



Environmental Management and Construction Plan (EM&CP)

Lake Champlain Marine Segment
Cable Installation (“Segment 18B”)

Case Number 10-T-0139

Village of Rouses Point, Clinton County, NY
Town of Champlain, Clinton County, NY
Town of Chazy, Clinton County, NY
Town of Beekmantown, Clinton County, NY
Town of Plattsburg, Clinton County, NY
Town of Peru, Clinton County, NY
Town of AuSable, Clinton County, NY
Town of Chesterfield, Essex County, NY
Town of Willsboro, Essex County, NY
Town of Essex, Essex County, NY
Town of Westport, Essex County, NY
Town of Moriah, Essex County, NY
Town of Crown Point, Essex County, NY
Town of Ticonderoga, Essex County, NY
Town of Putnam, Washington County, NY

Champlain Hudson Power Express

TRC Project Number: 490523.0005.0000

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January 2024

Revised April 2024





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ACRONYM AND ABBREVIATION LIST

2012 BMP	Best Management Practices document dated February 10 th , 2012
ACHP	Advisory Council on Historic Preservation
Application	Application for a Certificate of Environmental Compatibility and Public Need
BMPs	Best Management Practices
CC	Certificate Condition
Certificate	Certificate of Environmental Compatibility and Public Need
Certificate Holders	CHPE, LLC and CHPE Properties, Inc.
Certificate Order	Order granting the Certificate of Environmental Compatibility and Public Need
CHPE	Champlain Hudson Power Express or CHPE, LLC and CHPE Properties, Inc.
CHPE Project	Champlain Hudson Power Express Project
CI	Co-Located Infrastructure
CLB	Cable Lay Barge
CMI	Caldwell Marine International, LLC
Commission	New York State Public Service Commission
CRMP	Cultural Resources Management Plan
DC	direct current
DP	dynamic positioning
DMM	Document Matter Master
DOE	United States Department of Energy
DoL	Depth of Lowering
DPS	New York State Department of Public Service
ECM	Environmental Compliance Manager
EHS	Environmental Health and Safety
EI	Environmental Inspector
EM&CP	Environmental Management and Construction Plan
EM&CP Guidelines	Guidelines for Environmental Management and Construction Plan(s)
EMF	electromagnetic fields
EPA	United States Environmental Protection Agency
FO	fiber optic
FTF	Fort Ticonderoga Ferry
HDD	horizontal directional drilling or drill
HDPE	high-density polyethylene
HPU	hydraulic power unit
HVAC	high voltage alternating current
HVDC	high voltage direct current
HWMP	Hazardous Waste Management Plan
ICPC	International Cable Protection Committee
kV	kilovolt
LNM	Local Notice to Mariners



Lower Lake	The portion of Lake Champlain from Crown Point to Putnam Station, in alignment with applicable permits
MCB	Mattress Crane Barge
MFB	Mattress Feeder Barge
MW	megawatts
NKT	NKT Inc.
NMFS	National Marine Fisheries Service
NYNHP	New York Natural Heritage Program
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOS	New York State Department of State
NYSDOT	New York State Department of Transportation
NYSDPS	New York State Department of Public Service
OGS	Office of General Services
OPA	Oil Pollution Act
OSCP	Oil Spill Contingency Plan
PHASP	Program Health and Safety Plan
PLGR	Pre-Lay Grapnel Run
PSC	New York State Public Service Commission
PSL	New York Public Service Law
PWS	Public Water Supply
ROW	Right of Way
ROV	remotely operated vehicle
SHPO	State Historic Preservation Office
SOP	standard operating procedure
SOPEP	Shipboard Oil Pollution Emergency Plan
SPCP	Spill Prevention and Control Plan
SSHASP	Site Specific Health and Safety Plan
TOY	Time of Year
TSS	total suspended solids
Upper Lake	The portion of Lake Champlain from the U.S.-Canadian border to Crown Point, in alignment with applicable permits
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
USFWS	United States Fish and Wildlife Service
VSQG	Very Small Quantity Generator
WQC	Water Quality Certification



1.0 Introduction

The Champlain Hudson Power Express (CHPE) project involves the construction of approximately 339 miles of high voltage direct current (HVDC) underground and underwater transmission cable from the US/Canadian Border to Queens, New York (the “CHPE Project” or “Project”). It will bring 1,250 megawatts (MW) of renewable energy into New York by Spring 2026 to replace the use of fossil fuels and reduce carbon emissions. The Project will provide enough power for more than 1 million homes, along with numerous environmental and economic benefits to millions of residents in New York State communities. The CHPE Project includes two, five-inch diameter cables to be installed underwater or underground along the approximately 339-mile-long route, with aboveground facilities to include a voltage source converter station located in Astoria, Queens, New York.

The CHPE Project began the permitting process on March 30, 2010, when Champlain Hudson Power Express, Inc. filed an Application for a Certificate of Environmental Compatibility and Public Need (the Application) with the New York State Public Service Commission (PSC or Commission) pursuant to Article VII of the New York Public Service Law (PSL) to construct and operate the electric transmission facility known as the Champlain Hudson Power Express Project (the CHPE Project) (PSC Case 10-T-0139).

An Order granting the Certificate of Environmental Compatibility and Public Need (Certificate Order) was issued by the Commission on April 18, 2013 (the “Certificate”). In August 2020, Champlain Hudson Power Express, Inc. converted from a corporation to a limited liability company and received the PSC’s approval to transfer its interest in the Certificate to CHPE, LLC and CHPE Properties, Inc. (collectively “CHPE” and “Certificate Holders”). The Certificate was amended on March 20, 2020, August 13, 2020, September 21, 2020, January 26, 2021, May 14, 2021, February 17, 2022, March 16, 2022, December 15, 2022, and October 12, 2023¹ to reflect revisions in the alignment and other Certificate Conditions (CC). The Article VII review and certification process included the development of numerous documents which identified natural resources within the CHPE Project area and outlined best management practices (BMPs) to minimize impacts to those natural resources which might otherwise result from the construction or operation of the CHPE Project.

1.1 Purpose and Intent

This Environmental Management and Construction Plan (EM&CP) covers what is referred to as “Segment 18B” of the CHPE Project, which describes the installation and protection of underwater HVDC transmission cables in Lake Champlain. This segment is approximately 96.5 statute miles long and begins at the US-Canadian border in the Village of Rouses Point, Town of Champlain,

¹ An additional amendment, filed March 30th, 2023 (“Catskill Reroute Petition” or the “Amendment 8 Petition”), was pending as of the time of this submission. To the extent this amendment is granted, the final EM&CP for this segment will be updated to reflect any revised Certificate Conditions resulting from that Amendment, though the requested amendment pertains primarily to overland routing.



Clinton County, New York and ends in the Hamlet of Putnam Station, Town of Putnam, Washington County, New York.

This EM&CP has been developed to provide the plans and specifications for environmental protections and construction of Segment 18B that demonstrate compliance with applicable laws and regulations, including the Certificate. The EM&CP provides appropriate maps, illustrations, and text associated with underwater cable installation-related activities in Lake Champlain. Submission of this EM&CP does not serve as an opportunity to relitigate the Project approval, routing, Certificate or general installation methods, as applicable permits authorizing construction and operation of the Project have previously been obtained.

1.2 Distribution and Notification of the Filing of this EM&CP

Appendix 1-A, EM&CP Filing Notices, includes copies of the notices circulated to various stakeholders via mail, electronically, or through publication in local newspapers serving the areas where the EM&CP Segment 18B work areas are located, in accordance with the Certificate. Proofs of service outlining in detail the distribution of this EM&CP in hard copy and/or electronic file formats, in addition to affidavits of service and publication for notices, will be provided under separate cover as soon as they become available.

1.3 EM&CP Segmentation and Filing Schedule

Certificate Condition 6 permits the Certificate Holders to develop the CHPE Project facilities in segments to facilitate construction sequencing and scheduling. Each segment, or grouping of segments, may be the subject of an EM&CP filed with the Commission for review and approval independent of other EM&CPs. Within the EM&CP for the first segment, submitted April 15, 2022, the Certificate Holders identified the anticipated segmentation of the Project and included a schedule for their construction. Subsequent EM&CPs have included updates to the segment identification and construction schedule provided in the first segment EM&CP. Table 1.1 contains an updated version of the Certificate Holders' current segmentation of the CHPE Project including an anticipated schedule with respect to EM&CP submission, EM&CP approval, and construction commencement. On October 13, 2022, the Commission approved the first CHPE EM&CP for Segments 1 and 2 of Project construction; subsequent approvals have been issued since that time, as outlined in the below table.

This document, the Lake Champlain Marine Segment Cable Installation EM&CP (Segment 18B), is the fifth of seven planned marine EM&CPs (see Table 1.1) that will be submitted to the Commission related to the preparation for and installation of submarine cables required for the marine segments of the CHPE Facility. The submarine cable in Lake Champlain will link to the overland HVDC cables via the Transitional Horizontal Direction Drill (HDD) EM&CP approved by the Commission April 4, 2023 (Putnam Station, Congers, and Cementon Transitional HDDs, EM&CP Segment 17). A previous EM&CP Segment 18A, approved by the Commission on July 20, 2023, detailed pre-lay concrete mattress installation for protection of co-located infrastructure (CI) crossings in Lake Champlain.



The installation and protection of the HVDC cables in the Hudson River will be covered in CHPE's "Segment 19A" (Hudson River Pre-Lay Mattressing, approved October 12, 2023) and forthcoming "Segment 19B" (Hudson River Cable Installation) EM&CPs.

The installation and protection of the HVDC cables in the Harlem River will be covered in CHPE's "Segment 20" EM&CP.



Table 1.1 – Overland and Marine Segments: CHPE Project Construction, Sequencing, and Scheduling

EM&CP Segment	Design Packages	Location Description	Approximate Segment Length (miles)	Anticipated (Actual) EM&CP Submittal	PSC Approval of EM&CP	Anticipated Construction Commencement
OVERLAND SEGMENTS (UPSTATE)						
1, 2	Packages 1A & 1B	Putnam to Dresden/Dresden to Whitehall	17.6	4/15/2022	10/13/2022	12/2022
3	Packages 1C & 2	Whitehall to Fort Ann/Fort Ann to Kingsbury	20.8	12/23/2022	5/18/2023	6/2023
4, 5	Package 3	Kingsbury to Milton	26.5	4/24/2023	8/18/2023	10/2023
6	Package 4A	Milton to Ballston	10.2	8/4/2023	9/14/2023	9/2023
7	Package 4B	Ballston to Schenectady/Rotterdam	9.6	8/4/2023	9/14/2023	9/2023
8	Package 5A	Rotterdam to Selkirk	16.99	12/21/2022	6/26/2023	9/2023
9	Package 5B	Selkirk Bypass	5.31	12/21/2022	6/26/2023	1/2024
10	Package 6	Ravena to Catskill	20.9	9/29/2023	12/18/23	1/2024
11	Package 7A	Catskill to Germantown	8.6	3/30/2023	8/18/2023	1/2024
12	Package 7B	Stony Point to Haverstraw/Clarkstown	7.6	4/28/2023	8/18/2023	1/2024
13, 14, 15	Package 8	Bronx to Queens	2.13	8/11/2023	10/12/2023	1/2024
Laydown Yards	3, 5B, 6	Fort Edward, Bethlehem, Coxsackie	N/A	11/11/2022	2/21/2023	3/2023
MARINE SEGMENTS						
16	Package 9	Transitional HDD (Stony Point)	N/A	9/29/2022	3/20/2023	6/2023
17	Package 10	3 Transitional HDDs (Putnam, Catskill, Clarkstown)	N/A	12/14/2022	4/20/2023	6/2023
18A	Package 11A	Lake Champlain (Pre-Lay Mattressing)	96	4/4/2023	7/20/2023	4/2024
18B	Package 11B	Lake Champlain (Cable Installation)	96	1/26/2024	TBD	2024
19A	Package 12A	Hudson River (Pre-Lay Mattressing)	89.1	8/4/2023	10/12/2023	3/2024
19B	Package 12B	Hudson River (Cable Installation)	89.1	3/2024	TBD	2024
20	Package 13	Harlem River	~6.3	TBD	TBD	2025
OVERLAND SEGMENTS (NEW YORK CITY)						
21	N/A	Astoria Annex/AC Interconnection	0.3	11/2024	TBD	4/2025



Table 1.1 – Overland and Marine Segments: CHPE Project Construction, Sequencing, and Scheduling

EM&CP Segment	Design Packages	Location Description	Approximate Segment Length (miles)	Anticipated (Actual) EM&CP Submittal	PSC Approval of EM&CP	Anticipated Construction Commencement
22	TBD	Converter Station, Astoria Complex (Queens)	N/A	1/31/2023	5/18/2023	6/2023
23	16	Astoria Rainey Cable HVAC System (Queens)	~3.5	2/2024	TBD	3/2024



1.4 Applicable Permits

Of all permits applicable to the CHPE Project, the following permits contain conditions relevant and/or applicable to subaquatic cable installation in Lake Champlain:

- Presidential Permit No. PP-481-2, United States Department of Energy.
- Order Granting Certificate of Environmental Compatibility and Public Need, NYS PSC (issued in Case 10-T-0139).
- Water Quality Certification (WQC), NYS PSC (issued in Case 10-T-0139).
- Permit NAN-2009-01089-M7, US Army Corps of Engineers (USACE) New York District.

This EM&CP has been developed in accordance with the conditions adopted in the PSC's Certificate Order. Certificate Conditions approved in the Joint Proposal were attached to the Certificate Order as Appendix C and are presented as currently amended in Appendix 1-B to this EM&CP. Certificate Conditions relate to, among other things, the preparation, content, filing, and review of an EM&CP; public health and safety; the handling of complaints; CHPE Project construction, operation, maintenance, and restoration; and environmental supervision.

This EM&CP has also been developed in accordance with the guidance document provided as Appendix E to the Joint Proposal titled Guidelines for Environmental Management and Construction Plan(s) (EM&CP Guidelines) and the document titled Best Management Practices dated February 10, 2012 (2012 BMP Document). Plan and Profile Drawings are provided as Appendix 3-A to this EM&CP and have been developed in accordance with Section A of the EM&CP Guidelines. This EM&CP narrative includes the information required in Section B of the EM&CP Guidelines.

1.5 Outreach and Stakeholder Consultations

The Certificate Holders have mobilized stakeholder involvement and consultations for over a decade since the beginning of the Project. Stakeholder considerations have been integrated into the design, siting, and development of the Project, and will continue to be assessed and implemented throughout the construction phase.

In this EM&CP, the following documents provide documentation of stakeholder consultation completed or provide procedures for future consultation:

- Appendix 1-A, EM&CP Filing Notices
- Appendix 1-C, Agency and Stakeholder Consultations
- Appendix 1-D, Public Involvement Plan and Complaint Resolution Plan



- Appendix 3-C, Co-Located Infrastructure Documentation
- Appendix 7-A, Compliance Assurance Plan

Appendix 1-D, Public Involvement Plan and Complaint Resolution Plan outlines outreach to be completed during the construction process. This plan will complement previous and ongoing outreach efforts by the Certificate Holders and includes a detailed community outreach schedule that continues throughout the progress of the Project.



2.0 EM&CP Segment 18B Overview

The following sections provide an overview of material provided in this Segment 18B EM&CP. Material not provided in this Segment 18B EM&CP, such as activities covered under previous EM&CP segments, are outlined for context.

2.1 Activities Covered in this EM&CP

As described in Section 1.1 above, this EM&CP Segment 18B describes the preparation, installation and protection of underwater HVDC transmission cables in Lake Champlain. The cables will be installed along a route approximately 96.5 statute miles long, beginning at the US-Canadian border in the Village of Rouses Point, Town of Champlain, Clinton County, New York and ending at a set of landfall conduits in the Hamlet of Putnam Station, Town of Putnam, Washington County, New York.

The cable bundle to be installed will consist of two 400 kilovolt (kV) direct current (DC) power cables and one fiber optic cable.

In areas where CI crossing or other cable protection is needed, articulated pipe protection (UraGuard/Uraduct or similar protective duct product) and/or post-lay concrete mattresses will be installed.

Where the cables exit Lake Champlain at the Putnam Station HDD, they will be encased in pre-installed high-density polyethylene (HDPE) ducts (refer to previously approved Segment 17 EM&CP outlined in Section 2.2.1 below). Sections 2.2 and 2.3 below discuss related activities not covered in this EM&CP Segment 18B, such as pre-lay mattress and HDD installation covered by previously approved EM&CPs.

Activities covered by this EM&CP Segment 18B are outlined below.

2.1.1 *Pre-Installation Activities*

The following activities will be performed prior to cable installation, covered by this Segment 18B EM&CP:

- Pre-lay grapnel runs (PLGR) (Refer to Section 4.5.1); and
- Preparation of the pre-installed landfall conduits at Putnam Station to accept the underwater cables immediately before use (Refer to Section 4.5.2).

No permanent facilities will be installed as a result of these activities.

2.1.2 *Cable Installation Activities*

The following activities will be performed during cable installation, covered by this Segment 18B EM&CP:

- Float-out and lay of the power and fiber cables over the Canadian border (Refer to Section 5.5.1);
- Installation of the power and fiber optic cables in or on the lakebed via burial or surface lay (where permitted) (Refer to Section 5.5.1);
- Installation of articulated pipe protection (UraGuard/Ureduct or similar protective duct product) for cable protection at certain CI crossings and other locations as required (Refer to Section 5.5.2);
- Splicing of power cable segments (Refer to Section 5.5.3);
- Pulling the cables to land through a set of pre-installed landfall conduits at Putnam Station (Refer to Section 5.5.4); and
- Remedial burial actions in the event sufficient cable burial is not initially achieved (Refer to Section 5.5.5).

