May 13, 2021	Project re-introduction and status update
Town of Dartmouth	May 17, 2021	Project re-introduction and status update
City of New Bedford	June 3, 2021	Project re-introduction and status update
MEPA	March 24, 2022 January 26, 2023	Project re-introduction and status update. Environmental Justice Communities Discussion. Discussion of Notice of Project Change.
EFSB Site Tour	April 5, 2022	Siting Board overview of the preferred Project route

1.8 Regulatory Review

As noted in the beginning of this Section, the Secretary requested that the Companies provide information regarding applicable statutory and regulatory standards and requirements, and a description of how the Project will meet those standards (Certificate, p. 10). The Companies are coordinating all non-environmental permitting with the applicable jurisdictional agencies, as appropriate.

1.8.1 United States Army Corps of Engineers Section 404 General Permit

The Companies will be filing with the United States Army Corps of Engineers (USACE) New England District for coverage under the Department of the Army General Permits for the Commonwealth of Massachusetts for work in freshwater wetlands covered under Section 404 of the Clean Water Act. The following USACE conditions and performance standards apply to the Project and the Companies will construction the Project in accordance and compliance with these General Conditions from the Department of the Army General Permits for the Commonwealth of Massachusetts. No conflicts with State permitting requirements are anticipated.

- Other Permits.
- Federal Jurisdictional Boundaries.
- Single and Complete Projects.
- Use of Multiple General Permits.
- Suitable Material.
- Tribal Rights and Burial Sites.
- Avoidance, Minimization, and Compensatory Mitigation.
- Water Quality and Stormwater Management.
- Coastal Zone Management.
- Federal Threatened and Endangered Species.
- Essential Fish Habitat.
- Historic Properties.
- Permit/Authorization Letter On-Site.
- Heavy Equipment in Wetlands.
- Temporary Fill and Construction Mats.
- Restoration of Wetland Areas.
- Bank Stabilization.
- Soil Erosion and Sediment Controls.
- Aquatic Life Movements and Management of Water Flows.
- Spawning, Breeding, and Migratory Areas.
- Vernal Pools.
- Invasive Species.
- Fills Within 100-Year Floodplains.
- Stream Work and Crossings and Wetland Crossings.
- Utility Line Installation and Removal.
- Inspections.
- Maintenance.

- Property Rights.
- Transfer of General Permit Verifications.
- Modification, Suspension, and Revocation.
- Special Conditions.
- False or Incomplete Information.
- Abandonment.
- Enforcement cases.
- Previously Authorized Activities.
- Duration of Authorization.

1.8.2 United States Environmental Protection Agency

The Companies will prepare and submit a Notice of Intent with the United States Environmental Protection Agency (USEPA) in compliance with the National Pollutant Discharge Elimination System (NPDES) Program for coverage under the Storm Water Construction General Permit. As part of this submittal, the Companies will prepare Stormwater Pollution Prevention Plans (SWPPPs) for the Project. Components of the SWPPPs will include: a construction contact list, a description of the proposed work, storm water controls, spill prevention, and inspection practices for the management of construction-related storm water discharges.

1.8.3 Section 401 Water Quality Certification

The following provides applicable Water Quality Certification Regulatory criteria (314 CMR 9.06) and the Project's compliance with each:

(1) No discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge that would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.

Response: As discussed in Section 2.0, the Companies conducted a comprehensive alternatives analysis in response to Independent System Operator – New England (ISO-NE) identifying thermal and voltage needs. The Project alternatives considered included:

- The No-Action Alternative.
- An Undersea Cable Alternative based on Alternative 1 in the ISO-NE 2026 Solutions Study.
- A Synchronous Solution involving the reconductoring of 6.5 miles of 115-kV transmission line and the installation of two 30 megavolt-ampere reactive (MVAR) synchronous condensers.
- Non-Transmission Alternatives such as new generation, energy efficiency, solar, battery storage, demand response programs, and distributed generation.
- Routing Alternatives.

The Project was determined to be the preferred alternative because it is the best solution when balancing considerations of reliability, cost and environmental impacts. The Project:

- Maximizes use of existing transmission lines and ROWs.
- Minimizes environmental and social impacts.
- Provides the lowest cost solution to meet the identified need.

(2) No discharge of dredge or fill material shall be permitted unless appropriate and practicable steps have been taken which will avoid and minimize potential adverse impacts to the bordering or isolated vegetated wetland.

Response: Despite extensive avoidance and minimization measures, construction of the Project will result in limited unavoidable impacts to wetlands and water resources within the Project ROW. These impacts will include secondary, temporary and permanent impacts, depending on the specific construction activity. Secondary impacts on wetlands and water resources will occur where tree removal results in a conversion of habitat type from forested to scrub-shrub and/or emergent wetland within an existing transmission line ROW. Temporary impacts will result from the placement of construction mats as work pads in wetlands, as necessary for construction. Permanent impacts will result from the placement of fill required for structure installation.

Environmental resource areas temporarily disturbed by construction will be restored in accordance with applicable permit conditions. Additionally, the construction, operation and maintenance of the Project will have a minimal impact on waterbodies and water quality. The design of the overhead transmission lines inherently avoids most direct adverse impacts to such resources.

(3) No discharge of dredge or fill material shall be permitted to Outstanding Resource Waters [ORW], *except for the activities specified in 314 CMR 9.06 (3)(a) through (k)….(f) Construction of utilities…*

Response: In accordance with the provisions stated in the federal Clean Water Act (CWA) (33 United States Code [U.S.C.] §1341) and the Massachusetts Clean Water Act (M.G.L. c. 21, §26-53) and its implementing regulations (314 CMR 9.00), the AFRRP will require an Individual Section 401 Water Quality Certification due to impacts to wetland resource areas that are tributary to Class A Public Water Supplies of the North Watuppa Pond and Copicut Reservoir and are therefore classified as ORW. The Copicut Reservoir is located in the City of Fall River. The Project ROW traverses open water areas along the northern boundary of Copicut Reservoir. North Watuppa Pond is located 2,000 feet west of the AFRRP ROW and is not traversed directly by the Project. Although the placement of temporary construction mats is currently proposed within 400 feet of the Copicut Reservoir, the Companies are not currently anticipating that a variance will be required based on preliminary coordination with the Massachusetts Department of Environmental Protection (MassDEP) Office of Water Resources.

An application will be filed with MassDEP for Water Quality Certification review under 314 CMR 9.00. MassDEP evaluation criteria for applications are the incorporation of all practicable measures for avoiding and minimizing impacts to wetland resource areas. The design of the AFRRP avoids or minimizes adverse impacts, as described in Section 4.4. The AFRRP's compensatory mitigation package will comply with the mitigation requirements in the Massachusetts CWA.

(4) The discharge of dredged or fill material into wetlands or waters of the Commonwealth within 400 feet of the high water mark of a Class A surface water (exclusive of tributaries) requires a variance issued by the Department pursuant to 314 CMR 9.08 unless the discharge of dredge or fill material is

associated with an activity conducted by a public water system under 310 CRM 22.00 or by a public agency or authority for the maintenance or repair of existing public roads or railways.

Response: Construction of the AFRRP is anticipated to result in unavoidable temporary impacts to vegetated wetland resources within the Copicut Reservoir and North Watuppa Pond watersheds. Temporary wetland impacts within 400 feet of the Copicut Reservoir are also unavoidable due to the proximity of the AFRRP ROW to the northern end of the reservoir. Although the placement of temporary construction mats is currently proposed within 400 feet of the Copicut Reservoir, the Companies are not currently anticipating that a variance will be required based on preliminary coordination with the MassDEP Office of Water Resources.

(5) No discharge of dredge or fill material is permitted for the impoundment or detention of stormwater for purposes of controlling sedimentation or other pollutant attenuation.

Response: No discharge of dredged or fill material is proposed for the impoundment or detention of storm water for purposes of controlling sedimentation or other pollutant attenuation.

(6) Except as otherwise provided in 314 CMR 9.06, storm water discharges shall be provided with best management practices to attenuate pollutants and to provide a setback from the receiving water or wetlands in accordance with the following Storm Water Management Standards as further defined and specified in the Massachusetts Storm Water Handbook….

Response: During construction, erosion and sediment control BMPs will be used to minimize and mitigate for permanent, temporary, and secondary impacts. In addition, proposed mitigation will include restoration of the temporarily affected areas along the Project ROWs, and compensatory mitigation that complies with the mitigation requirements in the Massachusetts CWA.

(7) No discharge of dredge or fill material shall be permitted in the rare circumstances where the activity meets the criteria for evaluation but will result in substantial adverse impacts to the physical, chemical, or biological integrity of surface Waters of the Commonwealth.

Response: The Project has been designed to meet the criteria for evaluation through impact avoidance and minimization measures and the implementation of construction BMPs, including the use of temporary construction mats versus permanent fill in wetland. In addition, during the construction process, the Companies will assign an environmental monitor(s) to report on compliance with all federal, state and local, permit requirements and relevant Company policies and procedures. As such, the Project is not expected to result in substantial adverse impacts to the physical, chemical, or biological integrity of surface waters of the Commonwealth. A detailed description of Construction Methods and Potential Project Impacts and Mitigation Measures are provided in Sections 3.0, 4.0, 11.0, and 13.0.

1.8.4 Massachusetts Wetland Protection Act Order of Conditions

The Project has been designed to meet the general performance standards for wetland resource areas protected by the Massachusetts Wetlands Protection Act (MA WPA) and associated Regulations, whenever feasible. However, due to the linear nature of the Project, it is not feasible to avoid all resource areas.

Limited Project Status

Under the Limited Project provisions of the MA WPA regulations, the permit issuing authority may approve certain projects that do not meet the performance standards for affected resource areas so long as

the Project qualifies as a Limited Project. The applicable Limited Project provisions for 310 CMR 10.53(3)(d) are described below:

- *The issuing authority may require a reasonable alternative route with fewer adverse effects for a local distribution or connecting line not reviewed by the Energy Facilities Siting Council;*

The proposed Project reflects the outcome of an extensive alternatives analysis to determine the best solution for meeting the established need. The analyses ranged from a careful evaluation of the No Action Alternative to detailed assessments of routing alternatives, as well as transmission and non-transmission alternatives.

In all of the alternatives analyses, the minimization of adverse impacts to environmental resources was a key evaluation criterion. The proposed Project provides the best solution for providing the needed improvements to the regional transmission system while avoiding and/or minimizing adverse environmental impacts. The proposed Project is also consistent with the current use of the existing utility ROW. The above provision is met because the Project represents the alternative that will provide a reliable energy supply for the Commonwealth with a minimum impact on the environment while providing the lowest cost solution to meet the identified need.

- *Best available measures shall be used to minimize adverse effects during construction;*

Throughout the design and permitting process, the Companies made extensive efforts to comprehensively assess constructability and avoid impacts, where feasible. The Companies will implement BMPs as detailed in their respective Environmental Requirements and Guidance Manuals (Appendix C). The documents address minimization and avoidance measures that will be used to reduce overall impacts. The Companies are committed to working with federal, state and local regulatory agencies and providing an appropriate range of mitigation measures.

- *The surface vegetation and contours of the area shall be substantially restored; and*

The existing surface vegetation and contours of the area will be maintained or substantially restored to pre-existing conditions following Project activities. Where tree removal is required along transmission line ROWs, routine vegetation maintenance will continue within the transmission line corridor during post-construction operation of the Project. Vegetation will be maintained as low-growth shrubs or grasses and herbs.

- *All sewer lines shall be constructed to minimize inflow and leakage.*

Not applicable; no sewer lines are proposed.

Inland Bank (310 CMR 10.54)

Where Inland Bank (IB) is encountered, the following MA WPA general performance standards apply:

[310 CMR 10.54 (4)(a)] – *Where the presumption set forth in 310 CMR 10.54(3) is not overcome, any proposed work on an IB shall not impair the following:*

1. *the physical stability of the Bank;*

2. *the water carrying capacity of the existing channel within the Bank;*

3. *groundwater and surface water quality;*

4. *the capacity of the Bank to provide breeding habitat, escape cover and food for fisheries;*

5. *the capacity of the Bank to provide important wildlife habitat function. A project or projects on a single lot, for which Notice(s) of Intent is filed on or after November 1, 1987, that (cumulatively) alter(s) up to 10% or 50 feet (whichever is less) of the length of the bank found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. In the case of a bank of a river or stream. Additional alterations beyond the above threshold may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures contained in 310 CMR 10.60.*

Response: Temporary alteration of IB will result from the placement of construction mats across stream banks in construction work areas. Using construction mats for this purpose is intended to minimize stream bank impacts by avoiding compaction, bank erosion, or loss of vegetation and therefore will not result in permanent impact to the physical ability of the banks or the water carrying capacity of the existing channels. The temporary use of construction mats will not impact groundwater or surface water or the capacity of the IBs to provide breeding habitat, escape cover, food for fisheries, or reduce the capacity of the IBs to provide important wildlife habitat functions, as these functions will continue to be provided after construction is complete and the matting is removed.

Tree removal is proposed over a portion of Streams SD-5, SD-8, SD-11, SD-19 and SD-62 which will result in a permanent conversion in cover type to scrub-shrub or emergent. There are no anticipated impacts to the stability of the stream bank due to tree removal since the tree stumps will remain in place. Despite this tree removal it is anticipated that the IB of the streams will continue to function as wildlife habitat. There are no anticipated impacts to the water carrying capacity of the channel, or the groundwater and surface water quality.

[310 CMR 10.54 (4)(b)] – *Notwithstanding the provisions of 310 CMR 10.54(4)(a), structures may be permitted in or on a Bank when required to prevent flood damage to facilities, buildings and roads constructed prior to the effective date of 310 CMR 10.51 through 10.60 or constructed pursuant to a Notice of Intent filed prior to the effective date of 310 CMR 10.51 through 10.60 (April 1, 1983).*

Response: Not applicable; no structures are proposed in or on an IB.

[310 CMR 10.54 (4)(c)] – *Notwithstanding the provisions of 310 CMR 10.54(4)(a) or (b), no project may be permitted which will have any adverse effect on specified habitat sites of Rare Species, as identified by procedures established under 310 CMR 10.59.*

Response: The Companies will continue to coordinate with Natural Heritage and Endangered Species Program (NHESP) pursuant to Massachusetts Endangered Species Act (MESA) (M.G.L. c. 131A) and MA WPA (M.G.L. c. 131 § 40) to avoid impacts to listed species and their habitat, and to provide mitigation for any unavoidable impacts. NHESP has determined that the Project will result in a "take" for a reptile species and three plant species, and a Conservation and Management Permit (CMP) is required. A discussion of the conservation and management plan is presented herein in Section 5.3, and the elements of this plan are expected to become conditions of the CMP. Pursuant to MassDEP Wetlands Policy 06-1 it is presumed that any activity for which the Director has issued a CMP complies with the performance standards at 310 CMR 10.59. The plan, once fully realized and implemented, will avoid and minimize impacts to state-listed species to the greatest extent practical, demonstrate that an insignificant portion of the local population will be impacted or that no viable alternative exits, and provide a long-

term net benefit to the conservation of the local population of the impacted species. Please refer to Section 5.0 for additional detail.

Bordering Vegetated Wetlands (310 CMR 10.55)

Bordering Vegetated Wetlands (BVW) are prevalent throughout the Project ROW. Where BVW is encountered, the following MA WPA general performance standards apply:

[310 CMR 10.55 (4)(a)] – *Where the presumption set forth in 310 CMR 10.55(3) is not overcome, any proposed work in a BVW shall not destroy or otherwise impair any portion of said area.*

Response: The Companies have designed the Project to avoid or minimize wetland impacts to the greatest extent practicable. However, temporary and permanent impacts to BVW will occur. Unavoidable temporary impacts to BVW will occur in work areas and along access routes during construction. These impacts are primarily associated with the use of Best Management Practices (BMPs)s for work in wetlands (e.g., construction mats) which minimize impacts while allowing necessary work within resource areas to occur. Unavoidable impacts to BVW will be offset through compensatory mitigation determined in consultation with applicable regulatory agencies. In addition, tree removal in BVW will result in a conversion of these wetlands to scrub shrub and emergent wetlands. A Wildlife Habitat Evaluation was included for the NEP portion of the Project in the EENF submitted on May 15, 2017. Appendix D contains an updated NEP Wildlife Habitat Evaluation incorporating changes since the EENF submittal, and also contains Wildlife Habitat Evaluation report for the Eversource portion of the Project.

[310 CMR 10.55 (4)(b)] – *Notwithstanding the provisions of 310 CMR 10.55(4)(a), the issuing authority may issue an Order of Conditions permitting work which results in the loss of up to 5,000 sf of BVW when said area is replaced in accordance with the following general conditions and any additional, specific conditions the issuing authority deems necessary to ensure that the replacement area will function in a manner similar to the area that will be lost:*

1. *the surface of the replacement area to be created ("the replacement area") shall be equal to that of the area that will be lost ("the lost area");*
2. *the ground water and surface elevation of the replacement area shall be approximately equal to that of the lost area;*
3. *the overall horizontal configuration and location of the replacement area with respect to the bank shall be similar to that of the lost area;*
4. *the replacement area shall have an unrestricted hydraulic connection to the same water body or waterway associated with the lost area;*
5. *the replacement area shall be located within the same general area of the water body or reach of the waterway as the lost area;*
6. *at least 75% of the surface of the replacement area shall be reestablished with indigenous wetland plant species within two growing seasons, and prior to said vegetative reestablishment any exposed soil in the replacement area shall be temporary stabilized to prevent erosion in accordance with standard U.S. Soil Conservation Service methods; and*
7. *the replacement area shall be provided in a manner which is consistent with all other General Performance Standards for each resource area in Part III of 310 CMR 10.00.*

Response: The proposed work will result in the permanent loss of less than 5,000 square feet of BVW due to structure foundations where BVW impacts could not be avoided. Project mitigation for permanent,

temporary, and secondary impacts will include wetland enhancement and restoration, and on-ROW compensation consisting of wetland replication as described in Section 4.4.1.

[310 CMR 10.55 (4)(c)] – *Notwithstanding the provisions of 310 CMR 10.55(4)(a), the issuing authority may issue an Order of Conditions permitting work which results in the loss of a portion of BVW when;*

1. *said portion has a surface area less than 500 square feet;*
2. *said portion extends in a distinct linear configuration ("finger-like") into adjacent uplands; and*
3. *in the judgement of the issuing authority it is not reasonable to scale down, redesign or otherwise change the proposed work so that it could be completed without loss of said wetland.*

Response: As currently proposed, the Project will not result in a net loss of wetlands as compensation for permanent impacts to BVW will be provided.

[310 CMR 10.55 (4)(d)] – *Notwithstanding the provisions of 310 CMR 10.55(4)(a),(b), or (c), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.59.*

Response: The Companies will continue to coordinate with NHESP pursuant to MESA (M.G.L. c. 131A) and MA WPA (M.G.L. c. 131 § 40) to avoid impacts to listed species and their habitat, and to provide mitigation for any unavoidable impacts. NHESP has determined that the Project will result in a "take" for a reptile species and three plant species, and a CMP is required. A discussion of the conservation and management plan is presented herein in Section 5.3, and the elements of this plan are expected to become conditions of the CMP. Pursuant to MassDEP Wetlands Policy 06-1 it is presumed that any activity for which the Director has issued a CMP complies with the performance standards at 310 CMR 10.59. The plan, once fully realized and implemented, will avoid and minimize impacts to state-listed species to the greatest extent practical, demonstrate that an insignificant portion of the local population will be impacted or that no viable alternative exits, and provide a long-term net benefit to the conservation of the local population of the impacted species. Please refer to Section 5.0 for additional detail.

[310 CMR 10.55 (4)(e)] – *Any proposed work shall not destroy or otherwise impair any portion or BVW that is within an Area of Critical Environmental Concern designated by the Secretary of Environmental Affairs under M.G.L. c.21A, § 2(7) and 301 CMR 12.00.*

Response: Not applicable; the Project ROW is not located within an Area of Critical Environmental Concern.

Land Under Water Bodies and Waterways (310 CMR 10.56)

Where Land Under Water Bodies and Waterways (LUW) is encountered, the following MA WPA general performance standards apply:

[310 CMR 10.56 (4)(a)] – *Where the presumption set forth in 310 CMR 10.56(3) is not overcome, any proposed work within LUW shall not impair the following:*

1. *The water carrying capacity within the defined channel, which is provided by said land in conjunction with the banks;*

2. *Ground and surface water quality;*

3. *The capacity of said land to provide breeding habitat, escape cover and food for fisheries;*

4. *The capacity of said land to provide important wildlife habitat functions. A project, or projects on a single lot, for which Notice(s) of intent is filed on or after November 1, 1987, that (cumulatively) alter(s) up to 10% of 5,000 sf (whichever is less) of land in this resource area found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. Additional alterations beyond the above threshold may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures established under 310 CMR 10.60; and*

5. *Work on a stream crossing shall be presumed to meet the performance standard set forth in 310 CMR 10.56(4)(a).*

Response: Tree removal is proposed over a portion of Streams SD-5, SD-8, SD-11, SD-19, and SD-62. As a result of the loss of canopy cover, the water temperature of the stream may temporarily rise. It is anticipated that the IB of these streams will continue to function as wildlife habitat. There are no anticipated impacts to the water carrying capacity of the channel, or the groundwater and surface water quality.

Additional impacts to LUW have been avoided through the use of construction mats designed to span smaller streams during construction. The use of construction mats will not impact groundwater or surface water or the capacity of the LUWs to provide breeding habitat, escape cover, food for fisheries, or reduce the capacity of the LUWs to provide important wildlife habitat functions, as these functions will continue to be provided after construction is complete and the matting is removed.

[310 CMR 10.56 (4)(b)] – *Notwithstanding the provisions of 310 CMR 10.56(4)(a), the issuing authority may issue an Order in accordance with M.G.L. c.131, § 40 to maintain or improve boat channels with Land Under Water Bodies and Waterways when said work is designed and carried out using the best practical measures so as to minimize adverse effects such as the suspension or transport of pollutants, increases in turbidity, the smothering of bottom organisms, the accumulation of pollutants by organisms or the destruction of fisheries habitat or nutrient source areas.*

Response: Not applicable because the Project is not maintaining or improving boat channels.

[310 CMR 10.56 (4)©] – *Notwithstanding the provisions of 310 CMR 10.56(4)(a) or (b), no project may be permitted which will have any adverse effect on specified habitat sites or rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.59.*

Response: The Companies will continue to coordinate with NHESP pursuant to MESA (M.G.L. c. 131A) and MA WPA (M.G.L. c. 131 § 40) to avoid impacts to listed species and their habitat, and to provide mitigation for any unavoidable impacts. NHESP has determined that the Project will result in a "take" for a reptile species and three plant species, and a CMP is required. A discussion of the conservation and management plan is presented herein in Section 5.3, and the elements of this plan are expected to become conditions of the CMP. Pursuant to MassDEP Wetlands Policy 06-1 it is presumed that any activity for which the Director has issued a CMP complies with the performance standards at 310 CMR 10.59. The plan, once fully realized and implemented, will avoid and minimize impacts to state-listed species to the greatest extent practical, demonstrate that an insignificant portion of the local population will be impacted or that no viable alternative exits, and provide a long-term net benefit to the conservation of the local population of the impacted species. Please refer to Section 5.0 for additional detail.

Land Subject to Flooding (310 CMR 10.57)

Where Bordering Land Subject to Flooding (BLSF) is encountered, the following MA WPA general performance standards apply:

[310 CMR 10.57 (4)(a)1] – *Compensatory storage shall be provided for all flood storage volume that will be lost as the result of a proposed project within BLSF, when in the judgment of the issuing authority said loss will cause an increase or will contribute incrementally to an increase in the horizontal extent and level of flood waters during peak flows. Compensatory storage shall mean a volume not previously used for flood storage and shall be incrementally equal to the theoretical volume of flood water at each elevation, up to and including the 100-year flood elevation, which would be displaced by the proposed project. Such compensatory volume shall be provided within the same reach of the river, stream, or creek.*

Response: Structure installation will result in permanent fill in BLSF for the installation of five new transmission line on the Eversource portion, and 2 new transmission line structures on the NEP portion. Installation of a permanent work pad in BLSF along the Eversource portion of the Project will also result in permanent impacts. The filling of BLSF will be offset by compensatory flood storage as described in Section 4.4.

[310 CMR 10.57 (4)(a)2] – *Work within BLSF, including that work required to provide the above-specified compensatory storage, shall not restrict flows so as to cause an increase in flood stage or velocity.*

Response: The proposed Project will not result in an increase in flood stage or velocity. Compensatory flood storage will be provided, where applicable, as described in Section 4.4.

[310 CMR 10.57 (4)(a)3] – *Work in those portions of BLSF found to be significant to the protection of wildlife habitat shall not impair its capacity to provide important wildlife habitat functions. Except for work which would adversely affect vernal pool habitat, a project or projects on a single lot, for which Notice(s) of Intent is filed or after November 1, 1987, that (cumulatively) alter(s) up to 10% or 5,000 sf (whichever is less) or land in this resource area found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat function. Additional alternations beyond the above threshold, or altering vernal pool habitat, may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures contained in 310 CMR 10.60.*

Response: The Project is not anticipated to impair the capacity of BLSF to provide wildlife habitat. Compensatory flood storage will be provided. The scrub-shrub and emergent habitats will remain in the BLSF habitat.

Riverfront Area (310 CMR 10.58)

Where Riverfront Area (RFA) is encountered, the following MA WPA general performance standards apply:

[310 CMR 10.58 (4)(a)] – *Protection of Other Resource Areas: The work shall meet the performance standards for all other resource areas within the riverfront area, as identified in 310 CMR 10.30 (coastal bank), 10.32 (salt marsh), 10.55 (BVW), and 10.57 (Land Subject to Flooding). When work in riverfront area is also within the buffer zone to another resource area, the performance standards for the riverfront area shall contribute to the protection of the interests of M.G.L. c. 131, § 40 in lieu of any additional requirements that might otherwise be imposed on work in the buffer zone within riverfront area.*

Response: Ten perennial streams are located within the Project area, each with an associated 200-foot RFA. The Project will result in temporary and permanent impacts to RFA associated with the installation of new transmission line structures, work pads, and tree removal. Temporary disturbance in RFA will result from the placement of construction mats to establish stable work and access areas. In this manner, impacts to the functions of the RFA will be minimal.

Nine of the perennial streams (SD54, SD53, SD38A, SD35, SD25A, SD25, SD23A, SD22, and SD21) as identified on the Plans in Appendix B, are located within Eversource's cleared and maintained ROW. The existing Eversource ROW within the RFAs are currently maintained as a working ROW and have been cleared and maintained in accordance with Eversource's *Five Year Vegetation Management Plan for Central, Eastern, and Southeastern Massachusetts* and local, state, and federal laws and regulations. Additionally, maintenance of existing structures occurs on a routine basis as necessary, and in compliance with local, state, and federal laws and regulations. Within the RFA of SD11 in Fall River, tree removal totaling approximately 4,606 square feet will be required. These areas will be revegetated with native grass and herbaceous species once construction is complete.

The Companies recognize that maintaining/reestablishing the natural vegetation within the RFA is critical to protecting water supplies, providing flood control, preventing pollution, and protecting wildlife and fisheries habitat.

[310 CMR 10.58 (4)(b)] – *Protection of Rare Species. No project may be permitted within the riverfront area which will have any adverse effect on specified habitat sites of rare wetland or upland, vertebrate or invertebrate species, as identified by the procedures established under 310 CMR 10.59 or 10.37, or which will have any adverse effect on vernal pool habitat certified prior to the filing of the Notice of Intent.*

Response: The Companies will continue to coordinate with NHESP pursuant to MESA (M.G.L. c. 131A) and MA WPA (M.G.L. c. 131 § 40) to avoid impacts to listed species and their habitat, and to provide mitigation for any unavoidable impacts. NHESP has determined that the Project will result in a "take" for a reptile species and three plant species, and a CMP is required. A discussion of the conservation and management plan is presented herein in Section 5.3, and the elements of this plan are expected to become conditions of the CMP. The plan, once fully realized and implemented, will avoid and minimize impacts to state-listed species to the greatest extent practical, demonstrate that an insignificant portion of the local population will be impacted or that no viable alternative exits, and provide a long-term net benefit to the conservation of the local population of the impacted species. Please refer to Section 5.0 for additional detail.

[310 CMR 10.58 (4)(c)] – *Practicable and Substantially Equivalent Economic Alternatives. There must be no practicable and substantially equivalent economic alternative to the proposed project with less adverse effects on the interests identified in M.G.L. c. 131, § 40.*

The MA WPA performance standards for RFA require that the applicant prove by a preponderance of the evidence that there are no practicable and substantially equivalent economic alternatives to the Project with less adverse effects on the interests identified in the MA WPA. Please refer to the responses above and Section 2.0 of this document for a discussion of the alternatives evaluation process. The above provision is met because the proposed Project represents the alternative that will provide a reliable energy supply for the Commonwealth with a minimum impact on the environment.

[310 CMR 10.58 (4)(d)] – *No Significant Adverse Impact. The work, including proposed mitigation measures, must have no significant adverse impact on the RFA to protect the interest identified in M.G.L. c. 131, § 40.*

Response: Existing vegetative cover within RFA will be preserved to the maximum extent feasible. In accordance with 301 CMR 10.58(4)(d)1.a., temporary impacts where necessary for installation of linear site-related utilities are allowed, provided the area is restored to its natural conditions. When construction is complete, the disturbance to the RFA to establish work areas will be stabilized, as necessary, and allowed to revegetate.

To offset construction impacts, protective measures and BMPs will be in place to avoid and minimize impacts. Though some of the habitat functions associated with forested wetland will be permanently altered as a result of the Project, they will be replaced by functions offered by scrub-shrub habitat. Scrub-shrub habitat is increasingly rare and the change will provide a benefit to species that rely on scrub-shrub/open canopy habitat. Consequently, in accordance with 310 CMR 10.58(4)(d)1.c., the Project is not anticipated to impair the capacity of RFA to provide wildlife habitat.

In accordance with 310 CMR 10.58(4)(d)1.d., the Project is not anticipated to impair groundwater or surface water quality by incorporating construction phase erosion and sedimentation controls until such time as disturbed areas are fully revegetated and stabilized.

[310 CMR 10.58 (5)] – *Redevelopment Within Previously Developed Riverfront Areas: Restoration and Mitigation. Notwithstanding the provisions of 310 CMR 10.58(4)(c) and (d), the issuing authority may allow work to redevelop a previously developed RFA, provided the proposed work improves existing conditions. Redevelopment means replacement, rehabilitation or expansion of existing structures, improvement of existing roads, or reuse of degraded or previously developed areas. A previously developed RFA contains areas degraded prior to August 7, 1996 by impervious surfaces from existing structures or pavement, absence of topsoil, junkyards, or abandoned dumping grounds. Work to redevelop previously developed RFAs shall conform to the following criteria.*

Response: Although a majority of the Project activities will be occurring within an existing ROW, the Companies are not filing under the redevelopment provisions at 310 CMR 10.58(5).

Wildlife Habitat Evaluation (310 CMR 10.60)

Response: A wildlife habitat evaluation was completed pursuant to 310 CMR 10.60 and the procedures and methods detailed in MassDEP's *Massachusetts Wildlife Habitat Protection Guidance for Inland Wetlands*. Wildlife Habitat Evaluation reports are included in Appendix D. The Project exceeds thresholds for wildlife habitat alteration under the MA WPA M.G.L. c. 131 § 40 and associated Regulations (310 CMR 10.00). Anticipated temporary and permanent construction impacts are greater than 5,000 square feet within BVW, BLSF, and RFA. In addition, greater than 50 linear feet of IB associated with streams SD-8, SD-11, and SD-19 will also be temporarily impacted as a result of the Project.

Results from the wildlife habitat evaluation indicate that all wetlands within the Project ROW provide wildlife habitat functions including providing food, shelter, migration, breeding, and overwintering areas for wildlife. Important wildlife habitat characteristics have been identified within the Project ROW, of which several include upland/wetland food plants (hard mast and fruit), dense herbaceous cover, and perennial and intermittent streams. Important wildlife habitat enhancements proposed within some of the areas impacted by tree removal within the Project ROW include creating snags, and stockpiling woody debris. As concluded in the Wildlife Habitat Evaluations, there are no adverse effects on wildlife habitat since resource areas within the Project ROW will not be substantially reduced in their function to serve as valuable sources of wildlife habitat in an area. In the areas of proposed tree removal within the NEP ROW, where forest habitat will be converted to scrub-shrub and emergent habitats, wildlife will still be able to use the area along the transmission line ROW.

1.8.5 Massachusetts Natural Heritage and Endangered Species Program Conservation and Management Permit

The Companies continue to coordinate closely with NHESP pursuant to the MESA (M.G.L c. 131A) and MA WPA (M.G.L. c. 131 § 40) to avoid impacts to listed species and their habitat, and to provide mitigation for any unavoidable impacts. NHESP has determined that the Project will result in a "take" for eastern box turtle and a CMP is required. A discussion of the conservation and management plan is presented herein in Section 5.3. The plan, once fully realized and implemented, will avoid and minimize impacts to state-listed species to the greatest extent practical, demonstrate that an insignificant portion of the local population will be impacted or that no viable alternative exists, and provide a long-term net benefit to the conservation of the local population of impact species. Please refer to Section 5.0 for additional details.

