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October 6, 2017

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME	: New Harbor Electric Energy Company (HEEC) Cable Project
PROJECT MUNICIPALITY	: Boston
PROJECT WATERSHED	: Boston Harbor
EEA NUMBER	: 15746
PROJECT PROPONENT	: Eversource Energy
DATE NOTICED IN MONITOR	: August 23, 2017

Pursuant to the Massachusetts Environmental Policy Act (MEPA) (M.G. L. c. 30, ss. 61-62I) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **does not require** an Environmental Impact Report (EIR).

The purpose of the project is to ensure a reliable and uninterrupted power supply to the Massachusetts Water Resources Authority's (MWRA) Deer Island Treatment Plant (DITP) and to facilitate the commencement of the Boston Harbor Deep Draft Navigation Improvement Project (BHDDNIP) to be undertaken by Army Corps of Engineers (ACOE) and the Massachusetts Port Authority (Massport). The DITP treats wastewater generated by over 2 million residents in 43 communities and its uninterrupted operation is critical for maintaining the ecological health of the Commonwealth's coastal waters. The BHDDNIP is necessary to maintain the important region-wide benefits of the Port of Boston's maritime activity. Deepening the navigation channels will accommodate larger cargo vessels with deeper drafts that are increasingly used in the global transfer of goods.

Project Description

As described in the Environmental Notification Form (ENF) and supporting information submitted during the review period[1], the project includes the installation of an approximately 4.4-mile long 115-kiloVolt (kV) electric power cable on land and across Boston Harbor. The cable will supply power to the Massachusetts Water Resources Authority's (MWRA) Deer Island Treatment Plant (DITP) from the Eversource K Street substation in South Boston. A 7,814-ft (1.48 miles) long section of cable between the K Street substation and the eastern end of the Massachusetts Port Authority's (MassPort) Conley Container Terminal will be installed in a new trench with conduits and manholes. Approximately 2.76 miles of the cable will be located in the water. A 2,165-ft long section of cable will be installed under the Federal Navigation Channel at a depth of -75 feet Mean Lower Low Water (MLLW) using Horizontal Directional Drilling (HDD). A hydroplow will be used to bury a 2.19-mile long section of cable in a 4-ft wide, 6- to 10-ft deep trench in Boston Harbor between the east side of the Federal Navigation Channel and Deer Island. The 792-ft (0.15 miles) segment of cable between the submarine section and the DITP will be installed in an excavated trench.

Once the new cable is in operation, the existing cable will be drained of dialectric fluid and the cable core cleaned. A 1.5-mile segment of the cable in Reserved Channel and within the Federal Navigation Channel will be removed. The cable will be pulled out of the sediment using grappling hooks or a clamshell bucket; additional methods such as water jetting or mass flow excavation tools may be used if necessary to remove overburden covering the cable. The remaining 2.3-mile long section of the cable will be drained of fluid, capped and abandoned in place.

The project will replace an existing distribution line that serves as the primary electric supply facility for the DITP. When it was installed in 1990, an approximately 1,980-ft long section of cable in Reserved Channel was placed over an area of bedrock and was not buried to the intended depth. The shallow section of the cable will conflict with the planned dredging of Reserved Channel to be conducted as part of the BHDDNIP. The BHDDNIP will deepen Reserved Channel and adjacent sections of the Federal Navigation Channel to -47 ft MLLW. The Proponent previously proposed to armor the shallow section of cable and leave the entire distribution line in place.[2] In consultation with the ACOE, the Proponent determined that a cable protection system would not be a long term solution because a future navigation improvement project would likely require the removal of the cable. The project includes a cable route that avoids key areas of navigation, including the navigation channel in Reserved Channel, marine terminal and berths in Reserved Channel associated with the Conley Terminal, a turning area east of Reserved Channel and the President Roads anchorage area. It will be installed sufficiently below the main Federal Navigation Channel to accommodate the BHDDNP and future deepening of the channel and expansion of the anchorage area.

Project Site

The existing cable route is approximately 4.09 miles long and extends from the K Street substation to Deer Island. A 5,300-ft long section of the transmission line is within Reserved Channel

[1] Memorandum from Les Smith, Epsilon Associates to Alex Strysky, MEPA Office dated 9/22/17; Email dated 9/25/17 from Les Smith with responses to questions raised at 9/20/17 meeting with regulatory agencies.
[2] The previous proposals were reviewed by MEPA (EEA# 15522) in 2016 (Environmental Notification Form) and 2017 (Notice of Project Change).

and the remainder crosses Boston Harbor, including an approximately 1,500-ft long section below the Federal Navigation Channel. The cable is buried at -53 to -60 ft MLLW in Reserved Channel and below -60 ft MLLW for the rest of its route. Approximately 3,700 feet of the transmission line pass under the Governors Flats eelgrass bed.

The proposed cable will be installed south of the existing transmission line. It will cross Massport's Conley Terminal and generally follow the southern boundary of the eelgrass bed and veer north away from the President Roads Anchorage. According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (FIRM) 25025C0084J and 25025C0083J (effective March 16, 2016), the Conley Terminal portion of the cable route is located within the 100-year floodplain (Zone AE) with a Base Flood Elevation (BFE) of 12 feet North American Vertical Datum of 1988 (NAVD 88).

