

Champlain Hudson Power Express

Section 106 Consultation Meeting



July 31, 2013

HDR

Agenda

- Champlain Hudson Power Express Project
 - Project Overview
 - Regulatory Framework
- Cultural Resources
 - Regional Overview
 - Status of Cultural Resources Studies
- Next Steps
 - Programmatic Approach
 - Cultural Resources Management Plan
- Questions and Discussion

The slide features a complex geometric layout. At the top, a thin yellow-green horizontal line spans the width. Below it is a grey horizontal bar. The main content area is divided into three vertical sections. The leftmost section is a teal rectangle containing the text 'Project Introduction'. A thin yellow-green vertical bar separates this from the middle section, which is a dark grey rectangle. To the right of the dark grey section is a large teal rectangle. At the bottom of this teal rectangle is a yellow-green horizontal bar. The bottom half of the slide is a large, solid grey rectangle.

Project Introduction

Project Introduction

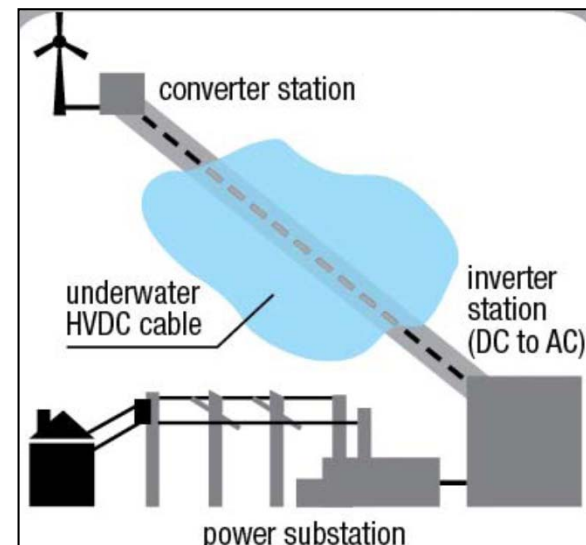
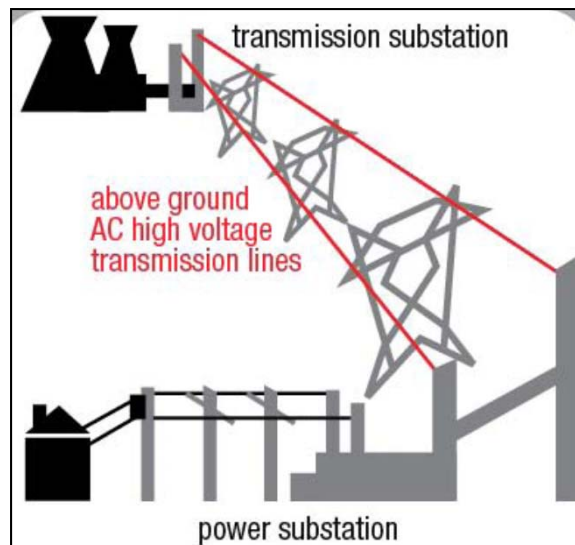
- Champlain Hudson Power Express, Inc. (CHPEI) has applied to the U.S. Department of Energy's (DOE) Office of Electricity Delivery and Energy Reliability for a Presidential Permit to construct, operate, maintain, and connect the proposed Champlain Hudson Power Express Transmission Line Project (Project).
 - The proposed Project consists of a 1,000-megawatt (MW) high-voltage direct current (HVDC) Voltage Source Converter-controllable transmission system extending from the Canadian Province of Quebec to New York City.
 - CHPEI's application for a Presidential Permit was submitted to the DOE on January 27, 2010. CHPEI subsequently modified its application on August 6, 2010; July 7, 2011; and February 28, 2012.
 - The Project will bridge the gap between renewable sources of generation in Canada and the New York City load center.