1.8.6 Massachusetts Department of Conservation and Recreation Construction Access Permit

Acushnet Cedar Swamp State Reservation

The Eversource portion of the Project crosses the Massachusetts Department of Conservation and Recreation (MA DCR) property known as the Acushnet Cedar Swamp State Reservation in the Town of Dartmouth. A permit will be required for construction of work areas and improvements to existing access roads within the existing ROW on the MA DCR property. Within this area, construction vehicles will primarily be using existing on-ROW access roads. In some locations, gullies and ruts along the existing access routes will need to be filled to create a safe means of ingress and egress to the work areas. The proposed improvements to the existing roads will be contained within the base of the existing roadway.

Within the Acushnet Cedar Swamp State Reservation, construction work pads will be created to provide a safe and level work area for construction equipment to undertake foundation work and structure assembly. Upland work pads will be constructed by grading and/or adding gravel or crushed stone to provide a stabilized work surface and would remain in place for post-construction operation and maintenance of the transmission line structures. In wetlands, these work pads will be constructed with temporary construction mats and will be removed after the completion of construction activities. The installation of a new short access road spur is proposed to provide access to a wire pulling location directly west of Flaherty Drive. Eversource currently holds existing transmission line easements across the MA DCR property that date back to the late 1950s and early 1960s and predates the establishment of the Acushnet Cedar Swamp State Reservation. In general, these easements provide Eversource the rights to "…enter upon to survey and to construct, reconstruct, repair, replace, maintain, operate, inspect, patrol, and remove a line or lines with wires and cables and other usual fixtures… and to pass along said strip to and from the adjoining lands for all of the above purposes, and the removal of said line or lines, and to pass over the Grantor's premises to and from said strip as reasonably required…." The proposed work will not require an Article 97 land disposition because the Project will be completed pursuant to the pre-existing easement rights described above and currently held by Eversource.

Southeastern Massachusetts Bioreserve

The Southeastern Massachusetts Bioreserve surrounds the existing transmission line corridor within the City of Fall River and consists of approximately 13,600 acres of protected open space. Land ownership within the Southeastern Massachusetts Bioreserve is a mix of City of Fall River, MA DCR, the Department of Fish and Game (MassDFG), and certain conservation restrictions imposed by MA DCR/MassDFG, and/or combination thereof (refer to Figure 1-5, Southeastern Massachusetts Bioreserve Conservation Land Ownership).

In March 2009, the City of Fall River granted a conservation restriction to the MA DCR and the MassDFG (prior to transferring their rights to the MA DCR) by way of a conservation easement on certain parcels of land within the Bioreserve. These areas are identified as Parcel A, B, and C on Figure 1-5 in Appendix B. NEP's existing transmission line easement predates the conservation restriction and therefore NEP maintains the rights to "…clear, renew, replace, add to and otherwise change the lines and each and every part thereof and all appurtenances thereto and the location thereof within said strips; and to pass along said strips to and from the adjoining lands and to pass over the Grantor's land to and from said strips as reasonably required …" Therefore, no MA DCR Construction and Access permit is required.

Additionally, the use of Bell Rock Road, Copicut Road, and Quanapoag Road will be used to gain access to the NEP ROW. Portions of these roads are categorized as MA DCR Roads/Trails. No improvements are necessary along these roadways, and since the roads are accepted public roads maintained by the City of Fall River, no MA DCR Construction and Access permit is required.

Table 1-6 summarizes the ownership of the state conservation land parcels traversed by the Project and notes the proposed Project activities within those parcels.

TABLE 1-6 STATE CONSERVATION LAND OWNERSHIP - SOUTHEASTERN MASSACHUSETTS BIORESERVE

PARCEL NO.	OWNERSHIP	PROPOSED IMPROVEMENTS	LENGTH OF CROSSING	NOTES
W-50-0012	MassDFG	• Install 3 structures • Clear southern portion of the ROW • Repair/improve/upgrade and/or adjust alignment of access road	~2,150 feet	--
W-44-2	DCRS/MassDFG	• Install 5 structures • Clear southern portion of the ROW • Repair/improve/upgrade and/or adjust alignment of • Upgrade/improve Gas Line Trail • Install permanent/temporary pipeline crossing	~0.5 mile	--
W-42-0020	Department of Fish and Wildlife	• Install 2 structures • Clear southern portion of the ROW	~.26 mile	--
W-44-3	DCRS/ MassDFG	• Install 5 structures • Clear southern portion of the ROW	~0.5 mile	--
W-28-8	MassDFG	• Install 5 structures • Clear southern portion of the ROW	~2,780 feet	This is part of the Copicut Wildlife Management Area
W-28-11	MassDFG	• Install 1 structure • Clear southern portion of the ROW	~435 feet	--

NEP currently holds easement rights along these areas and the proposed use of these access roads for construction are consistent with their current use by NEP for ROW maintenance activities. None of the proposed work will require Article 97 approval, and no Article 97 land disposition is required for the Project.

1.8.7 Massachusetts Chapter 91 License Minor Modification

Eversource holds an existing Chapter 91 License for the existing transmission line (Line 112) crossing of the Acushnet River (License No. 4374, dated October 3, 1960). Eversource is proposing to install a parallel aerial crossing over the Acushnet River with the new 115-kV line (Line 114) to the immediate south of the existing Line 112 crossing. Two new transmission line structures will be installed to the east and west of the Acushnet River to support the proposed new overhead conductors and wires. Structure 17 will be installed approximately 150 feet east of the river bank and will consist of an approximately 75-foot-tall steel H-frame structure. Structure 18 will be installed approximately 290 feet west of the river bank and will also consist of an approximately 75-foot-tall steel H-frame structure.

In personal communication with the MassDEP Waterways Program on May 19, 2022, the MassDEP indicated that the Project can be authorized a modification to the existing license (No. 4374) under the provisions of 310 CMR 9.22(3) *Minor Project Modifications*, (c) *replacement of subsurface utilities, or installation of additional utility lines in an existing right-of-way….provided the work will not restrict or impair access to water-dependent uses.* A notice of minor modification will be submitted to MassDEP to authorize the changes to the existing license.

1.8.8 Massachusetts Historical Commission and Tribal Consultation

950 CMR 70.00 establishes a uniform system for compliance with the so called "Antiquities Act", M.G.L. c. 9, §§ 26 through 27C (950 CMR 70-71). The purpose is to standardize the procedures for conducting archaeological field investigations in Massachusetts in order to insure the conservation of archaeological resources and the highest quality of archeological research. 950 CMR 70.00 is intended to protect the public's interest in archaeological resources by controlling activities which will disturb archaeological properties, and thus destroy the contextual relationships and associated scientific values of the properties. 950 CMR 70.00 are intended to strengthen and support the archaeological community's efforts towards the conservation of archaeological properties by setting standards whereby archaeological sites will be wisely used. 950 CMR 70.00 recognizes that archaeological sites are unique, non-renewable and fragile resources. Minimal levels of acceptable archaeological performance are established in order to insure the conservation of archeological properties, and also to insure full value for public expenditures in archaeology.

Response: The Companies and archaeologists from the Public Archaeology Laboratory (PAL) are complying with these regulations by adhering strictly to the professional qualifications and methodological standards as outlined. State Archaeologist's permits for subsurface investigation have been received for all archaeological investigations associated with Project impacts. Stated methodologies for field, laboratory, and reporting processes have been adhered to. The Companies and PAL have worked cooperatively throughout the archaeological investigations with the Massachusetts Historical Commission (MHC), local historical commissions, and federally and state-recognized Tribes with an expressed interest in the area.

The purpose of M.G.L. c. 9, §§ 26 through 27C is to eliminate, minimize, or mitigate adverse effects to properties listed in the State Register of Historic Places. 950 CMR 71.00 establishes a standardized procedure to protect the public's interest in preserving historic and archaeological properties by

directing state bodies to notify the MHC as early as possible in the planning process of any project either undertaken by the state body or prior to the state body's funding or licensing, in whole or in part, a private project. The MHC will determine whether the project will have any adverse effect, direct or indirect, on any property listed in the State Register of Historic Places. The MHC must make a determination of effect within 30 days of receipt of notification. If the MHC determines that a project will have an adverse effect on a State Register property, then the MHC, the state body, and the private project proponent will immediately consult to discuss ways to eliminate, minimize, or mitigate the adverse effects. The state body or the private project proponent undertaking the project must adopt all prudent and feasible means to eliminate, minimize, or mitigate adverse effects. 950 CMR 71.02 detail the process for compliance with M.G.L. c. 9, §§ 26 through 27C by establishing a forum for the resolution of disputes arising between proposed developments and historic properties; the emphasis of the process is on interested parties negotiating an agreement after a thorough and good faith examination of alternatives. State law does not give the MHC veto authority over proposed developments, but does direct state bodies to adopt all prudent and feasible means to avoid damaging historic properties. The MHC's role is to provide information, technical assistance, and a forum to assist project proponents in developing projects that consider historic values and preserve the Commonwealth's historic heritage.

Response: These regulations address impacts to resources that are listed on the State Register of Historic Places (State Register). Since 2018, PAL has been conducting intensive (locational) archaeological survey and archaeological site examination investigations and an historic architectural reconnaissance survey and effects assessment to identify and evaluate significant historic and archaeological resources that may be affected by the proposed undertaking. In 2021, PAL completed archaeological site examination investigations of nine sites that were evaluated by PAL as meeting the Criteria of Eligibility for listing in the State Register and the National Register of Historic Places (NRHP). In March 2022, PAL submitted the archaeological site examination report to the MHC, USACE, and Tribes; the report summarized the results of the investigations, and PAL recommended that two of the sites are eligible for listing in the State Register and NRHP. On July 7, 2022, the MHC commented on the report, concurring with PAL's recommendations, and requested that the Companies develop an Archaeological Site Avoidance and Protection Plan (ASAPP) to protect the two above-referenced sites, and a third site in the immediate vicinity with the NEP ROW to ensure that they are not inadvertently impacted by Project activities. PAL has developed an ASAPP and has been issued a State Archaeologist's Permit application to perform supplemental archaeological site examination investigations at one site within the Project impact area and plans perform these activities in in Q2 2023. The Companies will continue to consult with the MHC, USACE, and Tribes to avoid, minimize, or mitigate any adverse effects the Project may have on any significant historic properties and archaeological sites.

1.9 Engineering Safety Standards

The National Electric Safety Code (NESC) or American National Standards Institute (ANSI) Standard C2, is a United States standard of the safe installation, operation, and maintenance of electric power and communication utility systems. It is published by the Institute of Electrical and Electronics Engineers (IEEE). In the Commonwealth, the Massachusetts Department of Public Utilities (MA DPU) has promulgated the Massachusetts Code for the Installation and Maintenance of Electric Transmission Lines ([I&METL] - 220 CMR 125.00) that, in several instances, surpass NESC requirements. Where the CMR does not surpass NESC requirements, it is expected that NESC values will be met and this code is referenced. The I&METL Rules "state the minimum requirements for spacing, clearances and strength of construction" for transmission lines (220 CMR 125.10 (3)), including construction and maintenance (220 CMR 125.10 (5)).

Therefore, as presented in various tables, instead of specifying minimum distances between (transmission line) structures, these Rules establish minimum clearance and separation distances in feet from or between:

- Table 1 – Ground, Rails or Water (including streets, railroads, buildings and boats)
- Table 2 – Ground
- Table 3 – Wires Carried on the Same Structure
- Table 4 – Transmission Conductors and other Transmission Conductors or Wires
- Table 7 – Transmission Conductors and Supply or Communication Conductors
- Table 8 – Transmission Conductors and Conductors or Wires Carried on another Structure
- Table 9 – Transmission Conductors from Structures and Effectively Grounded Parts
- Table 10 – Transmission Conductors from Structures of another Line, Buildings and Bridges

In addition to these distances increasing with phase voltage (e.g., 69 kV, 115kV, 230 kV and 345 kV), other factors such as sag, wind, ice, and ambient and operational temperatures are considered in order to establish the minimum clearance and separation distances that transmission line structures must be designed and constructed to provide. These variables, in combination with intervening terrain, govern the spacing distances between structures along transmission lines.

The North American Electric Reliability Corporation (NERC) has established elevation (above sea level) dependent "minimum vegetation clearance distances" (MVCD) and "minimum air insulation distances without tools in the air gap" (MAID) that are further clarified in Facilities Design, Connections and Maintenance (FAC) Standard FAC-003-1: *Transmission Vegetation Management Program* (TVMP). FAC-003-1 requires the Transmission Owner to prepare and keep current a formal TVMP and also requires that specific minimum vegetation clearance distances be "no less than those set forth in the IEEE Standard 516-2003 (*Guidance for Maintenance Methods on Energized Power Lines*. NEP has prepared a Five Year Vegetation Management Plan ([VMP] 2014-2018) dated October 18, 2013 fulfilling FAC-003-1 requirements.[1]

Along with the MA DPU's I&METL Rules, the Companies' vegetation management practices have been incorporated into the design of the Project in relation to specific radial clearances to be maintained between vegetation and conductors under all rated electrical operating conditions. Whenever possible, additional efforts are made to implement measures to avoid, minimize and mitigate detrimental environmental impacts to the maximum extent practicable. A more detailed description of these efforts is presented in Section 4.0 - Wetlands and Stormwater in this SEIR.

[1] https://www9.nationalgridus.com/non_html/National%20Grid%20VMP%202014%20-%202018.pdf.

2.0 ALTERNATIVES ANALYSIS

This section summarizes the alternatives analysis performed by the Companies. The Companies considered the following alternatives in addition to the Project:

- No-Action Alternative.
- An Undersea Cable Alternative based on Alternative 1 in the ISO-NE 2026 Solutions Study.
- A Synchronous Solution involving the reconductoring of 6.5 miles of 115-kV transmission line and the installation of two 30 MVAR synchronous condensers.
- Non-transmission alternatives (NTAs) such as new generation, energy efficiency, solar, battery storage, demand response programs, and distributed generation.
- Routing Alternatives.

As discussed below, the Companies demonstrate that the Project is the alternative that best meets the reliability need identified by ISO-NE while minimizing environmental impacts and costs.

2.1 No-Action Alternative

Under the No-Action Alternative, the Companies would not construct any new facilities to address the established transmission reliability need. The current transmission system would remain unchanged.

ISO-NE, in its recently issued 2029 Needs Update, has identified a set of time-sensitive thermal, voltage, and contingent loss-of-load issues within the Load Pocket,[2] and has confirmed that certain transmission upgrades, including the Project, are needed to address these issues. Additional analysis by the Companies has confirmed that the Project is needed to address the potential for thermal overloads on two 115-kV transmission lines and, at load levels consistent with the Companies' forecast for 2031, voltage collapse across the Load Pocket under certain N-1-1 contingencies.

If these issues are not addressed, the transmission system would not meet relevant transmission reliability planning standards and criteria and the Companies would not meet their obligations to provide reliable electric power service to approximately 161,000 customers in the Load Pocket. The No-Action Alternative does not meet the need and would therefore not satisfy applicable transmission planning reliability criteria. Accordingly, it was not considered further.

2.2 Undersea Cable Alternative (ISO-NE 2026 Solutions Study Alternative 1)

2.2.1 ISO-NE Solutions Study

In the 2026 Solutions Study, ISO-NE identified four potential solution sets (i.e., combinations of transmission upgrades) that would meet the full range of Load Pocket needs identified in the 2026 Needs Assessment. Each solution set consisted of (1) two transmission projects selected from a set of four

[2] The Load Pocket consists of the municipalities of Fall River, Westport, Dartmouth, Freetown, New Bedford, Acushnet, Fairhaven, Rochester, Mattapoisett, Marion, and Wareham in Massachusetts, as well as Jamestown, Newport, Middletown, Portsmouth, Tiverton, and Little Compton in Rhode Island.

alternatives, and (2) a set of projects that are required regardless of the combination ("Common Projects").[3]

The four alternatives can be summarized as follows:

- Install new undersea cable and switching station in Rhode Island ("ISO Alternative 1").
- Separate and reconductor Lines M13 and N12 between Pottersville[4] and Sykes Road Substations ("ISO Alternative 2").
- Install new 115-kV line between Pottersville and Bell Rock Substations ("ISO Alternative 3").
- Extend Line 114 from Industrial Park Tap to Bell Rock Substation ("ISO Alternative 4").

The Solutions Study determined that any of the following four combinations of the alternatives, together with the Common Projects, would fully address the Load Pocket needs identified in the 2026 Needs Assessment:

- ISO Alternative 1 + any other ISO Alternative, or
- ISO Alternative 4 + ISO Alternative 2 or 3.[5]

ISO-NE then selected the combination of ISO Alternative 2 + ISO Alternative 4 as the preferred solution for the Load Pocket based on a comparison of costs.[6,7]

Following the 2029 Needs Update, the Companies revisited the alternatives presented in the 2026 Solutions Study to determine whether any should be presented as an alternative to the Project in this Analysis. The Companies noted that any solution set that does not include the Project must necessarily include ISO Alternative 1, the new undersea cable and switching station in Rhode Island. In this respect, ISO Alternative 1 can be regarded as an alternative to the Project. Consequently, in the sections below, the Companies summarize and compare ISO Alternative 1, hereinafter called the Undersea Cable Alternative, and the Project.

2.2.2 Undersea Cable Alternative: Description

The Undersea Cable Alternative includes:

- Construction of a new switching station in Portsmouth, Rhode Island.
- Installation of an approximately 5.0-mile, new 115-kV underground cable from Bristol Substation in Bristol, Rhode Island to the new switching station, including a 4,300 linear foot undersea segment beneath Mount Hope Bay.
- Reconductoring of 5.1 miles of the existing 115-kV F-184 line from Merriman Junction Tap in Swansea, MA to Bristol Substation in Bristol, Rhode Island.

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[3] See ID #13 – 17, Table 7-2, Pg. 55 of the Solutions Study.

[4] Pottersville Substation was formerly known as Somerset Substation. The name was changed when the substation was completely rebuilt as a part of a National Grid Asset Condition improvement project.

[5] The Solutions Study noted that the combination of ISO Alternatives 2 and 3 is not feasible and that the combinations of ISO Alternatives 2 and 4 and ISO Alternatives 3 and 4 are the same from an electrical performance standpoint.

[6] The N12/M13 DCT separation and reconductoring project (ISO Alternative 2) addresses additional needs and contingencies as compared to the Project. It is currently pending separately at the Department of Public Utilities pursuant to G.L. c. 164, § 72, in D.P.U. 22-95.

[7] The need for the Project was confirmed in ISO-NE's 2029 Needs Update. ISO-NE did not issue an updated Solutions Study, instead directing the Companies to bring the Project (and other identified projects) "to completion."

2.2.3 Comparison

Below, the Companies compare the Undersea Cable Alternative and the Project based on cost, reliability, and environmental impacts.

Environmental Comparison

In comparing Project alternatives, the Companies give preference to alternatives that minimize impacts to the natural and social environments. Here, the Undersea Cable Alternative includes construction of a new substation on a currently undeveloped site resulting in permanent land use impacts; it also requires a horizontal directional drill of approximately 4,300 linear feet beneath Mount Hope Bay requiring special oversized and overweight reel handling and construction equipment. In addition, it includes onshore underground and overhead transmission installation. The underground installation in a medium density residential area would have the typical temporary impacts from traffic restrictions and construction noise associated with underground construction within public streets.

In contrast, the Project is located entirely within an existing overhead transmission line ROW. Its primarily overhead design allows it to span wetlands and other sensitive resource areas, thus minimizing impacts to the natural environment. In addition, the existing ROW is located in predominantly undeveloped or low-density residential areas, helping to minimize impacts to the developed environment. As a result, the Project would be significantly less impactful to the natural and social environments than the Undersea Cable Alternative.

Cost Comparison

The estimated cost of the Undersea Cable Alternative, as presented in the 2026 Solutions Study, is approximately $102.3 million.[8] Given the general increase in both material and labor costs since the 2026 Solutions Study, it is reasonable to assume that $102.3 million may understate the current cost for the Undersea Cable Alternative.

The current cost estimate for the Project is $52.7 million, or approximately half the original estimate for the Undersea Cable Alternative. Thus, the Project is significantly less expensive than the Undersea Cable Alternative.

Reliability Comparison

Per the 2026 Solutions Study, the Undersea Cable Alternative and the Project each can be combined with another ISO alternative to address the reliability needs identified in the 2026 Needs Assessment. Since the Companies' 2031 peak load forecast for the Load Pocket (555 megawatts [MW]) is very close to the load forecast used in the 2026 Solutions Study (543 MW), and all the 2026 solutions included a reliability margin, it is more than reasonable to conclude that the Undersea Cable Alternative remains a viable alternative to the Project and either project would address the reliability needs.[9]

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[8] This cost estimate for the Undersea Cable Alternative is derived from the summation of each of the cost elements of ISO Alternative 1 as identified in Table 7-2 of the 2026 Solutions Study. More specifically, it is the total of Project ID#1 ($70.4 million); Project ID#2 ($5.5 million); Project ID#3 ($14.4 million) and Project ID#4 ($12 million).

[9] Given the passage of time and the implementation of certain of the Common Projects, additional load flow analysis would be required to demonstrate with certainty that the Undersea Cable Alternative, taken in combination with either ISO Alternative 2 or ISO Alternative 3, would be sufficient to address the need.

Conclusion (Project vs. Undersea Cable Alternative)

After comparing the Project with the Undersea Cable Alternative, the Companies concluded that the Project is the superior solution when balancing environmental impacts, costs to customers, , and considerations of system reliability. Based on the evaluation of the relative merits and disadvantages of each alternative, the Project is superior to Undersea Cable Alternative for the following reasons:

- It addresses the voltage collapse and thermal line overload needs in a less impactful manner:
    - It uses existing ROWs dedicated to overhead transmission lines where wetlands and other sensitive resource areas will be spanned to the greatest extent practicable; or where impacts can be minimized and mitigated.
    - It uses a network of existing access roads and access routes within the managed ROWs.
    - It does not require the acquisition of new ROW and/or easements.
- It provides the lowest cost solution to meet the identified need.

2.3 The Synchronous Solution

ISO-NE has confirmed the ongoing need for the Project in the 2029 Needs Assessment and has directed the Companies to implement the Project. Additional modeling by the Companies determined that, with all other Load Pocket solutions in place, Line 114 is needed to address the potential for thermal overloads on Eversource Lines 111 and 112 and for low voltages or a voltage collapse that would result in loss of power to the entire Load Pocket.

In order to confirm that the Project remains the most cost-effective, least environmentally impactful solution to meet the updated need, the Companies reviewed other means of addressing these specific needs. As part of this review, the Companies revisited an option that was considered and dismissed early in the 2026 Solutions Study process: to address thermal violations by increasing the capacity of overloaded transmission lines, and to address voltage issues by installing a dynamic reactive device within the Load Pocket. The Companies designed a solution (the "Synchronous Solution") that addresses the needs in this fashion. The Synchronous Solution includes:

- Reconductoring 4.1 miles of the 115-kV 112 Line from Industrial Park Tap to Industrial Park Substation.
- Reconductoring 2.4 miles of the 115-kV 111 Line from Industrial Park Substation to High Hill Switching Station.
- Installing two 30 MVAR synchronous condensers at National Grid's 115-kV Dexter Substation.

Synchronous condensers were selected as the dynamic reactive device. They are used to provide voltage support, supplying reactive power to the transmission network to regulate voltage. At the transmission level, ISO-NE and the Companies prefer to use synchronous condensers for voltage support rather than an alternative compensation device, such as a static var compensator. Synchronous condensers are superior

in that they strengthen the system in terms of short circuit current and provide inertia to improve system stability.[10]

The Companies initially considered four possible locations for the synchronous condensers: Eversource's High Hill and Industrial Park substations in Massachusetts, and National Grid's Dexter and Tiverton Substations in Rhode Island. Initial load flow analysis indicated that voltage support would be most effective if located at the downstream end of the Load Pocket; consequently, the Companies further evaluated the Dexter and Tiverton sites based on availability of space within or in proximity to the substation sites, ease of interconnection, and potential environmental impacts. While both sites had sufficient space, further investigation revealed that the Tiverton site presented prohibitively difficult challenges in terms of the ability to provide relay protection for the local transmission system. No such challenges exist at the Dexter Substation; therefore, the Tiverton location was not pursued further and the Dexter Substation was selected as the preferred location for the synchronous condensers. Additional load flow modeling showed that the installation of two 30 MVAR synchronous condensers at this location would be sufficient to address the voltage concerns. These synchronous condensers could be accommodated within the site boundaries, although they would require an expansion of the existing fence line, clearing of trees and vegetated areas and, potentially, impacts to wetlands.

2.3.1 Comparison

Similar to the above comparison of the Project to the Undersea Cable Alternative, the Companies compared the Project and the Synchronous Solution on the basis of environmental impacts, cost and reliability. This comparison is described below.

Environmental Comparison

Both solutions have limited impacts to the natural and social/developed environments when compared to other potential alternatives. Impacts are minimized for the Project and for the transmission line components of the Synchronous Solution, as both are located entirely within existing overhead transmission line ROWs in undeveloped or low-density residential areas. While much of the Project resides in ROW that has been cleared, some additional clearing is required to accommodate the New Line. No additional clearing would be required for the transmission portion of the Synchronous Solution. By incorporating the new transmission components within an existing ROW and transmission line corridor in a sparsely populated region, new impacts to the natural and social/developed environments for both the Project or the Synchronous Solution are limited.

As described above, the substation component of the Synchronous Solution would be located at the existing Dexter Substation. The existing Dexter Substation is located off a residential street with residences located to the north on the opposite side of Freeborn Street. To accommodate the Synchronous Solution, it will be necessary to perform some new tree clearing and land disturbance, which may disturb freshwater wetlands located around the perimeter of the existing station. While the synchronous condenser itself will be a source of noise, any such noise would be mitigated by its enclosure and would not be expected to be a public nuisance.

Therefore, new impacts to the natural and social/developed environments for both the Project or the Synchronous Solution are expected to be minimal as the new transmission components are located within

[10] ISO-NE presented a PowerPoint on the topic of dynamic reactive device technologies at the February 17, 2021 Planning Advisory Committee meeting.

an existing transmission line corridor, and any new station equipment will be at an existing substation location. Since both solutions are expected to have minimal impacts, they are generally comparable from an environmental perspective.

Cost Comparison

The estimated cost of the Synchronous Solution is $60.2 million, consisting of $9.2 million for the reconductoring and $51.0 million for the synchronous condensers. This is $7.5 million (14%) more than the estimated cost of the Project. As a result, the Project is less expensive than the Synchronous Solution.

Reliability Comparison

Both the Project and the Synchronous Solution address the reliability needs. However, the Project has several attributes that make it a more reliable alternative than the Synchronous Solution. First, the Project (a transmission line) is a static device with no moving parts and limited maintenance requirements. Once in place, it is a passive carrier of electricity from one location to another. In contrast, a synchronous condenser is a dynamic device that must respond to constantly changing system conditions and is subject to multiple modes of failure. Although a reliable transmission alternative, it is thus inherently less reliable than a static solution such as a transmission line.

In addition, the Project, unlike the Synchronous Solution, provides a new transmission path into and out of the Load Pocket. This additional path will facilitate the integration of new wind and solar generation, battery storage, and other distributed energy resources. It also will reduce the risk associated with transmission line maintenance within the Load Pocket. At present, when one of the three transmission supplies into the Load Pocket is removed from service for maintenance, the Load Pocket is dependent on the two remaining transmission lines for service. Loss of one of the remaining lines could overload the third, resulting in loss of service to customers. A fourth source into the Load Pocket provides not just voltage support, but also a layer of redundancy that protects customers from loss of service.

Overall, the Project is less subject to failure than the Synchronous Solution and requires less operator engagement and less maintenance. It also provides an additional transmission path into the Load Pocket, making it easier to integrate new energy resources and reducing the risk associated with routine maintenance of the transmission system. Consequently, the Project is superior to the Synchronous Solution from a reliability perspective.

Conclusion (Project vs. Synchronous Solution)

After comparing the Project with the Synchronous Solution, the Companies confirmed that the Project is the superior solution when balancing considerations of environmental impacts, costs to customers, and system reliability. Based on the evaluation of the relative merits and disadvantages of each alternative, the Project is superior to the Synchronous Solution for the following reasons:

- It provides a lower cost solution to meet the identified need.
- It relies on static, rather than dynamic, technology and thus is an inherently more reliable solution.
- It creates a new transmission path into the Load Pocket, providing robustness and flexibility to facilitate a multitude of future system states and facilitating routine maintenance activities on transmission equipment serving the Load Pocket.

With respect to environmental impacts, the Project and the Synchronous Solution are largely comparable and their impacts are minimal.

2.4 Non-Transmission Alternatives

In addition to transmission alternatives, the Companies also evaluated NTAs to the Project. The Companies completed an analysis of the locations and sizes of energy injections that would be needed to mitigate the transmission reliability needs addressed by construction of the proposed Project and then assessed the feasibility and potential costs of deploying potential NTAs.

2.4.1 NTA Methodology

At the outset of the NTA assessment, the Companies conducted an analysis to determine the amount of energy injection required to meet thermal and voltage needs within the Load Pocket under N-1-1 contingency conditions at the 2020 peak real time net load level of 493 MW. The Companies determined that the minimum level of resources necessary to resolve the projected transmission reliability needs from the N-1-1 contingencies addressed by the Project at this load level is 85 MW. A somewhat higher level of energy injections would be required to resolve the identified needs, which are based on the Companies' 2031 peak load forecast of 555 MW.[11]

In order to address the observed transmission reliability needs, NTA resources would ideally be located at or near the High Hill or Bell Rock substations. These locations provided the optimum thermal and voltage performance for the load pocket during system contingency events. An NTA located upstream from High Hill or Bell Rock (e.g., east of High Hill or west of Bell Rock) would not be as effective at mitigating transmission thermal overloads and voltage issues due to an increased distance from the far end of the load pocket under certain contingency events. However, the Bell Rock Substation lies within the Southeast Massachusetts Bioreserve, a 13,600-acre protected open space jointly managed by the City of Fall River Water Division, the MA DCR, the Massachusetts Division of Fisheries and Wildlife (MA DFW), and the Trustees of Reservations, a protected Outstanding Resource Water area, and protected species habitat. Development in the area surrounding the Bell Rock Substation would be significantly restricted. Therefore, the High Hill Switching Station was deemed to be the optimal location for the interconnection of a hypothetical NTA.

2.4.2 NTA Feasibility and Practicality Assessment

The Companies considered whether NTA technologies could hypothetically be developed as an alternative to the Project, either alone or in combination. Possible NTA technologies include:

- Active demand response.
- Passive demand response/energy efficiency (EE).
- Utility-scale or distribution-scale solar photovoltaic (PV), with and without energy storage.
- Energy storage.
- Conventional generation (such as combined cycle gas turbines, aeroderivative combustion turbines, large frame combustion turbines, etc.).

A technically feasible NTA technology is defined as one that could effectively resolve the transmission need with sufficient performance and response time. When considering whether a specific technology has the operating characteristics (performance and response time) needed to respond to contingency

[11] The NTA analysis was conducted prior to the development of the Companies' 2031 Forecast.

conditions, the Companies used a threshold response time of within 30 minutes of the occurrence of the first contingency.[12] The resource must then be able to continue to operate until the failed transmission system element is repaired and placed back into service or until loads decline.

Active Demand Response and EE

Neither active demand response nor EE is deployable to the scale necessary to mitigate the needs addressed by the Project. For example, future EE is already forecasted to reduce the area load by approximately 58 MW (or a reduction of 8% of gross area load) by 2029. Thus, in order for EE efforts to produce the needed demand savings, it would require installing *additional* EE measures in the area of the affected load that produces at least 85 MW in demand savings, over and above the planned 58 MW. This amount of incremental EE beyond the Companies' already aggressive EE forecasts is simply not achievable. Therefore, EE is not a feasible alternative taken alone to meet the identified need.

Solar PV and Energy Storage

Based on the Companies' analysis, which considered the historical load curve and dispatch patterns in the Load Pocket, the Companies determined that the projected overload duration of the N-1-1 contingency conditions is 14 hours out of 24 hours in each daily load cycle. Given the intermittency of solar PV, it is not technically feasible to provide sufficient energy injection for the duration of the overload. Likewise, energy storage technologies alone are not feasible due to the lack of transmission capacity available to provide energy for storage to charge in the off-peak hours. The 14-hour projected overload would leave only 10 hours of charging available and this would not be enough time to recharge an energy storage device in preparation for the next daily load cycle. Although the duration of the overload prohibits solar PV or energy storage from functioning independently, these technical limitations could potentially be overcome when solar PV is paired with storage.

The Companies have reviewed the solar PV, energy storage, and combination solar PV and energy storage projects in the ISO-NE interconnection queue that have been proposed by developers at or downstream of High Hill Switching Station. Although battery duration is not stated in the interconnection queue, the Companies' experience shows that energy storage projects in the queue tend to be short duration in the energy production (e.g., 2 to 4 hours) and would not be able to cover the full duration of the reliability needs. Furthermore, all projects in the interconnection queue are relying on the Project in their interconnection studies. Removing the Project from interconnection studies could result in the need to restart studies and the new studies would potentially identify the Project as a required interconnection upgrade. Additionally, any or all of the projects may withdraw from the queue at any time. Thus, these resources were deemed to be infeasible for meeting the identified need in a timely and reliable manner.