According to the Division of Marine Fisheries (DMF), Boston Harbor is habitat for the spawning and juvenile development of winter flounder (*Pseudopleuronectes americanus*). It provides passage for anadromous fish runs in the Charles River and Mystic River, including alewife (*Alosa pseudoharengus*), blueback (*Alosa aestivalis*), American shad (*Alosa sapidissima*), American eel (*Anguilla rostrata*), Atlantic tomcod (*Microgadus tomcod*), and white perch (*Morone americana*). American lobster (*Homarus americanus*) are located within the project area and are fished year-round from the waters off Deer Island.

Environmental Impacts and Mitigation

The removal of the cable and installation of the replacement cable will impact approximately 173,071 sf (4 acres) of Land Under the Ocean (LUO), including 7,200 sf (0.17 acres) of LUO in a Designated Port Area (DPA) and a 1,460-sf area containing eelgrass; 2,135 sf (0.05 acres) of Coastal Beach; 350 sf (0.008 acres) of Coastal Bank; and 31,256 sf (0.72 acres) of Land Subject to Coastal Storm Flowage. The project will dredge between 29,000 to 48,000 cy of sediment based on the proposed 6- to 10-ft burial depth of the cable.

The project will include pre-and post-construction monitoring of the eelgrass bed, replanting of eelgrass within the disturbed area, and an In-Lieu Fee payment through the ACOE's permitting process. Portions of the cable will be installed using HDD to minimize impacts to the Federal Navigation Channel and intertidal areas.

Permitting and Jurisdiction

The project is subject to MEPA review and requires an ENF pursuant to 301 CMR 11.03(3)(b)(1)(f) and 301 CMR 11.03(3)(b)(3) because it will require State Agency Actions and it will alter one-half or more acres of LUO and Coastal Beach (approximately 4 acres) and dredge 10,000 or more cy of material (up to 48,000 cy). The project requires a Section 401 Water Quality Certificate (WQC) and a Chapter 91 (c. 91) License from the Massachusetts Department of Environmental Protection (MassDEP). It also requires a Federal Consistency determination by the Massachusetts Office of Coastal Zone Management (CZM).

The project requires an Order of Conditions from the Boston Conservation Commission (and, if the Order is appealed, a Superseding Order of Conditions (SOC) from MassDEP). The project requires an Individual Permit from the U.S. Army Corps of Engineers (ACOE) under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act.

Because the Proponent is not seeking State Financial Assistance, MEPA jurisdiction extends to those aspects of the project that are within the subject matter of required or potentially required State Permits and that may cause Damage to the Environment, as defined in the MEPA regulations. Because the project requires a c.91 License, MEPA jurisdiction is broad in scope and extends to all aspects of the project that may cause Damage to the Environment, as defined in the MEPA regulations.

Review of the ENF

The ENF provided a detailed project description, existing and proposed conditions plans, and an alternatives analysis. It identified environmental impacts and measures to avoid, minimize and mitigate impacts, and reviewed the project's compliance with regulatory standards. During the review period, the Proponent provided additional information and analysis to support the conclusions of the Alternatives Analysis presented in the ENF and to demonstrate that it is not feasible to avoid impacts to eelgrass. The Proponent also incorporated replanting of eelgrass within the area disturbed by cable burial into its mitigation plan.

Alternatives Analysis

The ENF provided a detailed analysis of alternatives. It described environmental, physical and operational constraints that limit the range of potential alternatives and affect the feasibility of each option. One such constraint is the increasing risk of damaging the cable when it is pulled through a conduit that exceeds 2,500 ft in length. While HDD may be used to install conduits of greater length, the cable could be damaged by pulling tension at greater lengths, effectively restricting the maximum length of HDD for this project to 2,500 ft. During the review period, the Proponent also explained that using HDD to install the cable below the eelgrass would not be possible. The cable used for this project will be manufactured in a continuous manner with no splices; therefore, the entire cable would have to be off-loaded from a barge and pulled through the conduit or it would have to be spliced. According to the Proponent, splicing the cable would affect its long-term reliability and is not feasible for this project. As noted in more detail below, the Proponent also evaluated alternatives based on whether they would avoid impacts to navigation, including the BHDDNIP and future expansion of the navigational channel and anchorage.

The ENF provided an initial screening of options for meeting the project goals, including:

- A new cable from the K Street Substation to the DITP that would avoid Reserved Channel by laying the cable on land to the eastern end of the Conley Terminal, using HDD to install the cable under the Federal Navigation Channel, and burying the cable in sediment for the remainder of the route to Deer Island. As described below, three routes across Boston Harbor were considered, including the Preferred Alternative route;