Project Introduction



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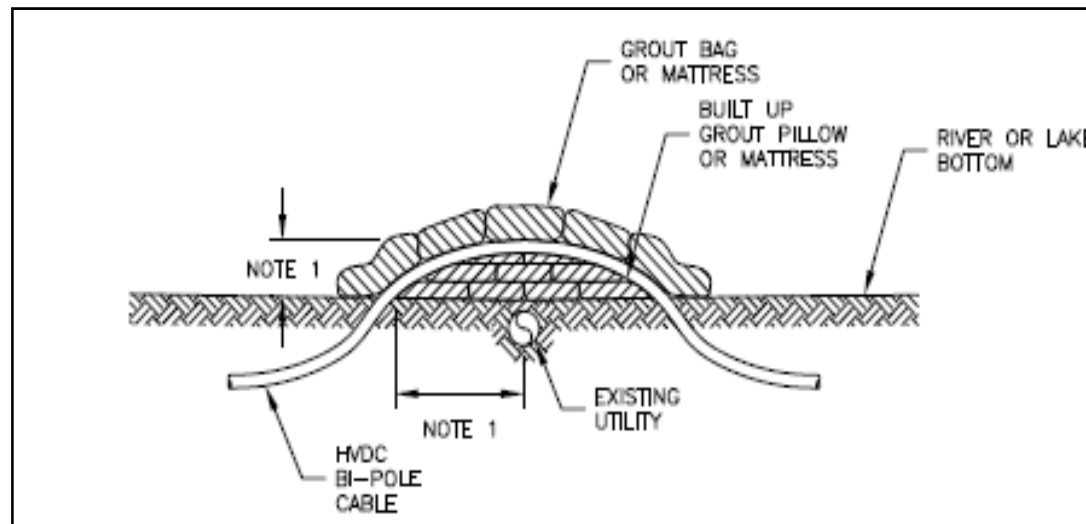
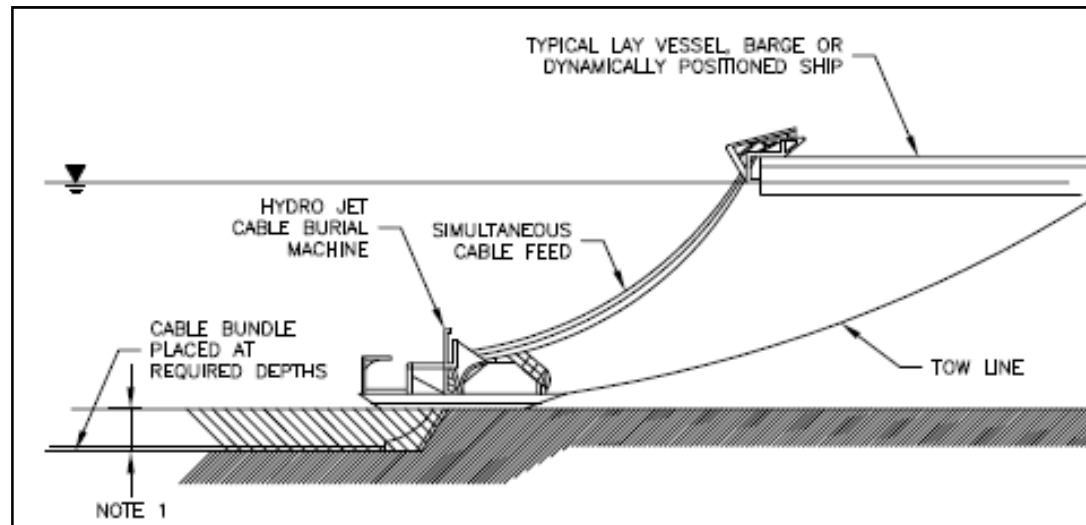
- Selection of HVDC technology for this Project offers significant benefits over traditional alternating current (AC) transmission systems
 - HVDC technology allows high-voltage transmission over greater distances with minimal line loss and without generation of EMF.
 - CHPEI proposes to install the cables within waterways, and within the rights-of-way (ROW) of existing transportation infrastructure, including railroads and roadways.
 - This innovative routing will avoid the adverse impacts to viewscales associated with traditional transmission infrastructure.



Project Introduction

- From the international border between the United States and Canada, two cables (comprising a single bipole) would extend south approximately 330 miles to an HVDC Converter Station to be located near Luyster Creek, north of 20th Avenue in Astoria, Queens.
 - Where possible, the Project will be installed along existing waterways, including Lake Champlain, the Hudson River, the Harlem River, and the East River.
 - Installation within waterways will primarily be accomplished by jet plow.
 - Shear plow or remote-operated vehicles (ROV) may be used for installation in deeper waters.
 - Target burial depth is anticipated at 3-4 feet in Lake Champlain, 6 feet in the Hudson River, and various depths in the Harlem River. However, burial depth varies if conditions permit.
 - The maritime construction corridor is approximately 15 feet wide along lake/river bottoms.
 - If existing utilities or other infrastructure are present on the lake/river bottom, or if other conditions do not permit burial, the cable will be installed on the lake/river bottom and armored.