Conventional and Offshore Wind Generation

There are no proposed conventional generation units in the ISO-NE interconnection queue that could serve to obviate the need for the Project. The Companies are aware of one offshore wind project currently in the ISO-NE interconnection queue that would potentially interconnect in the Load Pocket. The QP1118 project[13] is 1,200 MW net injection and is requesting interconnection at Bell Rock substation. The QP1118 project does not have a completed System Impact Study and will rely on the Project in its

[12] See the ISO-NE Transmission Planning Technical Guide (https://www.iso-ne.com/static-assets/documents/2017/03/transmission_planning_techincal_guide_rev6.pdf), Section 3.4.2 (page 48), which allows up to 30 minutes for system adjustments following a first contingency.

[13] QP1118 is incremental to QP909 and increases QP909's 800 MW net injection to 1,200 MW net injection.

interconnection study. Additionally, QP1118 does not yet have a Power Purchase Agreement contract and does not plan to be online until 2027, well beyond the in-service date of the Project.

As a result, neither conventional generation nor offshore wind generation would be available to meet the identified need in a timely or reliable manner.

2.4.3 Challenges for Technically Feasible NTAs

After determining that the queued generation in the Load Pocket has too many challenges preventing it from addressing the transmission reliability needs in an adequate and timely manner, the Companies looked to design a hypothetical NTA consisting of conventional generation or solar paired with storage. Although solar PV paired with storage and conventional generation are technically feasible NTA technologies, there are several practical challenges that would prevent these NTA technologies from being developed. These challenges include the necessary development time, land requirements, and infrastructure requirements.

Development of conventional generation or a paired solar and energy storage project as part of an NTA solution would entail, among other requirements, identification of an appropriate site in proximity to High Hill Switching Station, timely completion of permitting and siting processes, timely completion of the required interconnection studies with ISO-NE, securing an available fuel supply (in the case of a conventional generation project) and contracting with equipment suppliers and construction vendors. These hurdles make it impractical to develop a generation project within the same time frame as the Project. As an example, Canal Unit 3 in the Town of Sandwich entered the ISO-NE interconnection queue in March of 2014, completed interconnection studies more than one year later (in June of 2015), and went into service in July of 2019. Canal Unit 3 was developed at the site of an existing generator, and the Companies would expect a lengthier development time for a conventional generation or paired solar PV and energy storage project in the vicinity of High Hill Switching Station because a greenfield site would be required.

A generating facility or solar plus battery solution would need to be developed in the vicinity of High Hill Switching Station and would require an amount of land in that area appropriate for each technology. In order to install a solar PV array and energy storage facility that would resolve the identified need, at least 1,100 acres would be required, over 175 times the size of High Hill Switching Station. Any generation project, including a paired solar PV and energy storage project, would likely require additional transmission upgrades, potentially including the expansion of High Hill Switching Station, construction of additional new substations, and new or upgraded transmission or distribution lines, to allow for delivery of the energy.

New conventional generation, such as a gas-fired generator, would require an appropriately zoned site and land or leasehold rights for a gas supply lateral to the nearest natural gas pipeline. Upgrades to existing pipelines may be needed to ensure adequate delivery pressures and volumes. A dual-fueled generator would also require a backup supply of oil to ensure year-round availability, which would increase costs, further complicate the permitting process, and increase land requirements. In addition to land use requirements and the need for a reliable fuel source, conventional generation would result in substantial emissions, negatively affecting air quality and making it more difficult to achieve the Commonwealth's climate change goals.

Additionally, either NTA solution would likely require land acquisitions or leasehold interests to complete access to a transmission ROW in order to interconnect the facility to the transmission system. The expected changes in land use from either of the NTA solutions would significantly exceed the land

requirements associated with the Project, which utilizes existing ROW and does not require any additional easements or land rights.

While noting the significant practical challenges associated with development of each of the technically feasible NTA technologies, the Companies also considered the potential costs of developing a technically feasible NTA as an alternative to the proposed Project. The Companies concluded that the potential costs of any technically feasible NTA would be higher than the cost of the proposed Project. In particular, the least expensive NTA technology (a single frame peaker gas turbine) is estimated to have levelized costs of approximately $7.0 million per year. The estimated levelized costs for a combined solar and battery storage solution are approximately $25.4 million per year. By contrast, the levelized cost of the Project is estimated at $6.4 million per year. Accordingly, even a hypothetically available NTA alternative would be more expensive than the Project, and thus, an inferior option.

2.4.4 Conclusions on Non-Transmission Alternatives

Active and passive demand response are not deployable to the scale necessary to mitigate the needs addressed by the Project. Neither solar PV nor storage alone is feasible due to technical limitations. Conventional generation would need to overcome significant challenges including the necessary development time, land requirements, and infrastructure requirements, and therefore would not be practical.

Moreover, the higher cost to customers of any NTA compared to the cost of the Project, combined with the physical and logistical difficulties of implementing such a solution in a timely fashion, make an NTA or any combination of NTAs a substantially inferior solution to the identified need than the Project.

Overall, the Project, compared to any feasible NTA, better meets the goal of providing a robust, secure, and reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost.

2.4.5 Conclusion

The Companies' analysis demonstrates that the Project is the best alternative when balancing considerations of environmental impacts, cost, and reliability.

2.5 Routing Alternatives (Overhead and Underground)

A connection between the Industrial Tap and Bell Rock Substation was identified by ISO-NE as the preferred solution to provide a transmission source to the Fall River area, the Companies also examined the general vicinity of the Project and orientation of potential west-to-east Routing Alternatives to the proposed transmission line focusing on existing utility and transportation corridors. Each of the routes was evaluated to determine their feasibility and potential for environmental impact for the installation and operation of a transmission line using the following siting criteria:

1. **Maximize use of existing linear corridors.** The potential location of the proposed 115-kV transmission line along existing ROW (e.g., transmission line, highway, railroad, and pipeline corridors) where linear uses are already established was a primary routing consideration. Collocation along existing linear corridors minimizes conflicts with local, state and federal land use plans and policies; minimizes the need to acquire land rights; and follows corridors already encumbered by infrastructure, thereby decreasing environmental impacts. Utilizing existing transmission line ROW

offers the benefit of an established network of access roads and lands already encumbered with utility easements. In addition, use of existing linear corridors minimizes the need to acquire additional land or land rights to construct a line, which could impact project cost and schedule.

2. **Maintain system operability/reliability**. Route alternatives, whether overhead or underground, must allow general accessibility for future operation, inspection, maintenance, and repair. The Companies accordingly sought routes that would minimize access restrictions.
3. **Minimize impacts to environmental resources**. The Companies sought to identify route alternatives that would minimize impacts to environmental resources such as wetlands, wildlife habitats, watercourses, conservation lands, historic sites, archaeological resources, and other designated resources.
4. **Minimize cost.** The Companies sought to develop route alternatives that would avoid costly remediation or construction requirements or, alternatively, that would provide some opportunity for securing cost reductions, e.g., by avoiding underground construction, if possible, to reduce construction costs.
5. **Limit construction constraints**. In evaluating alternative routes, preference was given to routes that would minimize constructability constraints. For example, highway crossings or working within other utility corridors (e.g., railroad corridors) can result in access restrictions, workspace constraints, safety concerns, traffic disruptions, and restrictive work hours.
6. **Minimize impacts to densely developed areas.** The placement of transmission facilities in densely developed areas typically creates additional complexity both during initial construction and when maintenance or replacement is required. The potential for construction and maintenance work-hour restrictions, need for additional ROW, temporary workspace and limited access availability are more prevalent in densely populated areas. Therefore, the Companies sought to identify route alternatives that would, to the extent practicable, minimize impacts to densely developed areas and the social/developed environment.

As a result of this analysis, the Companies identified seven route alternatives, including the Project, connecting the Industrial Park Tap and Bell Rock Substation. These routes were further evaluated against natural and social environmental criteria to determine their feasibility and potential for environmental impact for installation and operation of a transmission line. The route scoring criteria and are provided in Table 2-1.

TABLE 2-1 NATURAL AND SOCIAL ENVIRONMENTAL CRITERIA

	CRITERION	DESCRIPTION
Natural Environment	MA DCR Conservation (Article 97) Land	Length of route in miles requiring Article 97 approval
	Wetlands	Acres within 25 feet of ROW
	Outstanding Resource Waters / Areas of Critical Environmental Concern/ Chapter 91 Jurisdictional Crossings	Number of crossings
	Rare Species Habitat (Priority Habitat)	Acres within ROW
	Tree Clearing Requirements	Acres of forested land within ROW
Social / Developed Environment	Commercial Buildings	Number directly abutting ROW
	Residences and Dwellings	Number directly abutting ROW
	Sensitive Receptors	Number directly abutting ROW
	Potential Traffic Congestion	Length within roadway ROW

	CRITERION	DESCRIPTION
	Historic and Archaeologic Resources	Number directly abutting ROW
	Potential Encounters w/Contamination	Number within ROW
Constructability	Complex Crossings	Number of trenchless crossings, overhead crossings of other transmission line, and railroad crossings within ROW
	Utility Congestion	Length of significant utility congestion, either overhead or underground, within ROW
	Substantial Road Improvements	Length in miles that each route would be located within or require access from unimproved, rough roads to facilitate construction of the Project
	Hard Angles (>30 degrees)	Number within ROW

Due to the geographic location of the Project area, the routing alternatives to the proposed Project consisted of a combination of overhead and underground installation located within roadway ROWs and the existing transmission line corridor. Based on an evaluation using the criteria described in Table 2-1, the proposed Project route was found to have the lowest potential for environmental impact. It is also by far the least expensive to construct due to its short length and almost entirely overhead construction.

The proposed Project is located within the existing Eversource and National Grid ROW, where established overhead transmission line corridors have existed for decades between the Industrial Park Tap and the Bell Rock Substation. These ROWs are controlled by the Companies either in fee or easement and contain sufficient width to construct a new overhead transmission line adjacent to the existing overhead transmission lines.

3.0 LAND ALTERATION

3.1 Anticipated Impacts

Construction will result in permanent impacts to land within the Companies' existing transmission line corridor and easements, as identified in Table 3-1. This is a result of structure installation and tree removal. Tree removal will be required within the NEP ROW in Fall River to expand the cleared ROW width approximately 60 feet to the south side of the ROW.

Table 3-1 below displays the Project's anticipated permanent impacts associated with access, structure installation, work pads and tree removal.

TABLE 3-1 ANTICIPATED PERMANENT LAND USE IMPACTS

RESOURCE AREA	PERMANENT IMPACTS
New Land Altered	959,857 (22 acres) (includes permanent impacts to upland and wetland areas associated with access, structure installation0, work pads, and tree removal)*

* Temporary impacts to wetland resources are accounted for in Section 4.0.

3.1.1 Construction Access

Access roads are required along the ROW to provide the ability to construct, inspect, and maintain the existing transmission line facilities. One of the objectives of the Project is to keep construction equipment on the existing ROW to the maximum extent practicable when moving from structure location to structure location. The Companies are planning to use the existing network of access roads to the greatest extent practicable. In some areas, new road spurs are necessary to gain access to the new structure locations from the existing and established ROW access roads. Typical access roads vary in width from 16 to 20 feet wide to accommodate the vehicles and equipment needed for construction on the transmission lines. These roads will be located to avoid or minimize disturbance to wetland resources to the extent feasible, to follow the existing contours of the land as closely as possible, and where practicable, avoid severe slopes. In addition, access roads will be constructed to avoid significantly altering existing drainage patterns. A total of approximately 6,254 linear feet of new access road realignment and/or spurs will be installed to facilitate construction, operation, and maintenance of the Project.

Access roads will be constructed of gravel, timber construction mats or a combination thereof depending on site-specific conditions, related grading work, and whether they are temporary or permanent. The majority of the existing access roads will require some improvements (refer to existing and proposed access routes shown on Figure 1-3 in Appendix B).

Any access road improvements and/or maintenance will be carried out in compliance with the conditions and approvals of the appropriate federal and state regulatory agencies. Crushed stone aprons (i.e., Construction Entrance BMP) will be used at all access road entrances to public roadways to clean the tires of construction vehicles and minimize the migration of soils off-site. In uplands and in state regulated 100-foot buffer zones to BVW, access road improvements will be left in place to facilitate future access to the ROW for inspection, operation, and maintenance purposes.

Where upland access is not available, access across wetlands and streams will be accomplished by the temporary placement of construction mats (timber or equivalent). The use of construction mats allows for heavy equipment access within wetland areas, minimizes the need to remove vegetation beneath the

access way, and helps to reduce the degree of soil disturbance, soil compaction, and rutting in soft wetland soils. Construction mats most often used by the Companies are wooden timbers bolted together typically into 4-foot by 16-foot sections, wooden lattice mats, or composite mats. Typically, construction mats may be installed on top of the existing vegetation; however, in some instances cutting or mowing woody vegetation may be required. Such temporary construction mat access roads will be removed following completion of construction, and areas will be restored to reestablish pre-existing topography and hydrology as necessary.

Mats shall be certified clean by the vendor prior to installation. Clean is defined as being free of plant matter (stems, flowers, roots, etc.), soil, or other deleterious materials prior to being brought to the Project site. Any equipment or timber mats that have been placed or used within areas containing invasive species within the Project site shall be cleaned of plant matter (stems, flowers, roots, etc.), soil, or other deleterious materials at the site of the invasive species prior to being moved to other areas on the Project site to prevent the spread of invasive species from one area to another. Mats shall be cleaned prior to being removed at the completion of the Project.

Once construction mats are removed, wetlands shall be inspected for buildup of sand or other materials that may have fallen through construction mats. Care shall be taken to inspect wetland crossings as each mat is removed to ensure any materials are properly removed and disposed of off-site. Wetlands will be restored to pre-construction grades and contours to the extent practicable. Vegetation will also be allowed to revegetate. If necessary, a wetland herbaceous seed mix will appropriate for the northeast region be over bare wetland soils to facilitate re-vegetation and soil stabilization of disturbed wetlands.

3.1.2 ROW Maintenance and Operation

The Project will be located within NEP and Eversource fee owned property and easements, portions of which are presently managed according to national and regional standards and regulations for electric transmission line operation, including required clearances between conductors and vegetation. These standards and regulations include but are not limited to:

- Federal Energy Regulatory Commission standards including NERC Standard FAC-003-1, Commissioner Order 693, FAC-003-2 (effective July 1, 2014).
- NERC Standard FAC-003-1 – TVMP, effective date of April 7, 2006.
- NESC Section 21, Part 2, Rule 218 and the ANSI pruning standards, A300, Part 1, Part 7, and Z-133.

The Companies will follow their respective plans and procedures for vegetation maintenance on the ROWs. Below is each company's VMP:

- National Grid's *Right-of-Way Vegetation Management Plan* and subsequent updates.
- Eversource's *Five Year Vegetation Management Plan for the Central, Eastern, and Southeastern Massachusetts (2023-2027).*

For routine vegetation maintenance within the ROWs, the Companies have long followed established plans and procedures for applying an Integrated Vegetation Management (IVM) approach to manage vegetation within existing utility corridors in accordance with transmission line clearance standards. The vegetation maintenance cycle follows a three- to five-year timeline and encourages the growth of low-growing shrubs and other vegetation that provide a degree of natural vegetation control. Vegetation management is necessary to ensure the reliable and safe delivery of electric services to the Companies'

customers. This is accomplished by allowing for the proper clearance between vegetation and electrical conductors. Once tree removal has been performed in order to expand the cleared width of the NEP portion of the existing ROW for Project activities, vegetation maintenance will continue to occur in this area and along the remainder of the transmission line ROW in accordance with the Companies' respective VMPs following the conclusion of the Project.

IVM provides the Companies with a proven range of techniques to manage ROW vegetation to conform to federal and regional standards for transmission line operation, accommodate the varying interests of stakeholders along the ROW, minimize environmental effects, and balance cost considerations. The Companies use a combination of mechanical and chemical controls (i.e., mowing, hand cutting and select herbicide application) to target vegetation that may impact the operation and safety of the transmission lines. The goal is to manage the upland and wetland vegetation within the ROWs using natural biological controls. Natural biological control is the process of working with the cycles of plant succession and interspecies competition to facilitate the spread and stabilization of native, early successional plant communities that discourage the establishment of taller woody vegetation (Nowak and Ballard 2004; Bramble et al. 1990).

While conducting routine vegetation maintenance within the ROWs, the Companies target undesirable vegetation such as trees and limbs, tall growing shrubs, vegetation growing around stations, guy wires, access roads, gates, and anywhere vegetation impedes access to the ROW. Because of this IVM approach, ROWs are one of the primary remaining early successional ecological communities in New England. These dense, low growing plant communities can help discourage the establishment of undesirable vegetation, do not hinder access to the ROWs, and do not generally interfere with the operation and maintenance of the transmission lines.

Plant species that are generally encouraged on the ROWs include herbaceous and shrub species and other vegetation that have a mature height of less than approximately 12 feet on NEP ROWs and 15 feet on Eversource ROWs. As a result of these ROW vegetation management practices, most of the wetland habitats within the managed portions of the ROWs consist of scrub shrub and some emergent marsh.

Routine vegetation maintenance will continue within the existing transmission line corridors following the conclusion of the Project. Vegetation will be maintained as low-growth shrubs or grasses and herbs which provide a degree of natural vegetation control. Vegetation management will occur once every three to five years within the ROW in accordance with the companies' respective VMPs, which is in compliance with the Massachusetts Rights-of-Way Management regulations (333 CMR 11.00) administered by the Massachusetts Department of Agricultural Resources. Treatment methods used on the ROWs are selected based upon timing, site sensitivity, target species composition and density, site access, topography, and treatment methods.

Limit Impacts to Habitat and Wildlife

The management and maintenance of ROW creates early successional habitats dominated by scrub-shrub vegetation and open areas with dense grasses and other herbaceous vegetation. Many animal species use the habitats provided along the ROWs as their homes, feeding and breeding grounds, migration corridors or nurseries, and many plant species adapt to the growing conditions provided within the managed portions of the ROWs. The early successional landscape maintained within the ROWs, however, is not by nature stable; it is instead the sustained result of the IVM program. The removal of the forested areas and selective tree removal to accommodate the Project and subsequent maintenance of the ROW to promote scrub-shrub and emergent habitats will not result in a loss of overall wetland habitat, but rather will create a change in habitat type, from forested to scrub-shrub or emergent wetland.

Different types of successional communities have various benefits to flora and fauna. For example, a study in Massachusetts indicated an increase in wildlife use, notably avian species, following clearing of ROWs (Nickerson and Thibodeau 1984). This study attributed the increase in wildlife use to the conversion of forested areas into wetland and upland shrub and emergent plant communities. Creating and maintaining additional shrub-land habitat along the ROWs, in many instances, represents a long-term positive effect on some species, since shrub-land habitat is otherwise declining in New England. This is important because land use trends suggest that this habitat type will continue to decline and ROWs will become increasingly significant (Confer 2003). This decline is a result of various factors (e.g., development, ecological succession, absence of fire). A managed transmission ROW is considered a major source of shrub-land habitat (Saucier 2003; Confer and Pascoe 2003); in fact, in the eastern United States utilities maintain more acreage of managed shrub-lands on ROWs than all other sources of this habitat combined (Confer et al. 2008).

Other studies also have indicated that this change may be beneficial (King et al. 2009; Yahner et al. 2004; Bramble et al. 1992). Scrub-shrub habitats within the ROW can provide wildlife habitat such as nesting for birds, browse for deer, and cover for small mammals (Ballard et al. 2004).

Shrub land birds and other disturbance dependent species are now more dependent than ever on human activities to maintain the habitat required for their survival (King et al. 2009; Confer and Pascoe 2003; Confer et al. 2008). In response to shrub land habitat loss and the decline in shrub land dependent species in the Northeast, the United States Fish and Wildlife Service (USFWS) has recently approved the Great Thicket National Wildlife Refuge, which will be dedicated to managing shrub land wildlife habitat in the Northeast (USFWS 2016). In this regard, transmission line ROW is considered a major source of shrub land habitat (Saucier 2003).

The establishment of low-growing species, i.e., grasses and forbs, is also a form of natural biological control that assist in reducing the re-invasion of the ROW corridor by tree species (Ballard et al. 2004). Some plant species also have the ability to inhibit the growth or invasion of other species which is referred to as allelopathy (Money 2008). Establishment of such dense shrub and herbaceous emergent plant communities that do not require continued disturbances for management activities may contribute to minimizing the spread of invasive species.

Avian Nests

Raptors and other birds of prey may be nesting on structures or within forested fringes within and adjacent to the ROWs that are slated for tree removal. Other migratory birds, including most commonly known avian species, may also nest within or along the forested portions of the ROWs. It is not feasible or practical for NEP to restrict tree removal and vegetation management during certain times of the year, however their policy is to leave active nests alone unless they interfere or present an immediate impact to operations. Inactive nests are removed, as appropriate. Trained field personnel only are to implement this protocol, which is appropriate for safe operation of the electric transmission lines.

Limit Encroachment by Unauthorized Vehicles

The Companies' existing transmission line easements restrict certain activities within the ROWs. Easements typically prohibit the construction of buildings, pools, and other structures within the ROWs. In addition, the Companies routinely work with landowners to discourage unwarranted access onto and use of its ROWs by third-party users of off-road vehicles such as ATVs and snowmobiles. NEP has communicated with the City of Fall River to solicit their input on restricting unauthorized vehicle access. The location of any permanent gates and access roadblocks proposed will be coordinated with the landowners, the Fall River Police Department, and the Massachusetts Environmental Police.

Following construction of the facilities, all transmission structures will be clearly marked with warning signs to alert the public to potential hazards if climbed or entered. Where authorized by property owners, permanent gates and access roadblocks will be installed at key locations to restrict access onto the ROW by unauthorized persons or vehicles.

3.1.3 Tree and Vegetation Removal Procedures

Tree removal and mowing of the ROW or other vegetation management is required prior to the start of construction to provide access to the proposed structure locations, to facilitate safe vehicular and equipment passage, and to provide safe work sites for personnel. Tree removal will be required within the NEP ROW for a distance of approximately 4.2 miles to expand the cleared ROW width approximately 60 feet to the south side of the ROW. All of the tall growing woody species within this portion of ROW will be removed. All tree rand vegetation removal are to occur within the boundaries of the existing ROW. The following are guidelines for work associated with the tree removal proposed for this Project:

General Procedures

- **Stumps and Roots:** Generally, trees will be cut close to the ground leaving the stumps and roots in place, except where grading is required for access road improvements or at structure sites. This reduces soil disturbance and potential for erosion.
- **Low Growing Vegetation:** Low growing vegetation found within Project work pads, pull pads, and access roads will be mowed for construction activities.

Tree Removal Methods

- **Tree Removal in Upland Areas:** Trees to be removed in upland areas will be felled with tree harvesting equipment, primarily using mechanized feller/bunchers, transported by forwarder or skidder to the landing, and chipped or loaded onto trucks for disposal. In limited locations woody debris may be cut and diced in place, mowed, or chipped on-site; this is dependent on vegetation type, tree health, and other conditions.
- **Tree Removal in Wetlands with Equipment Staged in Uplands:** Where wetlands are present, tree removal in the wetland may be required. Trees will be felled primarily using mechanized feller/buncher equipment with the equipment stationed in upland areas in order to reach into adjacent wetland without having to enter the wetland. This may require installing construction mats on the adjacent upland, depending on soil conditions. Harvested material will be lifted and removed into the upland for processing. Where the ROW crosses streams and other open water, vegetation along bank will be selectively removed using feller/buncher. Select trees may be removed using chainsaws, as necessary.
- **Tree Removal in Wetlands with Equipment Staged in Wetlands:** If a road is proposed within a wetland, crews will remove trees and build the construction mat road through the wetland as the wetland is cleared. The road will be used to forward/skid trees removed from sites within the wetland. Additionally, clearing equipment will operate on construction mats to remove trees throughout the wetland and will continually place/replace mats in front of the equipment as tree clearing proceeds. Mechanized feller/bunchers will operate on construction mats unless dry or frozen ground allow limited off mat work with no soil rutting greater than four to six inches deep. Tracked, low ground impact equipment will be allowed to operate off mats to forward felled trees to the mat road if there is no rutting greater than four to six inches deep. If no road is proposed within a wetland, tree removal will be done with equipment operating on construction mats to

remove trees throughout the wetland and continually placing/replacing mats in front of the equipment, felling and forwarding the trees to the adjacent upland without building a mat road.

- **Selective Tree Removal in Wetlands by Chainsaw Crew:** In some areas, crews will be directed to walk wetland portions of the ROW, dropping or girdling selected trees with chainsaws. Selective tree removal will only be allowed in areas of seasonal open water and/or very low tree density. These areas generally contain stunted red maple trees, seasonal non-flowing standing water, and some level of wetland shrub layer that can best be conserved by dropping/girdling and leaving the tree debris in place. This method will not be used in vernal pools or in areas of flowing water. Final decision on these sites will be made in the field as tree removal takes place.

Brush, limbs, and felled trees will be chipped and removed from the site or chips may be applied to upland areas as an erosion control measure, where allowable. Temporary laydown areas will be established along the ROW to serve as locations to load timber, to temporarily stage a wood-chipper, and to park tree removal vehicles and equipment. Generally, trees to be removed will be cut close to the ground, leaving the stumps and roots in place, which will reduce soil disturbance and erosion. In locations where grading is required for access road improvements, work pads and at structure sites, stumps will be removed. In certain environmentally sensitive areas such as wetlands, it may be necessary and desirable to leave felled trees and/or snags and allow them to decompose in place and provide valuable wildlife habitat rather than to disturb soft organic substrates while removing them. Where appropriate, enhancements will be proposed as mitigation for important wildlife features that may be lost as a result of tree removal and construction activities. Potential enhancement activities may include seeding, planting of native shrub species, and provision of snags, woody debris, and stone piles to create wildlife cover.

Mowing will occur in advance of construction within the Project limit of disturbance. Mowing will be used to reestablish access routes, and to prepare work pad and structure sites within the ROW. Mowing will be completed by mechanical means. Small trees and shrubs within the ROW limits of disturbance for NEP will be mowed as necessary with the intent of preserving root systems to the extent practical. Where the ROW crosses streams and brooks, any necessary vegetation mowing along the stream bank will be minimized to the extent practicable to reduce disturbance of bank soils and the potential for construction-related erosion. Wood chips may be applied to the ground in certain upland areas to serve as a means for erosion and sediment control.

Any trees just outside the ROW edge that may pose a hazard to the new transmission line will be assessed and to ensure reliability; these “hazard trees” may have to be pruned or, if the property owner provides permission, removed. The Project team will work with individual property owners to address their concerns.

3.1.4 New Transmission Structures, Conductors and Wires

The addition of the new AFRRP transmission line will be consistent with the current use of the existing utility ROW. Based on preliminary engineering, of the 118 new structures required for the overhead transmission line, 79 will be direct embed steel-pole H-frame structures, four will be steel-pole H-frame structures on concrete foundations, 25 will be direct embed steel single-pole (also referred to as monopole), supplemented by seven monopole and three triple-pole (dead-end and angle) structures requiring reinforced concrete foundations to support heavy loads (refer to Figure 1-3 in Appendix B).

The new structures will range in height from approximately 47 to 112 feet. The structures will support aluminum steel reinforced conductors both in horizontal and vertical configurations. One 3/8-inch extra high strength steel shield wire and one OPGW will be installed to support high speed relaying and

communications requirements. Typical cross-sections of the ROW showing existing and proposed structure size and placement are provided in the Appendix B.

Excavation for pole structures will result in a total of approximately 6,714 square feet of permanent impacts, including 923 square feet of permanent impacts in wetland resource areas which could not be avoided. Structure installation will include excavation for structure foundations and grading around the structure. Excavated soils that will not be reused on-site will be transported to an approved off-site disposal location or spread into an approved upland area. All disturbed areas around structures from grading and excavation that are not to remain as a work pad with crushed stone surface will be seeded with an appropriate conservation seed mixture and/or mulched to revegetate and stabilize the soils. For structure locations in wetland resource area, temporary construction mats will be used for access and works pads.

3.2 Mitigation

Mitigation relative to abutters, visual and noise effects are discussed in this section. Mitigation relative to wetland resource areas and rare species are included in Sections 4.0 and 5.0, respectively. The Companies have located the AFRRP entirely within existing transmission line ROW. New pole structures are proposed to be located adjacent to existing pole structures, where feasible, to minimize the potential for visual impact. Where new tree removal is required along the NEP portion of the Project, minimal visual impact to abutting property owners is anticipated due to the remote nature of the ROW.

Construction-generated noise will be limited by the use of mufflers on all construction equipment. Dust will be controlled by wetting and stabilizing access road surfaces, as necessary, and by maintaining crushed stone aprons at the intersections of access roads with paved public roadways. A construction communication plan will be developed for the AFRRP that will provide outreach during construction and will provide a consistent point of contact for the public. Recognizing the varying needs of its stakeholders, the Companies are developing various communication methods to inform stakeholders throughout construction, including as needed: work area signage; advance notification of scheduled construction; personal contact with residents, community groups and businesses; and regular e-mail updates to residents (upon request) and local officials that will include information on upcoming construction activity.

Traffic control and/or management plans will also be prepared, where required, which will minimize impacts associated with increased construction traffic on local roadways.

4.0 WETLANDS AND STORMWATER

4.1 Anticipated Impacts

Throughout the planning and design process for the Project, wetland impacts have been minimized to the extent practicable by utilizing existing transmission line corridors and existing access roads. However, given the scale and landscape setting of the AFRRP, certain wetland impacts associated with the development of the Project cannot be avoided. Construction will result in temporary, permanent, and secondary impacts to wetland resources. Secondary impacts generally involve the conversion of forested wetland habitat to scrub-shrub or emergent wetland habitat, whereby the cover type changes but results in no net-loss of wetlands. The following section describes the impacts associated with construction of the AFRRP including tree removal, excavation for pole structures, work pads and access road construction. Table 4-1 summarizes the potential impacts of the AFRRP on wetlands based upon engineering design data. Impacts have been calculated in square feet or linear feet and acres.

TABLE 4-1 SUMMARY OF ANTICIPATED WETLAND IMPACTS

RESOURCE AREA	TEMPORARY IMPACTS	PERMANENT IMPACTS	SECONDARY IMPACTS
Bordering Vegetated Wetland (BVW)	• 307,061 sf	• 923 sf	• 72,351 sf
Inland Bank (IB)[1]	• 2,180 sf	NA	• 1,654 sf • 515 lf of tree removal along the IB of Copicut Reservoir
Riverfront Area (RFA)[1]	• 23,587 sf	• 8,866 sf	• 4,606 sf
Bordering Land Subject to Flooding (BLSF) [1]	• 34,691 sf	• 8,016 sf	• 47,829 sf

Notes: sf = square feet; lf = linear feet.
[1] Overlapping impacts in BVW have been removed

TABLE 4-2 SUMMARY OF IMPACTS TO BORDERING VEGETATED WETLAND BY MUNICIPALITY

MUNICIPALITY	TEMPORARY IMPACT	PERMANENT IMPACT	SECONDARY IMPACT
Acushnet	107,727 sf	392 sf	0
New Bedford	77,851 sf	346 sf	0
Dartmouth	69,939 sf	131 sf	0
Fall River	51,544 sf	54 sf	72,351 sf

Notes: sf = square feet.

4.2 Wetlands Protection and Best Management Practices

Throughout the planning and design process for the new transmission line, wetland and watercourse impacts have been minimized to the greatest extent practicable by utilizing existing transmission line corridors and existing access roads to avoid new impacts to previously undisturbed wetlands, watercourses and other jurisdictional resource areas. However, given the scale and landscape setting of the Project, certain wetland impacts associated with the development of the new transmission line cannot be avoided.

To reduce the impacts associated with the construction and operation of the Project, the Companies incorporated design measures to minimize impacts. These measures, which include using an existing ROW, utilizing existing access roads, and avoiding the placement and construction of structures and access roads in wetlands and watercourses where possible, have resulted in the avoidance and minimization of impacts to wetlands, watercourses, and vernal pools to the greatest extent practicable. BMPs, as detailed in National Grid's Environmental Guidance document EG-303NE and Eversource's *Construction & Maintenance Environmental Requirements: Best Management Practices Manual for Massachusetts and Connecticut* (BMP Manual), will be employed to minimize disturbances to wetland resources during construction of the Project. The boundaries of the wetlands and watercourses along the ROW will be clearly demarcated by a qualified wetland scientist prior to the commencement of work. Boundaries of other sensitive environmental resources such as the vernal pool or cultural resources sites will also be flagged, or fenced-off, as necessary. Measures will be implemented on a site-specific basis as necessary to facilitate unencumbered amphibian access to and from vernal pools. These measures will be identified after taking into consideration site-specific conditions, including the type of construction activity in proximity to a vernal pool, the amphibian species known to occur in the vernal pool, and seasonal conditions.

The Companies will comply with all applicable wetland regulatory permit requirements and conditions, as well as the associated Project plans and specifications submitted in support of these permit applications. EG-303NE and Eversource's BMP Manual describes typical BMPs for construction.