Permanent, underwater infrastructure will be installed as a result of these activities.

2.1.3 Post-Installation Activities

The following activities will be performed following cable installation, covered by this Segment 18B EM&CP:

- Installation of post-lay concrete mattresses for remedial cable protection at CI crossings (Refer to Section 6.5.1);
- Installation of cable protection measures at the Fort Ticonderoga Ferry crossing (Refer to Section 6.5.2);
- Installation of post-lay concrete mattresses for remedial cable protection in the event sufficient cable depth of lowering cannot be achieved with cable installation tools (Refer to Section 6.5.3); and
- Clean-up and restoration of temporary work sites (Refer to Section 6.5.4).

Permanent underwater infrastructure will be installed as a result of post-installation CI and cable protection activities.

2.2 Activities Covered in Previous EM&CPs

As described above in Section 1.3, multiple EM&CPs have been submitted for the CHPE Project. Construction activities approved in previous EM&CPs will not be discussed in this EM&CP Segment 18B. Descriptions of the relevant and related EM&CPs are described below for context.



2.2.1 Transitional HDD – EM&CP Segment 17

The submarine cable in Lake Champlain will link to the overland HVDC cables via two (2) conduits pre-installed at the transitional HDD located in the Hamlet of Putnam Station in the Town of Putnam, Washington County, NY. Construction of the transitional HDD at Putnam Station was covered by the Putnam Station, Cementon, and Congers Transitional HDD EM&CP Segment 17, approved by the Commission on April 20, 2023.

As such, activities related to HDD construction at Putnam Station are not described in this EM&CP Segment 18B. HDD and conduit installation operations will be completed prior to cable installation activities.

2.2.2 Pre-Lay Mattress Installation – EM&CP Segment 18A

In specific locations where the submarine cable will cross certain existing CI, pre-lay concrete mattresses will be installed to provide utility protection. Installation of these pre-lay concrete mattresses in Lake Champlain was covered by the Lake Champlain Marine Segment Pre-Lay Mattressing EM&CP Segment 18A, approved by the Commission on July 20, 2023.

As such, activities related to pre-lay mattress installation are not described in this EM&CP Segment 18B. Installation of pre-lay concrete mattresses will be completed prior to cable installation activities.

2.3 Non-EM&CP Activities

Several activities related to the cable installation in Lake Champlain are not required to be approved under an EM&CP and thus are not addressed herein. These activities include, but are not limited to:

- The transportation of HVDC and fiber optic cables to and within New York State via boat (cables will be transported into Lake Champlain via barges through the canal system on a continuous basis prior to and during installation activities);
- The manufacture/assembly of installation barges and/or supporting equipment;
- Mobilization and demobilization of installation vessels and equipment;
- The manufacturing of post-lay concrete mattresses;
- The terrestrial splicing of the cables at Putnam Station to join the terrestrial and marine segments (activity covered by terrestrial EM&CP); and
- The splicing of the cables in Canadian waters north of the U.S.-Canadian border to connect with the underwater cables being installed in the Richelieu River in Canada, which



will be performed by Certificate Holders' Canadian partner, Hydro Quebec. The scope of this EM&CP ends at the US/Canadian border.

As such, these activities are not described in this EM&CP Segment 18B.

2.4 Anticipated Schedule

Certain construction activities covered by the Segment 18B EM&CP are subject to work windows and time of year (TOY) restrictions as provided by the Order, WQC, and applicable federal permits. Construction within navigable waters and pre-installation route clearing activities in the Upper Lake (from the U.S.-Canadian border to Crown Point) is permitted May 1st to August 31st of any year. Construction within navigable waters and pre-installation route clearing activities in the Lower Lake (Crown Point to Putnam Station) is permitted September 1st to December 31st of any year. Additionally, access to Lake Champlain is restricted by the annual canal opening, anticipated to occur in early May, and canal closing, anticipated to occur in late October.

Activities covered in this Segment 18B EM&CP are currently expected to be completed in 2024. In-water work is anticipated to begin in Spring 2024 and be completed in Fall 2024. The pre-lay grapnel run is currently anticipated to take place starting in May 2024 in the Upper Lake and in August 2024 in the Lower Lake.

Cable installation is currently anticipated to commence in June 2024 with completion at Putnam Station in October 2024. Post-lay mattress installation is currently anticipated to commence in June 2024 with completion in October 2024. Refer to Sections 4.2, 5.2, and 6.2 for additional details regarding anticipated schedule. In accordance with applicable permits, route clearing activities and cable installation are anticipated to take place from May to August in the Upper Lake, and from September to October in the Lower Lake, except to the extent the Commission grants some temporal relief to accommodate the transition from Upper to Lower Lake as discussed further below.

Certificate Condition 93 sets forth a table of underwater construction windows in, among other waterbodies, Lake Champlain, specifying that work conducted within Route Miles 0 to 73 (US/Canada Border to Crown Point) must occur between May 1 and August 31, while work conducted within Route Miles 73 to 101 (Crown Point to Dresden) must occur between September 1 and December 31. This Condition also states that Certificate Holders can, upon consultation with NYSDPS, NYSDEC and NYSDOS, seek appropriate modification of these timeframes via submission of a requested modification under CC 158 or in conjunction with submission of an EM&CP. The Certificate Holders are seeking such appropriate modification here to allow a more workable overlap in work windows for route installation activities transitioning between these two geographic regions of Lake Champlain.

As written, strict compliance with CC 93 would require that CHPE install the transition between the northern and southern portions of Lake Champlain, at Route Mile 73, precisely on August 31. If work in the final portions of northern Lake Champlain were not finished by August 31, those portions would be delayed another 9 months, into the following May, to meet the work window in



2025—an unworkable result. Similarly, if installation work reached Route Mile 73 before September 1, strict compliance with these work windows would require that installation vessels wait to transition to southern Lake Champlain until September 1 arrived, which would significantly increase the costs of Facility construction. Neither of these scenarios is workable or reasonable, and strict compliance with these construction windows could create logistical challenges, increased costs associated with construction of the CHPE Facility, and significant delays which may potentially threaten to delay the Project's targeted in-service date, thereby jeopardizing electric reliability in New York City and throughout the State.

Instead, CHPE hereby seeks to add a four-week period on either side of this August 31/September 1 target to transition cable installation from the northern to the southern part of Lake Champlain. This will ensure CHPE has sufficient time to complete cable installation activities in the northern portion of Lake Champlain and transition to the southern portion of Lake Champlain all within the same calendar year, which would enable the Certificate Holders to avoid and minimize impacts to the environment and stakeholders in the Lake to the maximum extent practicable. Under this modified schedule, work conducted within Route Miles 0 to 73 (US/Canada Border to Crown Point) would need to occur between May 1 and September 28, while work conducted within Route Miles 73 to 101 (Crown Point to Dresden) would need to occur between August 4 and December 31. If installation vessels reach the southern portion of the Lake earlier than expected, they could continue unimpeded; if the transition from northern to southern Lake Champlain was delayed, this modification would ensure work could continue expeditiously and in an uninterrupted manner to complete the work within one season. This modification is the minimum necessary to feasibly achieve installation of the Project—a four week window on either side of the previously agreed transition date represents a de minimis additional impact on marine resources at Crown Point, as compared with the prior schedule, while providing critical flexibility during construction. This change does not alter the overall character or route of the Facility and does not implicate new or additional impacts to the protected resources enumerated in CC 158. For these reasons, CHPE respectfully requests that the Commission and involved agencies agree to this additional temporal flexibility in allowed construction windows in Lake Champlain.

This Segment will require that CHPE have the ability to work on State/Federal holidays, Sundays, and nights during the cable installation period.

This includes, but is not limited to, the following Federal holidays:

- Monday, May 27, Memorial Day
- Wednesday, June 19, Juneteenth National Independence Day
- Thursday, July 04, Independence Day
- Monday, September 02, Labor Day
- Monday, October 14, Columbus Day
- Monday, November 11, Veterans Day

Operations on holidays, Sundays, and nights are necessary to ensure timely completion of the Project within the regulatory work windows. Where possible, steps will be taken to minimize



impacts to the community from work during these periods to the maximum extent practicable. However, timely completion of this Segment, especially given other seasonal time restrictions, is critical to ensuring the reliability of the New York State electric grid and necessitates allowing work on this Segment on a 24/7 basis.

2.5 Notification and Reporting

Several CCs impose timing requirements for Project notifications and reports. The below table summarizes these CCs based on whether the notification is required before, during, or after construction, or at any point during those periods. Not all notices are required, and some notices may be required after the entire Project has been constructed. Refer to Sections 4.1, 5.1, and 6.1 for information regarding communications prior to commencement of pre-installation, installation, and post-installation activities, respectively.

Table 2.1 – Reporting and Notification Requirements and Schedule

Description	Submitted to	Approximate Due Date
BEFORE OR CONCURRENT WITH EM&CP FILING		
The Certificate Holders will file copies of the segment EM&CP as directed by the Secretary to the Commission to relevant jurisdictional agencies as described in CC 151.	Relevant jurisdictional agencies.	Upon filing the applicable Segment EM&CP.
The Certificate Holders will provide newspaper notices and written notice(s) of the filing of the segment EM&CP on all parties such as relevant railroads, infrastructure owners whose facilities, properties, and/or structures within the geographic scope of the segment EM&CP may be impacted. The notice(s) will contain the information specified in CC 152.	Relevant parties specified in CC 152.	Upon filing the applicable Segment EM&CP.
The Certificate Holders will provide notice(s) of the filing of the segment EM&CP on all parties such as residents, businesses, and building, structure, and facility (including underground, aboveground and underwater facilities) owners and operators within 100 feet of any HDD staging area or trenching activity with an offer to inspect foundations before, during, and after construction. The notice(s) will contain the information specified in CC 154.	Relevant parties specified in CC 154.	Upon filing the applicable Segment EM&CP, if any.
The Certificate Holders will provide written notice(s) to any person with an interest in the property underlying the Certificate Holders' easements/leaseholds, including underlying landowners, other easement holders as specified in CC 143 upon filing the applicable segment EM&CP.	Relevant parties specified in CC 143.	Upon filing the applicable Segment EM&CP, if any.
Provide to the owner(s) and operator(s) of all co-located infrastructure a proposal for the locations and design of the Project. The submission will contain all the information and conditions outlined in CC 28d.	Owners and operators of all co-located infrastructure.	At least 180 days prior to the filing of the Segment EM&CP.

Description	Submitted to	Approximate Due Date
The Certificate Holders will provide written notice and newspaper notices of the filing of the applicable Segment EM&CP. (CC 152). The notice will contain the information outlined in CC 155a.	Local media within the vicinity of the segments to which the segment EM&CP relates.	Concurrent with the filing of the applicable Segment EM&CP.
The Certificate Holders will notify that the EM&CP is available for review to the chief executive officer of each affected municipality and to residents, businesses, and building, structure, and facility owners and to the extent known, operators of the same when such land uses are located within 100 feet of the HDD staging areas, off-ROW construction access roads, and the overland components of the Project. The notice will meet the conditions outlined in CC 153. The Certificate Holders will also provide a hard copy synopsis of any approved Segment EM&CP for residents owning property located within 100 feet of the Construction Zone as delineated therein. The synopsis will meet the conditions outlined in CC 153. Proof of notice to residents, businesses, and building and structure owners will be provided to the Secretary.	Chief executive officer of each affected municipality. Residences, Businesses, and Building/structure/ facility owners/ operators.	Concurrent with the filing of the Segment EM&CP.
A certificate of service indicating upon whom all EM&CP notices and documents were served and a copy of the written notice will be filed by the Certificate Holders (CC 155b).	Secretary to the Commission.	Following each applicable Segment EM&CP filing.
BEFORE CONSTRUCTION		
All necessary permits and consents referred to in CC 16 that pertain to Segment 10 (CC 9).	Secretary to the Commission	Before commencing site preparation and any construction activities.
The Certificate Holders shall not commence work on any Segment until they shall have obtained all required interests in real estate, including interests in real estate to be used for access roads (whether obtained through a conveyance, consent, permit, or other approval) as are necessary and applicable for such Segment. Evidence of the obtaining of such interests shall be provided to the Secretary prior to commencement of the work. (CC 10)	Secretary to the Commission	Before commencement of construction.
The Certificate Holders will inform the Secretary and NYSDEC at least five days before commencing site preparation for the Project. (CC 46).	Secretary to the Commission and NYSDEC.	At least 5 days before commencing site preparation.
The Certificate Holders will consult with each transportation department or agency having jurisdiction over any roads, related structures, and components that will be crossed by the Facility or used for direct access to the Construction Zone. If the access road takes direct access from, or lies	Transportation Department or Agency crossed by project.	When work begins.

Description	Submitted to	Approximate Due Date
within the limits of, such roads, the Certificate Holders will notify each relevant transportation department or agency of the approximate date when work will begin (CC 69a).		
The names and qualifications of the Environmental Inspector and Construction Inspector will be submitted to DPS Staff and NYSDEC (CC 53g).	DPS Staff and NYSDEC.	At least 2 weeks prior to the start of construction.
The Certificate Holders shall confine construction to the Construction Zone and approved additional work areas as detailed in the approved EM&CP. A detailed construction schedule and location timeline shall be provided to DPS Staff prior to construction (CC 59).	DPS Staff	Prior to construction.
The Certificate Holders will keep required parties apprised of on-site chemicals and waste stored within one hundred (100) feet of their Co-Located Infrastructure (CI) or service area. In the case of CI located within the CNY, the Certificate Holders will advise CI owners and operators of on-site chemicals and waste stored within 300 feet of such facilities. (CC 34).	Local Fire Departments, Emergency Management Teams, Owners and Operators of Co-Located Infrastructure.	Prior to storage of chemicals.
The Certificate Holders will provide notice to local officials and emergency personnel in the area where they will be working on the Project. The notice will meet the conditions outlined in CC 42.	Local officials and Emergency Personnel.	Two weeks prior to the commencement of site preparation in area of applicable jurisdiction.
The Certificate Holders will provide notice to local media for dissemination and display in public places (such as general stores, post offices, community centers, etc.). The notice will meet the conditions outlined in CC 42.	Media for public display.	Two weeks prior to the commencement of site preparation in area of applicable jurisdiction.
The Certificate Holders will notify the adjacent landowners and their tenants of construction work within 100 feet of their property at least two weeks prior to the commencement of construction in these areas and provide copies of all correspondence to the DPS Staff. The notice will meet the conditions outlined in CC 42. (CC 33, 42).	Adjacent landowners & Tenants with copies to DPS Staff, if applicable.	Two weeks prior to commencement of site preparation in area of landowner or tenant.
DURING CONSTRUCTION		
The Certificate Holders will make available to the public a toll-free or local phone number of an agent or employee who will receive complaints, if any, during the construction of the Project. In addition, the phone number of the Secretary and the phone number of the Commission's Environmental Compliance Section will be provided. A log will be maintained that lists at least the date of any complaint, identity and contact information for the complaining party, the date of the Certificate Holders'	DPS Staff as needed.	Upon commencement of construction. See Appendix 1-D Public Involvement Plan and Compliant Resolution Plan.

Description	Submitted to	Approximate Due Date
response, and a description of the outcome. Phone logs will be made available to DPS Staff upon request. The Certificate Holders will report to DPS Staff every complaint that cannot be resolved after reasonable attempts to do so. Any such report will be made within three business days after receipt of the complaint (CC 41).		
The Certificate Holders will provide status reports summarizing construction and indicating construction activities and locations scheduled for the next month (CC 47).	DPS Staff, NYSDOT, and NYSDEC.	Bi-weekly.
Should archaeological materials be encountered during construction, the Certificate Holders will notify and seek to consult with to determine the best course of action (CC 11).	DPS Staff and OPRHP Field Services Bureau.	Within 24-hours of discovery.
The Certificate Holders will promptly notify if a New York State listed species of special concern is observed to be present in the Project Area (CC 51).	DPS Staff and NYSDEC.	As soon as possible upon discovery.
The Certificate Holders will promptly notify if any threatened or endangered wildlife species under 6 NYCRR Part 182 (“TE species”) or any rare, threatened, or endangered plant species under 6 NYCRR Part 193 (“RTE plants”) are observed to be present in the Facility area so as to determine the appropriate measures to be taken to avoid or minimize impacts to such species. If necessary to avoid or minimize impacts to such species or as directed by DPS Staff, the Certificate Holders will stabilize the area and cease construction or ground disturbing activities in the Facility area until DPS Staff have determined that appropriate protective measures have been implemented (CC 52).	DPS Staff, NYDEC, USFWS, NMFS.	As soon as possible upon discovery.
Immediate notification of any petroleum product spills (CC 35).	DPS, NYSDEC, owners and operators of any CI within 100 feet (or 300 feet in CNY).	Immediately upon discovery of a spill of petroleum products.
POST-CONSTRUCTION		
Notification that all restoration has been completed in compliance with this Certificate and the Order(s) approving the EM&CP (CC 48).	Secretary of the Commission.	Within 10 days of the completion of final restoration activities.
Following final completion of construction of a particular Segment, the Certificate Holders shall prepare and provide to the DPS the as-built design drawings, which shall include a detailed map or maps containing all of the information specified in CC 139.	DPS	Within 90 days following the completion of construction.