- Armoring the section of cable in Reserved Channel that was not buried to a sufficient depth, as proposed previously (EEA# 15522). This option was rejected because it would not be a long-term solution;
- A new cable adjacent to the existing cable. This alternative was rejected because the existing cable would have to be powered down during construction, requiring the DITP to operate using backup generators, and because blasting may be necessary to sufficiently bury the cable in Reserved Channel;
- Splicing the existing cable so that it could be lengthened and buried in place at a greater depth. Like the alternative described above, this option would require the DITP to use backup power during the construction period and may require blasting to adequately bury the cable. It was also rejected because it may not be possible to find new cable that is compatible with the 30-year old existing cable;
- A new 5.5-mile long cable from the East Eagle substation proposed by Eversource to the DITP along an upland route through East Boston and Winthrop. The substation is currently under review by the Department of Public Utilities and will not be constructed before 2019. As planned, it may not have sufficient capacity to power the DITP; therefore an additional transmission line to the substation may be required. A variation of this alternative that would avoid some of the upland construction impacts would include a 3-mile submarine section. Both of the alternatives were rejected based on impacts to neighborhoods, the unavailability of the substation until 2019 and because it would require additional transmission;
- A new underground transmission line along an upland route from a National Grid substation in Everett to Deer Island. This alternative was rejected because the substation may not have sufficient capacity to supply the DITP and because it would impact residential areas of East Boston and Winthrop;
- A new distribution line from the Seafood Way substation in South Boston to Deer Island. This alternative would require a new connection to the substation from the K Street substation to ensure adequate capacity to power the DITP. The submarine route would cross the Federal Navigation Channel north of Reserved Channel, go around Logan Airport and pass north of the eelgrass bed. This alternative would avoid impacts to eelgrass. It was rejected because it would require additional transmission to the Seafood Way substation, which could be difficult to site and construct within the necessary timeframe; and
- A new cable from the K Street substation to Deer Island including a land-based route along the north side of Reserved Channel, an approximately 4,000-ft long section of cable installed under the Federal Navigation Channel and turning basin using HDD, and burial of the cable across the harbor north of the eelgrass bed. This alternative would avoid impacts to eelgrass. While it is technically feasible to drill and install a conduit required for this alternative, the cable would likely be damaged if pulled for this distance.

The ENF provided a more detailed review of three potential routes between Conley Terminal and Deer Island, referred to as the Northern, Middle and Southern Routes. The Northern Route would use HDD to install the cable under the Federal Navigation Channel to a point north of the eelgrass beds, and use a hydroplow to bury the cable along its route to the DITP. This alternative would avoid impacts to eelgrass. It would cross under the existing transmission line while it is carrying electricity. According to the Proponent, the existing cable could be directly or indirectly damaged by installation and potentially interrupt DITP power supply.

The Middle and Southern Routes would include an essentially identical section of HDD under the Federal Navigation Channel, but would diverge from there. The Middle Route would be parallel to and south of the existing transmission line. The cables must be separated by at least 300 to avoid damage to the existing cable during construction. The Middle Route would pass through or adjacent to the eelgrass bed for a distance of 3,800 ft. The Southern Route minimizes impacts by largely following a route outside of the southern edge of the eelgrass bed, with the exception of an approximately 635-ft long section on the east side of Governors Flats. Impacts to eelgrass along this section of the Southern Route are unavoidable because the cable must be installed at least 900 feet away from the President Roads anchorage area and therefore cannot be located south of the eelgrass bed. The 900-ft setback distance was established based on the requirements of the ACOE and the Proponent. The ACOE anticipates that the navigational facilities in Boston Harbor will require dredging again within the next 10 to 15 years to accommodate larger cargo vessels. In addition to deepening the channel to provide a deeper draft, the anchorage area would need to be expanded by 500 feet in all directions to accommodate longer vessels. Furthermore, the ACOE recommends that the cable be buried at least 200 feet away from the planned edge of the anchorage to account for the sideslope and dredging activities that would occur beyond the boundary of the planned anchorage area. According to the Proponent, the cable must be buried at least 200 feet from the ACOE's limit of work to minimize the risk of damage to the cable.

The Southern Route was selected as the Preferred Alternative. It has been designed to provide reliable power to the DITP, avoid interference with the BHDDNIP and future navigation improvement projects, and minimize impacts to benthic habitat, including eelgrass.

Wetlands, Water Quality and Marine Habitat

The project will impact approximately 173,071 sf of LUO, including 1,460 sf of eelgrass. The avoidance, minimization and mitigation of impacts to eelgrass were the focus of consultation meetings held between State Agencies and the Proponent before and during the review period. Comments from MassDEP, DMF and CZM acknowledged that the limits of available cable installation techniques and constraints imposed by navigational features create challenges to avoiding eelgrass impacts. The Proponent prepared an eelgrass mitigation plan with the following elements:

- pre- and post-construction surveys of the eelgrass bed to determine the area of eelgrass actually impacted by installation of the cable;
- Replanting eelgrass in the disturbed area by harvesting approximately 730 sf of eelgrass from areas adjacent to the cable and planting it in a checkerboard pattern over the plowed trench;
- Surveying the area of replanted eelgrass at the end of the first growing season to evaluate the success of the mitigation; and,
- Making an In-lieu Fee payment if eelgrass density within the replanted areas declines.

The Proponent should continue to consult with State Agencies during the permitting process to refine the mitigation plan. According to DMF, MassDEP and CZM, the overall mitigation plan should be based on achieving a 3:1 mitigation to impact ratio that would include pre-and post-construction monitoring, replanting eelgrass at a 1:1 ratio, and an In-Lieu fee payment to account for the remaining mitigation requirement, including temporal loss of habitat.

State Agency comments identified construction period mitigation measures that may be imposed on the project through permitting requirements. These include refining the route of the hydroplow based on the pre-construction eelgrass survey; using buoys or other means to identify the edge of the eelgrass bed to minimize encroachment of construction equipment into eelgrass areas; and developing an HDD contingency plan to identify and remediate any release of drilling fluids into the environment. According to DMF, a time-of-year (TOY) restriction prohibiting work from February 15 to June 30 may not be necessary if the turbidity-producing activities such as hydroplowing are limited to several hours a day for a few days. MassDEP should consult with DMF to determine whether a TOY is appropriate and/or whether other turbidity mitigation measures may be necessary. As requested by the Board of Underwater Archaeological Resources (BUAR), the Proponent should undertake an archaeological reconnaissance survey of the cable route prior to installation to minimize impacts to submerged resources.