Tree Removal – Secondary impacts will occur from tree removal activities in wetlands. Tree removal will result in the conversion of forested wetlands to either scrub-shrub or emergent BVW in these locations. Mechanized feller/buncher equipment will be used and construction matting will be installed to stage equipment within wetlands for tree removal. Some areas may require hand cutting with a chainsaw. Tree removal methods for wetlands are described above in Section 3.1.3.

Structures – The Project maximizes the use of existing transmission line ROWs, and the Project's design reflects the Companies' commitment to minimizing impacts to the environment. Within the Project ROWs, the Companies have conducted detailed environmental field studies such as wetland and watercourse delineations and vernal pool surveys to identify resource areas. In addition, constructability reviews of proposed Project activities were conducted in an effort to further minimize impacts to resource areas. Whenever feasible, and in accordance with engineering and safety requirements, structure foundations were moved to avoid or minimize impacts to resource areas. However, not all resource areas could be avoided.

Due to constraints posed by adjacent land uses or by transmission line design requirements, 17 new structures are proposed in wetland resource areas. Where permanent impacts are unavoidable, these impacts were minimized to the extent practicable based upon the prior extensive field constructability reviews and careful attention to design. New structures are proposed where necessary, either to meet structural or clearance requirements. No permanent impacts for the installation of structures are proposed within streams, streambanks or vernal pools.

Specific measures will be taken when installing structures. Temporary erosion and sedimentation controls will be installed around structure work sites in or near wetlands to minimize the potential for erosion and sedimentation. All erosion and sediment controls and other applicable construction BMPs will be inspected and maintained on a routine basis. Grading in wetlands will be limited for structure foundations. Construction mats will be used in wetlands to provide a safe workspace. Excess soil will be spread in upland locations or removed from the site for disposal at an approved receiving facility.

Access Roads – Existing access roads will be used to the extent practicable during the construction phase of the Project to minimize access through wetlands. Where access roads must be improved, the improvements will be completed so as not to extend beyond the existing road footprint or interfere with surface water flow or functions of the wetland. Where existing roads do not exist, temporary access roads through wetlands will be accomplished by the installation of construction matting. The disturbance area for the temporary matting has been conservatively estimated to be 20 feet wide, with the actual mat travel surface having a 16-foot width. The type of stabilization measures to be used in wetlands will depend on soil saturation and depth of organic matter. All temporary access roads through wetlands will be restored following the completion of installation activities by removing the construction mats, re-grading the area to pre-construction elevations to the extent practicable, and allowing the wetlands to re-vegetate.

There will be one temporary perennial stream crossing and four intermittent stream crossings installed for the Project. Temporary mat bridges or other bridging techniques will be used to span the streams. Temporary bridging installation will be avoided during peak flows or when the waterway to be crossed is above bankfull width conditions, with the exception of emergency situations or other unforeseen circumstances. If water is present at the time of construction, the ambient water flow will be maintained and water flows will not be constrained or interrupted at any time during construction. In addition, controls will be installed along access roads in upland areas to prevent or minimize turbidity and sediment loading into watercourses and wetlands. These controls may include the use of crushed stone approach aprons onto mat bridges, stone check dams, water bars, diversion channels, and soil erosion controls. Existing riparian zone vegetation will also be maintained, to the extent feasible, along the banks of the stream.

Construction Areas – The size, shape, location, and configuration of work pads were evaluated to minimize impacts to wetlands and watercourses to the extent practicable. Where wetland impacts could not be avoided, temporary construction matting for work pads will be placed on the existing wetland vegetation. Temporary construction matting and other possible construction area materials will be removed upon completion of the Project. Wetlands will be restored to pre-construction grades and contours to the extent practicable and allowed to re-vegetate. If necessary, vegetation will also be restored within the wetland through broadcasting a wetland herbaceous seed mix appropriate for the northeast region over bare wetland soils to facilitate re-vegetation and soil stabilization of disturbed wetlands.

Surface Water and Groundwater Resources – The Companies will require its contractor to adhere to BMPs regarding the storage and handling of oils, fuels, and other potentially hazardous materials during construction of the Project. Furthermore, the Companies will require its contractors to adhere to a standard emergency response plan or a Project-specific spill prevention, containment, response, and reporting plan. Equipment refueling and equipment/material storage will not be permitted within 100 feet of any wetland or waterbody, with the exception of equipment that cannot be feasibly moved from its working location (e.g., drilling equipment, dewatering pumps). Secondary containment will be used for small equipment (such as pumps) when operating within 100 feet of any wetland or waterbody, and secondary containment will be used beneath any large equipment during refueling in any of these locations. Contractor staging areas and contractor yards typically will be located at existing developed areas (parking lots, existing construction yards), where the storage of construction materials and equipment, including fuels and lubricants, would not conflict with protection of public surface water supplies or wetland resources.

Dewatering will be necessary during excavations for structures adjacent to or within wetland areas. Dewatering discharge water will be pumped into a settling basin which will be located in approved areas outside wetland resource areas. Other dewatering options would include pumping into a temporary storage tank, water truck, vacuum truck, or hauling to an off-site disposal facility. The pump intake hose will be suspended above the bottom of the excavation throughout dewatering to minimize entrainment of

sediment. The basin and all accumulated sediment will be removed following dewatering operations and the area will be seeded and mulched.

Erosion and Sediment Control and Storm Water Pollution Prevention - Erosion and sediment control devices will be installed along the perimeter of the identified wetland resource areas prior to the onset of soil disturbance activities to ensure that excess soil piles and other impacted soil areas are confined and do not result in downslope sedimentation of sensitive areas. To avoid disturbing the root mat and soils, tree stumps will be left in place during tree removal activities except at structure locations, within the footprint of proposed access roads, or construction work pads. Erosion controls will be inspected on a regular basis and maintained or replaced as necessary. The erosion and sediment control measures selected will be appropriate to minimize the potential for soil erosion and sedimentation in areas where soils are impacted. The Companies will adhere to National Grid's EG-303NE and Eversource's BMP Manual. The Companies will also prepare a Project-specific SWPPPs, in compliance with the MassDEP's *Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas: A Guide for Planners, Designers, and Municipal Officials* (2003). Typically, temporary erosion controls will be installed based on the specifications in the SWPPP.

The Companies will develop and maintain a SWPPP and Soil Erosion and Sediment Control Plan for each part of the Project for which they are responsible. The SWPPP will identify controls to be implemented to avoid and minimize the potential for erosion and sedimentation from soil disturbance during construction. The SWPPP will include a construction personnel contact list, a description of the proposed work, stormwater controls and spill prevention measures, and inspection practices to be implemented for the management of construction-related storm water discharges from the Project. The SWPPP will be adhered to by the contractors during all phases of Project construction in accordance with the general conditions prescribed in the Project's USEPA Stormwater Construction General Permit.

Environmental Guidance Documents – The Companies will prepare Environmental Guidance Documents consistent with other complex construction and maintenance projects. An Environmental Field Issue (EFI) will be developed for the NEP portion of the Project. Eversource will develop an Environmental Regulatory Compliance Matrix for the Project. At a minimum, the documents for the Companies will include the location of sensitive areas to be avoided, a summary of all permit requirements and conditions, detailed erosion and sediment control plans, and training requirements/documentation. All contractors and environmental monitors will be required to participate in environmental training before beginning work on-site. Regular construction progress meetings will provide the opportunity to reinforce the contractor's awareness of these matters.

Wetland Invasive Species Control Plan (WISCP) – The Companies will implement a WISCP to minimize the spread and/or introduction of invasive species in wetlands in the Project Area during construction. Invasive plants are species that are not native or indigenous to a region and can thrive in areas beyond their natural dispersal range, often out-competing native plants for space, nutrients, sunlight, and water. The WISCP identifies the invasive wetland plant species that are of concern in the Project Area. The WISCP was filed with the EENF.

The overall objective of the WISCP is to define the procedures to be used during Project construction to preserve the functions and values of wetlands in the Project Area and to minimize the further spread of invasive plants within wetlands that already contain them. The specific objectives of this plan are as follows:

- List the invasive plant species known to occur in the wetlands in the Project Area that were identified based on the wetland delineations of the Project ROWs.

- Identify as a baseline the wetlands in the Project Area in which such invasive species presently exist.
- Describe the Companies' existing vegetation management programs, discuss how these existing programs contribute to minimizing the proliferation of invasive species within the Project Area, and explain the constraints to long-term invasive species management along portions of the Project.
- Summarize the procedures that the Companies propose to implement to minimize the potential for the spread of wetland invasive species during the construction of the Project.

Supervision and Monitoring - Throughout the entire construction process, the Companies will retain the services of an environmental monitor. The primary responsibility of the monitor will be to oversee construction activities on a regular basis, including the installation and maintenance of soil erosion and sediment controls to ensure compliance with all federal, state, and local permit commitments. The environmental monitor will be a trained environmental scientist and qualified stormwater inspector responsible for supervising construction activities relative to environmental issues. The environmental monitor will be experienced in soil erosion control techniques and will have an understanding of wetland resources to be protected.

During periods of prolonged precipitation, the monitor will inspect all locations to confirm that the environmental controls are functioning properly. In addition to retaining the services of an environmental monitor, the Companies will require the contractor to designate an individual to be responsible for the daily inspection and upkeep of environmental controls. This person will also be responsible for providing direction to the other members of the construction crew regarding matters of wetland access and appropriate work methods. Additionally, all construction personnel will be briefed on Project environmental compliance issues and obligations prior to the start of construction. Regular construction progress/environmental training meetings will provide the opportunity to reinforce the contractor's awareness of these environmental issues.

4.3 Section 401 Water Quality Certification

In accordance with the provisions stated in the federal CWA (33 U.S.C. §1341) and the Massachusetts Clean Water Act (M.G.L. c. 21, §26-53) and its implementing regulations (314 CMR 9.00), the AFRRP will require an Individual Section 401 Water Quality Certification due to impacts to wetland resource areas which are tributary to a Class A Public Water Supply (Copicut Reservoir) and are therefore classified as ORW. Although the placement of temporary construction mats is currently proposed within 400 feet of the Copicut Reservoir, the Companies are not currently anticipating a variance will be required based on coordination with the MassDEP Office of Water Resources. The Companies will continue discussions with the MassDEP regarding the Project.

An application will be filed with MassDEP for Water Quality Certification review under 314 CMR 9.00. MassDEP evaluation criteria for applications are the incorporation of all practicable measures for avoiding and minimizing impacts to wetland resource areas. The design of the AFRRP avoids or minimizes adverse impacts, as described in Sections 3.0, 4.0, and 5.0. The AFRRP's compensatory mitigation package will comply with the mitigation requirements in the Massachusetts Water Quality Regulations.

The Massachusetts Section 401 Water Quality Certification Regulations at 314 CMR 9.06(2)(a) requires "For discharges to bordering or isolated vegetated wetlands, such steps shall include a minimum of 1:1

restoration or replication." Section 4.4 describes the preliminary compensatory wetland mitigation planning for each Company.

4.4 Wetland, Floodplain and Stormwater Mitigation

4.4.1 Wetland Mitigation

For those wetlands having permanent impacts, the Companies will provide appropriate mitigation. While the development of final mitigation plans is ongoing, the Companies are committed to working with the USACE, MassDEP, and the Acushnet, New Bedford, Dartmouth, and Fall River Conservation Commissions, to develop appropriate mitigation packages. The wetland mitigation plan is being designed to address the USACE and MassDEP requirements and performance standards as summarized further below.

Regulatory Requirements
The Companies have coordinated with the USACE regarding permittee-responsible compensatory mitigation requirements for the Project under the USACE Massachusetts General Permits and USACE - New England District's *Compensatory Mitigation Standard Operating Procedures*. On April 20, 2021, and February 15, 2023, the Companies met with the USACE to discuss the Project including requirements for wetland mitigation. During these discussions, the USACE expressed preference for payment to the In-Lieu Fee Program administered by the MassDFG.[14]

The Companies will be filing a joint Section 401 Water Quality Certification with the MassDEP for the proposed discharge of dredged or fill material into bordering vegetated wetlands. The MassDEP regulations at 314 CMR 9.00 require a minimum of 1:1 restoration or replication. Mitigation approved under the Water Quality Certification may be used to satisfy MA WPA-required mitigation. The final wetland mitigation plans will be an integral component of the Notices of Intent to be submitted and will addresses the:

- MA WPA BVW Performance Standards (310 CMR 10.55(4)(b) 1-7).
- *Massachusetts Inland Wetland Replication Guidelines* (Second Edition).
- USACE - New England District's *Compensatory Mitigation Standard Operating Procedures* (December 29, 2020).

Where wetland replication areas may be proposed, they will be selected based on the attributes of the Compensation Area fulfilling BVW General Performance Standards which require:

- Replacement area be equal to lost area.
- Similar ground water and surface water elevations in replacement and lost areas.
- Similar configurations between replacement and lost areas.
- Replacement area has unrestricted hydraulic connection to same waterbody/waterway as lost area.
- Replacement area shall be located in the same general area as the lost area.

[14] https://www.mass.gov/service-details/learn-about-dfgs-in-lieu-fee-program-for-massachusetts

- Greater than 75% of replacement area is established with indigenous wetland species within two growing seasons.

The *Inland Wetland Replication Guidelines* augment the above Performance Standards and also more explicitly address:

- Site Selection
- Hydrology, Soils and Vegetation
- Design Requirements and Erosion Control
- Schedule and Sequencing
- Monitoring Requirements

Projects that affect BLSF resulting in loss of flood storage volume require mitigation in the form of compensatory flood storage per 310 CMR 10.57(4)(a). Compensatory flood storage must be designed to meet the following performance standards:

- Be a volume not previously used for flood storage.
- Be provided in foot-by-foot increments equal to the volume of flood water at each elevation up to and including the 100-year flood.
- Have an unrestricted hydraulic connection to the waterbody.
- Be provided in the same reach without restricting flows causing an increase in flood stage or velocity.

Eversource Mitigation
The permanent wetland fill for Eversource (870 square feet), would be replicated within the existing transmission line ROW easement proximate to the impact areas within each municipality. The proposed permanent fill in BLSF for Eversource (removing overlapping impacts in BVW) is 7,921 square feet. Eversource is currently evaluating a number of areas to fulfill wetland replication and compensatory flood storage requirements. The locations being evaluated have been vetted from an environmental standpoint and would satisfy wetland mitigation requirements in each affected municipality. The sites are being evaluated from a legal, real estate and constructability perspective and detailed site-specific grading and planting plans will be developed. Wetland and compensatory flood storage mitigation plans will be prepared and submitted as a component of the Notice of Intent filings to be submitted to the municipal Conservation Commissions as well as the MassDEP.

NEP Mitigation
The permanent wetland fill for NEP consists of a loss of approximately 54 square feet of BVW and approximately 95 square feet of BLSF as a result of structure installation. Identification of wetland mitigation areas along NEP's portion of the Project is constrained as NEP does not own the ROW in fee, and thus would need to obtain real-estate rights to implement any wetland replication area. As a result NEP is proposing to take credit for the overdesign on the Bell Rock Substation Rebuild Project mitigation area in order to offset the permanent impacts proposed on the Line 114 Project. For the Bell Rock Substation Rebuild Project, NEP designed a wetland replication area that totaled approximately 5,520 square feet to offset approximately 4,244 square feet of permanent wetland loss (an over design of approximately 1,276 square feet). NEP discussed this with the City of Fall River Conservation Commission and MassDEP on January 5 and January 19, 2023, respectively, and both agencies were receptive to this approach. Details regarding this mitigation strategy will be prepared and submitted as a

component of the Notice of Intent filings to be submitted to the Conservation Commissions as well as the MassDEP.

4.4.2 Stormwater Mitigation

The transmission line facilities will not result in more than a *de minimis* increase in impervious surfaces and therefore will not require the use of low impact development techniques or Integrated Management Practices to control additional stormwater.

To reduce the impacts associated with the construction and operation of the AFRRP, the Companies incorporated design measures to minimize impacts. These measures, which include using an existing ROW, utilizing existing access roads, and avoiding the placement and construction of structures and access roads in wetlands and watercourses wherever possible, have resulted in the avoidance and minimization of impacts to wetlands and wildlife to the greatest extent practicable.

The Companies will develop and maintain a SWPPP and Soil Erosion and Sediment Control Plan for each part of the Project for which they are responsible. The SWPPP will identify controls to be implemented to avoid and minimize the potential for erosion and sedimentation from soil disturbance during construction. The SWPPP will include a construction personnel contact list, a description of the proposed work, stormwater controls and spill prevention measures, and inspection practices to be implemented for the management of construction-related storm water discharges from the Project. The SWPPP will be adhered to by the contractors during all phases of Project construction in accordance with the general conditions prescribed in the Project's USEPA Stormwater Construction General Permit.

The Companies will retain the services of environmental compliance monitors. The primary responsibility of the monitors will be to observe civil construction activities, including the installation and maintenance of soil erosion and sediment control BMPs, on a routine basis to ensure compliance with all federal, state, and local permit commitments. The environmental monitors will be experienced in soil erosion control techniques and will have an understanding of wetland resources to be protected.

In addition, the Companies will require that their construction contractors designate a construction supervisor or equivalent to be responsible for coordinating with the environmental monitor and for regular inspections and compliance with permit requirements. This person or persons will be responsible for providing appropriate training and direction to the other members of the construction crew regarding work methods as they relate to permit compliance and construction mitigation commitments. Additionally, construction personnel will undergo pre-construction training on appropriate environmental protection and compliance obligations prior to the start of construction of the Project. Training topics will include environmental, stormwater management, cultural resources, and safety considerations. Daily tailboard meetings will occur including a review of the day's environmental requirements and considerations. Regular construction progress meetings will be held to reinforce contractor awareness of these mitigation measures and as new crew members join the work force.

5.0 RARE SPECIES

According to the NHESP, nine state-listed species are located within the vicinity of the AFRRP as listed in Table 5-1. The Companies are actively coordinating with the NHESP regarding the species present within the Project area will continue with this consultation in order to minimize or avoid potential adverse effects on rare species during design, construction, and operation of the AFRRP. To supplement prior field efforts as documented in the EENF, species specific surveys have been reinitiated in 2021 for the Eastern box turtle. Additionally, botanical surveys have been conducted in coordination with NHESP. The distribution of annual species in particular, whose occurrence is variable from year to year will be conducted in 2023 prior to construction to reconfirm and/or re-delineate the current extant of plant populations previously documented within the Project ROW during the prior surveys. The Companies are also actively coordinating with the United States Fish and Wildlife Service regarding federally listed species present in the Project area.

TABLE 5-1 STATE-LISTED SPECIES IN THE VICINITY OF THE PROJECT

PROJECT	SCIENTIFIC NAME	COMMON NAME	TAXONOMIC GROUP	STATE STATUS
Acushnet to Fall River Reliability Project	*Coleataenia longifolia* ssp *longifolia*	Long-leaved Panic-grass	Plant	Threatened
	Caprimulgus vociferus	Eastern Whip-poor-will	Bird	Special Concern
	Terrapene carolina	Eastern Box Turtle	Reptile	Special Concern
	Linum medium var.*texanum*	Rigid Flax	Plant	Threatened
	Juncus debilis	Weak Rush	Plant	Endangered
	Panicum philadelphicum ssp. *Philadelphicum*	Philadelphia Panic-Grass	Plant	Special Concern
	Ambystoma opacum	Marbled Salamander	Amphibian	Threatened
	Gavia immer	Common Loon	Bird	Special Concern
	Spranthes vernalis	Grass-Leaved Ladies'-Tresses	Plant	Threatened

5.1 Anticipated Impacts and Alternatives

Throughout the planning and design process for the AFRRP, the Companies have worked diligently to minimize the footprint of the Project and have designed the proposed transmission line to utilize the existing transmission line corridor and existing access roads, to the extent practicable. However, given the scale and landscape setting of the AFRRP, certain impacts associated with the development of the AFRRP cannot be avoided. Construction will result in temporary, permanent, and secondary impacts to state-listed rare species habitat. Temporary impacts are anticipated for the placement of construction mats used for equipment access and staging during construction. Permanent impacts are anticipated for the installation of select new access roads, stone/gravel work pads in uplands and new transmission line structures. Secondary impacts generally involve the conversion of forested habitat to scrub-shrub, emergent, or herbaceous habitats.

The Companies have attempted to design the Project to avoid a take of listed species by implementing the following measures; however, as described below a take is anticipated for the eastern box turtle, as well as two grasses and one herb species.

- NEP has minimized impacts to state listed species to the extent practicable, but with tree clearing, road improvements, and crossing of a pipeline that must take place for safety reasons, full avoidance of state listed species is not feasible.
- Significant work has occurred to identify turtle habitat, including the use of radio telemetry. This tool will continue to be utilized to identify species during construction to avoid future harm to the species.
- The Project team will be performing seed collection of select plant species so that permanent loss is reduced.
- NEP has been working closely with NHESP and will be proposing a mitigation package that will offer a net benefit through a mix of on-site mitigation and funding to support Conservation and Research of state listed reptiles and plant species.

As detailed in the EENF filing, The Companies assessed the following alternatives to the proposed Project:

- Transmission Line Project Alternatives
- Routing Alternatives

The assessment demonstrated that the proposed Project best meets the identified system and reliability needs while maintaining regulatory and permitting objectives, including minimizing environmental impacts. As detailed further below, long-term operation and maintenance of the AFRRP is not anticipated to have adverse impacts on rare species.

5.2 Consultation with Natural Heritage and Endangered Species Program

Subsequent to the EENF filing, the Companies met with NHESP on seven occasions (March 24, 2021, April, 18, 2022, May 18, 2022, August 9, 2022, December 7, 2022, January 24, 2023, and March 30, 2023) to discuss the Project and recommendation measures for the species anticipated to occur in the Project area. Through discussions with the NHESP, the Companies have reached the following conclusions:

- A “take” is likely for the anticipated impacts to the eastern box turtle. “Net Benefit” provisions as required for the Director to issue a CMP have been the subject of periodic meetings with NHESP Review Staff and are incorporated into the CMP application.
- A “take” of long-leaved panic grass, rigid flax and Philadelphia panic grass is anticipated. A program involving seed collection and redistribution, with localized habitat management and post-Project monitoring is anticipated to minimize the level of “take” and to provide a net benefit to the local populations. Avoidance of grass-leaved ladies tresses is anticipated.
- Two seasons of whip-poor-will breeding surveys indicate that the species is significantly present to the south of the ROW in Fall River. Recent breeding activity adjacent to the ROW is limited to two consistent (two-year) sites and an additional site occupied in 2020. Standard mitigation measures and time of year tree removal restrictions will avoid a “take” for the eastern whip-poor-will.

Marbled salamanders are affiliated with mature forests and discrete breeding areas therein. No breeding habitat for marbled salamander was identified within or adjacent the ROW and a “take” of this species is

not anticipated. The tree removal proposed for the AFRRP is remote from documented breeding habitat. The Project is not anticipated to impact aquatic or terrestrial habitat for marbled salamander and no special or elaborate measures beyond those implemented for eastern box turtle and other species are anticipated, based on NHESP coordination.

Common loons have been documented in the Copicut Reservoir in Fall River, Massachusetts and were confirmed to have nested in 2020 and successfully raised a loon chick, though the nesting location was never confirmed. NEP has been coordinating with the MA DFW and NHESP to identify any recommended species-specific avoidance and minimization measures and determine BMP for this species.

The Companies will continue ongoing coordination efforts with NHESP and additional meetings will be scheduled to finalize any required species protection plans, mitigation, and additional elements of a conservation and management plan, which will be incorporated as conditions into the CMP.

5.3 Conservation and Management Plan Status (Best Management Practices, Minimization and Avoidance Measures)

Due to the extent of tree removal along the NEP ROW, the Companies anticipate that a CMP will be required under MESA for the eastern box turtle, as well as two grasses and one herb species. Mortality avoidance measures will be implemented in other parts of the alignment. Pursuant to 321 CMR 10.23, the application for the CMP will need to demonstrate measures to avoid and minimize impacts to the eastern box turtles and habitat and provide for a "net benefit" for these species. In general, with a suitable mortality avoidance plan in place the activities, particularly in the NEP ROW, will ultimately diversify the habitat for eastern box turtle within the context of ± 12,000 acres of intact and protected forest lands adjacent resulting in a compelling net benefit for this species.

In addition to avoiding and minimizing species habitat impacts to the maximum extent feasible, the Companies will continue to work closely with NHESP to develop mitigation measures for each species associated with the AFRRP ROW. At this time, proposed mitigation includes, but is not limited to, the following:

- Developing a mitigation program in consultation with the NHESP to allow for the issuance of a CMP.
- Training will be required for all construction personnel.
- Installing signage along the ROW alerting work crews to rare species habitats.
- Installing construction fencing along the ROW alerting work crews to rare plant occurrences adjacent to the work area(s).
- Performing extensive sweeps prior to construction and monitoring during construction.
- Monitoring of animals in the vicinity of active construction via radiotelemetry.
- Implementing species-specific protection plans.
- Conducting habitat restoration and enhancement post-construction.

Long-term operation and maintenance of the AFRRP is not anticipated to have adverse impacts on rare species, as long as the work is completed in compliance with the CMP, and future activities on the ROWs are conducted in accordance with the Companies' Operations and Maintenance Plans as approved by the NHESP.

5.4 Mitigation/ Net Benefit

When a "take" of a state-listed species is unavoidable, the preferred method for mitigation typically includes land preservation through on-site or off-site conservation restrictions at a specified ratio (see 321 CMR 10.23 (7) (a)), for the habitat acreage lost. Since NEP holds easement rights rather than land ownership over most of the ROW, conservation restrictions over appropriate habitat will not be possible.

Regulation 321 CMR 10.23(3) allows NHESP to approve financial or in-kind contributions toward the development and/or implementation of an off-site conservation recovery and protection plan for the impacted species when all other reasonable efforts have been made to avoid the take. The Companies anticipate a contribution to the Nature Conservancy's Box Turtle Enhanced Mitigation Fund will serve as a component of the net benefit to box turtle. The Companies and NHESP will determine the appropriate amount of compensatory funding which may be used for, but is not limited to, research studies, off-site habitat enhancements or land banking/preservation. NEP is also exploring other ROW enhancements including creating and maintaining exposed soil for turtle nesting areas.

6.0 HISTORIC AND ARCHAEOLOGICAL RESOURCES

PAL carried out intensive (locational) surveys for portions of the Project area under State Archaeologist's Permit Nos. 3871 and 3827 for the Eversource and NEP portions of the Project, respectively. PAL submitted the technical reporting to the MHC on October 10, 2018 (NEP portion of Project) and July 29, 2019 (Eversource portion of Project).

Subsurface archaeological testing was conducted along the Eversource portion of the Project in areas of high to moderate archaeological sensitivity within the Project's Area of Potential Effects (APE). The APE is "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist" (36 Code of Federal Regulations [C.F.R.] 800.16[d]). The APE includes the southern portion of a 150-foot-wide ROW adjacent to and south of the existing Eversource Energy 112, 111, and D21 lines. A total of four pre-contact archaeological find spots and four post-contact non-site areas were identified. None of the identified archaeological resources along the Eversource portion of the ROW are recommended as eligible for listing in the State Register and/or NRHP.

PAL conducted the intensive (locational) archaeological survey for the NEP portion of Project in May and June 2018 and submitted the technical report to the MHC in October 2018. Subsurface archaeological testing was conducted in areas of high and moderate archaeological sensitivity within the Project's APE. The APE includes a 60-foot-wide forested portion of a 150-foot-wide ROW immediately adjacent to, and south of, the cleared portion of the NEP ROW and the existing D21 line. Fifteen newly identified resources were recorded; nine of which were recommended as potentially eligible for listing in the NRHP. PAL conducted archaeological site examination investigations of the nine sites to determine their eligibility for listing in the NRHP and planned to submit a report to the MHC on the findings in March 2022. On July 7, 2022, the MHC responded, concurring with the recommendations in the archaeological site examination report, and requested that PAL prepare an ASAPP to protect the Copicut Hill 1 and 2 and the praying mantis sites identified within the Project impact areas. PAL has developed an ASAPP and has been issued a State Archaeologist's Permit application to perform supplemental archaeological site examination investigations at the significant site within the Project impact area and plans to perform these activities in Q2 2023.

PAL also conducted an historic architectural property reconnaissance survey in 2018. The Project is located within established transmission line ROW. Based on the results of the PAL architectural survey report, the installation of the overhead transmission line and related tree removal along the ROW will not result in any impacts to the existing view shed from abutting above-ground resources.

The Project will be subject to review under Section 106 of the National Historic Preservation Act (Section 106) and will require a permit from the USACE. The Project will also be subject to review by the MHC under M.G.L. c. 9 §§ 26–27C. The Companies will coordinate with the USACE and MHC to avoid and/or minimize adverse effects to any NRHP-eligible or -listed cultural resources. As part of the USACE Section 404 permit review, and pursuant to Section 106, the USACE have consulted with federally recognized Tribes that have expressed an interest in the cultural resources that may be affected by those portions of the Project.

As construction within the ROW has the potential to impact archaeological sites depending on the depth and extent of planned ground disturbance in relation to archaeological resources, NEP will implement the above-referenced ASAPP to ensure that significant archaeological sites are not inadvertently impacted during construction of the Project. Additionally, the Companies will continue to consult with MHC and the USACE prior to construction and to avoid, minimize or mitigate impacts to significant resources. Any protection or avoidance measures required to avoid or minimize impacts to significant resources will be outlined in an ASAPP and procedures to handle unanticipated discoveries during construction will also be specified as part of a Post Review Discoveries Plan.

7.0 CONSTRUCTION SEQUENCING

7.1 Overhead Transmission Line Construction Sequence

Conventional overhead electric transmission line construction techniques will be used to construct the new transmission line. The work will be completed in a progression of activities that will generally proceed as follows:

1. Survey and removal of vegetation and ROW mowing of proposed work areas in advance of construction.
2. Installation of BMPs (e.g., erosion and sediment controls).
3. Construction of access roads and access road improvements.
4. Construction of work pads and staging areas.
5. Installation of foundations and structures.
6. Installation of conductor, OPGW, and shield wire.
7. Restoration and stabilization of the ROW.

Each stage of construction is further described below.

7.1.1 Environmental Resource Area Flagging and Removal of Vegetation and ROW Mowing of Proposed Work Areas in Advance of Construction

Construction of the Project will require vegetation removal and mowing within the ROW. Prior to the start of vegetation removal, the boundaries of wetlands and water resources previously delineated will be re-flagged and clearly marked to prevent unauthorized vehicular encroachment into wetland areas. Appropriate forestry techniques will be implemented within wetlands to minimize ground disturbance. Other sensitive resources, such as cultural resource features and NHESP state-listed plant species, will be flagged and encompassed with protective fencing prior to removal of vegetation on the ROW.

Once water resources and protected areas previously identified are clearly marked along the entire ROW vegetation removal and mowing activities will begin. Tree removal for a width of approximately 60 feet along the southern edge of the existing NEP ROW in Fall River from the Bell Rock Substation west to the Fall River/Dartmouth town line will involve cutting and removal of all tall growing woody species within the ROW limits of work. Tree removal, totaling approximately 27.5 acres, is proposed within approximately 4.2 miles of the existing NEP ROW. Along the Eversource ROW in Dartmouth, New Bedford, and Acushnet for an approximately 8.4-mile stretch of ROW, tree and vegetation removal will be minimal because the ROW is already maintained at the widths necessary to accommodate the Project. Tree and vegetation removal activities for both Companies will also occur in all areas of the ROW necessary to: provide safe vehicular access to existing structure locations; to facilitate safe equipment passage; to provide safe work sites for personnel within the ROWs; and to maintain safe clearances between vegetation and transmission line conductors for reliable operation of the transmission facilities.

Brush, limbs, and cleared trees will be chipped and removed from the site or applied to upland areas as an erosion control measure, where allowable. Temporary laydown areas will be established along the ROW to serve as locations to load timber, to temporarily stage a wood-chipper, and to park tree removal vehicles and equipment. Generally, trees to be removed will be cut close to the ground, leaving the stumps and roots in place, which will reduce soil disturbance and erosion. In locations where grading is required for access road improvements, work pads and at structure sites, stumps will be removed. In

certain environmentally sensitive areas such as wetlands, it may be necessary and desirable to leave felled trees and/or snags and allow them to decompose in place and provide valuable wildlife habitat rather than to disturb soft organic substrates while removing them. Where appropriate, enhancements will be proposed as mitigation for important wildlife features that may be lost as a result of tree removal and construction activities. Potential enhancement activities may include seeding, planting of native shrub species, and provision of snags, woody debris, and stone piles to create wildlife cover.

Mowing will occur in advance of construction within the Project limit of disturbance. Mowing will be used to reestablish access routes, prepare work pad and structure sites within the ROW. Mowing will be completed by mechanical means. Small trees and shrubs within the ROW limits of disturbance for NEP will be mowed as necessary with the intent of preserving root systems to the extent practicable. Where the ROW crosses streams and brooks, any necessary vegetation mowing along the stream bank will be minimized to the extent practicable to reduce disturbance of bank soils and the potential for construction-related erosion. Wood chips may be applied to the ground in certain upland areas to serve as a means for erosion and sediment control.