Project Introduction



Project Introduction

- The cables will follow an upland route when necessary to avoid environmentally sensitive areas or areas undergoing polychlorinated biphenyl (PCB) mitigation.
 - The upland sections of the Project will generally follow existing transportation infrastructure ROW, including:
 - Canadian Pacific (CP) Railway ROW
 - CSX Railroad ROW
 - New York State (NYS) Route 22
 - NYS Route 9
 - Surface Streets
 - CHPEI has also proposed to install cables via horizontal directional drilling (HDD) techniques to avoid impacts to Rockland Lakes State Park and Hook Mountain State Park
- Upland installation will generally use a cut-and-fill technique and will encompass an area within 12.5 feet from either side of the centerline. Burial depths will be approximately 3-5 feet.
- Transitions from marine to upland sections of the Project's route will be accomplished via HDD
- High-voltage AC cables will connect the Luyster Creek Converter Station to Consolidated Edison's Rainey Substation

Project Introduction

Section	Distance	Description
US/Canadian border to Town of Dresden	101 miles	Marine installation within Lake Champlain
Town of Dresden to Village of Whitehall	11 miles	Upland installation within the ROW of NYS Route 22
Village of Whitehall to the City of Schenectady	65 miles	Upland installation primarily along CP ROW
City of Schenectady to the Town of Rotterdam	1.3 miles	Upland installation along surface streets and within CP ROW
Town of Rotterdam to the Town of Selkirk	24 miles	Upland installation primarily along CSX ROW
Town of Selkirk to Hamlet of Cementon	29 miles	Upland installation along CSX ROW
Hamlet of Cementon to Town of Stony Point	67.05 miles	Marine installation within Hudson River
Stony Point to point south of Rockland Lake State Park	7.66 miles	Upland installation including CSX ROW, NYS Route 9 and HDD beneath parkland
south of Rockland Lake State Park to Spuyten Duyvil	20.07 miles	Marine installation within Hudson River
Spuyten Duyvil to the Bronx	6.58 miles	Marine installation within Harlem River
Bronx to East River	1.1 miles	Upland installation primarily along railroad ROW
East River to Converter Station in Astoria, Queens	River crossing	Marine installation in East River
Converter Station to Rainey Substation	3 miles	HVAC installation along surface streets

Project Introduction

- In addition to the Presidential Permit, the Project will require federal permits from the U.S. Army Corps of Engineers pursuant to Section 404 of the Clean Water Act.
- The Project will also require a Certificate of Environmental Compatibility and Public Need from the NYS Public Service Commission (PSC) Pursuant to Article VII of the NYS Public Service Law. The Article VII Certificate was issued on April 18, 2013.
- Settlement discussions conducted from November 2010 through February 2012 resulted in development of a Joint Proposal that was signed by 7 NYS agencies, three non-governmental organizations (NGOs), the City of New York, and the City of Yonkers.
 - The Joint Proposal includes guidelines for the Environmental Management and Control Plan(s) (EM&CP) as well as Best Management Practices (BMP) for Project construction. Both the EM&CP and BMP guidance documents include provisions for addressing cultural resources.
 - The Joint Proposal also includes a proposed Water Quality Certification pursuant to Section 401 of the Clean Water Act.
 - The PSC approved the Joint Proposal in April 2013.



Cultural Resources

Regulatory Overview

- In considering a Presidential Permit for the Project, the DOE has the lead responsibility for compliance with applicable federal laws, regulations, and policies pertaining to historic properties, including the National Historic Preservation Act of 1966, as amended (NHPA). Section 106 of the NHPA (Section 106) directs federal agencies to take into account the effects of their undertakings on historic properties and to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment.
 - The DOE is the lead federal agency for purposes of consultation under Section 106.
 - The Project corridor includes portions of southeastern New York, the Hudson River Valley, and the Lake Champlain regions that have a rich history dating from the precontact period through the 20th century.
 - Early in the permitting process CHPEI initiated cultural resources studies and informal consultation to identify historic properties within the Project's prospective area of potential effects (APE) that may be affected by this undertaking.