Description	Submitted to	Approximate Due Date
The Certificate Holders shall provide a copy of their emergency procedures and contacts. If modifications are made an updated copy will be provided (CC 136).	Bulk Electric System Section of DPS Staff, Con Edison, and NYPA	Upon commencement of operation.
The Certificate Holders shall notify NYSDOT, NYSDEC, and the Secretary to the Commission of the date of commencement of commercial operation (CC 50).	NYSDOT, NYSDEC, and the Secretary to the Commission.	No later than three days after commercial operation.
The Certificate Holders will promptly provide to DPS Staff, NYPA, and Con Edison copies of all notices, filings, and other substantive written communications with NYISO as to such reduction, any plans for making repairs to remedy the reduction, and a proposed schedule for any such repairs.	DPS Staff, NYPA, Con Edison.	Within 5 business days of any failure of equipment causing a reduction of more than 10 percent in the capacity of the Project.
The Certificate Holders will provide monthly reports to DPS Staff, Con Edison, and NYPA on the progress of any repairs until completed. The monthly reports will contain the information specified in CC 126.	DPS Staff, NYPA, Con Edison.	Monthly until repairs are completed.
The Certificate Holders will work cooperatively with NYPA, Con Edison, and NYISO to avoid any future occurrences. If such equipment failure is not completely repaired within nine months of its occurrence, the Certificate Holders will provide a detailed report to the Secretary. The report will contain the information specified in CC 126.	Secretary to the Commission.	Within 9 months and 2 weeks after equipment failure.
The Certificate Holders will report any failure of the Project's cables. The report will contain the information specified in CC 135.	Bulk Electric System Section of DPS Staff, Con Edison, and NYPA	Within one day of determining the location of failure in one of the Project's cables.
The Certificate Holders will provide a copy of their emergency procedures and contacts. If modifications are made, an updated copy will be provided (CC 136).	Bulk Electric System Section of DPS Staff, Con Edison, and NYPA	Upon commencement of operation.
The Certificate Holders will notify DPS Staff of any system trips incidents.	DPS Staff	If the HVDC transmission system trips offline (other than as a result of any Operational Measures).
Following the incident, the Certificate Holders will provide notice of the cause of the trip and what actions, if any, the Certificate Holders are taking to rectify the cause (CC 134).	DPS Staff, NYPA, Con Edison	
The Certificate Holders will call and report any transmission related incident that affects the operation of the Project.	Call Bulk Electric System Section of DPS Staff.	Call within 6 hours of any incident.

Description	Submitted to	Approximate Due Date
A subsequent report of the incident will be submitted. The report will contain the information specified in CC 134. The Certificate Holders will work cooperatively with Con Edison, NYPA, NYISO, NPCC, NYSRC, NERC, and DPS Staff to prevent any future occurrences (CC 134).	Submit report to Bulk Electric System Section of DPS Staff, Con Edison, and NYPA	Submission of report within seven days of the incident.
Within 60 days of completing construction of the HVDC Transmission System, the Certificate Holders shall consult with the New York State Office of General Services (OGS) Bureau of Land Management regarding specifications for providing as-built information and mapping of the submerged portions of the HVDC Transmission System in conformance with the requirements of the OGS Bureau and 9 NYCRR Part 271. Within 60 days of that consultation, the Certificate Holders shall provide to the OGS as-built information and mapping complying with its specifications (including shapefile information compatible with ArcView® GIS software) and shall file with the Secretary copies of the as-built information and mapping and proof of filing with the OGS (CC 49)	OGS	Within 60 days of completing construction.
ANY PERIOD DURING PROJECT (PRIOR TO CONSTRUCTION, DURING CONSTRUCTION, POST-CONSTRUCTION)		
The Certificate Holders will provide copies of all necessary permits from applicable state agencies for the delivery of oversized construction materials and equipment (CC 40).	Secretary to the Commission	As needed.
The Certificate Holders shall make modifications to the Project if it is found by the NYISO or the Commission to cause reliability problems to the New York State Transmission System. If NYPA, Con Edison, or the NYISO bring concerns to the Commission, the Certificate Holders shall be obligated to respond to those concerns. The Certificate Holders shall prepare a report within 45 days of notification by DPS Staff that DPS Staff has determined that a reliability problem exists (CC 131).	DPS Staff	As needed within 45 days of notification by DPS Staff.
The Certificate Holders will report any theft of materials related to the Facility with a value in excess of \$10,000 to the DPS Representative. The notice will contain the information specified in CC 137.	DPS Staff	As needed within 1 business day of the time when the theft comes to the attention of the Certificate Holders.
All proposed modifications to any of the Segment EM&CPs and subsequent notices and filings will follow applicable procedures.	DPS Staff	As needed.
The Certificate Holders will notify the owners or operators of co-located infrastructure that is impacted by the Project or has the potential to be impacted by the Project of any	Owners and Operators of co-located infrastructure.	In the event of the emergency

Description	Submitted to	Approximate Due Date
situation involving imminent risk to health, safety, property, or the environment that requires the Certificate Holders to cross any infrastructure or to use any associated property to address the emergency (CC 28g).		
The Certificate Holders will advise the owners or operators of co-located infrastructure of all construction activities that take place within the vicinity of co-located infrastructure. The vicinity will be defined as described in CC 28e.	Owners and Operators of co-located infrastructure.	At least 30 days prior to commencing any construction activities
The Certificate Holders will notify the owners or operators of co-located infrastructure if any damage to or adverse effects to the co-located infrastructure resulting from any studies, surveys, testing, sampling, preliminary engineering, pre-construction activities, and construction (CC 28f).	Owners and Operators of co-located infrastructure.	Immediately upon knowledge or discovery of damage.
The Certificate Holders shall coordinate with NYPA and Con Edison system planning and system protection engineers to evaluate the characteristics of the transmission system before purchasing any system protection and control equipment related to the electrical interconnection of the Project to NYPA's and Con Edison's transmission facilities. This discussion is designed to ensure that the equipment purchased will be able to withstand most system abnormalities (CC 128).	NYPA and Con Edison system planning and system protection engineers.	Before purchasing any system protection and control equipment related to the electrical interconnection of the Project to NYPA's and Con Edison's transmission facilities
The Certificate Holders shall work with NYPA and Con Edison engineers and safety personnel on testing and energizing equipment and develop a start-up testing protocol providing a detailed description of the steps that they will take to limit system impacts prior to and during testing of the Project. Such protocol shall be provided to NYISO, Con Edison, and NYPA for review and comment and, following the review and comment phase, a copy of such protocol shall be provided to Staff of the Bulk Electric System Section of the DPS. The Certificate Holders shall comply with this protocol once established, unless NYISO provides written authorization to Certificate Holders to deviate from that protocol. The Certificate Holders shall make a good faith effort to notify DPS Staff of meetings related to the electrical interconnection of the Project to the NYPA's or Con Edison's transmission system, as applicable, and provide the opportunity for Staff to attend those meetings. The Certificate Holders shall provide a copy of the testing protocol to Staff of the Bulk Electric Systems Section of DPS (CC 130).	NYISO, Con Edison, NYPA, DPS Staff, Bulk Electric Systems Section of DPS	During the testing and energizing phase of the Project.



3.0 EM&CP Segment 18B Route Description and Design Considerations

The following sections provide a description of the permanent facilities to be installed associated with this Segment 18B EM&CP.

3.1 Certificated Route

A Certificated Route for cable installation in Lake Champlain, with an Allowed Deviation Zone (ADZ) set forth in CC 156, was approved by the PSC Order in April 2013. This route was subsequently modified in April 2020, as amended by Certificate Amendment 2. Based on recent surveys and further design considerations, the current route proposed to be installed varies from the Certificated Route and ADZ in select areas of Lake Champlain, as more fully described and justified in Appendix 3-B (Justification for Centerline and Allowed Deviation Zone Excursions). The route to be installed is discussed below in Section 3.2, while route design considerations are discussed below in Section 3.3.

3.2 Route to be Installed

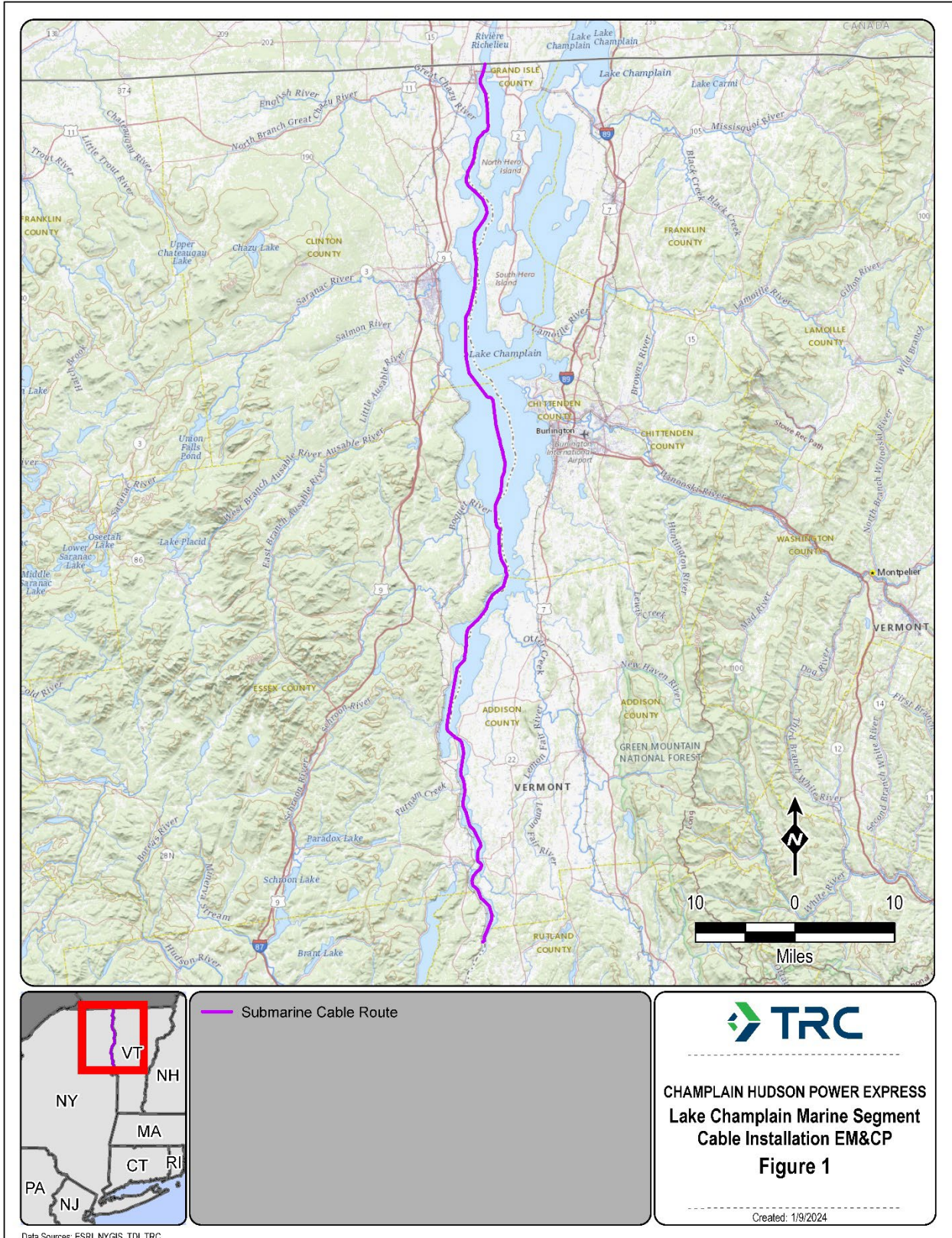
The route proposed for cable installation is shown in the Plan and Profile Drawings in Appendix 3-A, with an overview provided in Figure 1 below. The submarine cable route in Lake Champlain, located entirely in waters of the State of New York, begins at the U.S.-Canadian border and ends at the transitional land-to-water HDD in Putnam Station. The cable route traverses through the municipal waters of the Village of Rouses Point and the Towns of Champlain, Chazy, Beekmantown, Plattsburgh, Peru, and AuSable in Clinton County, NY; the Towns of Chesterfield, Willsboro, Essex, Westport, Moriah, Crown Point, and Ticonderoga in Essex County, NY; and the Town of Putnam in Washington County, NY.

Cable installation activities will commence at the U.S.-Canadian Border in northern Lake Champlain, at the source of the Richelieu River. The installation route proceeds southward under the Route 2 Road Bridge (operational), then passes through an existing opening in the Rouses Point Railroad Bridge (abandoned).

Continuing south, the route passes to the west of Isle La Motte, North Hero Island, and Grand Isle before passing under The Lake Champlain Bridge, to enter the narrower waters of the Lower Lake.

Within Lower Lake waters, the route passes through the Ticonderoga Ferry crossing, past Fort Ticonderoga to the west, and past Bob & Betty Cummings Memorial Park to the west, before terminating at the Putnam Station HDD landing area.

Figure 1. Lake Champlain Cable Route Overview.





3.3 Route Design Considerations

The proposed route has been designed to avoid or minimize adverse conditions and impacts to the greatest extent practicable, based on recent surveys and further design and installation considerations. For locations where the route to be installed deviates from the Certificated Route and requires approval or acknowledgement in accordance with the Certificate Conditions, a description is provided in the Justification for Centerline and Allowed Deviation Zone Excursions, attached as Appendix 3-B to this EM&CP.

The route has been designed to accommodate restrictions, resources, and considerations, including the following:

3.3.1 Submerged Cultural Resources

The cable route in Lake Champlain has been micro-rerouted where feasible to avoid known submerged cultural resources. An overall evaluation of underwater cultural resources identified in the vicinity of the proposed cable route is provided in Appendix 8-D (Final Report for the Underwater Cultural Resource Review of the Champlain Hudson Power Express, Lake Champlain Segment Investigations). The New York State Historic Preservation Office (SHPO) has concurred with the findings of this report, as reflected in the concurrence letter provided in Appendix 1-C (Agency and Stakeholder Consultations).

Cultural resource consultation with the Lake Champlain Maritime Museum and SHPO is ongoing. For all instances where a deviation in the cable route in proximity to a known cultural resource necessitates justification in the EM&CP, as required by CC 156(b)(2), an evaluation is provided in Appendix 3-B (Justification for Centerline and Allowed Deviation Zone Excursions). At the recommendation of the SHPO, a Supplemental CRMP has been developed for the Segment 18B construction activities; this Supplemental CRMP is provided in Appendix 8-F. Refer to Section 8.2 for additional detail regarding submerged cultural resource protection.

3.3.2 Sensitive Habitats

The cable route in Lake Champlain has been designed to avoid known sensitive ecological habitats. There are no Exclusion Zones or Significant Coastal Fish and Wildlife Habitats along the route which could potentially trigger CC 156(b)(1) or 156(b)(3), respectively.

3.3.3 Water Depth and Bottom Slope

The cable route in Lake Champlain has been routed where feasible to avoid adverse water depth and bottom slope conditions. Where possible, the route was shifted to deeper waters greater than 150 feet to reduce the impacts to the lakebed from jet plowing. For all route segments where routing in deep water is not feasible, an evaluation is provided in Appendix 3-B (Justification for Centerline and Allowed Deviation Zone Excursions).



3.3.4 Navigation

The cable route in Lake Champlain has been micro-rerouted where feasible to minimize adverse impacts to public navigation on Lake Champlain, such as impacts to U.S. Coast Guard aids to navigation. Refer to Section 9.1 for detail regarding protection of navigation during construction.

CHPE will continue to coordinate directly with the USCG on potential relocation of federal aids to navigation that may affect the cable laying operations.

3.3.5 Co-Located Infrastructure

CC 27 defines CI as “electric, gas, telecommunication, water, wastewater, sewer, and steam infrastructure and appurtenant facilities and associated equipment, whether above ground, below ground, or submerged.” The cable route in Lake Champlain has been routed where feasible to avoid known CI assets. Where CI assets cannot be avoided, cable and CI protection measures are proposed.

3.3.5.1 Survey of Co-Located Infrastructure

In accordance with CC 148, the Certificate Holders have performed surveys to identify CI assets along the proposed cable route and have initiated communication with these CI owners. Appendix 3-C (Co-Located Infrastructure Documentation) contains a summary table of the identified and potential infrastructure along Lake Champlain that may interact with the CHPE alignment, status of location and crossing. The Certificate Holders are currently working to resolve cases where the owner or utility type involved in a crossing or potential interaction is unknown consistent with the Unknown CI Owner Amendment to CC 162(i) approved by the Commission on October 12, 2023.

Refer to the approved Segment 18A EM&CP for additional CI survey information. The Segment 18A EM&CP also discusses consultation with CI owners for Lake Champlain, correspondence with CI owners, and status of CI Owner Crossing Agreements which involve pre-lay protection.

3.3.5.2 Protection of Co-Located Infrastructure

Utility and other infrastructure crossings will be completed consistent with site-specific design measures for each crossing. These site-specific design measures are indicated on the Plan and Profile Drawings in Appendix 3-A. Further details will be provided in the CI Crossing Packages in Appendix 3-D, to be provided once crossing agreements are final.

For most CI crossings, protection will consist of location-specific combinations of pre-lay concrete matting, articulated pipe protection (UraGuard/Uraduct or similar protective duct product), and/or post-lay concrete matting. Refer to the approved Segment 18A EM&CP for discussion of pre-lay matting, which is not covered by the scope of this Segment 18B EM&CP.