Conclusion

The ENF has sufficiently defined the nature and general elements of the project for the purposes of MEPA review and demonstrated that the project's environmental impacts will be avoided, minimized and/or mitigated to the extent practicable. Based on the information presented in the ENF and after consultation with State Agencies, I find that no further MEPA review is required at this time. Remaining issues can be addressed through the local, state and federal permitting and review processes.

October 6, 2017
Date

Matthew A. Beaton

Comments received:

Board of Underwater Archaeological Resources (BUAR)
Massachusetts Port Authority (Massport)
Massachusetts Division of Marine Fisheries (DMF)
Massachusetts Water Resources Authority (MWRA)

MAB/AJS/ajs

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September 26, 2017

Secretary Matthew A. Beaton
Executive Office of Energy & Environmental Affairs
Attn: MEPA Office
Alex Strysky, EEA #15522
100 Cambridge Street, Suite 900
Boston, MA 02114

Subject: New HEEC Cable Project (EEA #15522)

Dear Secretary Beaton:

On behalf of the Massachusetts Port Authority (Massport), thank you for the opportunity to submit comments on the Environmental Notification Form (ENF) filing for the New HEEC Cable Project that will replace the existing cable between South Boston and Deer Island including the section in the Reserved Channel, Boston, MA.

As described below and in previous filings for this project, Massport owns and operates several major maritime industrial properties along the Reserved Channel, including the Conley Container Terminal and the Flynn Cruiseport Boston. Over the past year, Massport has worked closely with Eversource and other stakeholders to evaluate the adverse impacts of the current position of the existing cable that serves Deer Island and is supportive of this proposal to install a new submarine cable and remove the existing section of cable within the Reserved Channel.

Massport is committed to ensuring that the Conley Container Terminal and Flynn Cruiseport Boston continue to serve their important transportation roles and also generate economic growth for the Commonwealth and the region. In support of that mission, Massport is advancing planning and design for the deepening of Berth 11 at Conley terminal and reconstructing Berth 10, both to provide a minimum depth of -50 feet in accordance with the Conley Terminal Revitalization Project (EEA #15571) and the earlier Boston Harbor Deep Draft Navigation Improvement Project (EEA # 12958). It is within this context that we provide the following comments.

1. Massport strongly supports Eversource Energy's current plan of fully replacing the existing cable and removing segments of the existing cable proximate to the Conley Container Terminal. This approach simplifies construction of our new Berth 10 and the deepening of Berth 11. Relocation and deepening of the new cable also protects the federal channel and President Roads anchorage for future deepening by the US Army Corps of Engineers.
2. Massport continues to work closely with Eversource to refine the alignment of landside segment of the new cable through Conley Terminal in South Boston. This landside route will minimize the work within the Harbor, reduce disruption of local streets and help expedite completion of project construction.

3. As design proceeds, Massport will need to continue the ongoing close coordination with Eversource to finalize the cable conduit route through Conley Container Terminal and to ensure that the new cable is fully installed and operating and that the old cable is fully removed from the Reserved Channel by 2019 so that construction of new Berth 10 and the deepening of Berth 11 can proceed as planned.

Massport believes that together with the ongoing agency coordination, the ENF has sufficiently described the new project and how the project's environmental impacts will be avoided, minimized and/or mitigated such that no further MEPA review is required and that any remaining issues regarding eelgrass and other temporary construction impacts can be appropriately addressed in the ensuing permitting process.

For all of the above reasons, we request that the Certificate reinforce that Eversource Energy will continue to work closely with Massport as the project survey, design and planning advances, to ensure that the proposed cable project achieves its goals, is permitted quickly and does not adversely affect critical navigation and shipping activities in the Reserved Channel.

Thank you for your consideration of our comments. Please feel free to contact me at (617) 568-3524 or at sdalzell@massport.com if you wish to discuss any of our comments.

Sincerely,

Massachusetts Port Authority

Stewart Dalzell, Deputy Director
Environmental Planning and Permitting

Cc: L. Wieland, C. McDonald, R. Goto, N. Hoang/Massport
J. Moreira, K. Trudell/Eversource Energy
L. Smith/Epsilon
M. Tessier/ACOE

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS
OFFICE OF COASTAL ZONE MANAGEMENT
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MEMORANDUM

TO: Matthew A. Beaton, Secretary, EEA
ATTN: Alex Strysky, MEPA Unit
FROM: Bruce Carlisle, Director, CZM
DATE: September 27, 2017
RE: EEA-15746, New HEEC Cable Project, Boston

The Massachusetts Office of Coastal Zone Management (CZM) has completed its review of the above-referenced Environmental Notification Form (ENF), noticed in the *Environmental Monitor* dated August 23, 2017, and offers the following comments.

Project Description

The project proposes to install a new 115 kV electric power cable extending 4.2 miles from the Eversource K Street power station in South Boston across Boston Harbor to Deer Island. The portion of the cable extending under the navigation channel will be installed using Horizontal Directional Drilling (HDD). The remainder of the cable will be installed using hydroplow. Portions of the existing cable within the Reserved Channel will be removed. Land Under the Ocean, coastal bank, coastal beach and eelgrass will be impacted by the proposed project. The proponent proposes eelgrass restoration as part of the mitigation for the anticipated impacts to eelgrass.