No tree or vegetation removal is to occur outside of existing utility easements or established access roads, with the exception of potential danger or hazard tree removal. Any trees just outside the ROW edge that may pose a hazard to the transmission asset will be assessed and to ensure reliability, these "hazard trees" may have to be pruned or, if the property owner provides permission, removed. The Project team will work with individual property owners to address their concerns.

7.1.2 Installation of Best Management Practices (Erosion and Sediment Controls)

Following vegetation removal activities, erosion and sediment control devices such as straw bales, straw wattles, siltation fencing, compost socks, and/or chip bales will be installed in accordance with the Companies' BMP manuals, and with approved plans and permit requirements. Installation of the erosion and sediment controls may also occur concurrently with work pads, pulling pads and/or access road construction. The installation of these sediment control devices will be supervised by the Companies' contractors and will be reviewed by the Companies' respective Construction Supervisors and/or designated environmental monitors. Erosion and sediment controls will be installed between the work site and environmentally sensitive areas such as wetlands, streams, drainage courses, roads and adjacent properties when work activities will disturb soil and result in the potential for soil erosion and sedimentation. The devices will function to mitigate construction-related soil erosion and sedimentation and will also serve as a physical boundary to delineate resource areas and to contain construction activities within approved areas.

7.1.3 Construction of Access Roads and Access Road Improvements

Access roads are required along the ROW to provide the ability to construct, inspect, and maintain the existing transmission line facilities. One of the objectives of the Project is to keep construction equipment on the existing ROW to the maximum extent practicable when moving from structure location to structure location. The Companies are planning to use the existing network of access roads to the greatest extent practicable. In some areas, new road spurs are necessary to gain access to the new structure locations from the existing and established ROW access roads. Typical access roads vary in width from 16 to 20 feet wide to accommodate the vehicles and equipment needed for construction on the transmission lines. These roads will be located to avoid or minimize disturbance to wetland resources to the extent feasible, to follow the existing contours of the land as closely as possible, and where practicable, avoid severe slopes. In addition, access roads will be constructed to avoid significantly altering existing drainage

patterns. A total of approximately 6,254 linear feet of new access road realignment and/or spurs will be installed to facilitate construction, operation, and maintenance of the Project, this includes both Companies' ROWs.

Access roads will be constructed of gravel, timber construction mats or a combination thereof depending on site-specific conditions related grading work, and whether they are temporary or permanent. Existing access is visible on the aerial photography-based map set in Figure 1-3 in Appendix B.

Along the ROW, the existing access roads may require improvements in certain locations to facilitate construction. For example, clean gravel or trap rock may be used to stabilize and level the roads for construction vehicles, and stabilized construction entrances of crushed stone may need to be installed or refurbished where the ROW crosses public roadways to minimize the migration of soils off-site from construction equipment. Any access road improvements and/or maintenance will be carried out in compliance with the conditions and approvals of the appropriate federal, state, and local regulatory agencies. Dust suppression measures, such as the use of water trucks to spray road surfaces, will be implemented as required to minimize fugitive dust from construction vehicle travel along the ROW.

Access across wetlands and streams, where upland access is not available, will be accomplished by the temporary placement of construction mats (timber or equivalent). The use of construction mats allows for heavy equipment access within wetland areas, minimizes the need to remove vegetation beneath the access way, and helps to reduce the degree of soil disturbance, soil compaction, and rutting in soft wetland soils. Construction mats most often used by the Companies are wooden timbers bolted together typically into 4-foot by 16-foot sections, wooden lattice mats, or composite mats. Typically, construction mats may be installed on top of the existing vegetation; however, in some instances cutting or mowing woody vegetation may be required. Such temporary construction mat access roads will be removed following completion of construction, and areas will be restored to reestablish pre-existing topography and hydrology as necessary.

7.1.4 Construction of Work Pads, Pulling Pads and Staging/Laydown Areas

Work pads will be constructed to provide a safe and level work area for construction equipment to undertake foundation work and structure assembly. Mowing of low growing woody vegetation and brush and minor grading may be necessary to create a work pad of approximately 100 feet by 100 feet to 100 feet by 150 feet at each proposed structure location. The work pads may be slightly smaller or larger depending on structure type, terrain, equipment, and overall site conditions at each structure location. Upland work pads will be constructed by grading and/or adding gravel or crushed stone to provide a stabilized work surface. Once construction is complete, upland work pads would remain in place for post-construction operation and maintenance of the transmission line structures.. In wetlands, these work pads will be constructed with temporary construction mats and will be removed after the completion of construction activities.

Construction of temporary wire stringing and pulling sites will be required to provide a level workspace for equipment and personnel or to establish remote wire stringing set-up sites at angle points in the transmission line and at dead-end structures.

A combination of temporary storage areas, staging areas, and laydown areas will be needed to support construction. Areas for material staging will be required at locations in the vicinity of the Project. The Companies and/or their designated contractor(s) will be responsible for selecting these sites and making arrangements with property owners for use of the land during construction. Selected staging areas and contractor laydown areas will typically be previously developed properties, where environmental resources can be avoided.

7.1.5 Installation of Foundations and Structures

The proposed transmission line structures include a combination of structure types including steel H-frame and monopole structures. Excavation for direct embedment structures will be performed using a soil auger or standard excavation equipment depending on field conditions. Excavations will range from approximately 10 to 20 feet in depth, with diameters typically between five-and-a-half and eight feet. A steel casing will be placed vertically into the hole and backfilled. The poles will be field assembled and inserted by cranes into the embedded steel casings. The annular space between the pole and the steel casing will then be backfilled with crushed stone.

Concrete foundations for steel structures will typically be drilled piers (also known as drilled caissons), 9 to 10 feet in diameter and 15 to 30 feet in depth, depending on the height and load conditions for the structure. Caissons will be constructed by drilling a vertical shaft, installing a steel reinforcing cage, placing steel anchor bolts, pouring concrete, and backfilling as needed. Structures will be lifted by a crane and placed onto the anchor bolts.

Excavated material will be temporarily stockpiled next to the excavation; however, this material will not be placed directly into wetland resource areas. If a stockpile is in close proximity to wetlands, the excavated material will be enclosed by staked straw bales or other sediment controls. Additional controls, such as watertight spin off boxes or geotextile filter fabric, may be used for saturated stockpile management in work areas in wetlands (e.g., construction mat platforms) where sediment-laden runoff would pose an issue for the surrounding wetland. Excess excavated soil will be spread over upland areas outside of any applicable wetland buffer zones or other wetland resource areas, or the excess soil will be removed from the site in accordance with the Companies' policies and procedures.

Dewatering may be required during the foundation installation. Groundwater pumped from an excavation would be discharged to an upland area into a sediment filter bag within a straw bale/silt fence corral (basin) and allowed to infiltrate back into the soil if there is adequate vegetation to function as a filter medium. The basin and all accumulated sediment would be removed following dewatering operations and the area would be restored, as needed.

Rock that is encountered during foundation excavation will generally be removed by means of drilling with rock coring augers rather than a standard soil auger. This method allows the same drill rig to be used and maintains a constant diameter hole. However, in some cases, rock hammering and excavation may be used to break up the rock. No blasting is currently anticipated for the Project.

7.1.6 Installation of Conductor, Optical Ground Wire, and Shield Wire

Following the construction of transmission line structures, insulators will be installed on the structures. The insulators isolate the energized power conductors from the structure. OPGW, shield wire, and power conductors will then be installed using stringing blocks and wire stringing equipment. The wire stringing equipment is used to pull the conductors from a wire reel on the ground through stringing blocks attached to the structures to achieve the desired sag and tension condition. During the stringing operation, temporary guard structures or boom trucks will be placed at road and highway crossings and at crossings of existing utility lines. These guard structures are used to ensure public safety and uninterrupted operation of other utilities by keeping the wire away from other utility wires and clear of the traveled way at these crossing locations.

Helicopter work is not anticipated at this time but may be considered depending on the work methods proposed by the construction vendors. In the event that helicopters are used, the Companies would

develop Project-specific health and safety plans and Project hazard analyses in coordination with their contractor(s). The Companies would notify municipal officials, fire and police departments, and affected landowners in advance of any helicopter work.

7.1.7 Restoration and Stabilization of the ROW

Restoration efforts, including removal of construction debris, final grading, stabilization of disturbed soil, and installation of permanent sediment control devices (water bar/diversion channel/rock ford), will be completed following construction. All disturbed areas around structure work pads and other graded locations that are not stabilized with a gravel surface will be seeded with an appropriate seed mixture and mulch (erosion control blanket may be used on slopes) to stabilize the soils in accordance with applicable regulations. Temporary sediment control devices will be removed following the stabilization of disturbed areas. Existing stone walls and fences will be restored, in accordance with property owner agreements and applicable local ordinances. Where authorized by property owners, permanent gates and access roadblocks will be installed at key locations to restrict access onto the ROW by unauthorized persons or vehicles. Regulated environmental resource areas that are temporarily or permanently disturbed by construction will be restored or replicated in accordance with applicable permit conditions.

7.2 Underground Transmission Line Construction Sequence

The two underground line segments (one approximately 160-foot segment at the Eversource Industrial Park Tap and one approximately 440-foot segment at the Eversource High Hill Switching Station) will involve the installation of overhead-to-underground transition structures and underground duct banks within the existing Eversource ROW. Construction of the two underground spans will be completed via open cut trenching methods. Open cut trenching involves excavating/removing the surface material to install the duct bank(s). This will result in soil and rock excavation and removal within the ROW. Pre-assembled polyvinyl chloride (PVC) conduit will be placed in the trench and encased in thermal concrete to form a duct bank. Plan and profile drawings for the underground segments are included in Figure 1-4 in Appendix B.

The following list provides a summary overview of the phases of construction associated with the installation of a new underground cable:

1. Implementation of BMPs, including soil erosion and sediment controls.
2. Trenching and duct bank installation.
3. Cable pulling.
4. Testing and commissioning.
5. Final restoration.

Installation of BMPs, including erosion and sediment controls, will be the same as that described for the overhead transmission line construction sequence above. Further details regarding the other underground phases of construction are described below.

7.2.1 Trenching and Duct Bank Installation

The primary method for underground duct bank construction is open-cut trenching. For installation of the underground transmission line spans, a sufficient trench width will be marked, Dig Safe will be contacted, and the location of the existing utilities will be marked. Earth removal will commence and a trench will

be excavated by backhoe, or similar equipment, to the required depth. Any rock encountered during excavation will be removed by mechanical means and brought to an off-site facility for recycling, re-use or disposal. Once excavated, the trench will be reinforced as required by soil conditions, Occupational Safety and Health Administration safety rules, and local and state regulations. Shoring is designed to permit passage of construction vehicles adjacent to the trench and will allow for the trench to be covered with a steel plate to allow construction vehicles access over the trench, as necessary, during construction.

Once a portion of the trench is prepared, conduit sections will either be assembled inside the trench or pre-assembled at the ground surface and then lowered into the trench. The area around the conduits will be temporarily formed and then filled with high-strength thermal concrete (3,000 pounds per square inch) that creates a barrier around the conduits. After the concrete is placed in the trench, it will be backfilled with fluidized thermal backfill, thermally approved backfill (sand, soil, etc.) or native soil depending on local conditions.

7.2.2 Cable Pulling

Prior to the installation of cable in the ducts, each conduit will be tested by pulling a mandrel (a close-fitting cylinder designed to confirm a conduit's shape and size) and cleaned via a swab through each of the ducts. When the swab and mandrel have been pulled successfully per Eversource's approval, the conduit is ready for cable installation.

Six power cables will be installed between the riser structures. To install each cable section, a cable reel will be set up at the "pull-in" riser and a cable puller will be set up at the "pull-out" riser. Following the initial pulling of the mandrel and pulling line through each duct, a hydraulic cable pulling winch and tensioner will be used to individually pull cable from the pull-in to the pull-out locations. This process will be repeated until all cables have been installed. Other accessory cables such as the grounding cable and communication cables will also be pulled into the duct bank.

Once the complete cable system is installed, it will be field-tested. At the completion of successful testing, the line will be energized.

7.2.3 Final Restoration

Following installation, areas disturbed by the work will be restored to match the existing topography and ground cover. Vegetated areas will be restored with grass seed, lime, starter fertilizer and mulch.

7.3 Typical Construction Equipment

Typical construction equipment that will be used for the AFRRP is identified in Table 7-1 by construction phase.

TABLE 7-1 TYPICAL CONSTRUCTION EQUIPMENT

CONSTRUCTION PHASE	TYPICAL EQUIPMENT REQUIRED	
Vegetation Removal and ROW Mowing	• Grapple trucks • Track-mounted mowers • Chippers • Log forwarders • Brush hogs, skidders • Bucket trucks	• Motorized tree shears • Chain saws • Box trailers • Low-bed trailers, flatbed trucks • Bulldozers, excavators • Pickup trucks
Soil Erosion/Sediment Controls	• Stake body trucks • Pickup and other small trucks	• Small excavators • Trencher
Access Roads Improvement and Maintenance	• Dump trucks • Bulldozers • Excavators • Backhoes • Front end loaders • Graders	• 10-wheel trucks with grapples • Cranes • Pick-up trucks • Low-bed trailers • Stake body trucks
Removal and Disposal of Existing Components	• Cranes • Flatbed trucks • Pullers with take-up reels • Excavators • Vacuum trucks	• Backhoes • Trucks with welding equipment • Dump truck • Storage containers
Installation of Structures and Foundations	• Backhoes • Bulldozers • Front-end loaders • ATVs • Tracked carriers or skidders • Concrete trucks • Excavators • Rock drills mounted on excavators or tracked equipment • Cranes	• Cluster drills with truck mounted compressors • Aerial lift equipment • Tractor trailers • Bucket trucks • Large-bore foundation drill rigs • Hand-held equipment such as shovels, pumps, and vibratory tampers • Dump trucks • Generators, air compressors
Conductor and Shield Wire Installation	• Bucket trucks • Puller-tensioners • Conductor reel stands	• Cranes • Flatbed trucks • Pickup trucks • Tracked carriers or skidders
Restoration	• Pickup and other small trucks • Excavators • Backhoes • Bulldozers	• Dump trucks • Tractor-mounted York rakes • Straw blowers • Hydro-seeders

8.0 TRAFFIC AND TRANSPORTATION

Intermittent traffic associated with AFRRP construction will occur throughout the duration of the Project. Construction equipment typically will gain access to the ROWs from public roadways crossing the ROWs in various locations along the route. Because each of the construction tasks will occur at different times and locations over the course of construction, traffic will be intermittent at these entry roadways. Traffic will consist of vehicles ranging from pick-up trucks to heavy construction equipment to large trailers delivering poles.

Additional temporary short-term impacts, including lane closures or traffic stops, are anticipated when the new transmission lines need to be strung over public roadways. At such times, trucks may be set up in travel lanes, shoulders, or medians to install temporary guard structures to support the lines as they are attached to the permanent transmission line structures. Traffic will be stopped for a short period of time to allow a rope to be manually pulled across the roadway. The conductor will then be attached to this rope and pulled above the roadway onto the temporary guard structures; traffic typically will be able to flow while the conductors are attached to the structures. Line stringing will be required across 19 roadway crossings and one railroad crossing along the Project route. Permits from the Massachusetts Department of Transportation (MassDOT) will be required for this work at state highway crossings.

MassDOT is responsible for the Permit to Access State Highway/Non-Municipal Utility for crossing over state roads with utility lines. The proposed Project's impacts relative to MassDOT are associated with the installation of overhead wires across state roadways by a non-municipal utility. The installation could temporarily affect traffic flow of the roadway but does not involve physical modifications to the roadway or roadway ROW. A draft traffic management plan (TMP) has been developed for the utility crossings of State Route 140 and State Route 18, respectively (Appendix E). TMPs will be required for the new conductor that is being pulled as it runs perpendicular across each of these highways. A draft detour plan was developed for both locations based on the construction methods used to tension in the new conductor and the areas of the highway affected. With MassDOT input, the TMPs will be finalized including complete details of proposed work. The TMPs will be developed and submitted to MassDOT for review and approval prior to the start of Project construction. Eversource will comply with all required measures to ensure a safe environment for traffic flow and construction crews in and around the roadways. Eversource will also coordinate with MassDOT to determine appropriate times, lengths, and management of roadway shutdowns to limit impacts to travelers.

The Companies will also coordinate with local authorities in Acushnet, New Bedford, Dartmouth and Fall River for work on local streets and roads and will file with the towns to the extent necessary for required grant of location applications for wire crossings across the town-owned roads. At locations where construction equipment must be staged in a public way, the contractors will follow a pre-approved work zone traffic control plan with appropriate police details. All traffic management of road crossings outside of the state's jurisdiction (local and county roads) will be completed by the construction contractor based on their construction means and methods in coordination with the relevant municipalities.

9.0 CLIMATE CHANGE ADAPTATION AND RESILIENCY

The Companies have taken steps to promote climate change adaptation and resiliency through the design of this Project. The Project will result in a more climate-ready and resilient transmission system that can withstand more extreme weather events; address existing system capacity shortages and increased demand; and support future interconnections from renewable energy projects and offshore wind. In addition, the new transmission line is located entirely within an existing ROW, thereby minimizing alteration of new land resources to construct the Project. A copy of the output report generated by the Resilient Massachusetts Action Team's (RMAT's) Climate Resilience Design Standards Tool is found in Appendix F.

9.1 RMAT's Climate Design Resilience Tool Outputs

Effective October 1, 2021, all projects subject to MEPA review are required to submit an output report from the RMAT's Climate Design Resilience Tool (RMAT Tool) to assess the climate risks to the Project. The Companies assessed current and future exposure/risk to higher high tides, storm surge and sea level rise. A copy of the output report generated by the RMAT Tool is found in Attachment F. The RMAT output report identified the Project as having a high exposure rating based on the Project's location for the following climate parameters: extreme precipitation from riverine flooding and extreme heat. The RMAT output report identified the Project as having moderate exposure to extreme precipitation from urban flooding. Additionally, the RMAT identified that due to the Project route's location it is not exposed to sea level rise and/or storm surges.

Based on the updated 50-year useful life identified for the Project, the RMAT Tool recommends a planning horizon of 2070 and a return period of 25 years (4%).

Table 9-1 below provides the Climate Resilience Design Standards Summary as produced by the RMAT Tool. This data is based on the user defined polygon drawn in the RMAT Tool depicting the Project route. Responses to the questions during the setup of the tool and values obtained are based on the Massachusetts Coast Flood Risk Model developed by Woods Hole Group in coordination with UMass Boston. The report was generated on April 19, 2022, and is presumed to use the latest data available as of that date.

TABLE 9-1 CLIMATE RESILIENCE DESIGN STANDARDS

EXPOSURE	ASSET RISK	TARGET PLANNING HORIZON	INTERMEDIATE HORIZON	PERCENTILE	RETURN PERIOD	TIER
Sea Level Rise/Storm Surge	Low Risk	N/A	N/A	N/A	N/A	N/A
Extreme Precipitation	Moderate/High Risk	2070	N/A	N/A	25 years (4%)	Tier 3
Extreme Heat	High Risk	2070	N/A	90th	N/A	Tier 3

Note: This data was extrapolated from the RMAT Tool, values are based on Massachusetts Coast Flood Risk Model. Data was generated on April 19, 2022. https://resilientma.mass.gov/rmat_home/.

Raw data from the RMAT Report related to projected total precipitation depth and peak intensity for storm events is depicted in Table 9-2 below. The RMAT Tool reported that the Project is at moderate exposure to extreme precipitation from urban flooding and risk exposure to extreme precipitation from riverine flooding.

TABLE 9-2 EXTREME PRECIPITATION DESIGN CRITERIA

DESIGN CRITERIA	RECOMMENDED PLANNING HORIZON	RECOMMENDED RETURN PERIOD (DESIGN STORM)	PROJECT 24-HOUR TOTAL PRECIPITATION DEPTH (INCHES)
Projected Total Precipitation Depth and Peak Intensity for 24-hour Design Storms	2070	25 years (4%)	8.2

Note: This data was extrapolated from the RMAT Tool, values are based on Massachusetts Coast Flood Risk Model. Data was generated on April 19, 2022. https://resilientma.mass.gov/rmat_home.

9.2 Measures to Adapt the Project to Climate Change Per RMAT Design Standards

The Executive Office of Energy and Environmental Affairs' (EOEEA's) *Climate Change and Adaptation Report*[15] documents that with increasing temperatures as a result of climate change, electricity demand in the Commonwealth could increase by 40% by 2030. A concern, stated in the report, in regard to energy service reliability is that without reliable energy service, the basic needs of residents, visitors, businesses, and governments cannot be met. The Project, which is designed to improve reliable energy service within the region, serves this overall purpose.

The RMAT Report identified three primary climate change concerns for the energy sector: flooding, extreme weather events, and increased temperature. The Companies considered each of these factors in designing the Project.

NEP and Eversource reviewed the Massachusetts Sea Level Rise and Coastal Flooding Viewer for the AFRRP project area. The map viewer displays the National Ocean and Atmospheric Administration's January 2013 sea level rise data. The data indicates that the Project is located outside of the inland extent of inundation projected from a 0 to 6-foot rise in sea level above current mean higher high-water mark. This data was reconfirmed utilizing the 2022 National Oceanic and Atmospheric Administration Sea Level Rise Viewer, through this tool it was noted again that the Project ROW is located entirely outside of the of inundation projected from a 0 to 6-foot rise in sea level above current mean higher high-water mark.[16]

The Project is also designed to account for more frequent extreme weather events and extreme heat. The Project's engineering design used structure loading criteria required by the NESC which requires consideration of combined ice and wind district loading, extreme wind conditions, and extreme ice with concurrent wind conditions. Both NEP and Eversource have design standards which also include consideration and contingency for heavy load imbalances and heavy ice conditions. All of these considerations result in a design that is better equipped to withstand extreme weather. The design incorporates materials (including steel structures and corrosion-resistant conductors) that have long useful lives and can withstand corrosive environments. The design of the Project is also equipped to respond to increases in temperature. The RMAT temperature forecasts project a minimum change in temperature of 3.5 degrees Fahrenheit (°F) and a maximum change in temperature of 3.9°F in the Project area. The new

[15] The Executive Office of Energy and Environmental Affairs. Climate Change and Adaptation Report. 2011. Retrieved April 4, 2023 from http://www.adaptationclearinghouse.org/resources/massachusetts-climate-change-adaptation-report.html
[16] The National Oceanic and Atmospheric Administration. Sea Level Rise Viewer. 2022. Retrieved April 4, 2023 from https://coast.noaa.gov/slr/#/layer/slr.

transmission line conductors are designed to operate at higher maximum operating temperatures at a higher carrying capacity and under fluctuations in air temperature.

The Project contributes to regional climate change adaptation strategies for the Southeastern Massachusetts and Rhode Island (SEMA-RI) area through the construction of a resilient transmission line that can withstand more extreme weather events while also addressing existing system capacity shortages and increased demand. As previously described, EOEEA's *Climate Change and Adaptation Report* documents that with increasing temperatures as a result of climate change, electricity demand in the Commonwealth could increase by 40% by 2030. The Report documents the vulnerability of existing aging infrastructure and identifies key strategies to alleviate these vulnerabilities, including repair, upgrades and reuse, and timely maintenance. The Project addresses the issues identified in the Report and ISO-NE studies by supporting future growth and forecasted demand within the SEMA-RI area. The Project will result in a stronger electrical transmission system that is vital to the area's safety, security, and economic prosperity.

The installation of the AFRRP transmission line is consistent with these reliability strategies in the following ways:

- Reinforces system reliability in the SEMA-RI region and provides a more robust transmission system in the area of need.
- Incorporates new design standards and the latest in design materials.
- Minimizes impacts to the natural and social environments because the proposed improvements are located within existing transmission line ROWs.
- Provides a stronger electrical transmission system that is vital to the area's safety, security and economic prosperity.
- Meets growing transmission needs identified by the ISO-NE and supports future growth and forecasted demand within the SEMA-RI area.
- Improves the capability of the existing transmission system to move power more reliably into load centers.

9.3 Conclusion

The Project is susceptible to extreme precipitation and extreme heat. The Companies have utilized NESC design criteria to combat these impacts. The Project will be impacted by heat and precipitation but will be built to be able to withstand the conditions predicted during the lifetime of the Project.

The Project will facilitate a regionally resilient transmission system that is able to interconnect renewable energy sources, increase resiliency of the grid infrastructure to accommodate both direct and indirect effects stemming from conditions associated with climate change, and withstand more extreme weather events anticipated through climate change.

10.0 GREENHOUSE GAS EMISSIONS AND AIR EMISSIONS

The Project is presumptively subject to the MEPA Greenhouse Gas Policy and Protocol (GHG Protocol) because it exceeds thresholds for a mandatory SEIR. However, in the December 28, 2019 Certificate, the Secretary concluded that this project falls under the *de minimis* exemption as the Project will have little or no greenhouse gas (GHG) emissions. Accordingly, the GHG Protocol does not apply to the Project.

The Project will not generate significant air emissions. There are no emissions associated with operating the transmission line and construction emissions will be limited. Typical construction equipment will be used for construction of the Project. The Project will comply with MassDEP's Solid Waste and Air Pollution control regulations, pursuant to M.G.L. c.40, §.54. The Companies will also comply with state laws regulating the use of diesel-powered equipment and vehicle idling times during construction to reduce air emissions, including implementation of the following:

- In Massachusetts, any diesel-powered non-road construction equipment with engine horsepower ratings of 50 and above to be used for 30 or more days over the course of construction will either be USEPA Tier 4-compliant or will be retrofitted with USEPA-verified (or equivalent) emission control devices such as oxidation catalysts or other comparable technologies (to the extent that they are commercially available) installed on the exhaust system side of the diesel combustion engine.
- The Companies require the use of ultra-low sulfur diesel fuel in its diesel-powered construction equipment and limits idling time to five minutes except when engine power is necessary for the delivery of materials or to operate accessories to the vehicle such as power lifts.
- Vehicle idling is to be minimized during construction activities, in compliance with the following:
    - Massachusetts Anti-idling Law, G.L. c. 90 § 16A, c. 111 §§ 142A – 142M, and 310 CMR 7.11.
- Exposed soils on access roads will be wetted and stabilized as necessary to suppress dust generation during construction (see Section 7.1.311.1.1 and 11.1.2).

11.0 CONSTRUCTION PERIOD AND ANTICIPATED SCHEDULE

11.1 Construction Environmental Standards

The Companies have long established policies and procedures for minimizing construction related disturbances throughout all phases of construction. The Companies and their respective contractors will follow these procedures for the AFRRP. These policies and procedures are described below.

11.1.1 National Grid Environmental Standards

- National Grid's *ROW Access, Maintenance and Construction Best Management Practices* (EG-303NE).
- National Grid's *Excess Soil Management from Construction Projects on Rights-of-*Way (EG-1707).

11.1.2 Eversource Environmental Standards

- Eversource's *Construction & Maintenance Environmental Requirements: Best Management Practices Manual for Massachusetts and Connecticut*.
- Eversource's *Five Year Vegetation Management Plan for Central, Eastern, and Southeastern Massachusetts (2108-2022)*.
- Eversource's *Excess Soil and Groundwater Management Policy, Massachusetts and New Hampshire*.

11.1.3 Construction Environmental Compliance Monitors

Throughout the entire construction process, the Companies will retain the services of environmental compliance monitors. The primary responsibility of the monitors will be to oversee construction activities including the installation and maintenance of soil erosion and sediment controls on a routine basis to ensure compliance with all federal, state, and local permit commitments. The environmental compliance monitors will be trained environmental scientists and qualified stormwater inspectors responsible for supervising construction activities relative to environmental issues. The environmental monitors will be experienced in soil erosion control techniques and will have an understanding of wetland resources to be protected.

During periods of prolonged precipitation, the monitors will inspect all locations to confirm that the environmental controls are functioning properly. In addition, the Companies will require the contractors to designate an individual to be responsible for the daily inspection and upkeep of environmental controls. This person will be responsible for providing direction to the other members of the construction crew regarding matters such as wetland access, appropriate work methods, and good house-keeping practices in the area. These construction supervisors also have "stop work" authority if there is an environmental or safety non-compliance issue. Additionally, all construction personnel will be briefed on environmental compliance issues and obligations prior to the start of construction on the AFRRP. Regular construction progress/environmental training meetings will provide the opportunity to reinforce the contractor's awareness of these environmental issues.

In addition, all construction contractor personnel will be required to participate in environmental and safety training prior to the start of construction. Training topics will include environmental, stormwater management, cultural resources, and safety considerations. Refresher training will be conducted as necessary or as new crew members join the work force. The Companies will conduct regular construction progress meetings to reinforce contractors' awareness of these issues. Pre-construction meetings will take place in the field with appropriate personnel. The Companies' environmental monitors will attend these meetings to provide feedback on environmental compliance to construction personnel.

11.2 Construction Period Best Practices

As discussed in Section 3.1, temporary construction mats will be used for access in and across wetlands to minimize wetland disturbance, and to provide a stable platform for safe equipment operation. Temporary corduroy (log) roads may be used on a limited basis to facilitate tree removal.

However, when not using mats for access, standard vehicles shall not be allowed to drive across wetlands without the prior approval of the Environmental Compliance Monitors in accordance with the Companies' environmental policies and standards. The use of a low ground pressure (LGP) vehicle that meets the regulatory requirement of less than 3.0 pounds per square inch (psi) when loaded, may be a feasible alternative to mats. The use of such an LGP vehicle through wetlands requires approval from the Environmental Compliance Monitor on a case-by-case basis. This approval is dependent upon several criteria including:

- **Time of year**. LGP equipment use may be allowed if weather and field conditions at the time of construction are suitable to eliminate/minimize the concern of rutting or other impacts. Frozen, frozen snow pack, low flow, or drought conditions are typically acceptable conditions. Spring and fall construction, due to the typical higher precipitation, are not suitable times of the year for LGP equipment use.
- **Number of trips**. Multiple trips through a wetland have been shown to increase the potential for damage and require matting. LGP equipment use shall only likely be approved if trips are limited to one trip in and one trip out.
- **Type of wetland system**. Some wetlands have harder soils/substrate, and may be passable without causing significant damage. Some of the wetlands along the ROWs have existing hard bottom roads that have been vegetated over time and may be traversed with LGP equipment without construction mats.
- **Emergencies**. LGP equipment use may be allowed during emergency or storm conditions for outage restoration.
- **State-specific USACE General Permit Performance Standards**: This standard is for no impact to the wetland, which may be obtained by using LGP equipment (≤ 3.0 psi when loaded). "*Where construction requires heavy equipment operation in wetlands, the equipment shall either have low ground pressure (<3.0 psi), or shall not be located directly on wetland soils and vegetation; it shall be placed on swamp mats that are adequate to support the equipment in such a way as to minimize disturbance of wetland soil and vegetation*."
- **Local bylaws**. Municipal wetland bylaws, where applicable, shall be reviewed for prohibitive conditions or applicable performance standards.

LGP equipment approval is required at the time of construction for each wetland crossing and shall be dependent upon the above conditions. In addition, LGP equipment use and approval shall be assessed by the Environmental Compliance Monitor during construction on a continuing basis. LGP equipment use

shall cease immediately if field conditions are found to be unsuitable. Also, if LGP vehicles are used, and wetland damage occurs, the use of the LGP equipment shall be suspended.

Investment Recovery

Both Companies have an Investment Recovery Department that manages the recycling and disposal of company facilities, equipment and materials. The Investment Recovery Department will oversee the recycling and disposal activities associated with the Project, as these assets have value and can be incorporated into the recycling program. No transmission structures are proposed to be removed through this Project. Any construction related debris will be recycled if possible. Debris that is not salvageable and any debris that cannot be recycled will be removed from the ROWs and station sites to an approved off-site facility. Such materials will be handled in compliance with applicable laws and regulations. The Project will maintain compliance with MassDEP's Solid Waste and Air Pollution Control Programs.

11.3 Safety and Public Health Considerations

The Project will be designed, built, and maintained so that the health and safety of the public are protected. This will be accomplished through adherence to all federal, state and local regulations, and industry standards and guidelines established for protection of the public. Specifically, the AFRRP will be designed, built, and maintained in accordance with the NESC and other applicable electrical safety codes. The Project will be designed in accordance with sound engineering practices using established design codes and guides published by, among others, the IEEE, the American Society of Civil Engineers, the American Concrete Institute, and ANSI.

Practices that will be used to protect the public during construction will include, but not be limited to, contractor safety training, establishing traffic control plans for construction traffic to maintain safe driving conditions, restricting public access to potentially hazardous work areas, and using temporary guard structures at road and electric line crossings to prevent accidental contact with the conductor during installation.

Following construction, all transmission structures will be clearly marked with warning signs to alert the public to potential hazards if climbed. Trespassing on the ROWs will be inhibited by the installation of gates and/or barriers at entrances from public roads where approved by owners of properties upon which easements are located.

11.3.1 Construction Work Hours

Typical construction work hours for the AFRRP are proposed to be from 7:00 a.m. to 5:00 p.m. Monday through Friday and from 9:00 a.m. to 5:00 p.m. on Saturdays, when daylight and weather conditions allow. Some work tasks such as concrete pours and transmission line stringing, once started, must be continued through to completion, and may go beyond normal work hours.