The crossing of the CHPE alignment at the Fort Ticonderoga Ferry (FTF) location does not require pre-lay matting protection since the ferry cables will not lie below the CHPE cables, but rather



will rise and fall through the water above the CHPE cable as the ferry crosses the lake. A location-specific crossing approach is being developed by Certificate Holders and FTF, with consultation ongoing. Refer to Appendix 3-C for documentation capturing a sample of these communications and Section 6.5.2 for the protective measures currently expected to be employed.

The Certificate Holders have registered Project activities with “UDig NY,” and the construction Contractor will coordinate with “UDig NY” for locating underground utilities prior to any underground construction work. The Certificate Holders or their construction Contractor will coordinate with the underwater utility owner(s) prior to any construction work. The Certificate Holders will comply with procedures identified by the CI owners and representatives including but not limited to obtaining relevant rights and permissions where applicable.

3.3.5.3 Reimbursement of Costs to Co-Located Infrastructure

Subject to the provisions of Certificate Conditions 29(b) and 29(c), the Certificate Holders will reimburse owners and/or operators of CI for the reasonable costs they incur in the following activities:

- Consulting with Certificate Holders as described in Certificate Conditions 28(a) and 28(b).
- Reviewing pre-construction activities, designs, construction methods, maintenance, and repair protocols, and means of gaining access to Potential CI or CI proposed by the Certificate Holders.
- Reviewing studies and design proposals described by Certificate Condition 28(d) and the EM&CP filings described in Certificate Condition 162.
- Conducting or preparing such additional studies and designs as may be agreed to by the Certificate Holders or approved by the Commission pursuant to Certificate Condition 29(a)(3).
- Coordinating with, and monitoring the activities of, the Certificate Holders during pre-construction activities, construction, maintenance, and repair of the CHPE Project.
- Conducting maintenance and repair work on CI property or facilities, but only to the extent of increases in such costs that result from the presence of the CHPE Project.
- Repairing damage to Potential CI or associated property caused by the Certificate Holders or their representatives in connection with any studies, surveys, testing, sampling, preliminary engineering, pre-construction activities, construction, operation, maintenance, or repair of the CHPE Project.
- Scheduling and implementing electric system outages required by any studies, surveys, testing, sampling, preliminary engineering, preconstruction activities, construction, operation, maintenance, or repair of the CHPE Project.

Disputes concerning the Certificate Holders' cost reimbursement responsibility will be brought to the PSC for resolution. The time required to resolve any dispute arising will not be counted in the calculation of any limitation on the time available for commencement or completion of construction of the CHPE Project.

3.3.6 Public Water Supply Intakes

The cable route in Lake Champlain has been designed to avoid and minimize impacts to public water supply (PWS) intakes. Refer to Section 9.3 for detail regarding protection of PWS intakes during construction.

3.4 Burial Depth/Depth of Lowering

Target "burial depth" in Lake Champlain varies based on water depth, in accordance with CC 95(b) and the USACE permit.

Where the term "burial depth" is used, it is understood and taken to mean to mean "depth of lowering" as shown in Figure 2.

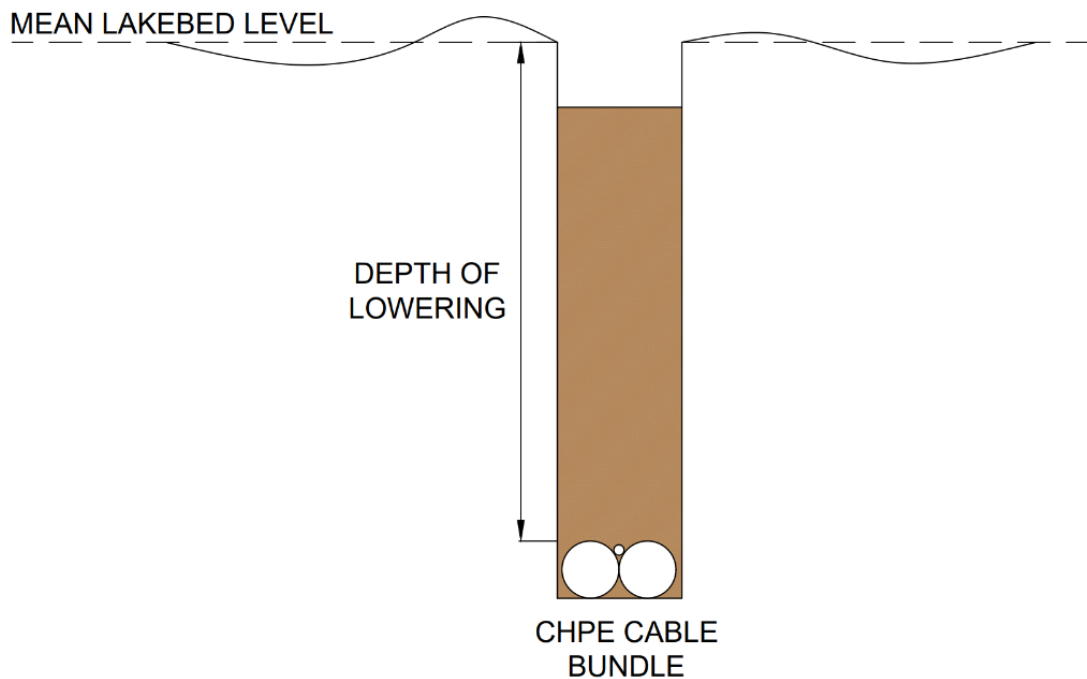


Figure 2. Definition of Depth of Lowering

The depth of lowering (DoL) is measured as the distance from the mean undisturbed lakebed level to the top of the buried cable, as shown in the above Figure.



In reference to compliance with the burial requirements, the DoL will be used as the value of assessment.

It is important to note that CC 95(b) cites mean low water as the datum for both Lake Champlain and the Hudson River. As Lake Champlain is not tidal, NOAA's Lake Champlain Low Lake Level datum would be the appropriate datum for application of CC 95(b) to Lake Champlain instead of the cited mean low water. NOAA's Lake Champlain Low Lake Level equates to +93.0 feet NGVD29 and +92.5 feet NAVD88.

- In locations where the lake's water depth is less than 150 feet (i.e., lakebed higher than elevation -57.5 feet NAVD88), the minimum depth of lowering (burial depth) is four (4) feet below the existing lake bottom except where the cables cross other utility lines or other infrastructure.
- In locations where the water depth is greater than 150 feet (i.e., lakebed lower than elevation -57.5 feet NAVD88), the target depth of lowering (burial depth) is four (4) feet below the existing lake bottom; however, the cable may be buried at shallower depths or laid on the lake bottom provided that the Certificate Holders provide a report prepared by a recognized authoritative technical consultant demonstrating and concluding that public health and safety can be appropriately protected without such burial, and the proposed installation method is approved by the PSC in a Segment EM&CP. The Navigation Risk Assessment provided in Appendix 3-E demonstrates and concludes that surface-lay of the cable on the existing lake bottom at these depths does not compromise public health, safety, or navigation. As such, in water depths greater than 150-foot water depth, the cable will be surface laid. No cable burial is proposed in waters with depths greater than 150 feet.
- Within the Narrows of Lake Champlain Navigation Project, where the federal navigation channel's authorized depth is -12 feet Lower Lake Level datum, the USACE permit requires a minimum depth of lowering (burial depth) of six (6) feet below channel's authorized depth in rock and eight (8) feet below authorized depth elsewhere. The southern end of the cable route at Putnam Station is located approximately 0.75 miles north of the northern extent of this federal navigation project; thus, this depth of lowering (burial depth) requirement does not apply to the route presented in this EM&CP.

Table 3.1 below provides an overview of where specific cable lay and burial methods are proposed. Cable burial is currently proposed for approximately 51.1 statute miles of the cable route, while surface-laying the cable on the lakebed is currently proposed for approximately 45.5 statute miles of the cable route. From the end of the marine route at Putnam Station, the cables will be placed in the conduits installed by HDD. These distances are subject to adjustment.

Table 3.1 – Cable Lay and Burial

Location (MP)	Section Length (miles)	Cable Lay Method	Cable Burial Method
0.0 – 1.2	1.2	Surface Float-in	Post-Lay Remedial Burial Tool or Diver Burial
1.2 – 21.3	20.1	Direct Bury - Plow Sled- Jet Plow Mode	Plow Burial
21.3 – 65.9	44.6	Surface Lay	None (Water Depths \geq 150')
65.9 – 73.0	7.1	Direct Bury - Plow Sled – Jet Plow Mode	Plow Burial
73.0 – 96.5	23.5	Direct Bury - Plow Sled – Shear Plow Mode	Plow Burial
96.5 – 96.7	0.2	Surface Float-in to HDD	Post-Lay Remedial Burial Tool or Diver Burial / HDD

3.5 Submerged Lands Easements

The Certificate Holders have obtained a construction permit from the New York State Office of General Services (OGS), which enables work to be completed in Lake Champlain. Once work is completed, the Certificate Holders will obtain a permanent easement from the OGS. The Certificate Holders are working to finalize Crossing Agreements with the owners of CI that will be crossed by the Project, where such agreements are required.

Signed Crossing Agreements, or compliant Unknown CI Owner Packages, will be submitted to the PSC prior to or concurrent with the request for a Notice to Proceed for this EM&CP.



4.0 Pre-Installation Activities

The following sections describe activities to be performed in preparation for cable installation in Lake Champlain. Refer to Appendix 4-A (Methodology Statement for Pre-Lay Grapnel Runs) and 5-A (Methodology Statement for Submarine Cable Installation) for additional information on installation methodology.

4.1 Communications and Notifications

Specific points of contact have been established for stakeholders and affected parties including, but not limited to:

- Public water intake owners;
- Private landowners;
- Mariners;
- Co-located utility owners;
- Private companies; and,
- Counties/towns/villages along the route.

Electronic notification will be made to designated contacts before crossing or passing an affected resource, on a schedule to be provided to stakeholders or as otherwise individually agreed with certain parties. For additional information regarding public communications, please see Appendix 1-D (Public Involvement Plan and Complaint Resolution Plan).

Local Notices to Mariners (LNM) will be submitted to the United States Coast Guard (USCG) for issuance a few weeks prior to the start of the marine field operations. Daily work location, minimum passing clearance request and other relevant information will be broadcast via marine VHF radio when required by the USCG. Courtesy notifications will be provided to emergency services and law enforcement that are local to project operational sites (if any).

4.2 Schedule

In-water pre-installation activities are anticipated to begin in Spring 2024. The pre-lay grapnel run (PLGR) is currently anticipated to take place in May 2024 in the Upper Lake. Two pre-lay grapnel run events are planned in the Upper Lake, spanning approximately 14 days and two days in May 2024, respectively. One pre-lay grapnel run event is planned in the Lower Lake, spanning approximately seven days in August 2024².

² See discussion in Section 2.4 regarding CHPE's request for additional temporal flexibility to install cable crossing between north and south Lake Champlain at Crown Point.



No overnight operations are proposed for pre-installation activities other than vessel transits for cable transport, which may continue during overnight hours. The pre-lay grapnel run is currently anticipated to operate with 12-hour daytime shifts.

4.3 Temporary Facilities

To facilitate pre-installation activities, temporary facilities will be utilized as described below.

4.3.1 Material and Equipment Staging

Wilcox Dock in Plattsburgh, New York will be utilized as an operational base. This location has served as an operational base for previous Lake Champlain projects and CHPE EM&CP Segment 18A. The base will serve multiple support functions including, mobilization of and support of Caldwell Marine International LLC (CMI) operational vessels, equipment, materials, and personnel.

CMI has received approval from NYS Canal Corporation and City of Plattsburgh for use of Wilcox Dock. CMI will transport material and equipment following Federal, State, and Local NYSDOT regulations. CMI has verified the entrance to Wilcox Dock is of sufficient width for delivery of required materials and equipment.

Refer to Section 4.2 of Appendix 4-A (Methodology Statement for Pre-Lay Grapnel Runs) for additional detail regarding the Wilcox Dock staging area.

Transportation of oversized loads via roadways may be required for the delivery of oversized loads to Wilcox Dock. The Certificate Holders shall obtain any necessary governmental permits associated with transport of such oversized loads and provide copies of such permits to the Secretary.

4.3.2 Construction Access

The Wilcox Dock will be utilized as the primary staging point for personnel transfer and Lake Champlain access. Additionally, five marinas will be utilized for access to various segments of the route: Safe Harbor Gaines Marina, Essex Marina, Bridgeview Harbor Marina, Monitor Bay Marina, and Chipman Point Marina. Parking will be available at these locations subject to agreements to be executed with each marina. Shuttle busses will be used where practical to reduce pressure on local marina parking. Crew will be transferred in accordance with the personnel transfer procedure. Daily travel to and from the installation sites will be managed by crew transfer vessels. Refer to Section 3.2 of Appendix 4-A (Methodology Statement for Pre-Lay Grapnel Runs) and Attachment 5 of Appendix 5-A (Methodology Statement for Submarine Cable Installation) for additional detail regarding marinas and construction access.

4.4 Vessels

The following vessels will be utilized to facilitate pre-installation activities in Lake Champlain:



- Mattress Crane Barge (MCB) – the primary operational platform for PLGRs.
- MCB Support Tug – truckable work vessel dedicated to the operational support of the MCB.
- Supporting Work Boats – to be available for general support of operations.
- Crew Boat(s) – for transit of personnel.
- Cable Transport Barges (six) – for transportation of power cable segments to and within Lake Champlain.
- Fiber Optic Transport Barge – for transportation of fiber optic cable segments to Lake Champlain.

Refer to Appendix 4-A and 5-A for additional detail regarding vessels.

4.5 Work to be Performed

Pre-installation activities included in this work are described below and build upon the activities outlined in the previous EM&CP Segments.

4.5.1 Pre-Lay Grapnel Run

The purpose of the PLGR is to remove surficial and shallow buried debris (jetsam, etc.), which may impede the safe progress of the plow installation vehicle or pose a risk to the installed cable product. PLGR runs will only be performed in the planned burial sections (approximately 52 miles) of the Lake Champlain cable route and will not be conducted immediately in the vicinity of existing co-located infrastructure or other sensitive areas. The International Cable Protection Committee (ICPC) recommends that PLGR operations be performed just prior to cable installation operation as this timing minimizes the risk of further route contamination in the interim period between completion of PLGR and commencement of lay.

Grapnel components and rig/deploy ‘grapnel trains’ that best suit the prevailing water depth and anticipated local lakebed conditions will be utilized. The initial PLGR efforts will consist of one centerline pass and two wing line passes, each offset from the centerline. Additional PLGR passes will be performed as necessary based on conditions encountered. Any non-hazardous or insignificant debris recovered to the barge during PLGR operations will be disposed at an appropriate off-site waste management facility. Any discovery of petroleum or hazardous materials will be reported immediately as outlined in Section 8.1.8 (“Unanticipated Discovery of Hazardous Waste”) of this EM&CP.

Refer to Appendix 4-A and Section 4.3 of Appendix 5-A for additional detail regarding the PLGR.

4.5.2 Cable Landing Preparation

Cables will be landed at Putnam Station via two HDPE ducts that will have been pre-installed in 2023 by means of HDD technology as approved in the Segment 17 EM&CP.

There is a short distance between the end of the HDPE ducts and the transition vault which is referred to as the tie-in. When both the HDD and the vault is installed, but prior to the pull in of the cables (anticipated in Fall 2024), this section will be excavated down to required burial depth. A pair of HDPE pipes will be installed in a duct bank between the HDD and the vault after which backfilling and compaction will commence. Afterwards the ground at the site will be reinstated and be ready for the cable pull-in preparation.

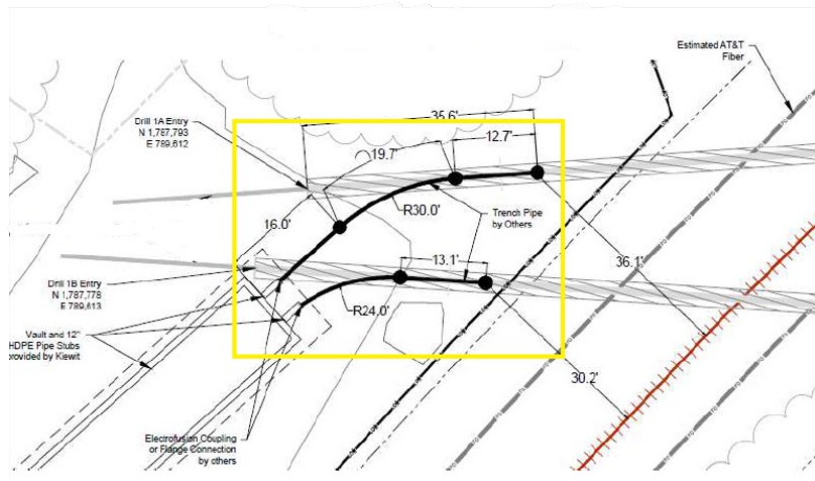


Figure 3. Plan view of the tie-in at Putnam Station (yellow box)

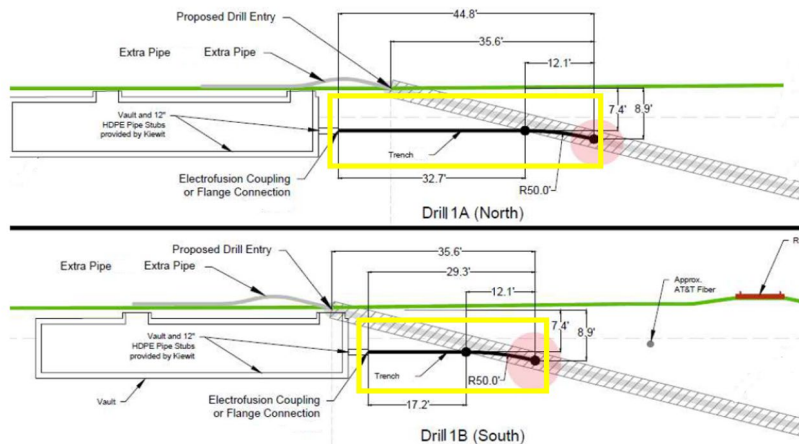


Figure 4. Profile view of the tie-in at Putnam Station (yellow box)

To prepare for cable installation, the HDD ducts will be re-proved and re-cleaned just prior to cable landing operations. This work will require the use of both land-based and marine-based assets. Refer to Sections 3.1.4 and 4.5.2.1 of Appendix 5-A for additional detail regarding cable landing preparation.