Project Comments

Twelve cable routes were evaluated as part of the alternatives analysis for the proposed project. The proponents met three times with state and federal regulatory agencies to present data relating to the alternatives and discuss opportunities to avoid and minimize impacts to sensitive eelgrass habitat. The preferred cable route (the southern alternative) will cross the southeastern corner of the Governor's Island Flats eelgrass bed. Opportunities to reroute the preferred alternative to the south of the eelgrass bed were discarded due to the close proximity to the Federal Anchorage area. Although other alternatives may have avoided eelgrass impacts, they were discarded due to the potential risk of impacting the existing power cable (northern route), lack of sufficient power source, proximity to Logan Airport, and greater impacts to eelgrass (middle route). The proponent estimates that the preferred route will impact 1,460 square feet (sf) of eelgrass.

Eelgrass is a critical and scarce habitat in Boston Harbor that the Commonwealth has invested significant resources in protecting and expanding. To this end, efforts to avoid and minimize impacts should be employed. As discussed above, some impacts to eelgrass are anticipated. CZM recommends that a pre-construction survey be used to accurately identify the current location of the eelgrass bed so that adaptive management can be used to carefully site the cable to minimize direct loss of, or siltation on, the resource. CZM suggests that the proponent identify the edge of the eelgrass bed with buoys to assist the proponent's contractors in minimizing eelgrass loss. CZM also recommends that the proponent conduct a post construction survey to accurately measure the extent and density of eelgrass habitat impacted by the cable laying activity and its associated vessels. Upon completion of the cable installation, restoration of impacted eelgrass habitat should be closely

guided by the Massachusetts Division of Marine Fisheries and the U.S. Environmental Protection Agency. In addition to eelgrass restoration, the proponent should mitigate for temporal and permanent loss of eelgrass habitat at a ratio greater than 1:1 through other means such as contributing to the In-Lieu-Fee Program.

Federal Consistency

The proposed project may be subject to CZM federal consistency review. For further information on this process, please contact, Robert Boeri, Project Review Coordinator, at 617-626-1050 or visit the CZM web site at www.state.ma.us/czm/fcr.htm.

BKC/lbe

cc: Amelia Croteau, Boston Conservation Commission
Stewart Dalzell, Massport
Lealdon Langley, MassDEP
Tay Evans, MA Division of Marine Fisheries
Phil Colarusso, US EPA
Matt Tessier, Army Corps of Engineers

Boston Water and Sewer Commission

980 Harrison Avenue
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September 11, 2017

Mr. Matthew Beaton, Secretary
Executive Office of Energy & Environmental Affairs
Attn: MEPA Office
Mr. Alex Strysky
100 Cambridge Street, Suite 900
Boston, MA. 02114

Re: New HEEC Cable Project
Environmental Notification Form

Dear Secretary Beaton:

The Boston Water and Sewer Commission (Commission) has reviewed the Environmental Notification Form (ENF) for the proposed New Harbor Electric Company (HEEC) cable project located in South Boston. This letter provides the Commission's comments on the ENF.

The proposed project involves the installation of a new electric power cable between Eversource's K Street substation in South Boston and the Massachusetts Water Resources Authority's (MWRA) wastewater treatment plant at Deer Island. The new cable will replace the existing 115 KV cable that extends to Deer Island by way of the Reserve Channel.

The ENF describes the evaluation of several alternatives to the preferred option chosen for the new cable. The prefered alternative proposes to install a buried cable from the K Street substation along K Street to East First Street and then across the Conley Terminal to its eastern shore. From the eastern shore of the Conley Terminal to Deer Island, the cable will be installed using Horizontal Direction Drilling.

The follow are the Commission's general comments:

1. The Commission maintains water, sewer and storm drains facilities along the route of the proposed cable. If during construction, the contractor encounters a conflict with existing Commission facilities, Eversource must modify the design to avoid conflicts with Commission facilities.

2. The Commission requires that Eversource submit a site plan to the Commission's Engineering Customer Service Department for review and comment. The site plan must be drawn at a scale of one inch equals twenty feet. Existing and proposed underground structures and conduits greater than six-inches in diameter must be drawn to scale. All proposed structures within 100 feet of Commission facilities must be shown in both plan and profile view.

3. The Commission requires that Eversource take all necessary precautions to prevent damage to existing water, sewer, storm drains and service lines. Should damage to Commission facilities occur, the Contractor shall immediately call the Commission's Operation Department at 617-989-7000.

4. The Contactor shall install and maintain silt sacks or other devices to prevent construction materials from entering catch basins and manholes until the final paving is complete.

5. The discharge of dewatering drainage to a sanitary sewer is prohibited by the Commission. The discharge of any dewatering drainage to the storm drainage system requires a Drainage Discharge Permit from the Commission. If the dewatering drainage is contaminated with petroleum products, the proponent will be required to obtain a Remediation General Permit from the Environmental Protection Agency for the discharge.

6. The Commission is not a member of dig safe, for mark-out of Commission water, sewer or storm drain facilities, the contractor must contact the Commission's Operations Department at 617-989-7000 at least 72 hours prior to the start of work.