In addition, the nature of transmission line construction requires line outages for certain procedures such as transmission line connections, equipment cutovers, or stringing under or over other transmission lines. These outages are dictated by the system operator, ISO-NE, and can be very limited based on regional system load and weather conditions. Work requiring scheduled outages and crossings of certain transportation and utility corridors may need to be performed on a limited basis outside of normal work hours, including Sundays and holidays. Prior to the start of construction activities, notification will be provided to landowners, abutting property owners, municipal officials, the municipal Departments of Public Works and Police and Fire Chiefs in Acushnet, New Bedford, Dartmouth, and Fall River of the

details of planned construction including the normal work hours and extended work hours and will obtain written approval from relevant municipal officials for extended work hours.

12.0 ENVIRONMENTAL JUSTICE

12.1 Characteristics of Environmental Justice Populations

The Companies submitted an EENF for the Project to the MEPA Office on November 15, 2018 and on December 28, 2018, the Massachusetts Secretary of Energy and Environmental Affairs issued a Certificate on the EENF filing. Even though this Project was in review by MEPA prior to the adoption of the MEPA Environmental Justice Protocols, the Companies are committed to the principles contained therein. As such, the Companies are providing this analysis and information on public outreach to ensure that the issues are addressed, and that Environmental Justice (EJ) populations and community groups are given an opportunity to participate in the environmental review of the Project.

Based on review of the EOEEA's Massachusetts Environmental Justice Populations Mapping Tool (EJ Mapper Tool), there are four EJ populations located within one mile of the Project. The EJ populations within one mile of the Project are within the municipalities of Acushnet and New Bedford and are mapped based on minority and/or income criteria as generated by the EJ Mapper Tool. Mapping of these EJ populations is included in Figure 12-1 in Appendix B.

Table 12-1 below identifies the characteristics of the EJ populations within one mile of the Project route.

TABLE 12-1 ENVIRONMENTAL JUSTICE POPULATIONS WITHIN ONE MILE OF THE PROJECT ROUTE

Census Block Group	Population	Minority Population (%)	Households with Language Isolation (2020 census)	Language Spoken (% of Population)	Median Household Income ($)	Median Household Income (% of the MA median)	EJ Population as Defined by the Commonwealth of MA
City of New Bedford							
Block Group 3, Census Tract 6501.02	1643	33.4%	10.6%	Portuguese or Portuguese Creole (8.7%)	$74,653	88.5%	Minority
Block Group 1, Census Tract 6501.02	1422	41.4%	4.4%	Portuguese or Portuguese Creole (8.7%)	$48446	57.4%	Minority and Income
Block Group 2, Census tract 6502.01	1,167	24.9%	1.9%	Portuguese or Portuguese Creole (6.3%)	$102,933	122.0%	Minority
Town of Acushnet							
Block Group 2, Census Tract 6542	1,166	8.3%	1.0%	Portuguese or Portuguese Creole (7.3%)	$55,189	65.4%	Income

Source: Environmental Justice Criteria dataset obtained from EOEEA's 2020 Environmental Justice Populations in Massachusetts. US Census Bureau data released in November 2022 (https://mass-eoeea.maps.arcgis.com and https://www.mass.gov/info-details/massgis-data-2020-us-census-environmental-justice-populations) Languages Spoken in Massachusetts (https://mass-eoeea.maps.arcgis.com) and Table B16001, 2015: ACS 5-Year Estimates (www.census.gov).

The information related to languages spoken presented in Table 12-1 was found through the EJ Mapper Tool. This tool is limited in that it only shows languages spoken at 5% or more within each census tract group. To supplement the information provided in the EJ Mapper Tool, the Companies reached out to

local community organizations, municipal boards of health, and school districts to determine other languages commonly known to be spoken in these specific communities. Through interactions with the community organizations, boards of health, and school districts in the Cities of Fall River, Dartmouth, and New Bedford it was noted that languages spoken in these cities include European, Brazilian, and Cape Verdean dialects of Portuguese. These groups did not mention any other notable languages spoken within the associated communities. Within the municipality of Acushnet, it was noted by the school district that there are students in their system who speak K'iche'. These additional languages have been used since 2022 to provide public involvement opportunities associated with the MEPA review and will continue to be used for the duration of the Project.

12.2 Baseline Characteristics of Health and Environmental Burdens

The subsequent section assesses (i) existing unfair or inequitable environmental burden on the town or city within which the Project is found; (ii) an analysis of Project Impacts to determine disproportionate adverse effects; and (iii) an analysis of Project impacts to determine climate change effects.

12.2.1 Existing Vulnerable Health EJ Criteria

The Companies consulted the Massachusetts Department of Public Health (MA DPH) EJ Tool to identify whether a municipality around the Project exhibit vulnerable MA DPH EJ criteria. The MA DPH EJ Tool compares community health indicators to 110% of the state level based on a five-year rolling average. The indicators represent populations that have higher-than-average rates of environmentally related community health outcomes. This data is only available at the municipality level.

See Table 12-2 below for vulnerable health EJ criteria within each municipality of the Project.

TABLE 12-2 DPH VULNERABLE HEALTH REPORT

MUNICIPALITY	EJ AND VULNERABLE HEALTH EJ CRITERIA	VULNERABLE HEALTH TOPIC EJ CRITERIA MET	RATE (MOST CURRENT DATA)
Acushnet	EJ Criteria met and meets at least one Vulnerable Health EJ Criteria	Heart Attack (2011-2017)	36 age-adjusted per 10,000 (2013–2017)
New Bedford	EJ Criteria met and meets at least one Vulnerable Health EJ Criteria	Heart Attack (2009–2017)	44 age-adjusted per 10,000 (2013–2017)
		Lead Poisoning: Blood Lead Level (BLL) >5 ug/dL (2012–2020)	40 per 1,000 (2016–2020)
		Low Birth Weight (2007–2015)	302 per 10,000 (2011–2015)
		Pediatric Asthma Emergency Department Visits (2009–2017)	134 per 10,000 (2013–2017)
Dartmouth	EJ Criteria met and meets at least one Vulnerable Health EJ Criteria	Heart Attack (2009-2017)	32 age-adjusted per 10,000 (2013–2017)

MUNICIPALITY	EJ AND VULNERABLE HEALTH EJ CRITERIA	VULNERABLE HEALTH TOPIC EJ CRITERIA MET	RATE (MOST CURRENT DATA)
Fall River	EJ Criteria met and meets at least one Vulnerable Health EJ Criteria	Heart Attack (2009–2017)	47 age-adjusted per 10,000 (2013–2017)
		Lead Poisoning: Blood Lead Level (BLL) >5 ug/dL (2013–2020)	20 per 1,000 (2016–2020)
		Low Birth Weight (2009–2017)	352 per 10,000 (2011–2015)
		Pediatric Asthma Emergency Department Visits (2009–2017)	176 per 10,000 (2013–2017)

Source: Environmental Justice Criteria dataset obtained from EOEEA's MA DPH Environmental Justice Tool (https://dphanalytics.hhs.mass.gov/)

12.2.2 Review of Additional Data Layers in DPH EJ Tool

Additional data layers in the MA DPH EJ Tool were utilized to survey other potential sources of pollution within the boundaries of the EJ populations within the vicinity of the proposed Project. The MA DPH assesses potential pollutant sources by examining exposures people have experienced and how it impacts their health. Exposure pathway for contaminants from inhalation, ingestion, or touching.[17] Table 12-3 shows a number of potential sources of pollution within one mile of the Project route. In general, the data from the MA DPH EJ Tool shows that areas around the Industrial Park Substation in New Bedford have the majority of these pollutant sources and most other areas within one mile of the Project route have fewer of these pollutant sources.

TABLE 12-3 DEPARTMENT OF PUBLIC HEALTH POLLUTION SOURCES WITHIN ONE MILE OF PROJECT

FACILITY TYPE	NUMBER OF POLLUTANT SOURCES WITHIN ONE MILE OF THE PROJECT
MassDEP major air and waste facilities	10
M.G.L. c. 21E sites	2
"Tier II" toxics use reporting facilities	13
MassDEP sites with Activity Use Limitations	1
MassDEP groundwater discharge permits	0
Wastewater treatment plants	0
MassDEP public water suppliers	1
Underground storage tanks	0
USEPA facilities*	7
Regional transit agencies**	1

Source: MA DPH EJ Tool, facility type data from various agencies dating from 2009-2017 https://dphanalytics.hhs.mass.gov/
*USEPA Facilities includes Toxics Release Inventory sites as of 2017. No superfund sites are found within one mile of the Project
** The Project is entirely within Southeastern Regional Transit Authority. There is a regional transit agency route which crosses the Project ROW in New Bedford.

[17] MA DPH EJ Tool, https://matracking.ehs.state.ma.us/Environmental-Data/exposures/index.html.

12.2.3 Review of RMAT Climate Resilience Design Standards Tool and Assessment of Resiliency

The Companies reviewed the output report generated from the RMAT Climate Resilience Design. This information is summarized again in this SEIR throughout Section 9.0 and the RMAT report may be found in Appendix F. The results of the RMAT evaluation are provided below in Table 12-4.

TABLE 12-4 RMAT CLIMATE DESIGN STANDARDS TOOL PROJECT REPORT

SEA LEVEL RISE/ STORM SURGE	EXTREME PRECIPITATION- URBAN FLOODING	EXTREME PRECIPITATION- RIVERINE FLOODING	EXTREME HEAT
Low Risk	Moderate Risk	High Risk	High Risk

Source: RMAT Climate Design dataset obtained from EOEEA and the Massachusetts Emergency Management Agency (MEMA) RMAT Tool https://resilientma.mass.gov/rmat_home/designstandards/.

The RMAT climate design tool determined the Project location had a low score for risk of sea level rise, a high risk for riverine flooding and heat, and moderate risk for urban flooding.

The Project is designed to withstand more frequent extreme weather events and extreme heat. Both NEP and Eversource have design standards which incorporate materials (including steel structures and corrosion-resistant conductors) that have long useful lives and can withstand corrosive environments. The materials which will be used to construct the new transmission line will also be equipped to respond to increases in temperature. The new transmission line conductors are designed to operate at higher maximum operating temperatures at a higher carrying capacity and under fluctuations in air temperature.

As the Project is designed, it will be adequately protected from flooding and extreme heat, and in no way will exacerbate flooding or heat issues nearby EJ groups may experience.

12.2.4 USEPA EJ Screen Tool

The USEPA developed an EJ mapping and screening tool, EJScreen (Version 2.1), which shows both demographic and environmental indicators. EJ indexes are based on the combination of demographic factors by averaging low income and minority populations with a single environmental factor. EJScreen tracks 12 environmental indicators.[18]

See Appendix G for the USEPA's EJScreen Report for the Project. This report includes only portions of Census Block Groups (CBGs) within one mile of the Project Route. For reporting the study area, the USEPA "*aggregate(s) appropriate portions of the intersecting block groups, weighted by population, to create a representative set of data for the entire ring area, honoring variation and dispersion of the population in the block groups within it. For each indicator, the result is a population-weighted average, which equals the block group indicator values averaged over all residents who are estimated to be inside the buffer."*[19] No EJ Index meets is above the 80th percentile when compared to the state.

[18] The EJ index is higher in block groups with large numbers of mainly low-income residents and/or people of color, with a higher environmental indicator value.

[19] USEPA, EJ Screen Environmental Justice Mapping Tool. https://www.epa.gov/ejscreen/how-interpret-standard-report-ejscreen.

Table 12-5 details EJ indexes relative to the Commonwealth of Massachusetts for full CBGs within one mile of the Project Route. The CBGs identified below are in the 80th percentile or higher as shown in EJScreen, as of March 10, 2023. All CBGs are in the City of New Bedford, Bristol County, within one mile of the Project Route.

TABLE 12-5 EJ INDEXES FOR CBGS WITHIN ONE MILE OF THE PROJECT ROUTE (ABOVE THE 80TH PERCENTILE THRESHOLD WHEN COMPARED TO THE COMMONWEALTH OF MASSACHUSETTS)

POLLUTION SOURCE	CENSUS BLOCK GROUPS	STATE PERCENTILE
Particulate Matter 2.5		
Ozone	Block Group 3, Census Tract 6501.02, New Bedford*** Block Group 3, Census Tract 6501.01, New Bedford	80 – 90 percentile
	Block Group 1, Census Tract 6501.02, New Bedford**	95 – 100 percentile
Traffic Proximity	Block Group 1, Census Tract 6501.02, New Bedford**	80 – 90 percentile
Superfund Proximity	Block Group 3, Census Tract 6501.02, New Bedford***	80 – 90 percentile
	Block Group 1, Census Tract 6501.02, New Bedford**	90 – 95 percentile
Underground Storage Tanks	Block Group 1, Census Tract 6501.02, New Bedford**	80 – 90 percentile

* CBG crossed by Project Centerline.
** EJ as defined by the Commonwealth of MA
Source: USEPA EJScreen (Version 2.1)

Table 12-6 details pollution and sources relative to the state. This data does not take into account demographic factors. The CBGs identified below are all within one mile of the Project Route and in the 80th percentile or higher of the statewide average for that pollution and source, as shown in the USEPA's EJScreen, as of March 10, 2023. The information in this table provides the USEPA's baseline report for environmental burden in all towns within this Project.

TABLE 12-6 POLLUTION AND SOURCES RELATIVE TO THE COMMONWEALTH OF MASSACHUSETTS FOR ALL CBGs WITHIN ONE MILE OF THE PROJECT ROUTE

POLLUTION AND SOURCE	CENSUS BLOCK GROUPS	POLLUTION LEVEL	STATE PERCENTILE
Ozone	Block Group 2, Census Tract 6541, New Bedford	40.8 ppb	88th percentile
	Block Group 1, Census Tract 6541, New Bedford	40.8 ppb	88th percentile
	Block Group 1, Census Tract 6542, Acushnet	40.8 ppb	88th percentile
	Block Group 2, Census Tract 6542, Acushnet**	40.8 ppb	88th percentile
	Block Group 3, Census Tract 6541, New Bedford	40.8 ppb	88th percentile
	Block Group 2, Census Tract 5411, New Bedford	40.7 ppb	84th percentile
	Block Group 1, Census Tract 6171.02, Bristol County	41.2 ppb	94th percentile
	Block Group 2, Census Tract 6502.01, New Bedford***	41.1 ppb	93rd percentile
	Block Group 3, Census Tract 6501.02, New Bedford***	41.1 ppb	93rd percentile
	Block Group 2, Census Tract 6501.02, New Bedford*	41.1 ppb	93rd percentile
	Block Group 1, Census Tract 6501.02, New Bedford**	41.1 ppb	93rd percentile
	Block Group 3, Census Tract 6501.01, New Bedford	41.1 ppb	93rd percentile
	Block Group 1, Census Tract 6501.01, New Bedford	41.1 ppb	93rd percentile
	Block Group 2, Census Tract 6501.01, New Bedford	41.1 ppb	93rd percentile
	Block Group 2, Census Tract 6171.01, Bristol County	41.7 ppb	96th percentile
	Block Group 2, Census Tract 6425, Fall River*	41.8 ppb	96th percentile
	Block Group 3, Census Tract 6531.02, Bristol County	41.4 ppb	95th percentile
Traffic Proximity	Block Group 3, Census Tract 6501.02, New Bedford***	2,800	80th percentile
	Block Group 2, Census Tract 6501.02, New Bedford*	2,900	80th percentile
Air Toxics Respiratory Hazard	Block Group 2, Census Tract 6502.01, New Bedford***	0.4	96th percentile
Superfund Proximity	Block Group 2, Census Tract 6502.01, New Bedford***	0.39/km	90th percentile
	Block Group 1, Census Tract 6542, Acushnet	0.22/km	82nd percentile
	Block Group 2, Census Tract 6542, Acushnet**	0.24/km	83rd percentile
	Block Group 3, Census Tract 6541, New Bedford	0.21/km	80th percentile
	Block Group 3, Census Tract 6531.02, Bristol County	0.45/km	91st percentile
RMP Facility Proximity	Block Group 2, Census Tract 6425, Fall River*	3.1/km	97th percentile
Underground Storage Tank	Block Group 1, Census Tract 6501.02, New Bedford**	6.9	85th percentile

* CBG crossed by Project Centerline.
** EJ as defined by the Commonwealth of MA
Source: USEPA EJScreen (Version 2.1), Pollution and Source data from various agencies dating from 2016–2022.

Ozone, air toxic respiratory hazards, and the proximity to traffic, superfund sites and RMP facilities are of concern in several block groups where the Project centerline crosses this EJ neighborhood. They include Block Group 2, Census Tract 6502.01, Block Group 3, Census Tract 6501.02, Block Group 2, Census Tract 6501.02, Block Group 3, Census Tract 6501.02, Block Group 2, Census Tract 6501.02, Block Group 2, Census Tract 6502.01, Block Group 2, Census Tract 6502.01 and Block Group 2, Census Tract 6425. The Companies will be implementing measures to minimize and mitigate temporary impacts as discussed in the mitigation section herein.

12.3 Project Impacts on EJ Populations

This Project will not negatively affect EJ populations. The Project does not exceed MEPA thresholds for Air (301 CMR 11.03(4)) and meets the greenhouse gas *de minimis* exemption. There are no facilities proposed that would result in long-term air emissions. The Project does not exceed MEPA thresholds for Water (301 CMR 11.03(8)) and there are no long-term water withdrawals or discharges proposed. The Companies will be applying to the MassDEP to obtain a Section 401 Water Quality Certificate for approval to temporarily alter wetland resource areas that are tributary to a Class A Public Water Supply and are therefore classified as ORW. These temporary impacts result from the placement of construction matting, which is considered by the DEP to be a BMP to minimize impacts to wetlands during construction of linear utility line projects. The Project does not exceed MEPA thresholds for Land (301 CMR 11.03(1)) and there will be no reduction in or conversion of public open space since the Project will be located within the Companies' existing ROWs. Additionally, by siting the Project within existing ROW, the Companies are further avoiding any new impacts to EJ populations associated with new disturbance/alteration of previously undeveloped areas for a new utility line corridor.

During the construction-phase of the Project there may be intermittent and localized increases in noise, dust and emissions from construction vehicles and related equipment. The Companies will implement measures to minimize and mitigate these temporary impacts as discussed in the mitigation section herein. Solid waste will be generated during the construction of the Project; however, all construction-related debris and refuse will be removed from the ROW and disposed of at an appropriate receiving facility in accordance with applicable laws and regulations.

The Project will address ISO-NE's determination of a need for additional transmission capacity within a load pocket consisting of Fall River, Westport, Dartmouth, Freetown, New Bedford, Acushnet, Fairhaven, Rochester, Mattapoisett, Marion, and Wareham in Massachusetts, as well as Jamestown, Newport, Middletown, Portsmouth, Tiverton, and Little Compton in Rhode Island (referred to herein as the "Load Pocket"). The Project will be a benefit to all communities in the Southeastern Massachusetts (including EJ populations) as it will result in a stronger electrical transmission system that is vital to the area's safety, security and economic prosperity.

12.4 Public Involvement Activities

The Companies have undertaken an enhanced public outreach approach for this Project, in concert with the MA Energy Facilities Siting Board (EFSB) process and requirements, to comply with the MEPA Public Involvement Protocol for Environmental Justice Populations 2021 Protocol. Public outreach has occurred and is anticipated to occur for this Project as outlined in detail below.

12.4.1 Completed Public Involvement

The Companies have established a community and public outreach program for the Project to initiate and maintain communications with stakeholders (e.g., abutting property owners, residents, community groups and local and state officials). This program includes opportunities for public education and input regarding the need for the Project, the permitting process, the dissemination of construction updates and outreach during construction, and follow-up outreach after Project completion. The program is designed to engage the affected communities, facilitate transparency throughout the Project, foster public participation, and solicit feedback from stakeholders.

Project Mailings

All abutters within a 300-foot radius of the Projects' edge of ROW and within 0.25 mile of all ancillary facilities received a Project introduction letter through the mail in 2018, and in June of 2021. These letters overviewed the Project purpose, need, location, and how to contact Project staff for additional information. A Project specific 24-hour call-in number and email address for both Companies were included in all correspondence so that community members can contact Project staff directly. Translation services are readily available through the Project specific hotline and email. NEP and Eversource created Project-specific webpages to provide an overview the Project and Project-related documentation on a publicly accessible platform without restriction related to time, date, location, etc. The webpages also include information regarding the Project overview, safety, virtual simulations, map of the Project, open house dates, environmental concerns, timeline of the Project, fact sheets, and Project benefits. Information on the websites has been posted in English, Spanish, Portuguese (European), Portuguese creole (Brazilian and Cape Verdean), and K'iche'. Upon request all materials may be translated into other languages beyond what is provided on the website. Updates will be made to the website as the Project progresses, this may include links to any virtual open houses, changes to the Project route, or changes to the Project's anticipated timeline.

Community Events

The Companies held four Open Houses to introduce the need for and the benefits of the Project. All Open Houses were held in interactive settings that provided the public with opportunities to speak with subject matter experts, ask questions, and share concerns about the Project. In-person Open Houses were held on September 26, 2018, in Acushnet, Massachusetts, and on September 27, 2018, in Dartmouth, Massachusetts. Virtual Open Houses were held on June 29, 2021, and July 8, 2021. At each Open House, the Companies provided a Project overview with a focus on the need, the benefits, the siting process, route selection criteria, identified potential routes, location, design, schedule, anticipated construction activities, as well as a summary of participation opportunities for all interested persons.

In preparation for the 2021 virtual Open Houses, the Companies actively sought meaningful conversations with all interested stakeholders, including residents within mapped EJ populations crossed by the Project. This included development and mailing trilingual invitations (featuring, in equal parts: English, Spanish, and Portuguese) to all property owners along the Project route in each city/town as well as the corresponding municipal officials. The invitation also included a QR code that provided instant access to each virtual Open House via a simple scan using any smartphone/device. Oversized postcards advertising the open houses were sent to the homes of all abutters within a 300-foot radius of the Projects' edge of ROW and within 0.25 mile of all ancillary facilities. The postcards mailed to each home were provided in English, Spanish, and Portuguese. Invitations to the open houses were also sent to the Watuppa Reservation Headquarters, each municipalities' city/town government and Water Department, and the Commonwealth of Massachusetts Department of Conservation and Recreation. Newspaper advertisements for the Open Houses were published in The Chronicle (weekly newspaper of Dartmouth and Westport), The Standard Times (daily newspaper for the South Coast area, including Fall River and

New Bedford), The Herald News (daily newspaper for the South Coast area, including Fall River and New Bedford), and O Jornal (weekly Portuguese and English language newspaper for Southeastern Massachusetts). The Open Houses were also advertised on-line at www.southcoasttoday.com.

During each virtual Open House, the presentation material was narrated in English with live, simultaneous Portuguese and Spanish interpretation. This was made possible by having four experienced professional interpreters at the virtual Open House—two in the Portuguese meeting room and two in the Spanish meeting room—to provide smooth, continuous coverage of the Open House. The interpreting was bi-directional with the dominant amount from English into Portuguese and Spanish. To achieve the best possible experience for the virtual Open House attendees, the Companies sent a prepared tri-lingual presentation to all interpreters so that they had sufficient opportunity to familiarize themselves with the content and resolve any questions/concerns prior to the virtual Open Houses.

CBO Communication

Advance notification of the SEIR filing was provided by NEP and Eversource on May 6, 2022 and May 20, 2022, respectively, December 5, 2022, and March 31, 2023 to community-based organizations (CBOs) and tribes within all municipalities impacted by the Project. CBOs and tribes were informed of ways to find out more about the Project (i.e., Project-specific webpages), request a community meeting, and how to contact the Project team. To date, no CBOs or tribes have requested meetings or responded to the notifications with questions or requests for further information.

Table 12-7 below identifies the distribution list of CBOs and tribes, or other individuals or entities, to whom the Companies have provided advance notification of the SEIR filing and who will receive notification of availability of the SEIR at the request of the MEPA office in accordance with the new Environmental Justice protocol that went into effect on January 1, 2022.

TABLE 12-7 DISTRIBUTION LIST OF CBO'S AND TRIBAL ORGANIZATIONS

AFFILIATION	SERVICE AREA
Groundwork South Coast	Acushnet, New Bedford, Fall River
Coalition for Social Justice	New Bedford and Fall River
Southeastern Regional Planning & Economic Development District	Acushnet, Dartmouth, New Bedford, Fall River
Buzzards Bay Coalition	Buzzards Bay / South Coast
Hands Across the River Coalition	Acushnet River
Greater Southeast MA Labor Council	Greater Southeast MA
NAACP of New Bedford	New Bedford
Watuppa Tribe	Fall River
Environment Massachusetts	Massachusetts
Clean Water Action	Massachusetts
Sierra Club MA	Massachusetts
Neighbor to Neighbor	Massachusetts
Appalachian Mountain Club	Massachusetts
Mass Audubon	Massachusetts
Mass Rivers Alliance	Massachusetts
The Trust for Public Land	Massachusetts
Browning the GreenSpace	Massachusetts
Environmental League of MA	Massachusetts
E4TheFuture	Massachusetts
Ocean River Institute	Massachusetts
Mass Land Trust Coalition	Massachusetts
Mass Climate Action Network	Massachusetts

AFFILIATION	SERVICE AREA
Conservation Law Foundation	Massachusetts
Community Action Works	Massachusetts
Unitarian Universalist Mass Action Network	Massachusetts
Healthcare without Harm	Massachusetts
Chappaquiddick Tribe of the Wampanoag Nation	Massachusetts
Wampanoag Tribe of Gay Head (Aquinnah)	Federally Recognized Tribe
Nipmuc Nation (Hassanamisco Nipmucs)	Massachusetts
Massachusetts Commission on Indian Affairs (MCIA)	Massachusetts
Chaubunagungamaug Nipmuck Indian Council	Massachusetts
Herring Pond Wampanoag Tribe	Massachusetts
Chappaquiddick Tribe of the Wampanoag Nation, Whale Clan	Massachusetts
North American Indian Center of Boston	Massachusetts
Stockbridge-Munsee Tribe	Federally Recognized Tribe
Mashpee Wampanoag Tribe	Federally Recognized Tribe
Pocassett Wampanoag Tribe	Massachusetts
Massachusetts Tribe at Ponkapoag	Massachusetts

12.4.2 Public Involvement to Occur

The Stakeholder Outreach communication plan will continue to provide periodic Project updates during construction and will offer a consistent point of contact for the public. The Companies will continue to conduct the following outreach activities to solicit input from community members:

- Door-to-door outreach will be conducted in all communities abutting the Project. This form of outreach may be conducted on multiple occasions to notify the landowners of upcoming activities and/or to address any questions or concerns they may have. Translation services will be accessible through this form of outreach.
- Touch point mailings will be sent to announce updates to the Project or to make abutters aware of upcoming activities. All documentation will be sent in English, Spanish, European Portuguese, Portuguese creole (Brazilian and Cape Verdean), and K'iche'.
- Updates will be made to the website as the Project progresses. This may include links to any virtual open houses or changes to the Project's anticipated timeline.
- Project-specific 24-hour call-in number and email will remain active for the duration of the Project. This number, email address, and website URL will be included on all outreach documents so that community members can contact Project staff directly. Translation services will be available for those whose primary language is not English.
- Additional open houses may be held for this Project. Translation services will be provided at these events. Open houses will occur outside of standard business hours and will occur at locations that are easily accessible by public transportation. Any virtual aspect of the open house(s) will be recorded and posted on the Project website so that anyone who was unable to attend can still view the information.
- Meetings, emails, and phone calls with concerned landowners and Project personnel will be held on a case-by-case basis.

Recognizing the varying needs of its stakeholders, the Companies are developing various communication methods to inform stakeholders throughout construction, including as needed: advance notification of scheduled construction; personal contact with residents, community groups and businesses; and regular e-

mail updates to stakeholders, residents who elect to be added to mailing lists and local officials that will include information on upcoming construction activity.

13.0 MITIGATION AND SECTION 61 FINDINGS

13.1 Mitigation Cost Responsible Parties

The implementation of Eversource's proposed compensatory wetland mitigation are expected to cost approximately $500,000. This estimate is approximate and associated costs include earthwork, plantings and seed mix, the installation of the plantings, environmental monitoring during and after the work, and writing of monitoring reports. Eversource is responsible for all costs associated with the compensatory wetland mitigation.

13.2 Section 61 Findings

The remainder of this chapter provides proposed Section 61 findings in accordance with the requirements of M.G.L. Chapter 30, § 61. Section 61 requires that state agencies "review, evaluate and determine the impact on the natural environment of all works, projects or activities conducted by them and [to] use all practicable means and measures to minimize damage to the environment." It further requires that "any determination made by an agency…include a finding describing the environmental impact, if any, of the project and a finding that all feasible measures have been taken to avoid or minimize said impact." Revisions to the Section 61 Findings are expected to occur to reflect ongoing discussions.

13.3 Massachusetts Department of Environmental Protection Findings

DRAFT FINDINGS PURSUANT TO M.G.L. CHAPTER 30, SECTION 61

Project Name: Acushnet to Fall River Reliability Project

Project Location: Acushnet, New Bedford, Dartmouth and Fall River

Project Proponent: New England Power Company and NSTAR Electric Company d/b/a Eversource Energy

EEA Number: 15941

Agency Actions: MassDEP Section 401 Water Quality Certification

Intent of These Section 61 Findings: MEPA regulations 301 CMR 11.12(5) provide that in "accordance with M.G.L. c.30, §61, any Agency that takes Agency Action on a Project for which the Secretary required an Environmental Impact Report shall determine whether the Project is likely, directly or indirectly, to cause any damage to the environment and confirming that all feasible measures have been taken to avoid or minimize the damage to the environment." The Section 61 Findings are to be incorporated into the conditions or restrictions to the relevant permit or authorization. The following proposed Section 61 Findings have been prepared by the Companies and are intended to assist the state permit-issuing agency in fulfilling its obligations in accordance with M.G.L. c. 30, §61. These Findings are limited to the subject matter jurisdiction of the Section 401 Water Quality Certification sought from the MassDEP.

Project Description: The proposed Project will be located within the Companies' fee-owned properties or transmission line easements and consists of the following:

(1) Tree removal within the NEP ROW for a distance of approximately 4.2 miles to expand the cleared ROW width approximately 60 feet to the south side of the ROW.

(2) Installation of a new 115-kV electric transmission line and associated structures extending from Eversource's Industrial Park Tap in Acushnet west to NEP's Bell Rock Substation in Fall River.

(3) Protection and control upgrades to the existing Tremont, Acushnet and Bell Rock Substations located in Wareham, Acushnet, and Fall River, respectively.

MEPA History: Pursuant to M.G.L. c. 30, §§61- 62A-H, of MEPA and its implementing regulations at 301 CMR 11.00, the Companies submitted an EENF to the MEPA office on November 15, 2018. The Project is subject to MEPA review as it requires one or more state permits and exceeds thresholds requiring the filing of an ENF and an Environmental Impact Report (EIR) for Wetlands, Waterways, and Tidelands for the requirement of a permit and an expected alteration of one or more acres of bordering vegetated wetlands (301 CMR 11.03(a)(1)(a)). The Project requires state permits from the MassDEP, MA DCR, NHESP and MassDOT.

The EENF received an extended public comment period pursuant to Section 11.06(1) of the MEPA regulations. The Secretary issued a Certificate on December 28, 2018 requiring the preparation of an Environmental Impact Report and allowing the Companies to prepare a SEIR in fulfillment of the requirements of Section 11.03 of the MEPA regulations.

Project Impacts: Certain Project activities, such as structure installation, and using construction mats for temporary access and work pad locations, will result in the discharge of fill material in the waters of the

United States for which there are no practicable alternative. Secondary impacts will result in a conversion of forested wetland habitat to scrub-shrub or emergent wetland habitat, whereby the cover type changes but results in a no net-loss of wetlands. As proposed, the Project will result in temporary impacts to wetlands that are designated as tributaries to Class A Public Water Supplies of the North Watuppa Pond and Copicut Reservoir (Outstanding Resource Waters). Impacts relative to the Section 401 Water Quality Certificate include the permanent fill of approximately 923 square feet of bordering vegetated wetland, as well as the 307,061 square feet of BWV temporarily impacted by construction mats for work pads, and conversion of 72,351 square feet of forested BVW to scrub-shrub wetlands.

Project Mitigation: The Companies' mitigation measures fall into three primary categories: avoidance/ minimization, construction BMPs to be implemented in the field, and compensatory mitigation. Mitigation was built into the planning and design process as an overall approach to avoid impacts whenever possible. In terms of mitigation during construction, the Companies have established BMPs that will be followed by all employees and its contractors for accessing sites and performing construction activities on transmission ROWs. These procedures ensure that the Project will be completed in accordance with all applicable environmental laws and regulations as well as with Company policies and compliance objectives. Where permanent impacts cannot be avoided, appropriate compensatory mitigation will be utilized.

The Companies completed field investigations and constructability reviews along the Project ROW throughout the planning and design period to determine access routes, tree removal techniques, and construction techniques to be implemented during construction of the Project in order to provide an accurate impact assessment and to design work to avoid and minimize impacts to wetlands and waterways to the greatest extent possible. The below-listed commitments will be carried out by the Companies to ensure that all proposed wetlands and waterways impacts are mitigated.