4.6 Environmental Monitoring

Environmental monitoring will be conducted during pre-installation activities, as outlined in Section 7.0 below. Refer to Section 7.0 for information regarding environmental monitoring.



5.0 Cable Installation Activities

The following sections describe construction activities to be performed during cable installation in Lake Champlain. Refer to Appendix 5-A (Methodology Statement for Submarine Cable Installation) for additional information on installation methodology.

5.1 Communications and Notifications

Specific points of contact have been established for stakeholders and affected parties including, but not limited to:

- Public water intake owners;
- Private landowners;
- Mariners;
- Co-located utility owners;
- Private companies; and,
- Counties/towns/villages along the route.

Electronic notification will be made to designated contacts before crossing or passing an affected resource, on a schedule to be provided to stakeholders or as otherwise individually agreed with certain parties. For additional information regarding public communications, please see Appendix 1-D (Public Involvement Plan and Complaint Resolution Plan).

Required notification of the cable installation construction activities will be completed by the Certificate Holders prior to the commencement of construction. Local Notice to Mariners (LNM) will be submitted to the USCG for issuance a few weeks prior to the start of the marine field operations. Daily work location, minimum passing clearance request and all other relevant information will be broadcast via marine VHF radio as required by the USCG. Courtesy notifications will be provided to emergency services and law enforcement that are local to project operational sites (if any).

5.2 Schedule

Cable installation is currently anticipated to commence in June 2024 at the U.S.-Canadian border with completion at Putnam Station anticipated by October 2024. In accordance with applicable permits, except to the extent the Commission grants some temporal relief to accommodate the transition from Upper to Lower Lake³, installation in the Upper Lake is anticipated to take place

³ See discussion in Section 2.4 regarding CHPE's request for additional temporal flexibility to install cable crossing between north and south Lake Champlain at Crown Point.



from June to August, and installation in the Lower Lake is anticipated to take place from September to October.

Both daytime and nighttime operations are currently proposed for this phase of construction to ensure the timely completion of cable installation in Lake Champlain within one season, and in adherence to applicable seasonal work windows. Cable splicing and cable installation will operate on a 24/7 schedule. Each cable splicing event is currently anticipated to last 7-10 days.

5.3 Temporary Facilities

To facilitate cable installation activities, temporary facilities will be utilized as described below.

5.3.1 Material and Equipment Staging

Materials and equipment related to the installation of the submarine cables will be staged at the Wilcox Dock in Plattsburgh, New York. Equipment will be mobilized to Wilcox Dock in the early phases of the CHPE Project. The base will serve multiple support functions including, namely mobilization and support of CMI operational vessels and personnel transfer.

CMI has received approval from NYS Canal Corporation and City of Plattsburgh for use of Wilcox Dock. CMI will transport material and equipment following Federal, State, and Local NYSDOT regulations. CMI has verified the entrance to Wilcox Dock is of sufficient width for delivery of required materials and equipment.

Refer to Section 4.5.1 of Appendix 5-A for additional detail regarding the Wilcox Dock staging area.

The Putnam Station Transitional HDD work site previously approved in Segment 17 will also be utilized to facilitate cable landing operations and temporary staging of equipment. Refer to Section 4.5.2 of Appendix 5-A for additional detail regarding the Putnam Station work site.

Transportation of oversized loads via roadways may be required for the delivery of oversized loads to equipment staging areas. The Certificate Holders shall obtain any necessary governmental permits associated with transport of such oversized loads and provide copies of such permits to the Secretary.

5.3.2 Construction Access

The Wilcox Dock will be utilized as the primary staging point for personnel transfer and construction access. Additionally, five marinas will be utilized for access to various segments of the route: Safe Harbor Gaines Marina, Essex Marina, Bridgeview Harbor Marina, Monitor Bay Marina, and Chipman Point Marina. Parking will be available at these locations subject to agreements with each marina. Shuttle busses will be used where practical to reduce pressure on local marina parking. Crew will be transferred in accordance with personnel transfer procedures. Daily travel to and from the installation sites will be managed by crew transfer vessels. Refer to



Section 4.5 and Attachment 5 of Appendix 5-A for additional detail regarding marinas and construction access.

5.4 Vessels

Vessels to be used for cable installation in Lake Champlain include the following:

- Cable Lay Barge (CLB) (modular barge with dynamic positioning) – the primary operational platform for cable installation.
- Cable Transport Barges (six) – for transportation of power cable segments from Albany through the canals and within Lake Champlain.
- Fiber Optic Transport Barge – for transportation of fiber optic cable segments to Lake Champlain.
- Supporting work boats, tugboats, and barges – to be available for general support of operations.
- Crew Boats – for personnel transfer.
- Survey Boats – for environmental monitoring.

The cable lay barge will be mobilized from Wilcox Dock along with support vessels (crew transfer vessels and support barges).

Refer to Appendix 5-A for additional detail regarding working and supporting vessels.

5.5 Work to be Performed

Construction activities included in this phase of work are described below.

5.5.1 Cable Laying and Burial

The installation of the two power cables and one fiber optic cable will proceed (nominally) from north to south, starting at the US-Canadian border and ending at the HDD at Putnam Station. Currently, several cable installation methods are proposed at varying locations throughout the lake in accordance with applicable permit conditions. Each installation method is outlined below.

5.5.1.1 Float out at Rouses Point

Due to draft and bridge interferences, the CLB cannot travel north of the abandoned train trestle bridge near Rouses Point. Thus, to install the cables north of this location, cable installation via float out will be conducted in the northernmost portion of the cable route from Rouses Point to the US-Canadian border. This operation will include floating approximately 1.2 miles of cable from the CLB north into Canada. The CLB will be positioned south of the Rouses Point bridge and a pull-in support barge will be positioned at the border. A floatation sleeve (or similar floatation device) will be attached to the cables, and the cable will be pulled into position. Approximately 330 feet of cable will be floated over the border into Canada and received by Canadian vessels



contracted by Hydro Quebec; this will not require crossing of the border by vessels or personnel. Once pulled into position, the floatation will be deflated/removed, and the cable will be lowered to the lakebed. The cable will be buried using a post-lay/remedial burial tool.

Refer to Sections 3.2.3 and 4.6.4.2 of Appendix 5-A and Attachment 7 of Appendix 5-A for additional detail regarding the float out and installation at Rouses Point.

5.5.1.2 Hand Burial Using Divers

The hand burial method using divers is an alternative cable installation method where jet plow or shear plow cannot be utilized. Refer to Section 4.6.4.2 of Appendix 5-A for additional detail regarding hand remedial burial. Additional remedial burial options are described in Section 5.5.5 below.

5.5.1.3 Jet Plow

Cable installation via towed jet plow will be conducted in the Upper Lake (north of Crown Point) with water depths less than 150 feet in accordance with environmental permitting restrictions. The jet plow will lower the cable to a minimum of 4 feet below the lakebed in a single trench. Two segments of jet plowing are currently anticipated between Rouses Point and Crown Point, New York (approximately 20 miles and 7 miles, respectively). Refer to Sections 4.6.4.3 and 4.6.4.4 of Appendix 5-A and Attachment 2 of Appendix 5-A for additional detail regarding jet plow operations.

5.5.1.4 Shear Plow

Cable installation via shear plow will be conducted in the Lower Lake (south of Crown Point) with water depths less than 150 feet in accordance with environmental permitting restrictions. Note that shear plow mode may be used in the North section of Lake Champlain under the Certificate Conditions. The shear plow will lower the cable to a minimum of 4 feet below the lakebed. Unlike jet plow, pressurized water feed is disabled in shear plow mode. One segment of shear plowing is currently anticipated between Crown Point, New York, and the Putnam Station cable landing (approximately 24 miles). Refer to Section 4.6.4.3 and 4.6.4.4 of Appendix 5-A and Attachment 2 of Appendix 5-A for additional detail regarding shear plow operations.

5.5.1.5 Surface Lay

Cable installation via surface-lay of the cable on the lakebed surface is currently proposed in areas with water depths greater than 150 feet in accordance with the Certificate. Approximately 45 miles of cable will be surface-laid at these depths with remotely operated vehicle (ROV) touchdown monitoring. Refer to Appendix 5-A for additional detail regarding free-lay operations.

5.5.2 Cable and CI Protection Measures

Articulated pipe protection (UraGuard/Urduct or similar protective duct product) will be installed at specific locations to provide cable or crossing protection where required. Where CI assets cannot be avoided, cable and CI protection measures are proposed. For certain CI crossings, including all crossings where water depths are greater than 150 feet, articulated pipe protection (UraGuard/Urduct or similar protective duct product) will be installed with the cables during installation. Refer to Section 4.4.2 of Appendix 5-A for additional detail regarding articulated pipe protection.

5.5.3 Cable Splicing

A total of eight power cable segments (each approximately 12.5 miles long) will be installed within Lake Champlain, necessitating seven cable splicing events (two splices per event) to join each segment of cable. Cable splicing will occur on the CLB with 24/7 operations lasting approximately 7-10 days, while the CLB needs to stay in the same location. Splicing operations are performed on the deck of the CLB inside a splicing habitat which provides a protected and controlled environment to ensure the quality of the work performed on the splices.

When a full segment of cable has been installed in the Lake the cable ends are positioned inside the splicing habitat. The cables for the next segment are brought to the CLB with the help of Cable Transport Barges. The initial end of the cables for the next segment is routed to the splicing habitat and the splicing operation can commence. The splicing is performed by skilled and certified NKT personnel following the sequence as per below:

- Cut the cable ends to the correct length
- Prepare cable ends for splicing
- Install the splice
- Install outer casing and bending restrictors



Figure 5. Preparation of Cable Ends Prior to Installation of Splice in Progress



Each cable splice will be tested prior to installing the next segment of cable.

Should unforeseen circumstances necessitate departure of the CLB from a worksite along the cable route (weather, mechanical breakdown, etc.), the cables need to be cut and sealed and placed on the bottom of the Lake until the CLB can return to the site and perform an additional splice of the fiber optic cable and the power cables.

Cable splices cannot pass through the plow and will be lowered to depth, in water depths less than 150 feet, to the required 4 feet with means of post lay methods or if the burial depth cannot be reached protected by mattresses.

Refer to Sections 4.6.4.10 and 4.6.4.12 of Appendix 5-A for additional detail regarding cable splicing.

5.5.4 Cable Landing

After the cable installation has progressed to the southernmost segment in Lake Champlain, the cables will be landed via the pre-installed land-to-water HDD ducts at Putnam Station. The landing will include the floated pull-in of the cables via the two HDPE ducts.

Cables will be landed to shore by means of a 'second end' type landing that will be performed at the end of Lake Champlain cable lay operations. The three CHPE submarine cables will be landed at Putnam Station as follows:

- Duct A: Power cable A (Single Stripe) + fiber optic (FO) cable
- Duct B: Power cable B (Double Stripe)

Refer to Section 4.6.4.12 of Appendix 5-A for additional detail regarding cable landing procedures.

5.5.5 Remedial Burial Actions

Where jet or shear plowing techniques have not achieved required depth of lowering, additional remedial burial actions may be taken to adjust the depth of the cables or to install protections for the cable at the depths achieved. This may include remedial burial of non-plowed areas, such as the cable splice locations and non-plowed cable landing transition. It is anticipated that remediation of these sites may be achieved via diver-assisted burial of the exposed or non-conforming cable. Alternatively, post-lay cable burial via a remedial burial tool—such as the Amphibious Hi-Traq Jetter Vehicle (discussed in Appendix 5-A, Attachment 8) or a remotely powered tracked or free-flying jet trenching machine—may also be used so long as water quality trials conducted using the selected equipment can demonstrate to DPS and NYSDEC that the equipment complies with all required water quality standards and parameters set forth in the Article VII Certificate and/or the Project's WQC. Refer to Section 4.1.2.2 of Appendix 5-A and Attachment 8 to Appendix 5-A for additional information regarding some of the potential remedial burial tool options under consideration by the Project; water quality trial results for any tool(s)



selected will be provided prior to use. Refer to Section 6.5.3 below for discussion of post-lay mattress installation.

5.6 Environmental Monitoring

Environment monitoring will be conducted during cable installation construction activities as outlined in Section 7.0 below. In addition to general environmental monitoring efforts, suspended sediment and water quality will be routinely monitored during cable installation in accordance with the Suspended Sediment/Water Quality Monitoring Plan attached as Appendix 7-B to this EM&CP. In accordance with the plan, a survey boat will be deployed during active cable installation via jet plow and shear plow to collect in-situ data and samples for laboratory analysis. Assessments of water quality and suspended sediment plumes will be conducted continuously with real-time total suspended solids (TSS) monitoring and with twice-daily water sampling for laboratory analysis. Refer to Section 7.4.1 for additional detail regarding the Suspended Sediment/Water Quality Monitoring Plan.



6.0 Post-Installation Activities

The following sections describe activities to be performed following completion of cable installation in Lake Champlain, which primarily consist of installation of post-lay protection. Refer to Appendix 6-A (Methodology Statement for Post-Lay and Remedial Mattress Placement) and 5-A (Methodology Statement for Submarine Cable Installation) for additional information.

6.1 Communications and Notifications

Specific points of contact have been established for stakeholders and affected parties including, but not limited to:

- Public water intake owners;
- Private landowners;
- Mariners;
- Co-located utility owners;
- Private companies; and,
- Counties/towns/villages along the route.

Electronic notification will be made to designated contacts before crossing or passing an affected resource, on a schedule to be provided to stakeholders or as otherwise individually agreed with certain parties. For additional information regarding public communications, please see Appendix 1-D (Public Involvement Plan and Complaint Resolution Plan).

Local Notice to Mariners (LNM) will be submitted to the USCG for issuance a few weeks prior to the start of the marine field operations. Daily work location, minimum passing clearance request and all other relevant information will be broadcast via marine VHF radio as required by the USCG. Courtesy notifications will be provided to emergency services and law enforcement that are local to Project operational sites (if any).

6.2 Schedule

Post-installation activities will commence on a rolling basis as the cable is installed. Post-lay mattress installation is currently anticipated to commence in June 2024 with completion in October 2024. Post-lay mattress installation in the Upper Lake is anticipated to take place from June to August, and post-lay mattress installation in the Lower Lake is anticipated to take place from September to October. There are no environmental TOY restrictions applicable to post-lay mattressing. The schedule for cable protection measures at the Fort Ticonderoga Ferry will be determined following execution of a crossing agreement.

No overnight operations are proposed during this phase of construction. Post-lay mattress installation is currently anticipated to operate with 12-hour daytime shifts.



6.3 Temporary Facilities

To facilitate post-installation activities, temporary facilities will be utilized as described below.

6.3.1 Material and Equipment Staging

Materials and equipment related to the installation of the submarine cables will be staged at the Wilcox Dock in Plattsburgh, New York. Equipment will be mobilized to Wilcox Dock in the early phases of the CHPE Project. The base will serve multiple support functions including, namely mobilization and support of CMI operational vessels and personnel transfer.

CMI has received approval from NYS Canal Corporation and City of Plattsburgh for use of Wilcox Dock. CMI will transport material and equipment following Federal, State, and Local NYSDOT regulations. CMI has verified the entrance to Wilcox Dock is of sufficient width for delivery of required materials and equipment.

Refer to Section 3.2 and Attachment 4 of Appendix 6-A for additional detail regarding the Wilcox Dock staging area.

The Tomkins Cove laydown yard will also be utilized to facilitate post-lay mattress operations and associated temporary staging of equipment. This location has served as a work site for previous CHPE construction activities. Refer to Section 3.3 and Attachment 3 of Appendix 6-A for additional detail regarding Tomkins Cove laydown yard.

Transportation of oversized loads via roadways may be required for the delivery of oversized loads to equipment staging areas. The Certificate Holders shall obtain any necessary governmental permits associated with transport of such oversized loads and provide copies of such permits to the Secretary.

6.3.2 Construction Access

The Wilcox Dock will be utilized as the primary staging point for personnel transfer and construction access. Additionally, five marinas will be utilized for access to various segments of the route: Safe Harbor Gaines Marina, Essex Marina, Bridgeview Harbor Marina, Monitor Bay Marina, and Chipman Point Marina. Parking will be available at these locations subject to agreements with each marina. Shuttle busses will be used where practical to reduce pressure on local marina parking. Crew will be transferred in accordance with personnel transfer procedure. Daily travel to and from the installation sites will be managed by crew transfer vessels. Refer to Section 3 of Appendix 6-A and Attachment 5 of Appendix 5-A for additional detail regarding marinas and construction access.