7. The Contractor must have a spill management plan for any hazardous materials, hydraulic fluids and petroleum products which may be used on site. Specifically the Contractor should be prepared to effectively deal with spillage of fuels, hydraulic fluids, oils and coolant that may leak from equipment. A quick absorbent material, such as "speedy dry" shall be stored in a dry and accessible area at the work site. All hazardous material spills, shall be in handled in accordance with state, local and federal requirements.

8. Eversource is required to obtain a Hydrant Permit for use of any hydrant during the construction phase of this project. The water used from the hydrant must be metered. Eversource should contact the Commission's Meter Department for information on and to obtain a Hydrant Permit.

Thank you for the opportunity to comment on this project.

Yours truly,

John P. Sullivan, P.E.
Chief Engineer

JPS/rja

cc: L. Smith, Epsilon Associates, Inc.
M. Connolly, MWRA via e-mail
M. Zlody, BED via e-mail
P. Larocque, BWSC via e-mail

The COMMONWEALTH OF MASSACHUSETTS
BOARD OF UNDERWATER ARCHAEOLOGICAL RESOURCES
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September 5, 2017

Secretary Matthew A. Beaton
Executive Office of Energy and Environmental Affairs
Attention: Alex Strysky, MEPA Unit
100 Cambridge St., Suite 900
Boston, MA 02114

RE: New HEEC Cable Project, Reserved Channel, Boston, MA (EEA#15746)

Dear Secretary Beaton,

The staff of the Massachusetts Board of Underwater Archaeological Resources has reviewed the above referenced project's ENF (EEA#15746) and supporting materials prepared by Epsilon Associates, Inc., on behalf of Eversource Energy. We offer the following comments.

The Board has conducted a preliminary review of its files and secondary literature sources to identify known and potential submerged cultural resources in the proposed project area. While no record of any underwater archaeological resources was found, the Board considers the area to be generally archaeologically sensitivity. The proponent has agreed to undertake an archaeological reconnaissance survey of the new cable route to determine any impact on submerged cultural resources.

Additionally, should heretofore-unknown submerged cultural resources be encountered during the course of the project, the Board expects that the project's sponsor will take steps to limit adverse affects and notify the Board and the Massachusetts Historical Commission, as well as other appropriate agencies, immediately in accordance with the Board's *Policy Guidance for the Discovery of Unanticipated Archaeological Resources*.

The Board appreciates the opportunity to provide these comments. Should you have any questions regarding this letter, please do not hesitate to contact me at the address above, by email at victor.mastone@state.ma.us, or by telephone at (617) 626-1141.

Sincerely,

Victor T. Mastone
Director

/vtm
Cc: Bob Boeri and Lisa Engler, MCZM (via email attachment)

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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Governor

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Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

Mr. Alex Strysky
MEPA Unit, 9th Floor
100 Cambridge Street
Boston, MA 021114
ENF for New HEEC Cable Project, Boston, MA

September 27, 2017

Dear Mr. Strysky:

The Massachusetts Department of Environmental Protection Wetlands Program and Waterways Program have reviewed the proposal to relocate the electrical cable that is the sole source of electrical power to the Deer Island Wastewater Treatment Plant. The relocation is necessary to accommodate the Army Corps of Engineer's improvement dredging of Boston Harbor. The comments that follow reflect the agency's review and analysis of the above-referenced ENF.

Eversource owns and operates a 115KV distribution line that extends from the South Boston K Street Station to the Massachusetts Water Resource Authority (MWRA)'s wastewater treatment facility on Deer Island and is the primary electric supply line to Deer Island. The 115KV line was installed in 1990. Much of the distribution line in the Reserve Channel is installed in a depth of -60 feet Mean Low Low Water (MLLW). However, for a segment of approximately 1,980 feet, proximity to bedrock and other actors led to the cable's installation at a shallower depth. Of the 1980 foot section, the cable is between elevation -53 and -60 ft MLLW. This section of cable is potentially vulnerable to the Boston Harbor deep draft project and Massport's Conley Terminal Project. It is therefore essential to relocate the 115 KV distribution line in order for the Boston Harbor Deep Draft Project and the Conley Terminal to proceed.

The applicant proposes to use an HDD system for cable installation from Conley Terminal where the new cable route transitions from the upland to the marine environment. HDD will allow the cable to be installed under the shoreline bulkhead, the Federal Navigational Channel and an estimated 900 foot buffer from the Federal Anchorage Area to accommodate future

Federal Anchorage Area expansion, side slopes and a margin of safety for cable stability and integrity. The portion of the cable installed under the Federal Navigational Channel must achieve a required depth of -75 feet MLLW due to the potential future deepening and expansion of the Federal Navigation Channel. The applicant examined multiple cable routes and the potential to HDD the cable over the entire cable route to avoid impacts to eelgrass. Two alternatives were examined, one in which the applicant would HDD the entire length from the landside to the far side of the eelgrass resources. This alternative was dismissed because it would require HDD for a length which would create an unacceptable degree of stress on the cable during the cable pull-back procedure. The second alternative was one in which a second entry hole would be bored on the near side of the eelgrass resource and a second exit hole would be bored on the far side of the eelgrass resource. The boring of a second entry hole in an all-water environment proves challenging. Therefore, the applicant proposes to install the remaining portion of the cable to Deer Island installed using hydroplow, laying the cable along a surveyed track in one continuous operation with the burial depth of up to 10 feet to accommodate active boat use, fishing and anchoring.