TABLE 13-1 SUMMARY OF NEP PROPOSED MITIGATION MEASURES

ENVIRONMENTAL PARAMETER / ACTIVITY	SUMMARY OF MITIGATION MEASURES	IMPLEMENTATION SCHEDULE / PHASE	RESPONSIBLE PARTY
General	NEP will hire qualified professionals as Environmental Compliance Monitors and require that the contractor designate Construction Supervisors. The Construction Supervisor(s) will supervise construction and operations and will be responsible for site compliance with permit conditions; monitoring on-site conditions; and maintenance of mitigation measures. The Environmental Monitor(s) will observe work within wetlands, rare species habitat and conduct restoration/replication monitoring. Per existing NEP Policy, Environmental Field Issue (EFI) guidelines are developed for all complex construction and maintenance projects. At a minimum, the EFI will include the locations of sensitive areas to be avoided, a summary of all permit requirements, detailed erosion and sediment control plans, and training requirements/documentation. All contractors and environmental monitors are required to participate in Project-specific EFI training before beginning work on the Project. In accordance with a schedule specified in the EFI, regular construction progress meetings will provide the opportunity to reinforce the contractor's awareness of these matters.	Construction, Long-term	NEP
Vegetation Removal	NEP will implement standard industry forestry practices during tree removal and vegetation removal. Site-specific forestry means and methods will be implemented where needed to minimize environmental impact. NEP will follow its approved Vegetation Management Plan, and its policies for ROW access, maintenance and construction BMPs outlined in *EG-303NE.*	Construction, Long-term	NEP
	Creation of additional scrub-shrub wetland habitat along the maintained ROW will represent a long-term positive effect for an assemblage of native wildlife.	Long-Term	NEP
Grading, Excavation and Soil Erosion Control	Stabilization of ground disturbance and site grading activities will occur in accordance with *Massachusetts Erosion Sediment Control Guidelines for Urban and Suburban Areas*.[1]	Construction	NEP / Contractor
	Prior to construction, a detailed erosion and sediment control plan will be developed and implemented in the field based on site-specific conditions with input from NEP, the designated contractor(s), and environmental consultants. Appropriate erosion and sediment controls will be installed according to the mutually agreed upon plan. All controls will be installed in accordance with *EG-303NE,* which contains guidance policies regarding ROW access, maintenance and construction BMP. Examples of erosion and sediment controls commonly used for utility work include silt fence, straw bales, straw wattles, filter socks, mulch, water bars, temporary and/or permanent reseeding. Refer to *Appendix C.*	Construction	NEP / Contractor / POWER

ENVIRONMENTAL PARAMETER / ACTIVITY	SUMMARY OF MITIGATION MEASURES	IMPLEMENTATION SCHEDULE / PHASE	RESPONSIBLE PARTY
Access Road Improvements	Contractors to comply with *EG-303NE*.	Construction	Contractor
	Install erosion controls, as identified in the erosion and sediment control plan and specified in *EG-303NE*.	Construction	Contractor
	Install stabilized construction entrances on the ROW at public road crossings. Place suitable crushed stone aprons/ramps on geotextile fabric at road entrances to minimize tracking soil onto public streets.	Construction	Contractor
	Use construction mats for access through BVW, across intermittent or small streams (if bridge spans are not viable) and other sensitive areas to minimize compression of soils, rutting, and disturbance of vegetation. Remove construction mats and restore areas, as appropriate, upon work completion.	Construction	Contractor
	Maintain adequate drainage patterns, if required, by installing temporary culverts and riprap lined drainage swales to accommodate equipment crossings of wetlands and watercourses. Remove and restore to previous conditions upon work completion.	Construction	Contractor
Soils Handling/ Management	If necessary, preparation of a plan for handling potentially contaminated soils in accordance with National Grid*'s Environmental Guidance Documents (EG-1707 and 1701)* regarding projects at existing substations and excess soil management from construction projects on ROWs.	Construction	NEP
Dewatering/ Stormwater	Discharge and/or dispose of groundwater encountered during construction in accordance with EG303NE, applicable local and state requirements, as necessary, and the USEPA Dewatering General Permit, as applicable.	Construction	Contractor
	NEP will submit a Stormwater Pollution Prevention Plan (SWPPP) in compliance with USEPA's NPDES program under the Stormwater Construction General Permit. The SWPPP establishes a construction contact list, presents a description of the proposed work, and identifies stormwater controls, spill prevention, and inspection practices to be implemented for the management of construction-related stormwater discharges from the Project.	Construction	NEP/ POWER
Spill Prevention	If a spill occurs, control and minimize the potential effects in accordance with National Grid Environmental Guidance Documents (EG-501MA and EG-502MA) regarding release notification requirements and spill response procedures and notifications.	Construction	Contractor

ENVIRONMENTAL PARAMETER / ACTIVITY	SUMMARY OF MITIGATION MEASURES	IMPLEMENTATION SCHEDULE / PHASE	RESPONSIBLE PARTY
Air Quality	Deploy dust mitigation measures as described in National Grid's *Environmental Guidance Document EG-303NE* (see *Appendix C)*, (e.g., track pads at access points and controls during dry periods).	Construction	Contractor
	NEP requires the use of ultra-low sulfur diesel fuel exclusively in its diesel-powered construction equipment. Any diesel-powered non-road construction equipment with engine horsepower ratings of 50 and above to be used for 30 or more days over the course of Project construction will either be USEPA Tier 4-compliant or will be retrofitted with USEPA-verified (or equivalent) emission control devices such as oxidation catalysts or other comparable technologies (to the extent that they are commercially available) installed on the exhaust system side of the diesel combustion engine. The Project will comply with MassDEP's Solid Waste and Air Pollution control regulations, pursuant to M.G.L. c.40, s.54.	Construction	Contractor
Streams and Rivers	Use of washed stone where existing access roads crossing stream beds must be improved, (e.g., clean rip-rap or equivalent, rock fords).	Construction	Contractor
	Bridge/span watercourses with temporary construction mats, as necessary, to allow equipment to cross without constraining water flow.	Construction	Contractor
	Maintain adequate separation from watercourses while mixing concrete for structure foundations to avoid impacts to waterbodies.	Construction	Contractor
Wetland Resource Areas	Contractors to comply with National Grid's *Environmental Guidance Document EG-303NE* for all work in or adjacent to wetland resource areas.	Construction	Contractor
	Install temporary construction mats on top of existing vegetation within BVW to establish safe and stable construction work areas/crane pads where necessary.	Construction	Contractor
	Restore temporarily impacted wetland resource areas to pre-construction configurations and contours to the extent practicable.	Construction	Contractor
	Compensatory mitigation for permanent BVW fill associated with the Project Final plans to be developed in consultation with local conservation commissions and USACE.	Construction, Long-Term	NEP
	Compensatory mitigation which will be determined in consultation with agencies to offset conversion of forested wetlands associated with tree removal.	Long-Term	NEP
Floodplain	Over-excavate with BLSF to maintain existing elevations, or provide compensatory flood storage as mitigation for fill within BLSF. Final plans to be developed in consultation with local conservation commission.	Permitting/ Construction	NEP

ENVIRONMENTAL PARAMETER / ACTIVITY	SUMMARY OF MITIGATION MEASURES	IMPLEMENTATION SCHEDULE / PHASE	RESPONSIBLE PARTY
Rare Species	Implement NHESP-accepted state-listed species mitigation plans to avoid and minimize impacts on rare species. Develop and implement species specific protection plans to be approved by the NHESP. File a Conservation and Management Permit Application with the NHESP seeking an approved Conservation and Management Permit. NEP is committed to minimizing impacts where possible and has committed to the measures discussed in Section 5.0.	Construction	NEP
	Vegetation maintenance will be undertaken in accordance with the provisions of NEP's NHESP- approved long-term Operation and Maintenance Plan and National Grid's *Environmental Guidance Document EG-305.*	Construction/Long-Term	NEP
Cultural Resources	Mitigation to be determined in consultation with MHC and USACE, as appropriate.	Pre-Construction	NEP
Traffic	Consult with MassDOT to review proposed plans for overhead crossings (including the use of guard structures). Develop a Transportation Management Plan that addresses impacts and MassDOT concerns to ensure a safe working environment as well as safe passage for highway traffic.	Construction	NEP/POWER
Public Outreach	Continue to update Project website, submit news releases to local media and local public access channel, as available; establish a toll-free Project hotline; email construction updates; establish email inquiry process; direct mail and "leave behinds" (e.g., fliers, brochures, CDs).	Design & Construction	NEP/ POWER
	Municipal briefings, Project website, toll-free Project hotline and dedicated Project email.	Design & Construction	NEP/ POWER
	Implement Construction Communication Plan.	Construction	NEP/ POWER

Note:
[1] MassDEP. 2003. Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas: A Guide for Planners, Designers, and Municipal Officials. Retrieved August 2, 2018 from http://www.mass.gov/eea/docs/dep/water/essec1.pdf.

TABLE 13-2 SUMMARY OF EVERSOURCE PROPOSED MITIGATION MEASURES

ENVIRONMENTAL PARAMETER / ACTIVITY	SUMMARY OF MITIGATION MEASURES	IMPLEMENTATION SCHEDULE / PHASE	RESPONSIBLE PARTY
General	Eversource will hire qualified professionals as Environmental Compliance Monitors which will be conducted by consultants as well as require that the contractor(s) designate a Construction Supervisor. The Construction Supervisor will supervise construction and operations and will be responsible for site compliance with permit conditions; monitoring on-site conditions; and maintenance of mitigation measures. If work occurs in a wetland resource area or an area mapped or otherwise designated as a rare or endangered species habitat, permit conditions may dictate that construction be monitored by a qualified wetland or wildlife specialist. Construction permit documents and guidelines will be developed for the Project. These documents will include the locations of sensitive areas to be avoided, a summary of all permit requirements, detailed erosion and sediment control plans, and training requirements/ documentation. All contractors and environmental monitors are required to participate in a Project-specific environmental compliance training session before beginning work on the Project. Regular construction progress meetings will be held and provide the opportunity to reinforce the contractor's awareness of these matters.	Construction, Long-term	Eversource
Vegetation Removal	Eversource will follow their approved Five-Year Vegetation Management Plan, current Operation and Maintenance Plan, and construction and maintenance BMPs as outlined in Eversource's *Construction and Maintenance Environmental Requirements: Best Management Practices Manual for Massachusetts and Connecticut (BMP Manual)*.	Construction, Long-term	Eversource
Soil Erosion Controls	Stabilization of ground disturbance and site grading activities will occur in accordance with *Massachusetts Erosion Sediment Control Guidelines for Urban and Suburban Areas.*[1]	Construction	Eversource/ Contractor
	The proper selection of BMPs should take into consideration the Project goals, permit requirements, and site-specific information. Once the assessment of the area is made and requirements of the Project have been established, all BMPs should be considered and implemented, as applicable. Appropriate erosion and sediment controls will be installed according to the mutually agreed upon plan and Eversource's *BMP Manual* regarding ROW access, maintenance and construction BMPs, examples of erosion and sediment controls commonly used for utility work include preserving existing vegetation, silt fence, straw wattles, hay/straw bales, filter socks, mulch, check dams, temporary and/or permanent reseeding/trench breakers/diversions. Any damage observed must be repaired in a timely matter, at least within 48 hours of observation.	Construction	Eversource/ Contractor/ POWER

ENVIRONMENTAL PARAMETER / ACTIVITY	SUMMARY OF MITIGATION MEASURES	IMPLEMENTATION SCHEDULE / PHASE	RESPONSIBLE PARTY
Access Road Improvements	Contractors to comply with Eversource's *BMP Manual*.	Construction	Contractor
	Install erosion controls, as identified in the erosion and sediment control plan and specified in Eversource's *BMP Manual*.	Construction	Contractor
	Install stabilized construction entrances on the ROW at public road crossings. Place suitable crushed stone aprons/ramps on geotextile fabric at ROW road entrances to minimize tracking soil onto public streets.	Construction	Contractor
	Use construction mats for access through wetlands, across intermittent or small streams and other sensitive areas to minimize compression of soils, rutting, and disturbance of vegetation (generally no wider than 16 feet when using construction mats). Install elevated construction mat road crossings or "bridges" in locations where the access road is greater than one mat thick. Gaps and/or bridges are to be placed along the access road at intervals no less than 50 feet. Remove construction mats and restore areas, as appropriate, upon work completion.	Construction	Contractor
	Maintain adequate drainage patterns, if required, by installing water bars and riprap lined drainage swales to control stormwater runoff and minimize erosion and sedimentation.	Construction	Contractor
Soils Handling/ Management	When polluted/contaminated soil is encountered, it must be handled in accordance with the appropriate regulatory requirements. In addition to the measures discussed above, contaminated soils should be stockpiled on and covered by polyethylene sheeting. Sheeting used to cover the stockpile should be weighted down to prevent the wind migration of contaminated dust.	Construction	Contractor
Dewatering/ Stormwater	Eversource will develop and submit Stormwater Pollution Prevention Plan (SWPPP) prepared in compliance with USEPA's NPDES program under the Stormwater Construction General Permit. The SWPPP will establish a construction contact list, present a description of the proposed work, and identify stormwater controls, spill prevention, and inspection practices to be implemented for the management of construction-related stormwater discharges from the Project.	Construction	Eversource/ POWER
	Discharge and/or dispose of groundwater encountered during installation of structure supports in accordance with applicable local and state requirements, as necessary, and the USEPA Stormwater Construction General Permit and SWPPP, as applicable.	Construction	Contractor
	In accordance with dewatering and stormwater policies defined in Eversource's *BMP Manual* and SWPPP developed for the Project regarding protected waters as well as site inspections and monitoring reports.	Construction	Contractor
Spill Prevention	If a spill occurs, control and minimize the potential effects in accordance with Eversource's *BMP Manual*, the SWPPP (which includes spill prevention and response procedures), and Eversource Energy Contractor Rules regarding release notification requirements and spill response procedures and notifications.	Construction	Contractor

ENVIRONMENTAL PARAMETER / ACTIVITY	SUMMARY OF MITIGATION MEASURES	IMPLEMENTATION SCHEDULE / PHASE	RESPONSIBLE PARTY
Air Quality	Deploy dust mitigation measures as described in Eversource's *BMP Manual,* (e.g., stone to cover soil surface and controls during dry periods).	Construction	Contractor
	Eversource will use ultra-low sulfur diesel fuel exclusively in its diesel-powered construction equipment. Any diesel-powered non-road construction equipment with engine horsepower ratings of 50 and above to be used for 30 or more days over the course of Project construction will either be USEPA Tier 4-compliant or will be retrofitted with USEPA-verified (or equivalent) emission control devices such as oxidation catalysts or other comparable technologies (to the extent that they are commercially available) installed on the exhaust system side of the diesel combustion engine. Idling will be required to comply with the Massachusetts Anti-idling Law and regulations.	Construction	Eversource/ Contractor
Streams and Rivers	Coordinate the timing of work to cause the least impacts during the regulatory low flow period under normal conditions or when water/ground is frozen. The United States Army Corps of Engineers defines the low-flow periods for streams which are outlined in Eversource's *BMP Manual.*	Construction	Contractor
	Use of washed stone where existing access roads crossing stream beds (for intermittent streams less than 2-feet wide or braided) must be improved, (e.g., 6-8-inch clean angular stone and clean rip-rap).	Construction	Contractor
	Bridge/span watercourses with temporary construction mats, as necessary, to allow equipment to cross without constraining water flow.	Construction	Contractor
Wetland Resource Areas	Contractors to comply with Eversource's *BMP Manual* for all work in or adjacent to wetland resource areas. Construction within and across wetlands and in proximity to vernal pools should be limited to the extent practicable to avoid working in the periods between April 1st and June 1st.	Construction	Contractor
	Install temporary construction mats on top of existing vegetation within wetlands to establish safe and stable construction work areas/crane pads where necessary and should be inspected daily to ensure that controls are in working order and repairs can occur in a timely manner. Restrict vegetation removal to the extent possible especially in Vernal Pool areas and eastern box turtle habitats to that required for construction.	Construction	Eversource/ Contractor
	Restore wetland resource areas to pre-construction configurations and contours to the extent practicable.	Construction	Contractor
	Compensatory mitigation for permanent BVW fill associated with the construction of the proposed Project and the installation of transmission line structures. Final plans to be developed in consultation with local conservation commissions and USACE.	Construction, Long-Term	Eversource
Floodplain	Over-excavate with BLSF to maintain existing elevations, or provide compensatory flood storage as mitigation for fill within BLSF. Final plans to be developed in consultation with local conservation commission.	Permitting/Construction	Eversource

ENVIRONMENTAL PARAMETER / ACTIVITY	SUMMARY OF MITIGATION MEASURES	IMPLEMENTATION SCHEDULE / PHASE	RESPONSIBLE PARTY
Rare Species	Implement NHESP-accepted state-listed species mitigation plans to avoid and minimize impacts on rare species. Develop and implement species-specific protection plans to be approved by the NHESP. File a Conservation and Management Permit Application with the NHESP seeking an approved Conservation and Management Permit. Eversource is committed to minimizing impacts where possible and has committed to the measures discussed in Section 5.0.	Construction	Eversource
	Vegetation maintenance will be undertaken in accordance with the provisions of Eversource's approved long-term Operation and Maintenance Plan and Five-Year Vegetation Management Plan.	Construction/ Long- Term	Eversource
Cultural Resources	Mitigation to be determined in consultation with MHC, Tribal Historic Preservation Officers, and Advisory Council on Historic Preservation, and USACE, as appropriate.	Pre-Construction	Eversource
Traffic	Consult with MassDOT to review proposed plans for overhead crossings (including the use of guard structures). Develop a Transportation Management Plan that addresses impacts and MassDOT concerns to ensure a safe working environment as well as safe passage for highway traffic.	Construction	Eversource
Public Outreach	Continue to update Project websites, submit news releases to local media and local public access channels, as available; establish toll-free Project hotlines; email construction updates; establish email inquiry process; direct mail and "leave behinds" (e.g., fliers, brochures, CDs).	Design & Construction	Eversource
	Abutter contact; Open House events; and municipal briefings.	Design	Eversource
	Implement Construction Communication Plan.	Construction	Eversource

Note:
[1] MassDEP. 2003. Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas: A Guide for Planners, Designers, and Municipal Officials. Retrieved August 2, 2018 from http://www.mass.gov/eea/docs/dep/water/essec1.pdf.

The Companies are working with the local Conservation Commissions to finalize mitigation plans for the permanent loss of BVW.

Findings: MassDEP finds that the foregoing describes environmental impacts associated with permanent fill of BVW for structure installation, temporary impacts to BVW by construction mats for work pads, and conversation of forested wetlands to scrub-shrub wetlands, and that, with the implementation of the mitigation measures described above, all feasible means will have been taken to avoid or minimize adverse environmental impacts subject to MassDEP's authority.

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY DATE

13.4 Massachusetts Department of Conservation and Recreation Findings

DRAFT FINDINGS PURSUANT TO M.G.L. CHAPTER 30, SECTION 61

Project Name: Acushnet to Fall River Reliability Project

Project Location: Acushnet, New Bedford, Dartmouth, New Bedford

Project Proponent: New England Power Company and NSTAR Electric Company d/b/a Eversource Energy

EEA Number: 15941

Agency Actions: MA DCR Construction Access Permit

Intent of These Section 61 Findings: MEPA regulations 301 CMR 11.12(5) provide that in "accordance with M.G.L. c. 30, §61, any Agency that takes Agency Action on a Project for which the Secretary required an EIR shall determine whether the Project is likely, directly or indirectly, to cause any damage to the environment and confirming that all feasible measures have been taken to avoid or minimize the damage to the environment." The Section 61 Findings are to be incorporated into the conditions or restrictions to the relevant permit or authorization. The following proposed Section 61 Findings have been prepared by the Companies and are intended to assist the state permit-issuing agency in fulfilling its obligations in accordance with M.G.L. c. 30, §61. These Findings are limited to the subject matter jurisdiction of the Construction and Access Permit sought from MA DCR.

Project Description: The proposed Project will be located within the Companies' fee-owned properties or transmission line easements and consists of the following:

(1) Tree removal within the NEP ROW for a distance of approximately 4.2 miles to expand the cleared ROW width approximately 60 feet to the south side of the ROW.

(2) Installation of a new 115-kV electric transmission line and associated structures extending from Eversource's Industrial Park Tap in Acushnet west to NEP's Bell Rock Substation in Fall River.

(3) Protection and control upgrades to the existing Tremont, Acushnet and Bell Rock Substations located in Wareham, Acushnet, and Fall River, respectively.

MEPA History: Pursuant to M.G.L. c. 30, §§61- 62A-H, of MEPA and its implementing regulations at 301 CMR 11.00, the Companies submitted an EENF to the MEPA office on November 15, 2018. The Project is subject to MEPA review as it requires one or more state permits and exceeds thresholds requiring the filing of an ENF and an EIR for Wetlands, Waterways, and Tidelands for the requirement of a permit and an expected alteration of one or more acres of bordering vegetated wetlands (301 CMR 11.03(a)(1)(a)). The Project requires state permits from the MassDEP, MA DCR, NHESP and MassDOT.

The EENF received an extended public comment period pursuant to Section 11.06(1) of the MEPA regulations. The Secretary issued a Certificate on December 28, 2018 requiring the preparation of an Environmental Impact Report, and allowing NEP to prepare an SEIR in fulfillment of the requirements of Section 11.03 of the MEPA regulations.

Project Impacts: A permit from the MA DCR will be required for construction work areas and improvements to existing access roads within MA DCR property known as the Acushnet Cedar Swamp State Reservation in the Town of Dartmouth. Within this area, construction vehicles will primarily be using existing on-ROW access roads. In some locations, gullies and ruts along the existing access routes will need to be filled to create a safe means of ingress and egress to the work areas. The proposed improvements to the existing roads will be contained within the base of the existing roadway. Construction work pads will also be created to provide a safe and level work area for construction equipment to undertake foundation work and structure assembly. The installation of a new access road spur, is proposed directly west of Flaherty Drive in order to gain access to a wire pulling location.

Project Mitigation: Mitigation was built into the planning and design process as an overall approach to avoid impacts wherever possible. Eversource has established procedures that are to be followed by all employees and contractors for accessing sites and performing construction activities on the ROW. Eversource's procedures ensure that the Project will be completed in accordance with all applicable environmental rules and regulations as well as with Company policies and compliance objectives. Field investigations and constructability reviews were completed along the Project route to determine access routes, tree removal techniques, and construction techniques that will be implemented during construction of the Project. The Project was designed to avoid and minimize impacts within wetlands and other sensitive resources (e.g., cultural resources) to the greatest extent practicable.

Eversource will carry out mitigation measures to be determined during the review process for the Construction Access Permit to ensure that any unavoidable impacts associated with the proposed activities are mitigated as the Project proceeds. Eversource will meet all standards and conditions identified in the final Construction and Access Permit. The impacts associated with construction work areas and improvements to existing access roads within the Acushnet Cedar Swamp State Reservation are not anticipated to have any long-term effects on the natural, cultural, or recreational resources of the area.

Findings: MA DCR finds that the foregoing describes environmental impacts associated with the construction AFRRP, and that, with the implementation of the mitigation measures to be described in the Eversource Construction Access Permit, all feasible means will have been taken to avoid or minimize adverse environmental impacts subject to MA DCR's authority.

MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION

BY DATE

13.5 Division of Fish and Wildlife, Natural Heritage and Endangered Species Program Findings

DRAFT FINDINGS PURSUANT TO M.G.L. CHAPTER 30, SECTION 61

Project Name: Acushnet to Fall River Reliability Project

Project Location: Acushnet, New Bedford, Dartmouth, New Bedford

Project Proponent: New England Power Company and NSTAR Electric Company d/b/a Eversource Energy

EEA Number: 15941

Agency Actions: Conservation and Management Permit from the Natural Heritage and Endangered Species Program of the MA DFW under 321 CMR 10.23 for a "take" of eastern box turtle and three herbaceous plant species.

Intent of These Section 61 Findings: MEPA regulations 301 CMR 11.12(5) provide that in "accordance with M.G.L. c. 30, §61, any Agency that takes Agency Action on a Project for which the Secretary required an EIR shall determine whether the Project is likely, directly or indirectly, to cause any damage to the environment and confirming that all feasible measures have been taken to avoid or minimize the damage to the environment." The Section 61 Findings are to be incorporated into the conditions or restrictions to the relevant permit or authorization. The following proposed Section 61 Findings have been prepared by the Companies and are intended to assist the state permit-issuing agency in fulfilling its obligations in accordance with M.G.L. c. 30, §61. These Findings are limited to the subject matter jurisdiction of the Conservation and Management Permit sought from NHESP.

Project Description: The proposed Project will be located within the Companies' fee-owned properties or transmission line easements and consists of the following:

(1) Tree removal within the NEP ROW for a distance of approximately 4.2 miles to expand the cleared ROW width approximately 60 feet to the south side of the ROW.

(2) Installation of a new 115-kV electric transmission line and associated structures extending from Eversource's Industrial Park Tap in Acushnet west to NEP's Bell Rock Substation in Fall River.

(3) Protection and control upgrades to the existing Tremont, Acushnet and Bell Rock Substations located in Wareham, Acushnet, and Fall River, respectively.

MEPA History: Pursuant to M.G.L. c. 30, §§61- 62A-H, of MEPA and its implementing regulations at 301 CMR 11.00, the Companies submitted an EENF to the MEPA office on November 15, 2018. The Project is subject to MEPA review as it requires one or more state permits and exceeds thresholds requiring the filing of an ENF and an EIR for Wetlands, Waterways, and Tidelands for the requirement of a permit and an expected alteration of one or more acres of bordering vegetated wetlands (301 CMR 11.03(a)(1)(a)). The Project requires state permits from the MassDEP, MA DCR, NHESP and MassDOT.

The EENF received an extended public comment period pursuant to Section 11.06(1) of the MEPA regulations. The Secretary issued a Certificate on December 28, 2018 requiring the preparation of an

Environmental Impact Report, and allowing NEP to prepare an SEIR in fulfillment of the requirements of Section 11.03 of the MEPA regulations.

Project Impacts: Impacts relative to the Conservation and Management Permit include a "take" due to activities proposed within eastern box turtle habitat and a localized "take" of three plant species in the easterly Fall River portion of the Project. NHESP has indicated that the Project may be conditioned to avoid a "take" relative to eastern whip-poor-will, thus avoiding the need for a CMP for that species.

Marbled salamanders are affiliated with mature forests and discrete breeding areas therein. No breeding habitat for marbled salamander was identified within or adjacent the ROW and a "take" of this species is not anticipated. The tree removal proposed for the AFRRP is remote from documented breeding habitat. The Project is not anticipated to impact aquatic or terrestrial habitat for marbled salamander and no special or elaborate measures beyond those implemented for eastern box turtle and other species are anticipated, based on NHESP coordination.

Common loons have been documented in the Copicut Reservoir in Fall River, Massachusetts and were confirmed to have nested in 2020 and successfully raised a loon chick, though the nesting location was never confirmed. NEP has been coordinating with the MA DFW and NHESP to identify any recommended species-specific avoidance and minimization measures and determine BMPs for this species.

Project Mitigation: Project mitigation measures fall into three primary categories: avoidance/ minimization, construction BMPs to be implemented in the field, and mitigation. Mitigation was built into the planning and design process as an overall approach to avoid impacts whenever possible. In terms of mitigation during construction, established BMPs will be followed by all employees and contractors for accessing sites and performing construction activities on the transmission ROWs. These procedures ensure that this Project will be completed in accordance with all applicable environmental laws and regulations as well as with Company policies and compliance objectives.

Field investigations and constructability reviews were completed along the Project ROW to determine access routes, tree removal techniques, and construction techniques to be implemented during construction of the Project in order to provide an accurate impact assessment and to design work to avoid and minimize impacts within rare species habitat to the greatest extent practicable. NEP has been working closely with NHESP and will be proposing a mitigation package that will offer a net benefit through a mix of on-site mitigation and funding to support Conservation and Research of state listed reptiles and plant species.

The below-listed commitments will be carried out to reduce potential Project related impacts:

- Developing a mitigation program in consultation with the NHESP to allow for the issuance of a CMP.
- Performing seed collection of select plant species so that permanent loss is reduced.
- Training will be required for all construction personnel.
- Installing signage along the ROW alerting work crews to rare species habitats.
- Installing construction fencing along the ROW alerting work crews to rare plant occurrences adjacent to the work area(s).
- Performing extensive sweeps prior to construction and monitoring during construction.
- Monitoring of animals in the vicinity of active construction via radiotelemetry.

- Implementing species-specific protection plans as applicable.
- Conducting habitat restoration and enhancement post-construction as applicable.

Standard mitigation measures and time of year tree removal will avoid a "take" for the eastern whip-poor-will. NEP will continue the ongoing coordination with MA DFW and NHESP to identify any recommended species-specific avoidance and minimization measures and determine BMPs relative to the Common loon.

Findings: NHESP finds that the foregoing information adequately describes the environmental impacts associated with the proposed Project relative to the subject matter jurisdiction of the Conservation and Management Permit, and that, with the implementation of the mitigation measures to be described above, all feasible means will have been taken to avoid or minimize adverse environmental impacts subject to NHESP authority.

NATURAL HERITAGE AND ENDANGERED SPECIES PROGRAM

BY DATE

13.6 Energy Facilities Siting Board and Department of Public Utilities Findings

DRAFT FINDINGS PURSUANT TO M.G.L. CHAPTER 30, SECTION 61

Project Name: Acushnet to Fall River Reliability Project

Project Location: Acushnet, New Bedford, Dartmouth, New Bedford

Project Proponent: New England Power Company and NSTAR Electric Company d/b/a Eversource Energy

EEA Number: 15941

Agency Actions: Approval to construction and operate the Project pursuant to Chapter 164, Sections 69J and 72

Intent of These Section 61 Findings: MEPA regulations 301 CMR 11.12(5) provide that in "accordance with M.G.L. c. 30, §61, any Agency that takes Agency Action on a Project for which the Secretary required an EIR shall determine whether the Project is likely, directly or indirectly, to cause any damage to the environment and confirming that all feasible measures have been taken to avoid or minimize the damage to the environment." The Section 61 Findings are to be incorporated into the conditions or restrictions to the relevant permit or authorization. The following proposed Section 61 Findings have been prepared by the Companies and are intended to assist the state permit-issuing agency in fulfilling its obligations in accordance with M.G.L. c. 30, §61. These Findings are limited to the subject matter jurisdiction of the Approval to Construction and Operate the Project pursuant to Chapter 164, Sections 69J and 72.

Project Description: The proposed Project will be located within the Companies' fee-owned properties or transmission line easements and consists of the following:

(1) Tree removal within the NEP ROW for a distance of approximately 4.2 miles to expand the cleared ROW width approximately 60 feet to the south side of the ROW.

(2) Installation of a new 115-kV electric transmission line and associated structures extending from Eversource's Industrial Park Tap in Acushnet west to NEP's Bell Rock Substation in Fall River.

(3) Protection and control upgrades to the existing Tremont, Acushnet and Bell Rock Substations located in Wareham, Acushnet, and Fall River, respectively.

MEPA History: Pursuant to M.G.L. c. 30, §§61- 62A-H, of MEPA and its implementing regulations at 301 CMR 11.00, the Companies submitted an EENF to the MEPA office on November 15, 2018. The Project is subject to MEPA review as it requires one or more state permits and exceeds thresholds requiring the filing of an ENF and an EIR for Wetlands, Waterways, and Tidelands for the requirement of a permit and an expected alteration of one or more acres of bordering vegetated wetlands (301 CMR 11.03(a)(1)(a)). The Project requires state permits from the MassDEP, MA DCR, NHESP and MassDOT.

The EENF received an extended public comment period pursuant to Section 11.06(1) of the MEPA regulations. The Secretary issued a Certificate on December 28, 2018 requiring the preparation of an Environmental Impact Report, and allowing NEP to prepare an SEIR in fulfillment of the requirements of Section 11.03 of the MEPA regulations.

Project Impacts and Mitigation: The EFSB and MA DPU review will identify terms and conditions during the evaluation of the Project to determine public necessity and environmental impacts.

Findings: Based on its review of the MEPA documents, the EFSB and MA DPU find that the foregoing information adequately describes the environmental impacts associated with the proposed Project, and that with the implementation of the terms and conditions to be determined during the EFSB and MA DPU review processes, all feasible means will have been taken to avoid, minimize or mitigate adverse environmental impacts to the maximum extent practicable for those impacts subject to the EFSB and MA DPU authority. Implementation of the mitigation measures will occur in accordance with the terms and conditions set forth in the permits.

ENERGY FACILITIES SITING BOARD AND DEPARTMENT OF PUBLIC UTILITIES

BY DATE

13.7 Massachusetts Department of Transportation Findings

DRAFT FINDINGS PURSUANT TO M.G.L. CHAPTER 30, SECTION 61

Project Name: Acushnet to Fall River Reliability Project

Project Location: Acushnet, New Bedford, Dartmouth, New Bedford

Project Proponent: New England Power Company and NSTAR Electric Company d/b/a Eversource Energy

EEA Number: 15941

Agency Actions: MassDOT Permit to Access State Highway

Intent of These Section 61 Findings: MEPA regulations 301 CMR 11.12(5) provide that in "accordance with M.G.L. c. 30, §61, any Agency that takes Agency Action on a Project for which the Secretary required an EIR shall determine whether the Project is likely, directly or indirectly, to cause any damage to the environment and confirming that all feasible measures have been taken to avoid or minimize the damage to the environment." The Section 61 Findings are to be incorporated into the conditions or restrictions to the relevant permit or authorization. The following proposed Section 61 Findings have been prepared by the Companies and are intended to assist the state permit-issuing agency in fulfilling its obligations in accordance with M.G.L. c. 30, §61. These Findings are limited to the subject matter jurisdiction of the State Highway Access Permit sought from MassDOT.