6.4 Vessels

The following vessels will be utilized to facilitate post-installation activities in Lake Champlain:



- MCB – the primary operational platform for post-lay mattress installation.
- Supporting work boats – to be available for general support of operations.
- MCB Support Tug – dedicated to the operational support of the MCB.
- Crew Boat –for transit of personnel.
- Mattress Feeder Barge (MFB) – to provide replenishment of mattresses aboard the MCB.
- MFB Support Tug – dedicated to the operational support of the MFB.

Refer to Appendix 6-A and 5-A for additional detail regarding vessels.

6.5 Work to be Performed

Construction activities included in this phase of work are described below.

6.5.1 Post-Lay Mattress Installation for Co-Located Infrastructure Protection

Where indicated by site-specific conditions/crossing agreements or as otherwise appropriate in waters shallower than 150 feet, post-lay concrete mattresses will be installed at the location of select CI crossings. Installation of post-lay mattresses will be completed in accordance with Project permit and utility crossing agreement requirements. Refer to Appendix 6-A and 5-A for additional detail regarding installation of post-lay concrete mattresses.

6.5.2 Cable Protection Measures at the Fort Ticonderoga Ferry

Due to the complexities of the Fort Ticonderoga Ferry crossing, a specific cable protection solution is currently proposed. Cable protection measures will be determined following completion of consultation with the ferry owners. Additional information will be provided following execution of the crossing agreement.

6.5.3 Post-Lay Mattress Installation for Remedial Cable Protection

Where jet or shear plowing techniques have not achieved required depth of lowering, additional remedial burial actions will be taken to adjust the depth of the cables or to install protections for the cable at the depths achieved. In areas where the cable has not been lowered to the required four (4) feet, remedial post-lay concrete mattresses will be installed on the bottom surface of the lake overlying the area of inadequate cable burial (in water depths less than 150 feet). Refer to Appendix 6-A and 5-A for additional detail regarding installation of post-lay concrete mattresses.

6.5.4 Clean-up and Restoration of Temporary Work Sites

Upon completion of construction, temporary staging areas and work sites will be restored to their original condition and character as much as possible. Debris resulting from construction will be disposed of at a State-approved solid waste disposal site in compliance with all applicable environmental regulations. Usable construction equipment and materials may be collected and



transported to off-site storage facilities or to other Facility segments for use in later phases of construction.

Vessels and barges will be demobilized from Lake Champlain via the Lake Champlain Canal or via road transport following disassembly at Wilcox Dock.

6.6 Environmental Monitoring

Environmental monitoring will be conducted during post-installation construction activities, as outlined in Section 7.0 below. Refer to Section 7.0 for information regarding environmental monitoring.



7.0 Monitoring and Compliance

The following sections describe procedures for monitoring and compliance before, during, and following installation of the submarine cable in Lake Champlain. Facility inspections and maintenance procedures are also discussed. Refer to the Compliance Assurance Plan in Appendix 7-A for additional information.

7.1 Environmental Supervision and Construction Oversight

During construction of the Project, the Certificate Holders will employ construction oversight staff as required by the Certificate and to ensure that regulatory requirements, plans, and specifications are appropriately met. The construction oversight staff will perform a variety of functions. The duties of each are described below.

Inspector(s) and monitor(s) may perform multiple inspection roles if each is qualified to serve in these roles.

The Certificate Holders will submit the name and qualifications of the Construction Inspectors(s) and/or Environmental Inspector(s) to New York State Department of Public Service (DPS) Staff at least two weeks before construction starts.

7.1.1 On-board Representatives

For offshore operations executed by a subcontractor, two NKT Inc. (NKT) representatives will be present onboard to supervise the works. These personnel will usually be Site Managers or Project Engineers but may be other positions with suitable offshore experience.

The NKT representatives will perform the following tasks on board the vessels:

- Supervise the operation;
- Give instructions to the subcontractor;
- Work as the main contact for communication with the subcontractor's on-board personnel;
- Communicate with the on-board CHPE representatives;
- Ensure that the works is carried out in a safe manner;
- Write daily progress reports and communicate with the land-based Project organization;
- Ensure that Environmental Health and Safety (EHS) standards and regulations are followed on the vessel; and



- Report incidents to land-based Project organization and on-board CHPE representatives.

7.1.2 Site Manager

There will be a full-time Site Manager during cable installation; for other pre- and post-cable installation activities, the Site Manager will be full- or part-time as appropriate to the level of activity. The Site Manager will be responsible for managing the construction Contractor's performance for the successful completion of construction activities. The Site Manager will provide proactive leadership and direction to the Contractors for safety, security, schedule, and environmental compliance; confirm that assigned personnel are properly directed, trained, licensed, and evaluated within the Certificate Holders' guidelines and procedures; and maintain a thorough understanding of emergency response procedures to help arrange and provide resource support as needed.

7.1.3 Construction Manager(s)

There will be full-time Construction Manager(s), who will report to the Site Manager, during cable installation for this Segment; for other pre- and post-cable installation activities, the Construction Manager(s) will be full- or part-time as appropriate to the level of activity. The Construction Manager(s) will support the Site Manager by overseeing the Contractors' performance of construction work; reinforcing that contractors must maintain safety, security, schedule, and environmental compliance at all times; verifying that construction field work complies with the criteria per the Certificate Holder's construction specifications; writing and publishing reports detailing results of field construction audits; issuing and tracking non-conformances for items found not meeting the required specification; and requiring submission of corrective and preventive action for non-conformances found.

7.1.4 Environmental Compliance Manager

The Environmental Compliance Manager (ECM) will serve as the Certificate Holders' point of contact for information related to the environmental compliance status of the work. The ECM will be responsible for coordinating with the Site Manager, Construction Manager(s), the Certificate Holder's environmental staff, and the environmental inspecting team regarding compliance matters. This position will coordinate monitoring and staffing needs to ensure appropriate monitors are present during construction. The ECM, with assistance from Environmental Inspector(s), will be responsible for environmental oversight throughout the construction, and restoration phases, and for monitoring compliance with environmental protection provisions of the Certificate and the EM&CP. Additionally, the ECM will be responsible for performing quality assurance/quality control of the daily reports and compiling a weekly summary report for the Certificate Holders. The ECM will provide guidance to the Environmental Inspector(s) on interpretation of requirements of the Certificate, EM&CP, and other permits and approvals.



7.1.5 Environmental Inspector(s)

The number of Environmental Inspector(s) (EI) will be commensurate with the level of Project activity at any given time. The Environmental Inspector(s) will monitor environmental compliance with environmental requirements of the Project during construction activities by working directly with the construction crews daily to reinforce and encourage a team approach, and to develop a compliance culture that is understood and executed by Contractor staff and personnel. Environmental Inspector(s) will meet the requirements of a “Qualified Inspector” as defined by GP-0-20-001. In addition, the Environmental Inspector(s) will be responsible for understanding the requirements of the Certificate, EM&CP, and other permits and approvals. They will assist and report to the ECM, complete daily site inspection reports, participate in pre-job briefings and tailboards as part of the construction team to help develop and maintain the Project-wide culture of environmental compliance and to help contractors understand compliance requirements, and address potential areas of non-compliant conditions. Any items identified to be non-compliant or with the potential to be non-compliant if not addressed immediately will be communicated to the site superintendent or foreman prior to leaving the site. The Environmental Inspector(s) shall have stop work authority over aspects of the Project that could create an adverse impact to the environment. The EI(s) will be responsible for completing daily inspections and submitting weekly status reports; refer to Section 7.2 for a discussion of compliance reporting requirements.

7.1.5.1 Aquatic Inspector

At least one Aquatic Inspector will be on the main vessel or barge during construction activities. It is the Aquatic Inspector’s job to monitor compliance with regulatory and permit requirements for the underwater portions of the cable installation. The Aquatic Inspector will monitor construction activities on, above, or below the State's waters. If construction and installation appear to be in violation of the Certificate of Environmental Compatibility and Public Need, the Aquatic Inspector may direct the field crews to stop the specific potentially harmful activity immediately and attempt to assist in preventive or remedial action.

7.1.6 Safety Inspector

At least one Safety Inspector will be responsible for providing professional safety and health oversight, conducting work area inspections, and confirming compliance with the Certificate Holders’ safety requirements. The Safety Inspector will be on site when any higher-risk activities are being conducted and will inspect construction activities for hazards that could be eliminated. Any incidents that may occur will be reported to and analyzed by the Safety Inspector. The Safety Inspector will conduct Project specific on-site safety training.

7.1.7 Quality Assurance Inspector

At least one part-time Quality Assurance Inspector will perform quality audits on the Project facilities and components purchased for the Project to make sure the material is consistent with the specifications described in the EM&CP and Plan and Profile Drawings (Appendix 3-A). If materials fail to meet the criteria outlined in the Quality Control Plan, the Quality Assurance



Inspector will be responsible for issuing and tracking non-conformances for the Project facilities and components as well as requiring submission of corrective and preventive action for the identified non-conformances. The Quality Assurance Inspector will work closely with the Construction Manager(s) to verify project personnel are adhering to the quality control procedures.

7.2 Reporting Requirements

The Certificate Holders will conduct the compliance inspections and reporting, detailed below, for the Project. In addition, the Certificate Holders will organize and conduct site-compliance audit inspections and reporting for DPS as needed, but not less frequently than once per month during the pre-installation, installation, and post-installation phases. Additionally, the Environmental Inspector(s) is responsible for completing daily inspections and submitting weekly status reports.

7.2.1 Monthly Status Reports

A monthly EHS Report will be completed for each month the Project has ongoing installation related activities in Lake Champlain. The report will include a review of project performance, safety performance, incident rate, lost time incident rate, safety inspections and action items completed, and safety training and meetings completed. The Certificate Holders will provide a written record of the results of the monthly review, including resolution of issues and additional measures to be taken, to agencies involved in the inspection audit and as part of its scheduled construction update reports. Scheduled construction activities and locations for the following month will be included in the status report.

7.2.2 Environmental Inspection Reports

Following each environmental inspection, an environmental inspection report will be completed by the Environmental Inspector(s) performing the inspection, detailing compliance of the inspection location with all applicable environmental requirements. Deficiencies will be noted and reported to the Construction Manager(s) responsible for the noted project location. Deficiencies should be corrected prior to the inspector leaving the site if feasible. Any deficiency not immediately corrected will be listed in an "Open Items" log and its status will be confirmed during the next site inspection. This process will be repeated until the deficiency is appropriately addressed. The Construction Manager(s) will be notified of deficiencies prior to the environmental compliance personnel leaving the site. The contractor must initiate correction of the deficiency within one business day and the correction must be completed in a reasonable and expeditious timeframe. The Environmental Inspector(s) will submit their reports to the ECM daily. The ECM will be responsible for reviewing and archiving the inspection reports.

7.3 Worksite Health and Safety

Measures will be taken by the Certificate Holder and project personnel to protect the health and safety of all parties throughout the duration of the Project. Detailed worksite health and safety procedures are described in the sections below. A full-time Safety Inspector will be on site during



cable installation to provide safety and health oversight and confirm compliance with the Certificate Holder's safety requirements (see Appendix 7-A, Compliance Assurance Plan); for other pre- and post-cable installation activities, the Safety Inspector may be full- or part-time as appropriate to the level of activity.

7.3.1 Safety Training & Education

Training, instruction, and periodic briefings will be provided by the Certificate Holders and their contractors to all Project-related personnel, as appropriate, to verify that environmental, health, and safety precautions and measures are followed during construction. Training will be provided before employees or subcontractors are assigned to new or different work activities and periodically to reinforce their awareness. Where required, annual refresher training will also be provided. Each party's management is responsible for ensuring that safety training is made available to its employees or subcontractors as required by their specific work activities. The Site Superintendent (SS) will be responsible for assuring that employees or subcontractors have the required training to perform their work safely. This training will include specific information on how work is conducted as well as the hazards the workers may be exposed to in relation to their own specific craft and work procedures. Daily tailboard meetings will be held at the start of each construction day to refresh awareness of general safety topics.

7.3.2 Stop Work Procedures

Any Project personnel can stop work for health and safety reasons by notifying the Project Superintendent or Captain of the Vessel. All Project personnel will also be encouraged to notify any of these individuals if they observe conditions that could potentially be in non-compliance so appropriate corrective action(s) can be taken. Any stop work notice will be reported to the Site Manager who will report it to the Certificate Holders management in a timely manner noting the incident specific information, such as time, date, location, details of the incident, person observing the incident, and response taken. DPS representatives may issue a stop-work order where permitted by the Certificate for any construction or maintenance activities that violate or may violate the terms of the Certificate or any other valid order.

7.4 Supporting Monitoring Studies

In accordance with CC 159(k), 159(ee), 159(ff), and 163, and conditions 12 and 14 of the WQC, several monitoring studies will be conducted before, during, and/or after installation of the cables in Lake Champlain. These monitoring studies are outlined below, and related study plans are contained in Appendix 7-B (Suspended Sediment / Water Quality Monitoring Plan), 7-D (Bathymetry, Sediment Temperature, and Magnetic Field Standard Operating Procedure), and 7-E (Benthic and Sediment Monitoring Pre- and Post-Energizing Standard Operating Procedure).

7.4.1 Suspended Sediment / Water Quality Sampling and Monitoring Study

A suspended sediment/water quality monitoring Standard Operating Procedure was developed pursuant to Certificate Condition 159 of the Certificate and the 401 WQC issued and effective on January 18, 2013. A draft Standard Operating Procedure (SOP) or study plan was submitted to the DPS Staff for review, comment, and approval in consultation with New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of State (NYS DOS) (see DMM Item 752, filed October 18, 2013). The final version is provided in Appendix 7-B (Suspended Sediment / Water Quality Monitoring Plan).

A pre-installation trial of the jet plow occurred along a 1,000-foot route in the Upper Lake on August 31, 2022, while the pre-installation trial of the shear plow was completed in the Lower Lake on September 1, 2022. The objectives of the TSS monitoring program were to assess the amount of sediment resuspension in the water column during operation of the jet plow and shear plow relative to the 401 WQC, and to potentially make recommendations for modifications to the jet/shear plow operation or monitoring procedures based on the results of the pre-installation trials. All TSS levels from samples collected at the Upper Lake site before, during, and after the trial had TSS values below the detection limit (“BDL”) of the laboratory analysis. For the Lower Lake, TSS measurements collected during the shear plow trial showed slightly higher levels of TSS, but none approached exceeding ambient concentrations by 100 mg/L as per the condition described in the WQC. An increase of 4 mg/L above ambient was the maximum observed value above background for TSS levels during the shear plow trial in the Lower Lake. The final report is provided as Appendix 7-C (Suspended Sediment Monitoring during Pre-Installation Trials for the Champlain Hudson Power Express Project – Lake Champlain Report).

7.4.2 Bathymetry, Sediment Temperature, and Magnetic Field Study

A pre- and- post-energizing bathymetry, sediment temperature, and magnetic field SOP (or study plan) was developed in accordance with CC 163 of the Certificate (see DMM Item 751, filed October 18, 2013). The final SOP is provided as Appendix 7-D (Bathymetry, Sediment, Temperature, and Magnetic Field Standard Operating Procedure).

Pre-energizing bathymetry surveys have been conducted along the submarine cable installation route and post-installation bathymetric surveys will be used to monitor recovery of the bottom substrate after cable installation. The bathymetry survey will be repeated 1 year after the cable installation and then 3 years after cable installation. Initially (year 1), the entire cable route will be surveyed to compare with the bottom elevations of the pre-installation survey. Where the substrate has returned to the pre-installation configuration, these segments will not be resurveyed during any subsequent survey. If a cable segment has not returned to pre-installation condition after 3 years, it will be resurveyed after 5 years (total of 8 years after cable installation).

Pre- and post-installation surveys of sediment temperature and thermal resistivity along the cable route will be conducted along the route at approximately five-mile intervals. As currently planned, the post-energizing survey will occur 3 years after completion of cable installation, assuming cable energizing, or when the transmission system is operating at 500 to 1,000 MW if it is not doing so



3 years after installation. The post-energizing survey will be conducted during the same season as the pre-installation survey. However, the Certificate Holder is discussing the potential to complete this study post-energizing to allow for sampling in the same year. Any such modification would be done in consultation with the DEC and the New York State Department of State and subject to approval by DPS Staff.

At selected locations along the cable route a pre-installation and post-energizing magnetometer survey will be conducted. In Lake Champlain, the monitoring sites will include deep water areas of the central lake and shallow water in the south lake area. Once the routing for a segment has been approved, the Certificate Holders will review existing data to determine survey locations. The final proposed locations will be provided to the NYSDEC, NYSDOS, and NYSDPS in tabular and map form for review. The Certificate Holders will survey approximately 30% of the total length of the in-water cable. The post-energizing survey will occur 3 years after installation, assuming cable energizing, or when the transmission system is operating at 500 to 1,000 MW if it is not doing so 3 years after installation. The post-installation survey will be conducted within the same season as the pre-installation survey.

7.4.3 Benthic and Sediment Monitoring Study

A pre- and- post-energizing benthic monitoring and sediment sampling SOP (study plan) was developed in accordance with CC 163 of the Certificate. The SOP is provided in Appendix 7-E (Benthic and Sediment Monitoring Pre- and Post-Energizing Standard Operating Procedure). It was submitted to DPS Staff for review, comment, and approval in consultation with NYSDEC and the NYSDOS (see also DMM Item 751, filed October 18, 2013). In addition, the benthic study must be conducted in accordance with Special Conditions HH and II of the USACE permit (Permit Number NAN-2009-01089-M7).