At the Department's request, the proponent conducted an alternatives analysis on the marine routes from Conley Terminal to Deer Island. Surveys of these routes were conducted to map the presence of eelgrass. The sampling showed that eelgrass resources have expanded since the last eelgrass mapping effort provided in the MassGIS layer. The applicant's preferred alternative is the Southern Alternative because it has the least impact to the eelgrass. The Northern Alternative would have no impact on the eelgrass but was eliminated because of the risk of HDD crossing beneath the existing active cable since it is the only source of power to the MWRA facilities in Deer Island.

The proponent also proposed to remove approximately 1.5 miles in length of cable starting at the Summer Street Bridge in the Reserved Channel to a point 500 feet east of the Federal Channel. The remaining submarine section of the cable, approximately 2.2 miles in length, is located outside of the area of future dredging identified by the USACE, and not located within the Presidents Road Anchorage Area. This section of cable is proposed to be drained of cooling oil, capped, and abandoned in place.

Pursuant to c. 91 and 3109 CMR 9.27(1), existing licensed structures which are abandoned are required to be removed in their entirety, unless the Department determines that the continued existence of such structures in place will promote the public interests served by M.G.L. c.91. The applicant states that in the area where the cable is proposed to be left in place, approximately 900 linear feet of the cable route is presently covered by eel grass beds. To remove the entire, 2.2-mile length of cable, there would be direct impacts on approximately 4,150 square feet of eelgrass. To remove the entire 11,700-foot length of this cable by dredging, there would be an additional 58,500 square feet of impacts to Land Under Ocean (based on a 5'-0" wide trench

over 11,700 lineal feet). Accordingly, the Department's waterways program concurs with the applicant's proposed methodology to leave this section of cable in place, after the safe removal of the dielectric fluid and capping, as it will minimize environmental impacts and have no demonstrated negative impacts to future navigational interests.

The ENF included a table summarizing the federal, state and local permits required for this project. The applicant proposed that after the issuance of the Secretary's Certification on the ENF, the sequence of permitting would be submitting an application to the Army Corps of Engineers first, then a combined application for Chapter 91 License and 401 WQC or a separate application to the Department and then a Notice of Intent to the Boston Conservation Commission. The applicant is reminded that a file number under the Wetlands Protection Act is required to obtain a Chapter 91 file number and commence the Ch 91 public comment process. The Department recommends that the applicant submit the Notice of Intent earlier than presently proposed.

Department Comments:

- The Department acknowledges that the Proponent had evaluated 10 preliminary alternatives and a detailed evaluation of Alternatives 1, 2 and 3 (i.e. North, Middle and South)
- The applicant asserts that the most important mitigation measure for this project is the careful selection of the preferred cable route. (Section 3.7, page 3-11) However, route alternatives are avoidance and minimization measures which are separate and distinct requirements from mitigation under the WPA, WQC and Ch 91. Similarly, hydroplowing is described as a mitigation measure, but is a minimization measure.
- At the agencies' request the Applicant provided additional information at a meeting held on September 20, 2017 on the feasibility of avoiding the eelgrass impact of the preferred alternative such as decreasing the setback distance between the cable and the anchorage area and rerouting the cable to an area between the mapped eelgrass and the future anchorage area with armoring protection and or laying the cable deeper, (i.e. greater than 10 feet). In addition, the Corps of Engineers discussed relevant information related to the dimensions of the Federal Anchorage Area including side slopes, sediment slope stability, and the expectations for future navigational improvements. The applicant subsequently provided a memorandum titled **New HEEC Cable Project Responses to Questions Raised at the 9/20/17 Meeting with Regulatory Agencies** which was submitted on September 25, 2017. This memorandum also addresses questions on avoidance that the agencies requested at two prior meetings.
- The Department acknowledges the rational for eliminating the North Alternative to minimize the risk deemed unacceptable for future cable integrity.

- The Department recommends that the Notice of Intent be submitted prior to the submittal of the Chapter 91 license application. Otherwise, the Department will deem the application to be incomplete in accordance with 310 CMR 9.11(3).
- MassDEP requests that the applicant prepare an HDD Contingency Plan that would account for the quantity of drilling muds during the HDD process to avoid "frac out" that could adversely affect marine resources. In addition, the Contingency Plan should include procedures for cessation of HDD if frac out is detected, identification of the location of the frac-out and recovery of material and mitigation measures if needed.
- DMF and EPA continue to assist the applicant with the refinement of the eelgrass mitigation and monitoring plan. MassDEP requests that the Secretary require the applicant to finalize the mitigation and monitoring plan in accordance with the resource agencies recommendations. The applicant submitted a memo, dated September 22, 2017, which states that if the eelgrass replanting effort is unsuccessful after one year that in-lieu fee payment pursuant to the Corps' ILF Program would be made and that "in-lieu fees may be adjusted based on observations from the post-planting survey." MassDEP requests that any ILF payment take into account temporal loss of eelgrass resources.
- MassDEP requests that the applicant's permit application include a plan for ensuring vessel activity does not mistakenly enter the eelgrass resource and cause inadvertent damage during the cable-laying procedures. Such a plan may include the use of buoys as markers, contractor notification and over-sight of contractor activities by the applicant.

MassDEP appreciates the opportunity to comment.