Project Description: The proposed Project will be located within the Companies' fee-owned properties or transmission line easements and consists of the following:

(1) Tree removal within the NEP ROW for a distance of approximately 4.2 miles to expand the cleared ROW width approximately 60 feet to the south side of the ROW.

(2) Installation of a new 115-kV electric transmission line and associated structures extending from Eversource's Industrial Park Tap in Acushnet west to NEP's Bell Rock Substation in Fall River.

(3) Protection and control upgrades to the existing Tremont, Acushnet and Bell Rock Substations located in Wareham, Acushnet, and Fall River, respectively.

MEPA History: Pursuant to M.G.L. c. 30, §§61- 62A-H, of MEPA and its implementing regulations at 301 CMR 11.00, the Companies submitted an EENF to the MEPA office on November 15, 2018. The Project is subject to MEPA review as it requires one or more state permits and exceeds thresholds requiring the filing of an ENF and an EIR for Wetlands, Waterways, and Tidelands for the requirement of a permit and an expected alteration of one or more acres of bordering vegetated wetlands (301 CMR 11.03(a)(1)(a)). The Project requires state permits from the MassDEP, MA DCR, NHESP and MassDOT.

The EENF received an extended public comment period pursuant to Section 11.06(1) of the MEPA regulations. The Secretary issued a Certificate on December 28, 2018 requiring the preparation of an Environmental Impact Report, and allowing NEP to prepare a SEIR in fulfillment of the requirements of Section 11.03 of the MEPA regulations.

Project Impacts: The proposed Project's impacts relative to MassDOT are associated with the installation of overhead wires across state highways by a non-municipal utility. In some instances, temporary guard structures, situated on the side of the state roadways along the ROW, will be installed to ensure safe overhead wire crossing. The installation could temporarily affect traffic flow on the roadway

but will not permanently alter the roadway or MassDOT ROW. Access to the ROW from state roadways will occur via existing approved access points.

Project Mitigation: Mitigation was built into the planning and design process as an overall approach to avoid impacts wherever possible. The Companies have established procedures that are to be followed by all employees and contractors for accessing sites and performing construction activities on the Companies' ROWs. The Companies' procedures ensure that the Project will be completed in accordance with all applicable environmental rules and regulations as well as with Company policies and compliance objectives. The Companies completed field investigations and constructability reviews along the Project route to determine access routes, tree removal techniques, and construction techniques that will be implemented during construction of the Project. The Project was designed to avoid and minimize impacts within wetlands and other sensitive resources (e.g., cultural resources) to the greatest extent practicable.

With MassDOT input, a Traffic Management Plan will be developed and submitted for review and approval prior to the start of construction. Enforceable commitments in the Traffic Management Plan will be carried out by Eversource to ensure that all proposed traffic impacts are mitigated. Such strategies may include, as appropriate, traffic management procedures, construction time restrictions, signage, installation of tracking pads to minimize soil in roadways, and/or restoration of vegetation along soft shoulders after construction.

Findings: MassDOT finds that the foregoing describes impacts associated with the installation of new overhead wires across state highways by a non-municipal utility during construction of the Project, and that, with the implementation of the mitigation measures to be described in the Traffic Management Plan, all feasible means will have been taken to avoid or minimize adverse impacts subject to MassDOT's authority.

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION

BY DATE

13.9 Massachusetts Department of Environmental Protection Waterways Program, Chapter 91 Findings

DRAFT FINDINGS PURSUANT TO M.G.L. CHAPTER 30, SECTION 61

Project Name: Acushnet to Fall River Reliability Project

Project Location: Acushnet, New Bedford, Dartmouth, New Bedford

Project Proponent: New England Power Company and NSTAR Electric Company d/b/a Eversource Energy

EEA Number: 15941

Agency Actions: Massachusetts Department of Environmental Protection Waterways Program, Chapter 91, Massachusetts Public Waterfront Act

Intent of These Section 61 Findings: Pursuant to M.G.L. c. 30, §§61- 62A-H, of MEPA and its implementing regulations at 301 CMR 11.00, The Companies submitted an EENF to the MEPA office on November 15, 2018. The Project is subject to MEPA review as it requires one or more state permits and exceeds thresholds requiring the filing of an ENF and an EIR for Wetlands, Waterways, and Tidelands for the requirement of a permit and an expected alteration of one or more acres of bordering vegetated wetlands (301 CMR 11.03(a)(1)(a)). The following proposed Section 61 Findings have been prepared the Companies and are intended to assist MassDEP in fulfilling its obligations in accordance with M.G.L. c. 30, § 61. These Findings are limited to the subject matter jurisdiction of the Chapter 91 License sought from the MassDEP.

Project Description: The proposed Project will be located within the Companies' fee-owned properties or transmission line easements and consists of the following:

(1) Tree removal within the NEP ROW for a distance of approximately 4.2 miles to expand the cleared ROW width approximately 60 feet to the south side of the ROW.

(2) Installation of a new 115-kV electric transmission line and associated structures extending from Eversource's Industrial Park Tap in Acushnet west to NEP's Bell Rock Substation in Fall River.

(3) Protection and control upgrades to the existing Tremont, Acushnet and Bell Rock Substations located in Wareham, Acushnet, and Fall River, respectively.

Project Impacts: Certain Project activities, such as conductor installation, will be within the Chapter 91 jurisdictional area of the Acushnet River in an area where transmission line crossings were previously licensed by the Department.

Mitigation: Eversource will submit an application to the MassDEP Waterways Program for a Chapter 91 License to modify the existing License and will conform to the Chapter 91 Waterways Standards for the portions the Project that are subject to Chapter 91 jurisdiction. The Project is designed and constructed to avoid or minimize permanent impacts to flowed waterways and any temporary disturbances will be stabilized and restored following construction. The installation of these overhead transmission lines will not impact nor hinder the public's rights to access the tidelands, although current access is restricted due to safety and security purposes.

Findings: The potential environmental impacts of the Project quantified herein through this SEIR are incorporated by reference into this Section 61 Finding. Throughout the planning and environmental review processes, the Companies have developed measures to mitigate impacts of the Project. With the

mitigation proposed and carried out in cooperation with the state agencies, the Department of Environmental Protection Waterways Program finds that there are no significant unmitigated impacts.

For the reasons stated above, MassDEP hereby finds that pursuant to M.G.L. c. 30, § 61, the construction of the Project as described above, and with the implementation by the Proponent of the noted mitigation measures, all practicable means and measures will be taken to avoid or minimize adverse environmental impacts related to the Project.

DEPARTMENT OF ENVIRONMENTAL PROTECTION – WATERWAYS

_____ _____

BY: DATE:

14.0 RESPONSES TO COMMENTS/ CIRCULATION

Include a copy of the Certificate and a copy of each comment letter received.

Response: The Certificate and comment letters received are included in Appendix A.

In order to ensure that the issues raised by commenters are addressed, the SEIR should include direct responses to comments to the extent that they are within MEPA jurisdiction.

Response: This section of the SEIR includes direct responses to comments received.

Circulate the SEIR to those parties who commented on the EENF, to any State Agencies from which the Proponent will seek permits or approvals, and to any additional parties specified in Section 11.16 of the MEPA Regulations.

Response: The SEIR Circulation list is included in Appendix H. All parties who commented on the EENF, state agencies from which the Project requires permits and/or approvals, and other parties as specified in Section 11.16 of the MEPA Regulations will receive this SEIR document.

A copy of the SEIR should be made available for review at the Acushnet, Dartmouth, Fall River, and New Bedford public libraries.

Response: The Companies will make the SEIR document available for review at the Acushnet, Dartmouth, Fall River and New Bedford public libraries.

14.1 Massachusetts Department of Conservation and Recreation

If the Project will include access for construction vehicles across DCR Bioreserve land or DCR's Acushnet Cedar Swamp State Reservations, then a DCR Construction and Access Permit will be required.

Response: Eversource acknowledge that access for construction vehicles across the MA DCR Acushnet Cedar Swamp State Reservation will require a Construction and Access Permit.

The SEIR should include a clarification of land ownership along the portion of the Eversource ROW that passes through the Bioreserve and explanation of potential construction and access needs.

Response: Land ownership along the transmission line ROW traversing the Bioreserve are discussed in Section 1.8.6.

Continue the ongoing collaboration between the Proponent and the Bioreserve managing partners related to installation and maintenance of gates in key locations to mitigate unauthorized access by off-highway vehicles.

Response: The Companies' existing transmission line easements restrict certain activities within the ROWs. The Companies routinely work with landowners to discourage unwarranted access onto and use of their ROWs by third-party users of off-road vehicles such as ATVs and snowmobiles. The Companies strategically place permanent gates and access roadblocks at key locations within the ROW to restrict access onto the ROWs by unauthorized persons or vehicles.

NEP has communicated with the City of Fall River, the Fall River Police Department, and the Fall River Environmental Police to solicit their input on restricting unauthorized vehicle access. The location of any permanent gates and access roadblocks proposed will be coordinated with the landowners and the Environmental Police.

SEIR should include a summary of rare species occurrences (consistent with public disclosure guidelines) and related protection strategies for the stretches of the ROW that pass through jointly held MA DCR/MassDFG Bioreserve and the Acushnet Cedar Swamp State Reservation.

Response: Section 5.0 of this SEIR includes a discussion of rare species located in the vicinity of the Project including potential protection and mitigation strategies.

The Companies have continued coordinating with the NHESP regarding the species present within the Project area will continue with this consultation in order to minimize or avoid potential adverse effects on rare species during design, construction, and operation of the AFRRP. To supplement prior field efforts as documented in the EENF, species specific surveys were reinitiated in 2021 for the eastern box turtle. Additionally, botanical surveys have been conducted in coordination with NHESP. The distribution of annual species in particular, whose occurrence is variable from year to year will be conducted again prior to construction to reconfirm and/ or re-delineate the current extant of plant populations previously documented within the Project ROW during the prior surveys.

SEIR should include a section on BMPs related to preventing the spread of invasive species, and protocols for post-construction monitoring and treatment.

Response: Section 4.2 discusses wetland invasive species control BMPs.

The most abundant invasive species located in wetlands along the ROWs are common reed (*Phragmites australis*), reed canary grass (*Phalaris arundinacea*), Japanese stiltgrass (*Microstegium vimineum*) and buckthorn (*Frangula alnus*).

The Companies will implement a WISCP to minimize the spread and/or introduction of invasive species in wetlands in the Project Area during construction. The overall objective of the WISCP is to define the procedures to be used during Project construction to preserve the functions and values of wetlands in the Project Area and to minimize the further spread of invasive plants within wetlands that already contain them. The WISCP shall be implemented during construction. Specific measures that shall be taken to handle invasive species are listed below.

- All construction equipment, vehicles, and materials (e.g., construction mats) must be clean and free of excess soil, debris, and vegetation before being mobilized to the Project Area.
- Mats or equivalent will be used in wetlands during tree removal operations to minimize the spread of invasive species within a wetland by the equipment itself.
- To minimize the potential for spreading invasive plant species from wetland-to-wetland, any equipment working in or traversing a wetland will be cleaned prior to relocating to another work site. Cleaning of vehicles and other equipment (including the tracks and tires) will involve removal of visible dirt, debris and vegetation through the use of brooms, shovels, and, if needed, compressed air.
- Construction mats or equivalent will be used at wetland crossings so construction vehicles that frequently travel along on-ROW access roads, such as pickups carrying personnel or material delivery trucks, can avoid direct wetland interaction.

- Construction mats will be cleaned prior to relocation to other work areas or wetlands. Cleaning of matting will involve dropping mats one on top of another to loosen any sediment and debris. The matting will then be swept to remove loose soil and any plant material.
- Construction equipment and excavated soil material will be contained within the approved limits of work areas within the ROW; these limits of work will be defined on the Project plans.
- Soil excavated from wetlands or riparian areas containing a predominance of invasive plants will be stockpiled separately (to the extent there is sufficient work space) and contained within staked bales, silt fence or other approved soil erosion and sedimentation control device to minimize the potential of spreading these soils elsewhere on the ROWs.

14.2 Massachusetts Department of Environmental Protection, Southeast Regional Office: Bureau of Water Resources

The proposed project will require local Orders of Conditions from the Acushnet, Dartmouth, Fall River, and New Bedford Conservation Commissions and a 401 Water Quality Certification from MassDEP. No work can occur within Areas of Jurisdiction until a Final Order and a 401 Water Quality Certificate is issued.

Response: The Companies acknowledge the Project requires local Orders of Conditions from the Acushnet, New Bedford, Dartmouth and Fall River Conservation Commissions and a Section 401 Water Quality Certification approval prior to commencing work in jurisdictional areas. The Companies anticipate filing Notice of Intent filings with the local Conservation Commissions in Q3 of 2023, and submittal of the Section 401 Water Quality Certification application in Q3 of 2023.

Per 310 CMR 10.53(3), in determining whether to exercise discretion to approve the limited project, the following factors should be considered: the magnitude of the alteration and the significance of the Project site to the interests identified in M.G.L. c. 131 § 40, the availability of reasonable alternatives to the proposed activity, the extent to which adverse impacts are minimized, and the extent to which mitigation measures, including replication or restoration, are provided to contribute to the protection of the interests identified in M.G.L. c. 131 § 40.

Response: Please refer to Section 2.0 of this document for a discussion of Alternatives. In the EENF Certificate concurred that the proposed Project is preferable the other alternatives with respect to meeting the identified need with less risk because of engineering feasibility, constructability, and a reduction in the amount of construction required on existing infrastructure.

A 401 Water Quality Certification Application is required per 314 CMR 9.04 and is subject to the Criteria for Evaluation of Applications for the Discharge of Dredged or Fill Material in 314 CMR 9.06 and the requirements of 314 CMR 4.00.

Response: The Companies acknowledge the Project requires a Section 401 Water Quality Certification. Submittal of the Section 401 Water Quality Certification application is anticipated in Q3 of 2023.

An alternative analysis must be submitted that demonstrates measures taken to avoid, minimize, and mitigate for the dredging and placement of fill with the 401 Water Quality Application.

Response: The Companies acknowledge this comment and will be submitting an Alternatives Analysis with the Section 401 Water Quality Certification application.

For discharges to bordering or isolated wetlands, such steps shall include a minimum of 1:1 restoration or replication. If restoration or replication of the lost BVW is not possible, then the Project Proponent may seek a Variance pursuant to 314 CMR 9.08.

Response: Section 4.4.1 of this SEIR includes a discussion of wetland mitigation which is proposed to be provided for this Project. The proposed mitigation will be in compliance with 314 CMP 9.08.

Copies of the Notice of Intent (NOI) must be sent to NHESP for their review for compliance with state-listed rare species protection provisions of the MESA, 321 CMR 10.00.

Response: The Companies acknowledge this comment and will be submitting copies of the NOI to NHESP.

The proposed Project is subject to the Massachusetts Stormwater Standards; therefore, the Proponent must demonstrate compliance with MassDEP Stormwater Management Regulations, with 310 CMR 10.05(6)(b) and (k-q).

Response: The Companies acknowledge that portions of the Project are subject to Massachusetts Stormwater Regulations and shall comply with 310 CMR 10.05(6)(b) and (k-q). Please refer to Section 4.4 - Wetlands and Stormwater Mitigation.

14.3 Massachusetts Department of Environmental Protection, Southeast Regional Office: Waterways Program

After performing a cursory review of its database, the Waterways Program has found a prior Chapter 91 authorization for the area infrastructure, License No. 4374 (issued October 03, 1960).

Some Project elements may qualify as Activities Not Requiring a License pursuant to 310 CMR 9.05(3), and if requested by the Proponent the Department will exercise its discretionary authority to review and potentially approve such, usually through a Minor Modification Request, pursuant to CMR 9.22(3).

Any new transmission line or other Project element not located within an existing ROW that is located in, on, over or under a Chapter 91 jurisdictional area may require a Chapter 91 License pursuant to the Waterways Regulations at 310 CMR 9.0.

The Waterways Program will work with the Proponent to discuss Chapter 91 jurisdictional questions and provide guidance to achieve regulatory authorizations.

Response: As discussed in Section 1.7, the Companies met with the MassDEP Waterways Program on May 19, 2022. The MassDEP reviewed the information presented in the EENF and the supplemental information provided in the SEIR to determine the appropriate authorization(s) required under the Chapter 91 Waterways Program. The Project includes the installation of the new transmission line over a non-tidal portion of the Acushnet River generally parallel and adjacent to Eversource's existing Line 112, which is authorized under existing Chapter 91 License No. 4374.

Pursuant to discussions with the MassDEP the Project can be authorized a modification to the existing license (No. 4374) under the provisions of 310 CMR 9.22(3) *Minor Project Modifications*, (c) *replacement of subsurface utilities, or installation of additional utility lines in an existing right-of-way….provided the work will not restrict or impair access to water-dependent uses.* Based on the discussion, a Notice of Minor Project Modification will be submitted to MassDEP. The Companies will

continue to coordinate with the MassDEP to obtain the necessary approval(s) under the Chapter 91 Waterways Program.

The Project construction activities are scheduled to disturb 28.62 acres of land and therefore, may require a NPDES Stormwater Permit for Construction Activities.

The Proponent can access information regarding the NPDES Stormwater Requirements and an application for the Construction General Permit at the EPA website: https://www.epa.gov/sites/production/files/2017-07/documents/cgp_flow_chart_do_i_need_a_permit2.pdf.

Response: The Companies acknowledge construction activities will require a NPDES Construction General Permit for Stormwater Discharge from Construction Activities and anticipate filing for permit coverage in Q4 2023.

14.4 Massachusetts Department of Environmental Protection, Southeast Regional Office: Bureau of Waste Site Cleanup

Based upon the information provided, the Bureau of Waste Site Cleanup (BWSC) searched its databases for disposal sites and release notifications that have occurred at or might impact the proposed Project area. A disposal site is a location where there has been a release to the environment of oil and/or hazardous material that is regulated under M.G.L. c. 21E, and the Massachusetts Contingency Plan [MCP-310 CMR 40.0000]. Please be advised that there are many listed BWSC disposal sites located in the vicinity of the proposed Project areas. Many of the sites have closed under the MCP, but many other disposal sites are open and require continued response actions under the MCP. A listing and discussion of each MCP site will not be presented here.

Interested parties may view a map showing the location of BWSC disposal sites using the MassGIS data viewer (Oliver) at http://maps.massgis.state.ma.us/map_ol/oliver.php. Under "Available Data Layers' select "Regulated Areas", and then "DEP Tier Classified 21E Sites." The compliance status and report submittals for specific MCP disposal sites may be viewed using the BWSC Waste Sites/Reportable Release Lookup at: https://eeaonline.eea.state.ma.us/portal#!/search/wastesite.

The Project Proponent is advised that if oil and/or hazardous materials are identified during the implementation of this Project, notification pursuant to the Massachusetts Contingency Plan (310 CMR 40.0000) must be made to MassDEP, if necessary. A Licensed Site Professional (LSP) should be retained to determine if notification is required, and if need be, to render appropriate opinions. The LSP may evaluate whether risk reduction measures are necessary if contamination is present. Please contact BWSC for guidance if questions arise regarding assessment and cleanup under the MCP.

Response: The Companies have reviewed the BWSC DEP Tier Classified 21E disposal sites using the Mass Mapper data viewer at https://maps.massgis.digital.mass.gov/MassMapper/MassMapper.html. According to Mass Mapper, the closest 21E disposal site with a release tracking number 4-0001347 is located approximately 2,500 feet to the north of the ROW in proximity to Duchaine Boulevard in the City of New Bedford. This site has been classified as Tier 2 with a Response Action Outcome (RAO) of "TN" or temporary solution and the site must be maintained and periodically reviewed until a permanent solution is in place.

The Companies have also reviewed the Mass Mapper data viewer for sites with Activity Use Limitations and the BWSC Waste Sites & Reportable Releases at:

https://eeaonline.eea.state.ma.us/portal#!/search/wastesite for Active Tier I and Tier II sites, Activity Use Limitation sites closed with ongoing maintenance conditions and Utility Release Abatement Measure sites. None of these sites are located within direct proximity to the proposed Project.

The Companies acknowledge that if oil and/or hazardous materials are identified during the implementation of this Project, notification pursuant to the Massachusetts Contingency Plan (310 CMR 40.0000) may be necessary. The Proponent understands a Licensed Site Professional should be retained to determine if notification is required, and render appropriate opinions as necessary.

14.5 Massachusetts Department of Environmental Protection, Southeast Regional Office: Bureau of Waste and Air

Air Quality: Construction and operation activities shall not cause or contribute to a condition of air pollution due to dust, odor or noise. To determine the appropriate requirements please refer to: 310 CMR 7.09 Dust, Odor, Construction, and Demolition 310 CMR 7. 10 Noise.

Response: The Companies have committed to the following measures to limit vehicle idling times and to reduce air emissions, including the following:

- In Massachusetts, any diesel-powered non-road construction equipment with engine horsepower ratings of 50 and above to be used for 30 or more days over the course of construction will either be USEPA Tier 4-compliant or will be retrofitted with USEPA-verified (or equivalent) emission control devices such as oxidation catalysts or other comparable technologies (to the extent that they are commercially available) installed on the exhaust system side of the diesel combustion engine.
- The Companies require the use of ultra-low sulfur diesel fuel in its diesel-powered construction equipment and limits idling time to five minutes except when engine power is necessary for the delivery of materials or to operate accessories to the vehicle such as power lifts.
- Vehicle idling is to be minimized during construction activities, in compliance with the following:
    - Massachusetts Anti-idling Law, G.L. c. 90 § 16A, c. 111 §§ 142A – 142M, and 310 CMR 7.11.
- Exposed soils on access roads will be wetted and stabilized as necessary to suppress dust generation during construction.

During construction, exposed soils will be wetted and stabilized as necessary to suppress dust generation, and crushed stone aprons will be used at all access road entrances to public roadways. Consequently, fugitive dust emissions are anticipated to be low. Dust suppression methods will be used during drilling operations, as deemed necessary, to minimize impact. Due to the transitory nature of construction activities, air quality in the AFRRP area will not be significantly affected by construction along the ROW. Emissions produced by the operation of construction machinery (nitrogen oxides [NOx], sulfur oxides [SOx], carbon monoxide [CO], volatile organic compounds [VOCs], and particulate matter [PM]) are short-term and not generally considered significant.

There are no anticipated long-term impacts on air quality associated with the operation of the transmission line.

GHG Emissions: If the Project involves the use of Gas Insulated Switchgear, the Proponent must follow the state (310 CMR 7.72) and federal regulations to reduce sulfur hexafluoride emissions from that switchgear.

Response: The Project includes the installation of a 115-kV transmission line. No gas-insulated switchgear will be installed as a result of this Project.

Construction-Related Measures: MassDEP requests that the Proponent use construction equipment with engines manufactured to Tier 4 federal emission standards, which are the most stringent emission standards currently available for off-road engines. If a piece of equipment is not available in the Tier 4 configuration, then the Proponent should use construction equipment that has been retrofitted with appropriate emissions reduction equipment. Emission reduction equipment includes EPA-verified, CARB-verified, or MassDEP-approved diesel oxidation catalysts or Diesel Particulate Filters.

Construction-Related Measures: The Proponent should maintain a list of the engines, their emission tiers, and, if applicable, the best available control technology installed on each piece on file for Department review.

Spills Prevention: A spills contingency plan addressing prevention and management of potential releases of oil and/or hazardous materials from pre- and post-construction activities should be presented to workers at the site and enforced. The plan should include but not be limited to, refueling of machinery, storage of fuels, and potential on-site activity releases.

Massachusetts Idling Regulation: MassDEP reminds the Proponent the unnecessary idling (i.e., in excess of five minutes), with limited exception, is not permitted during the construction and operation phase of the Project (310 CMR 7.11).

Massachusetts Idling Regulation Typical methods of reducing idling include driver training, periodic inspections by site supervisors, and posting signage.

Massachusetts Idling Regulation: To ensure compliance with this regulation once the Project is occupied, MassDEP requests that the Proponent install permanent signs limiting idling to five minutes or less on-site.

Response: Since the specific contractors for each phase of the Project have not yet been chosen, the Companies are unable to provide a list of the engines associated with the construction equipment, their emission tiers, and if applicable, the best available control technology installed on each engine. This data will be provided when the contractors are chosen for the Project.

The Companies acknowledge the requirement to use construction equipment with engines manufactured to Tier 4 federal emission standards and will require Project contractors to adhere to these standards. The Companies have committed that any diesel-powered non-road construction equipment with engine horsepower ratings of 50 and above to be used for 30 or more days over the course of Project construction will either be USEPA Tier 4-compliant or will be retrofitted with USEPA-verified (or equivalent) post-combustion emission control devices such as oxidation catalysts or other comparable technologies (to the extent that they are commercially available).

In addition, vehicle idling is to be minimized during the construction phase of the Project, in compliance with the following:

- Massachusetts Anti-idling Law, G.L. c. 90 § 16A, c. 111 §§ 142A – 142M, and 310 CMR 7.11.

The Companies require the use of ultra-low sulfur diesel fuel in its diesel-powered construction equipment and limits idling time to five minutes except when engine power is necessary for the delivery of materials or to operate accessories to the vehicle such as power lifts. The Companies will require its contractors to follow these procedures.

Although information about specific engines is not yet available, the Companies included a table of potential construction equipment likely to be used during the Project (see Section 7.0). Due to extent, phasing and duration of the Project, the listed equipment will unlikely be collectively operating simultaneously.

Solid Waste: Asbestos: The Proponent is advised that demolition activity must comply with both Solid Waste and Air Quality Control regulations. Please note that MassDEP promulgated revised Asbestos Regulations (310 CMR 7.15) that became effective on June 20, 2014.

Solid Waste: Asbestos: In accordance with the revised Asbestos Regulations at 310 CMR 7.15(4), any owner or operator of a facility or a facility component that contains suspect asbestos containing material (ACM) shall, prior to conducting any demolition or renovation, employ a MA Department of Labor and Work Force Development, Division of Labor Standards (DLS) licensed asbestos inspector to thoroughly inspect the facility of facility component, to identify the presence, location, and quantity of any ACM or suspect ACM and to prepare a written asbestos survey report. As part of the asbestos survey, samples must be taken of all suspect asbestos containing building materials and sent to a DLS certified laboratory for analysis, using USEPA approved analytical methods.

Solid Waste: Asbestos: If ACM is identified in the asbestos survey, the Proponent must hire a DLS licensed asbestos abatement contractor to remove and dispose of any ACM from the facility or facility component in accordance with 310 CMR 7.15, prior to conducting any demolition or renovation activities. The removal and handling of asbestos from or facility or facility components must adhere to the Specific Asbestos Abatement Work Practice Standards required at 310 CMR 7.15(7). The Proponent asbestos contractor will be responsible for submitting an Asbestos Notification Form ANF-001 to MassDEP at least 10 working days prior to beginning any removal of the ACM as specified at 310 CMR 7.15(6).

Solid Waste: Asbestos: The Proponent shall ensure that all asbestos containing waste material from any asbestos abatement activity is properly stored and disposed of at a landfill approved to accept such material in accordance with 310 CMR7.15(7). The Soil Waste Regulations at 310 CMR 19.061(3) lists the requirements for any solid waste facility handling or disposing of asbestos waste. Pursuant to 310 CMR 19.061(3) (b) a, no ACM; including VAT, asphaltic-asbestos felts or shingles; may be disposed at a solid waste combustion facility.

Solid Waste: Asbestos: In accordance with the Air Quality Regulations at 310 CMR 7.09(2), the Proponent must submit a BWP AQ 06 Notification Prior to Construction or Demolition form to MassDEP for any construction or demolition of an industrial, commercial, or institutional or residential building with 20 or more dwelling units at least 10 working days prior to initiation of said construction or demolition Project. The Proponent should propose measures to prevent or alleviate dust, noise, and odor nuisance conditions, which may occur during the demolition.

Solid Waste Comments: All waste materials generated during the Project that are determined to be solid waste (e.g., construction and demolition waste) and/or recyclable material (e.g., wood, metal, asphalt, brick, and concrete shall be disposed, recycled, and/or otherwise handled in accordance with the Solid Waste Regulations: including 310 CMR 19.017: Waste Bans.

Asphalt, brick, and concrete (ABC) rubble, such as the rubble generated by the demolition of buildings must be handled in accordance with MA solid waste regulations. These regulations allow, and MassDEP encourages, the recycling/reuse of ABC rubble. The Proponent should refer to MassDEP's Information Sheet, entitled "Using or Processing Asphalt Pavement, Brick and Concrete Rubble, revised February 27, 2017," that answers commonly asked questions about ABC rubble and identifies the provisions of the solid waste regulations that pertain to recycling/reusing ABC rubble. This policy can be found online at the MassDEP website: https://www.mass.gov/files/documents/2018/03/19/abc-rubble.pdf.
Please contact Cynthia Baran at (508) 946-2887 if you should have any questions pertaining to the Asbestos program comments or Mark Dakers at (508) 946-2847 with any questions pertaining to the Department's comments on solid waste management.

Response: The Project includes the installation of a new 115-kV transmission line. No demolition of material is proposed as a result of this Project. All waste, including construction debris, will be disposed, recycled and/or otherwise handled in accordance with federal and state regulations.

Proposed s.61 Findings: The "Certificate of the Secretary of Energy and Environmental Affairs on the Environmental Notification Form" may indicate that this Project requires further MEPA review and the preparation of an Environmental Impact Report. Pursuant to MEPA Regulations 301 CMR 1l.12(5)(d), the Proponent will prepare Proposed Section 61 Findings to be included in the EIR in a separate chapter updating and summarizing proposed mitigation measures.

Proposed s.61 Findings: In accordance with 301 CMR 1l.07(6)(k), this chapter should also include separate updated draft Section 61 Findings for each State agency that will issue permits for the Project. The draft Section 61 Findings should contain clear commitments to implement mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and contain a schedule for implementation.

Response: A draft of the Proposed Section 61 Findings for each state agency that will issue permits for the Project are included in Section 13.0 of this SEIR.

14.6 Massachusetts Historical Commission

MHC will continue to review the results of archaeological site examinations at six identified archaeological sites with the AFRRP project impact area, and to provide consultation to avoid, minimize, or mitigate adverse effects to significant historic and archaeological resources.

There were no historic or archaeological resources found in the Bell Rock Substation, including the M13 Bypass portion of the Project. No further surveys are recommended for these areas.

Response: The Companies acknowledges that the MHC will continue to review the Project under Section 106 and will consult with the USACE. Please refer to Section 6.0, Historic and Archeological Resources, which incorporates the results of MHC consultation to date and describes the proposed measures to avoid and/or mitigate adverse effects to identified historic and archaeological resources.

14.7 Massachusetts Division of Fisheries and Wildlife – Natural Heritage and Endangered Species Program

The Division's review of Phase 2 pursuant to the MESA remains ongoing. The Division anticipates Phase 2 will likely result in a Take (321 CMR 10.18(2)(b)) of the Eastern box turtle and long-leaved panic-grass

and rigid flax. The Division is currently working with the Proponent to assess temporary and permanent impacts and determine if a Take of state-listed plants can be avoided through Project redesign.

The Proponent is coordinating with the Division to assess alternative strategies for avoiding, minimizing, and mitigating impacts of Phase 2 to state-listed species and their habitats.

The details of the long-term net benefit required under a Conservation and Management Permit (CMP) have not yet been finalized. The Division does anticipate being able to resolve any outstanding concerns related to state-listed species during the MESA review process.

The Division will not render a final decision until the MEPA review process and associated public and agency comment period is completed, and until all required MESA filing materials are submitted to the Division.

As the MESA review for Phase 2 of the Project remains ongoing, no alteration to the soil, surface, or vegetation and no work associated with Phase 2 shall occur until the Division has made a final decision relative to the CMP.

Response: The Companies acknowledge the Project review under MESA remains ongoing and will continue their active and ongoing coordination with the Division. Please refer to Section 5.0, Rare Species, which incorporates results of ongoing species specific-surveys and potential avoidance, minimization and mitigation measures that may be implemented for the Project. The Conservation and Management Plan detailing the final avoidance, minimization, and mitigation measures will be prepared and submitted to the NHESP for approval.

In addition to avoiding and minimizing species habitat impacts to the maximum extent feasible, the Companies will continue to work closely with NHESP to develop mitigation measures for each species associated with the AFRRP ROW. At this time, proposed mitigation includes, but is not limited to, the following:

- Developing a mitigation program in consultation with the NHESP to allow for the issuance of a CMP.
- Training will be required for all construction personnel.
- Installing signage along the ROW alerting work crews to rare species habitats.
- Installing construction fencing along the ROW alerting work crews to rare plant occurrences adjacent to the work area(s).
- Performing extensive sweeps prior to construction and monitoring during construction.
- Monitoring of animals in the vicinity of active construction via radiotelemetry.
- Implementing species-specific protection plans.
- Conducting habitat restoration and enhancement post-construction.

15.0 REFERENCES

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