Benthic sampling will occur in Lake Champlain to characterize and compare pre- (i.e., existing) and post- installation abundance and distribution of macroinvertebrates occurring in the vicinity of the cable route. The benthic post-energizing surveys will be conducted at the following milestones: (a) 3 years after installation assuming cable energizing; and (b) when the transmission system is operating at 500 to 1,000 MW if it is not doing so 3 years after installation.

Sediment chemistry surveys will be conducted to characterize existing and post-energizing sediment conditions proximate to the cable in Lake Champlain. Sediment sampling in Lake Champlain will be made at or within 30 feet of the benthic macroinvertebrate sampling stations as described above. Sediment post-energizing sampling will be conducted 3 years after installation during the same season as the first benthic sampling event.

7.5 Existing Structure Inspections

If applicable, in areas where trenching activity will occur within 100 feet of any building, facility, or structure foundation, the Certificate Holders will offer to inspect such foundation structure before, during, and after construction. This inspection will document conditions at each significant stage of construction, including measurements of foundation crack lengths, and will provide



photographs of any existing and/or post-construction damage. A report detailing foundation condition findings will be provided to the building, facility, and/or structure owner/operator and to DPS Staff within 30 days of completion.

7.6 Cable Operation, Maintenance, and Inspection

As the owner, CHPE LLC will be responsible for ensuring the long-term successful operation of the Project over its design life. System performance will be continuously monitored from several locations by a dedicated O&M Team to ensure proper operation of the system. This monitoring will allow for immediate fault detection and instantaneous feedback on any operational deviations which may prevent the system from functioning optimally.

The Astoria (NY) and Hertel (Quebec) Converter Stations will be continuously staffed by the O&M Team with notifications, monitoring, and control protocols established and integrated as part of the overall automated operation of the system.

The CHPE Project is projected to come online in Spring 2026.

The transmission line's facilities in Canada, including an HVDC converter station in Hertel, Quebec, will be constructed, operated, and maintained by Hydro Quebec and its affiliates. CHPE LLC will construct, operate, and maintain the U.S. facilities including marine and terrestrial cable sections, the Astoria Converter Station, and the Operations Control Center.

An overall Facility Operation and Maintenance Plan shall be developed during construction and submitted to the relevant authorities prior to operations.

7.6.1 Operations and Monitoring

A fiber-optic cable monitoring system is being integrated into the cable bundle to actively monitor the HVDC cables along the entire HVDC power cable route, both terrestrial and submarine. In addition to the main stations in Hertel and Astoria, there are 5 land-based monitoring stations linked to both.

HVDC-system-related control functions are coordinated by both converter stations (Hertel and Astoria), such as starting/stopping power transmission, power/current reference value setting, and controlling DC voltage.

7.6.2 Scheduled Inspection and Maintenance (Marine)

7.6.2.1 Post-Installation Cable Inspection, Short-term

In accordance with CC 161, the Certificate Holders have developed an Immediate Post-Installation Inspection Plan which will be mobilized following cable installation. This plan includes the method for determining the actual cable location and actual depth of lowering of the cable upon completion of installation, standards to be used to determine what remedial actions are



warranted consistent with Good Utility Practices (e.g., additional burial and/or protection efforts) in all locations where the cable depth of lowering is less than the applicable target depth of lowering, standards to be used to determine if any damage has been or will be caused to any pre-existing facility and/or infrastructure as a result of cable installation, operation, or maintenance, and remedial measures therefore, and the method and timing for undertaking such efforts. The Immediate Post-Installation Inspection Plan is attached as Appendix 7-F.

7.6.2.2 Post-Installation Cable Inspection, Long-term

In accordance with CC 161, the Certificate Holders will develop a Maintenance and Emergency Action Plan to be implemented following cable installation. The Maintenance and Emergency Action Plan will be provided as a part of the overall facility Operations and Maintenance Plan prior to operation.

In accordance with CC 161 and USACE permit NAN-2009-01089-M7, the Certificate Holders will conduct inspections of the installed subaqueous cable at least once every five (5) years. Such inspections will verify the cable's location, depth of lowering, verify the horizontal and vertical location of identified non-burial cable locations, determine the durability of protective concrete mattresses and articulated protective pipe, and determine whether maintenance of any kind would be required on any installed structures. The findings of the inspections will be provided in a report to the USCG, USACE, and NYSDEC. The report will contain evaluations and supporting documents demonstrating that the cable, in its then-existing condition, is still protected by the minimum depth of lowering required by the USACE permit and/or that the authorized concrete mattress armament will continue to prevent anchor strikes from vessel traffic. Additionally, this report will specify the Project contact who will be responsible for verifying the cable location.

7.6.3 *Unscheduled Maintenance (Marine)*

Repair equipment storage facilities will be established to store and maintain an inventory of long lead items and equipment required for repairing possible cable faults.

Repair scenarios in the vicinity of CI are further described in Appendix 3-D (Co-Located Infrastructure Crossing Packages). Dedicated repair procedures and plans will be shared in the event of a required repair in proximity to facilities described in this document.



8.0 Environmental and Cultural Resource Protection

The following sections describe procedures for environmental and cultural resource protection to be implemented before, during, and following installation of the submarine cable in Lake Champlain.

8.1 Pollution Prevention

The following plans discuss pollution prevention, spill response, waste management, and safety for EM&CP Segment 18B construction activities:

- Spill Prevention and Control Plan (SPCP), Appendix 8-A
- Oil Spill Contingency Plan (OSCP), Attachment 1 to Appendix 8-A
- Shipboard Oil Pollution Emergency Plan (SOPEP), Attachment 4 to Appendix 5-A
- Very Small Quantity Generator (VSQG) Hazardous Waste Management Plan (HWMP), Appendix 8-B
- Program Health and Safety Plan (PHASP), Appendix 8-C
- Site Specific Health and Safety Plan (SSHASP), Attachment 3 to Appendix 5-A

The procedures to be implemented to avoid the release of pollution during project construction are summarized in the sections below. For additional detail regarding any specific prevention or response procedure, please refer to the appropriate plan listed above.

8.1.1 Potential Pollutant Sources

At the construction/installation sites for the Lake Champlain marine segment, potential pollution or hazardous material can be generated by worksite activities. Some of the common types include carbon monoxide from vehicle and generator exhaust, different types of fuels and lubricants, and miscellaneous hazardous materials.

The Certificate Holders will inform local fire department and emergency management teams of on-site chemicals and waste and will also advise owners and operators of CI as to on-site chemicals and waste stored within one hundred (100) feet of their CI.

8.1.2 Material Handling, Storage, and Use

The following procedures provide a process for waste management planning and promote the development of more coherent and appropriate waste management. It is the responsibility of each individual on site to follow policies and procedures for managing waste.

- The Contractor will estimate the waste that will be generated prior to work being performed so that the need for containers and waste removal can be properly determined.



- Any waste materials will be properly stored and handled to minimize the potential for a spill or impact to the environment.
- The Contractor will properly segregate waste materials to ensure opportunities for reuse or recycling.
- All site personnel will be instructed on the proper disposal method for waste. This training will be conducted during the site orientation and conducted by the Site Manager, Construction Manager, or their designee.
- Waste management planning will be continuously reviewed and revised to ensure site safety and to meet regulatory requirements.

8.1.3 Waste Disposal

Waste handling and disposal procedures will be conducted in conformance with the PHASP provided in Appendix 8-C and the SSHASP provided in Attachment 3 to Appendix 5-A. Disposal of hazardous waste generated during splicing operations will be conducted in accordance with the VSQG HWMP provided in Appendix 8-B.

8.1.3.1 Sanitary Waste

Portable sanitary facilities will be present on the CLB and at Wilcox Dock, at a minimum. Wilcox Dock will serve as an exchange and clean-out service point for portable sanitary facilities. Sanitary waste from portable sanitary facilities will be collected by a licensed sanitary waste management contractor, as required by NYSDEC regulations.

8.1.3.2 Solid Waste

The CLB will be equipped with temporary storage for waste materials. Scrap will be periodically offloaded to shore, for onward transportation to, and proper disposal at, an approved environmental waste handling facility. To further reduce environmental risks associated with construction materials, the following procedures will be implemented:

- Construction materials will be stored in a manner that minimizes exposure to precipitation and runoff.
- Construction materials will be stored in a neat, orderly manner in appropriate containers with appropriate labels.
- Construction waste material and rubbish from the work area will be removed and disposed of at properly licensed facilities.



8.1.3.3 Hazardous Waste

The CLB will be equipped with temporary storage for any hazardous waste materials produced during cable installation. Small amounts of hazardous waste, including lead waste, are anticipated during cable splicing events and will be collected, labeled appropriately, stored and disposed of in accordance with all applicable regulations. Details regarding the type, anticipated quantities and disposal protocols for all hazardous wastes are included in the VSQG HWMP provided in Appendix 8-B.

To reduce the risks associated with generating hazardous wastes, contractors will be in conformance with the NYSDEC Hazardous Waste Rules and Regulations, and the following procedures will be followed:

- Train and instruct employees and other handlers of hazardous waste on the proper reporting, storage, inspection and handling requirements.
- Separate hazardous waste from normal waste through the segregation of storage areas and proper labeling of containers.
- Use appropriate storage and, when necessary, use NYSDOT-approved transportation containers, along with secondary containment measures.
- Prior to shipping hazardous wastes, verify that the hazardous waste transporters servicing the Project have required licenses, registrations and/or USEPA identification number that the waste is disposed at an approved/licensed facility.
- Transport hazardous waste under a properly completed manifest.
- Follow accurate record keeping requirements as to the quantity and nature of hazardous wastes generated onsite.

8.1.4 Hazardous Vapors Releases

Marine vessels that will be used to facilitate installation of the submarine cable have the potential to release hazardous vapors, such as fuel vapor. In the event of a hazardous vapor release, the appropriate emergency procedures should be followed in accordance with the Contractor's emergency response plans and policies. If the vapors released do not pose an immediate risk to crew members, the vessel should be safely moved to a suitable shore location or anchorage location prior to further action.

8.1.5 Petroleum Pollution Prevention

To prevent potential releases of petroleum in the Lake or other inland waters, the Certificate Holders and their contractors will adhere to the SPCP, provided as Appendix 8-A to this EM&CP, during construction to ensure that proper authorities are informed of any incident giving rise to pollution, or threat of pollution, of the aquatic environment, as well as the need for assistance and salvage measures, so that the appropriate action may be taken. Petroleum pollution prevention



measures are also summarized in the OSCP, provided as Attachment 1 to Appendix 8-A, and the SOPEP, provided as Attachment 4 to Appendix 5-A. Petroleum pollution prevention measures implemented by the contractor include, but are not limited to:

- Readily available emergency 'spill kit(s)' on all operational barges (including the CLB), crew boats, and tug boats.
- Fuel stocks onboard will be kept to a practical minimum.
- Equipment and storage tanks will be designed to minimize discharge or release potential and will be equipped with secondary containment.
- Petroleum products and chemicals will be stored in original, properly labeled, containers.
- SDS for petroleum products and chemicals will be maintained on each vessel.
- Employees and other handlers of petroleum products and chemicals will be trained on proper reporting and handling requirements.
- Vessels will be monitored and maintained to reduce the risk of potential leakage.
- Any vessels or equipment that are leaking oil, fuel, or hydraulic fluids will be removed or immediately repaired.
- Washing active vessels of any oils or chemicals into the surrounding waterbody will not be allowed.

As an emergency contingency measure the Contractor has pre-arranged that US Ecology, a US based Oil Spill Removal Organization (OSRO) will be available on 'call-out' basis to provide professional clean up support.

8.1.6 Operational Spills

An "operational spill" is any potential spill of petroleum, hazardous material, or other reportable waste directly released by the Construction Contractor during construction activities. Immediately following an operational spill, the Site Manager and crew members will initiate action to protect the crew, secure the vessel, stop the flow, control or contain the spill, and notify as per contact instructions. The Contractor's emergency response team will provide practical support required to assist the vessel team in dealing effectively with the incident. Emergency spill response is outlined in the SPCP (Appendix 8-A), OSCP (Attachment 1 to Appendix 8-A), and SOPEP (Attachment 4 of Appendix 5-A), and summarized in Section 8.1.7 below.



8.1.7 Spill Response and Cleanup Procedures

In the event of a spill release, the appropriate spill response and cleanup procedures should be followed in accordance with the Contractor's emergency response plans and policies. The NYSDEC Spill Hotline (1-800-457-7362), the EPA National Response Center (1-800-424-8802), and DPS Staff (Chase Chaskey; Chase.Chaskey@dps.ny.gov), as appropriate, will be called as soon as possible following identification of a spill. In the event of a spill, the following general procedures shall be followed:

- Ensure safety;
- Stop the flow;
- Secure the area;
- Contain the spill;
- Notify and report;
- Clean-up.

Petroleum spills must be reported to the NYSDEC unless they meet all of the following criteria:

- The spill is known to be less than 5 gallons; and
- The spill is contained and under the control of the spiller; and
- The spill has not and will not reach the State's water or any land; and
- The spill is cleaned up within 2 hours of discovery.

All reportable petroleum spills and most hazardous materials spills must be reported to NYSDEC hotline (1-800-457-7362) within New York State.

Refer to the SPCP (Appendix 8-A), OSCP (Attachment 1 to Appendix 8-A), and SOPEP (Attachment 4 of Appendix 5-A) for additional spill response procedures.

8.1.8 Unanticipated Hazardous Material Discovery

During construction activities, incidental discovery of hazardous material not directly released by the Construction Contractor may occur. If evidence of unanticipated hazardous materials are found during construction, construction activities will be stopped immediately in that immediate area, and the Environmental Inspector will be notified. The Environmental Inspector will report the unanticipated encounter of contaminants to CHPE personnel, who will notify the NYSDEC, NYSDPS staff, the landowner (if applicable), and the EPA National Response Center (1-800-424-8802), as appropriate. All reportable petroleum spills and most hazardous materials spills must be reported to the NYSDEC Spill Hotline (1-800-457-7362) within New York State. Construction will not be resumed until the appropriate authorities have issued an approval to continue construction activities in that area. Any future construction activities at the referenced site will be conducted in accordance with all conditions specified by NYSDEC.



8.1.9 Notification and Reporting

In the event of a spill, the appropriate project contacts and regulatory agencies must be notified. Notification and reporting of the spill will be completed in accordance with the Contractor's emergency response plans and policies, as well as applicable laws and regulations and the Certificate. Refer to the SPCP (Appendix 8-A), OSCP (Attachment 1 of Appendix 8-A), and SOPEP (Attachment 4 of Appendix 5-A) for additional notification and reporting procedures.

8.2 Cultural Resource Impact Mitigation

The route has been designed to avoid submerged cultural resources, as previously described in Section 3.3.1. An overall evaluation of underwater cultural resources identified in the vicinity of the proposed cable route is provided in Appendix 8-D (Final Report for the Underwater Cultural Resource Review of the Champlain Hudson Power Express, Lake Champlain Segment Investigations). The SHPO has concurred with the findings of this report, as reflected in the concurrence letter provided in Appendix 1-C (Agency and Stakeholder Consultations). Construction activities will follow the procedures outlined in the Cultural Resources Management Plan (CRMP), attached as Appendix 8-E to this EM&CP. At the recommendation of the SHPO, a Supplemental CRMP has been developed for the Segment 18B construction activities; this Supplemental CRMP is provided in Appendix 8-F. Should an unanticipated cultural resource discovery be encountered during project construction, the procedures outlined below will be implemented.

8.2.1 Unanticipated Cultural Resource Discovery

The Unanticipated Cultural Resource Discovery Plan, included in Appendix 8-E and Appendix 8-F, outlines the procedures to be implemented during underwater cable installation in Lake Champlain should potential cultural resources be incidentally discovered. The specific procedures for the unanticipated discovery of archaeological resources and human remains during the Project's construction were developed in accordance with federal and state guidelines, as outlined in the CRMP (Appendix 8-E). The Certificate Holder will respond promptly to any complaints of negative archaeological impacts during the Project's construction and will consult with the State Historic Preservation Office (SHPO), the Advisory Council on Historic Preservation (ACHP), Native nations, and other appropriate parties identified in the CRMP to resolve adverse effects on historic properties and determine the appropriate avoidance, treatment, or mitigation measure.

8.3 Invasive Species Management

Invasive aquatic plant and animal species have been observed within or in the vicinity of the Lake Champlain site. Invasive species that may be present within or surrounding the Lake Champlain Marine Segment Project sites are listed below:



Lake Champlain Invasive Species:

- Aquatic plant: Water chestnut (*Trapa natans*) and Eurasian water-milfoil (*Myriophyllum spicatum*).
- Animal: Zebra mussel (*Dreissena polymorpha*), Spiny Water Flea (*Bythotrephes cederstroemi*) and Rusty Crawfish (*Faxonius rusticus*).

Numerous invasive aquatic plant and insect species may occur at the Lake Champlain marine segment installation sites, beyond those listed above. The Certificate Holders have developed an Aquatic Invasive Species Management Plan, included as Attachment 6 to Appendix 5-A of this EM&CP, which identifies invasive species monitoring and control measures to be implemented along marine portions of the CHPE Project.

Per Article VII BMP Section 21.4 in the Aquatic Invasive Species Management Plan, the Certificate Holder will ensure careful inspection and wash-down of construction equipment and vessels to prevent or control the transport of Zebra Mussels and Spiny Water Fleas. The Certificate Holder will also adhere to Article VII BMP Section 21.4 in the Aquatic Invasive Species Management Plan by avoiding submerged plant beds, performing construction in infested areas only during non-germination periods, as well as careful inspection and cleaning of vessels and submerged construction equipment to prevent or control the transport of water chestnut and Eurasian watermilfoil. Refer to Attachment 6 of Appendix 5-A for additional invasive species management procedures.