Commonwealth of Massachusetts

Division of Marine Fisheries

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Deputy Commissioner

September 29, 2017

Secretary Matthew A. Beaton
Executive Office of Energy and Environmental Affairs (EEA)
Attn: MEPA Office
Alex Strysky, EEA No. 15746
100 Cambridge Street, Suite 900
Boston MA 02114

Re: New HEEC Cable Project

Dear Secretary Beaton:

Division of Marine Fisheries (*MarineFisheries*) staff have reviewed the above referenced Environmental Notification Form submitted by the New Harbor Electric Energy Corporation (HEEC) for the installation of a new electric cable from the substation in South Boston to the MWRA's waste water treatment facility on Deer Island, and subsequent decommissioning of the existing cable. The project involves the installation of a new electric cable drilled under the channel to a depth of -75 feet, transitioning to a jetplow installation 6-10 feet below the surface across Governors Island Flats to Deer Island flats, where it will make landfall via HDD on Deer Island.

Fisheries resources and impacts along the cable route
Eelgrass (*Zostera marina*), an important marine fisheries habitat, was mapped by the applicant in 2017 throughout Governors Island Flat, including through a portion of the proposed cable route. Approximately 1,460 sf of eelgrass will be directly impacted by the jetplow. Additional area may be impacted by the jetplow skis and through the increase of turbidity, depending on how long it takes for the sediments to settle.

Boston Harbor, including the cable route, is habitat for the spawning and juvenile development of winter flounder (*Pseudopleuronectes americanus*), an important commercial and recreational species in the region. Winter flounder eggs are demersal and adhesive, forming clusters which are vulnerable to smothering by settling sediments. Juvenile fish use nearshore areas during development for forage and shelter. The jetplow may increase turbidity and sedimentation that could be detrimental to developing winter flounder eggs, larvae and juveniles. The channel edges and Governors Island Flats provide passage for the Charles River and Mystic River anadromous fish runs. Additionally, the project area is utilized by American lobster (*Homarus americanas*) and the waters approaching Deer Island are fished by lobster fisherman year-round.

Resource impacts and recommendations
The applicant and representatives met with resource agencies several times in the past few months to discuss project alternatives and mitigation for unavoidable impacts. We agree that at this point the applicant has thoroughly examined the alternatives. The preferred route is constrained by the 900-foot buffer and future dredge footprint set by the USACE from the Presidents Roads federal anchorage. Lacking other acceptable options, the cable route will cause an impact to eelgrass that must be mitigated. Through meetings with the applicant, DEP and other resource agencies, DMF has recommended a 3:1 mitigation to impact ratio and an approach to mitigation that includes monitoring the impacted area before

and after impact, transplanting eelgrass into the impacted area in a 1:1 ratio after the sediments have consolidated, and paying into the In Lieu Fee program for the remainder of the required mitigation. Monitoring the restoration for three to five years is also recommended to determine success. DMF reviewed the supplementary eelgrass mitigation plan, developed by Epsilon Associates on September 22, 2017. The plan will need revision and more detail. DMF has extensive experience in eelgrass restoration and specific experience planting successfully on Governor's Island Flat. Our staff are available to consult with the applicant and their representatives to help improve the design details of the restoration effort, including methods, timing, and interpretation of results.

As mentioned above, the jetplow may increase turbidity and sedimentation. The best way to minimize impacts to fisheries resources is through the restriction of silt-producing work during the most sensitive time of year. The recommended time of year restriction for the protection of winter flounder spawning and larval development at this location is from February 15 to June 30th of any year. The ENF states that the jetplow work will last only a few days. If turbidity causing work is restricted to a period of hours in each location and lasts only for a couple of days, a TOY may not be necessary. However, the sediment is very fine grained mud in that area and may remain in suspension for long after the plow has passed. Before we make our recommendation on a time of year restriction, we need more information on how and where the sediments are expected to disperse with the use of the jetplow. How long will fine grain sediments remain in suspension and what is the predicted depth of sedimentation based on the characteristics and hydrodynamics at the site. Experiments showed that decreased hatching success of winter flounder eggs was observed with increasing depth of burial and few eggs hatched successfully in more than 3mm of sediment deposition (Berry et al 2005[1]). In Upper Narragansett Bay where the experiments were done, the deposition from natural sediment resuspension was 0.1mm/day, which winter flounder eggs tolerate.

What are the impacts of cable deterioration in the abandoned cable? Cable materials made of copper and lead may leach into the sediments overtime. Is this expected to occur at the abandoned portion of the cable? We agree that disturbance from the removal of the cable may have more impacts than the effects of the potential release of contaminants, but this should be addressed and the impacts weighed.

We anticipate working with the applicant on the above issues through the permitting process. Please contact Tay Evans at 978-282-0308 x. 168 or tay.evans@state.ma.us for more information about this review.

Sincerely,

David E. Pierce, PhD
Director

DP/te/sd

cc:
K. Ford, T. Evans, DMF
R. Lehan, DFG
L. Berry-Engler, CZM
L. Langley, DEP
P. Colarusso, EPA
M. Johnson, NMFS
B. Newman, ACOE
City of Boston Conservation Commission

[1] Berry et al., "Assessment of Dredging-Induced Sedimentation Effects on Winter Flounder (Pseudopleuronectes Americanus) Hatching Success: Reults of Laboratory Investigations." Proceedings, WEDA XXXI Technical Conference & TAMU 42 Dredging Seminar.