8.4 Rare, Threatened, and Endangered Species Impact Mitigation

Previous consultations between the United States Department of Energy (DOE) and National Marine Fisheries Service (NMFS) conducted in 2014 and updated in 2021 concluded that the effects of the proposed Project will be insignificant or discountable and that the CHPE Project is not likely to adversely affect any Endangered Species Act (ESA)-listed species or critical habitat.

The potential presence of aquatic threatened or endangered species along the cable route was identified as part of the Article VII proceeding. For Lake Champlain, the aquatic species identified as threatened by the State of New York are Lake Sturgeon (*Acipenser fulvescens*), Mooneye (*Hiodon tergisus*) and Eastern Sand Darter (*Ammocrypta pellucidum*). All appropriate avoidance and mitigation actions recommended by NYSDEC will be undertaken by the Certificate Holders to protect the identified species.

On September 26, 2023, the Certificate Holders submitted a project screening request to the New York Natural Heritage Program (NYNHP) for information on State-listed rare, threatened, or endangered species that may occur along or near the Lake Champlain cable installation route. NYNHP has provided a response on December 4, 2023, included in Appendix 1-C (Agency and Stakeholder Consultations) and summarized in Table 8.1 below.

Table 8.1 – State-Listed and Rare Species and Significant Natural Communities

Common Name	Scientific Name	NYS Listing	Federal Listing	Location/Notes
<i>Bats</i>				
Indiana Bat	<i>Myotis sodalis</i>	Endangered	Endangered	Maternity and non-winter locations documented within one mile of the cable route in Towns of Crown Point and Ticonderoga. Individual animals may travel 2.5 miles from documented locations.
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	Endangered	Endangered	Hibernacula documented within one mile of the cable route in Towns of Ticonderoga, Moriah, and Westport. Individual animals may travel five miles from documented locations.
Eastern Small-footed Myotis	<i>Myotis leibii</i>	Special Concern	Unlisted	Hibernaculum documented within 0.5 mile of the cable route in the Town of Westport.
<i>Fish</i>				
Mooneye	<i>Hiodon tergisus</i>	Threatened	Unlisted	Caught in Lake Champlain near Willsboro, along CHPE cable route almost due east of Bouquet River Point.
Sauger	<i>Sander canadensis</i>	Unlisted	Unlisted	A rare fish in New York, it has been documented in Lake Champlain off Crown Point in the Town of Crown Point.
<i>Birds</i>				
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Threatened	Unlisted	Nesting on Lake Champlain shoreline in the Towns of Westport and Ticonderoga.
Black Tern	<i>Chlidonias niger</i>	Endangered	Unlisted	Breeding in shoreline wetlands in the Town of Champlain.
Northern Harrier	<i>Circus hudsonius</i>	Threatened	Unlisted	Breeding near Lake Champlain in the Towns of Crown Point and Plattsburgh
Peregrine Falcon	<i>Falco peregrinus</i>	Endangered	Unlisted	Breeding on Lake Champlain shoreline cliffs in Town of Westport.
Pied-billed Grebe	<i>Podilymbus podiceps</i>	Threatened	Unlisted	Breeding in shoreline wetlands in the Towns of Crown Point and Champlain
Least Bittern	<i>Ixobrychus exilis</i>	Threatened	Unlisted	Breeding in shoreline wetlands in the Town of Champlain.
Common Loon	<i>Gavia immer</i>	Special Concern	Unlisted	Common Loons have been documented breeding in Lake Champlain off of the Towns of Chazy, Beekmantown, Plattsburgh (Town and City), and Westport.

Common Name	Scientific Name	NYS Listing	Federal Listing	Location/Notes
Reptiles				
Timber Rattlesnake	<i>Crotalus horridus</i>	Threatened	Unlisted	Documented in shoreline locations in the Town of Westport.
<i>Significant Natural Communities</i>				
Mesotrophic Dimictic Lake	N/A	N/A	N/A	A significant occurrence of this lake type in excellent condition has been mapped in shallow, productive waters in Kings Bay, Catfish Bay and the waters around Point Au Fer, off of the Town of Champlain. The bedrock in the area is limestone.
Summer-stratified Monomictic Lake	N/A	N/A	N/A	The deep, central portion of Lake Champlain has been mapped as a significant occurrence of this lake type in good condition. The proposed cable route passes through this significant community off the Towns of Plattsburgh, Peru, Ausable, Chesterfield, Willsboro, Essex, and the north portion of Westport.

Based on the nature of Lake Champlain cable installation activities, impacts to these Significant Natural Communities, rare species, and State-listed endangered species are not anticipated. Installation activities will take place within Lake Champlain with little to no disturbance occurring above the water surface. Mattresses will be installed away from the lake shore at significant depths. Should any concerns arise during project construction, appropriate avoidance and mitigation actions will be taken to protect these identified species as recommended by the NYSDEC.

Consistent with CC 52, the Certificate Holders will promptly notify DPS Staff, NYSDEC, and the United States Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS), if applicable, if any threatened or endangered wildlife species under 6 N.Y.C.R.R. Part 182 or any rare, threatened or endangered plant species under 6 N.Y.C.R.R. Part 193 are observed to be present in the Facility. The agencies notified will determine the appropriate measures to be taken to avoid or minimize impacts to such species. If necessary to avoid or minimize impacts to such species, or as directed by DPS Staff, the Certificate Holders shall stabilize the area and cease construction or ground disturbing activities in the Facility area until DPS Staff have determined that appropriate protective measures have been implemented.

Further, the Certificate Holders will promptly notify DPS Staff and NYSDEC if a New York State listed species of special concern is observed to be present in the Facility area, in accordance with CC 51.



Protection measures, as generally described below, will be implemented to ensure minimization and mitigation of impacts to environmentally sensitive aquatic species and their habitats. These measures were taken from the 2013 BMP Document and Certificate Conditions.

- The Certificate Holders have worked closely with federal and state agencies to establish measures prior to construction to minimize impacts to aquatic species.
- All in-water work will be conducted within the applicable time window where applicable and weather permitting (or as amended and approved by the applicable regulatory agencies, as noted above).
- Environmental training for contractors and construction crews will be required.
- Spill response and mitigation procedures will be implemented in the case of any accidental spills of chemical, fuel, or other toxic materials, as specified Attachment 4 of Appendix 5-A.
- The Environmental/Aquatic Inspector will have the authority to modify or suspend construction if any threatened or endangered species are impacted in any way by construction activities.
- Construction machinery and equipment will be well maintained and checked daily for leaks.



9.0 Public Health and Safety

The following sections describe procedures for the protection of public health and safety to be implemented before, during, and following installation of the submarine cable in Lake Champlain.

9.1 Protection of Navigation

Underwater activities will be undertaken in a manner that minimizes the potential for interference with navigation. To protect navigation on Lake Champlain, the following measures will be implemented:

- LNM will be submitted to the USCG for issuance a few weeks prior to the start of the marine field operations.
- Daily work location, minimum passing clearance request and all other relevant information will be broadcast via marine VHF radio as required by the USCG.
- Courtesy notifications will be provided to emergency services and law enforcement that are local to project operational sites (if any). Construction vessels will monitor VHF channels 13, 16, and the project work channel during project-related activities.
- Vessels will post standard day shapes and lighting in accordance with USCG regulations.

The Certificate Holders will continue to work with the USCG to deconflict the waterway near Project activities. The Certificate Holders will continue to coordinate directly with the USCG on potential relocation of federal aids to navigation that may affect the cable laying operations.

9.2 Bridge Crossings

The cable route to be installed in Lake Champlain traverses beneath two active bridges: the US Route 2 Korean War Veterans Memorial Bridge in the Village of Rouses Point, NY and the Lake Champlain Bridge in Crown Point, NY. Travel across each bridge will be maintained throughout the duration of construction. As necessary, applicable permits will be gained and inspection of bridge foundations will occur as described in Section 7.5 above in consultation with the bridge owners.

9.3 Public Water Supply Intakes

In accordance with CC 102 and 150, the New York State Department of Health (NYSDOH) was contacted to identify Public Water Systems (PWS) within the vicinity of the Lake Champlain Marine Segment. Table 1 below shows the five water intakes identified within Lake Champlain by NYSDOH. Two PWS (Village of Rouses Point and Town of Essex) have been identified within one mile of the CHPE alignment in Lake Champlain and therefore consultation was completed pursuant to CC 150. Based on CC 150 as well as the pre-installation suspended sediment trial described in Section 7.4.1, consultation was not completed with the other three PWS facilities.

Table 9.1 – Public Water Systems Drawing upon Lake Champlain

Water Department	Distance to CHPE Alignment	Notification Required
Rouses Point	0.42 miles	Yes
Port Kent	1.21 miles	No
Willsboro	Separate bay	No
Essex	0.99 miles	Yes
Crater Club	1.18 miles	No

In accordance with CC 150, CHPE completed consultation with the Chief Plant Operator at Rouses Point on September 14, 2023, and the Water / Wastewater Operator at Essex on September 15, 2023 (collectively, PWS Operators or PWS Intake Owners). During these conversations, the Project’s installation process was described as well as the geographic proximity of the installation route to the intake as well as the specific topics required under CC 150. Based on these consultations, the Certificate Holders developed the “Lake Champlain Public Water Supply Protection and Contingency Plan”, which is provided as Appendix 9-A.

Notices of this EM&CP were provided to the PWS Intake Owners, as required by CC 103, and construction notifications will be provided as required by CC 104 on the schedules discussed above.

To comply with CC 105, Certificate Holders will coordinate with the Village of Rouses Point and Town of Essex PWS Operators regarding the schedule of grapnel/debris removal and construction phasing near these intakes, and to address any testing required by CC 106.

9.4 Noise

Noise sensitive receptors that may be impacted by Lake Champlain cable installation activities are limited to those in occupied areas along the shoreline of Lake Champlain. During construction, there will be a temporary increase in noise levels at nearby sensitive noise receptors; however, there will be no permanent increase to noise levels once construction is complete. Noise due to construction and installation of the marine cable will be temporary in nature and primarily will occur on Lake Champlain. Temporary noise impacts will vary due to the type of equipment in use at any given time, and due to the existing ambient noise at any given working hour and location. Further, as noted in the Record of this proceeding, in the Joint Proposal at Appendix E, Section 25.0, Noise Impact and Mitigation, noise levels during construction are anticipated to diminish over distance such that temporary noise impacts at sensitive receptors will be at acceptable levels (see, e.g., Table 25.1).

Table 9.2 summarizes the types of equipment to be used during construction and their standard noise level. Residents and businesses may be temporarily affected by noise from construction activities, but such impacts will be temporary and minimized to the extent practicable for the type of work involved, as confirmed in the Article VII Certificate Order.

Table 9.2 – Noise Impact Summary

Type of Equipment	Equipment Noise Level at 50 feet, dBA
Crane	81
Compressor	67
Generator	78
Winch	78

All noise generated by the construction of the Project will be temporary and, therefore, impacts on any noise receptors will also be temporary.

During construction, if vessels are anticipated to be stationed in the same location for more than a brief period (such as during splicing) and if elevated noise volumes generated by the Project and proximity to noise sensitive receptors necessitate mitigation, appropriate noise suppression measures will be employed. The closest sensitive receptors to those locations in Lake Champlain where vessels are anticipated to be stationed in the same location for more than a brief period are as follows:

Location	Approx. MP	Approx. Time Present (days)	Approx. Distance to Closest Residence (ft)
Rouses Point (Float-in)	0.0 - 1.2	4	2300
Splice 1	12.1	7	1300
Splice 2	24.5	7	4000
Splice 3	37	7	12400
Splice 4	49.5	7	5200
Splice 5	62.1	7	4300
Splice 6	74.5	7	1700
Splice 7	87	7	1500
Putnam Station (Pull-in)	96.4 - 96.7	2	700



The following noise control measures will be employed during construction to minimize noise related impacts to nearby noise sensitive receptors:

- The installation barge is equipped with factory standard mufflers and/or best available technologies for noise-related purposes. In addition to factory standards, the following equipment have been optimized to reduce noise effects:
 - Generators with large mufflers and sound attenuated enclosures;
 - Engine and hydraulic power unit (HPU) for dynamic positioning (DP) thrusters employed with large mufflers and within enclosures;
 - Sound attenuated enclosure for water pumps; and
 - HPU for loading arms and carousels within enclosure.

Furthermore, equipment such as generators, pumps and winches are located on the interior of the barge spread(s), as feasible, which provides barriers and/or enclosures which dampen or block sound produced by that equipment. The surrounding perimeter of the barge spread is generally occupied by offices, tool containers, and other pieces of equipment or structures that may act as a barrier to reduce the “direct line of sound” to receptors.

Crane and winch operation is not expected to be utilized for extended durations at the potential maximum noise level. As such, this equipment will only produce noise during specific operations as required, which further reduces the duration of potential noise impacts from this equipment. Equipment operations are expected to begin and complete within any 12-hour shift.

CMI will be responsible for ensuring that all construction tools and equipment have been maintained such that they operate at normal manufacturer’s operating specifications, including at peak loading. CMI will also be responsible for identifying the schedule of activities that will take place during Project construction.

Construction operations for marine cable installation are expected to be completed during both daytime hours and nighttime hours. Pre- and post-installation activities will be conducted during daytime hours (after ~7 am and before ~7 pm), with 12-hour shifts anticipated for completion of pre-lay grapnel runs and post-installation mattress installation. Cable installation activities, including cable laying, cable burial, and cable splicing, will be conducted with 24/7 operations. Should additional nighttime operations be required due to scheduling, safety, and/or operational purposes, the Certificate Holders and/or Contractor will inform the DPS and local municipalities in advance of the nighttime operations. DPS shall be notified in advance if construction is planned on Sundays, evenings, or holidays. Appropriate mitigation and noise suppression measures, as outlined in the bulleted list above, will be employed to minimize impacts to nearby sensitive receptors if combined noise levels and proximity to sensitive receptors necessitate mitigation.

During review and approval of the CHPE Project, the PSC and the parties to the Joint Proposal acknowledged that construction of the Facility will result in temporary noise impacts, and that



reasonable noise mitigation measures will be employed to minimize these impacts to the maximum extent practicable, such as by limiting noise-producing activities to daytime hours where practicable. Those minimization measures are reflected in this section of the EM&CP and are consistent with the BMPs developed for the Project during the Article VII process (see BMPs Section 25 and Joint Proposal Paragraph 89). Certificate Condition 159(II)'s requirement of a noise mitigation plan refers to developing such a plan to address noise sensitive sites along the Facility Right of Way (ROW) to address noise impacts during clearing, construction, and operation. The Certificate Holders submit that the scope of this EM&CP—installation of HVDC cable in Lake Champlain, work which is temporary and distant from population centers—does not warrant further development of a noise mitigation plan beyond the measures already identified within the EM&CP (installing improved mufflers on equipment, utilizing low noise technologies as appropriate, providing advance notice to municipalities should nighttime work become necessary, etc.), and that the measures proposed are consistent with the Certificate, Joint Proposal, and BMPs as written.

9.5 Lighting

Construction operations are expected to be completed during both daylight and nighttime, as required by scheduling, safety, and/or operational purposes. The Certificate Holders and/or Contractor will inform the DPS and local municipalities in advance of any nighttime operations. During nighttime operations, deck lighting will be used to illuminate the cable installation barge. This lighting is necessary to ensure safety and security of the crew onboard the vessel. Appropriate mitigation measures will be employed to minimize impacts to abutters and nearby sensitive receptors. Lighting will be positioned and oriented inward and downward to avoid and minimize impacts to nearby sensitive receptors to the greatest extent feasible (e.g., light towers will be set up to illuminate the work area but not shine light directly in the direction of sensitive receptors adjacent to the vessel). The vessel will be equipped with all required navigation lights for safe nighttime operation which are not anticipated to impact sensitive receptors.

9.6 Electromagnetic Fields (EMF)

The transmission facility in Lake Champlain has been designed and will be constructed such that, to the extent applicable, operation of the Facility will comply with the interim electrostatic field standard established by the Commission in Opinion No. 78-13 (issued on June 19, 1978 in Cases 26529 and 26559) and the limit for magnetic fields set in the Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities (issued on September 11, 1990 in Cases 26529 and 26559). The Certificate Holders will submit a certification by a professional engineer licensed by the State of New York stating that, if constructed in accordance with the final design plans, the Facility will comply with these standards to the extent applicable. With regard to the EMF calculations for the Project, refer to Exhibits B, C and D and Appendix A and B to the Certificate Holders' January 29, 2021, Petition for an Amendment to Certificate of Environmental Compatibility and Public Need (DMM Item 819).



10.0 Decommissioning

The permanent Project components involved in the Segment 18B EM&CP are below-water infrastructure, including subaquatic cables, concrete mattresses, and articulated pipe protection (UraGuard/Urduct or similar protective duct product). As such, the Certificate Holders will not remove these below-water components in the event that the Project is deenergized at some future date (CC 162k), particularly given that removal of these components may have a greater adverse impact on the environment than leaving these components in place. Given the size and scale of the proposed HVDC facility in Lake Champlain, the continued presence of below-water infrastructure is not anticipated to pose a concern to the environment, future land use, and/or future utility uses following de-energizing of the Project. Therefore, the decommissioning plan for the HVDC facility in Lake Champlain will be to leave all components in place (CC 162k).