Cultural Resources Studies

- CHPEI assembled a local and experienced team of archaeologists, architectural historians, and experts in maritime archaeology to lead the identification of historic properties.

HDR

HARTGEN

archeological associates inc



Lake Champlain
MARITIME MUSEUM

HDR

Cultural Resources Studies

- On February 22, 2010 CHPEI distributed a letter to state and federal agencies, NGOs, Indian tribes, and other potential stakeholders with a prospective interest in the Project's potential effects on cultural and historic resources.
- The letter provided an overview of the proposed Project and included a request for additional information. The letter also described the need for additional studies to identify historic properties within the Project's vicinity and to determine the Project's potential effects on these resources.
- CHPEI initiated informal consultation with the New York State Historic Preservation Officer (NYSHPO) in 2010 to discuss the Project and identify specific concerns.

Cultural Resources Studies

- Cultural resources studies were initiated in 2010.
- The study team initially compiled information from a variety of resources:
 - New York State Museum and New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) site files
 - Shipwreck data from the Lake Champlain Maritime Museum (LCMM)
 - Side scan sonar images of the Hudson River provided by the New York State Department of Environmental Conservation (NYSDEC)
 - Previous cultural resources studies conducted in the Project's vicinity
 - Information regarding properties listed in the National Register of Historic Places (NRHP) or determined eligible for the NRHP
 - Information regarding National Historic Landmarks within the Project's vicinity
 - Historic maps
 - Cultural contexts for the Project area
- This information was presented in the April 9, 2010 *Pre-Phase IA Cultural Resources Screening Report* which was distributed to NYSHPO, Indian tribes, and other parties.

Cultural Resources Studies

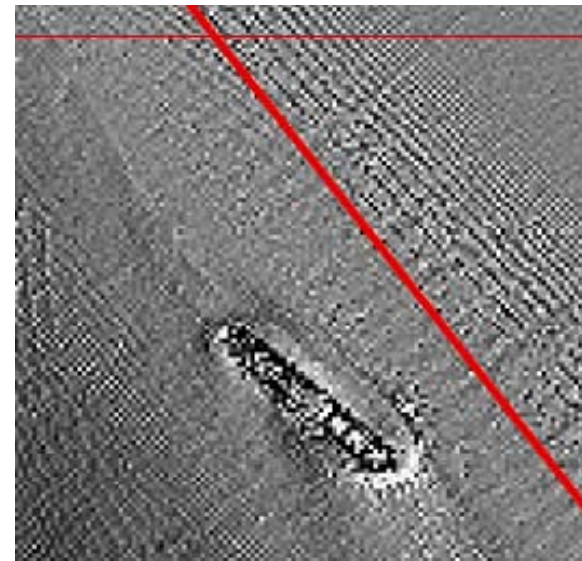
- CHPEI consulted with the NYSHPO to develop an approach to completing additional studies of the Project's prospective APE.
- A Phase IA Literature Review and Archaeological Sensitivity Assessment was prepared and distributed to the NYSHPO, Indian tribes, and other parties in September 2010. The Phase IA report included recommendations for additional studies.
 - Appendix A of the Phase IA report included a Study Plan that described the recommended testing strategy for each section of the Project's proposed alignment.
 - The testing strategy proposed in the Study Plan was developed through initial, informal consultation and discussions with the NYSHPO. The NYSHPO reviewed the Phase IA report and concurred with the methodologies proposed for the Phase IB studies (with minor modifications) in a letter dated March 14, 2011.

Cultural Resources Studies

- Concurrent with the Phase IA study, CHPEI undertook additional analyses to identify potential maritime archaeological resources within or adjacent to the Project's alignment.
- The LCMM and Hartgen Archaeological Associates, Inc. (HAA) conducted a comprehensive review of side scan sonar data collected for the Project's maritime route to identify known shipwrecks, potential shipwrecks, and other anomalies that may represent cultural deposits.
- Maritime archaeological resources and anomalies were identified by the LCMM and HAA, Inc. through an analysis of side scan sonar data collected along the extent of proposed maritime sections of the Project's prospective APE.
 - The side scan sonar data was compared to information available from existing archaeological site files, historical records regarding shipwrecks, previous studies conducted by the LCMM and others within Lake Champlain and the Hudson River, and other sources of information regarding known, reported, or potential cultural resources within the Lake Champlain, Hudson River, Harlem River, and East River sections of the Project's APE.

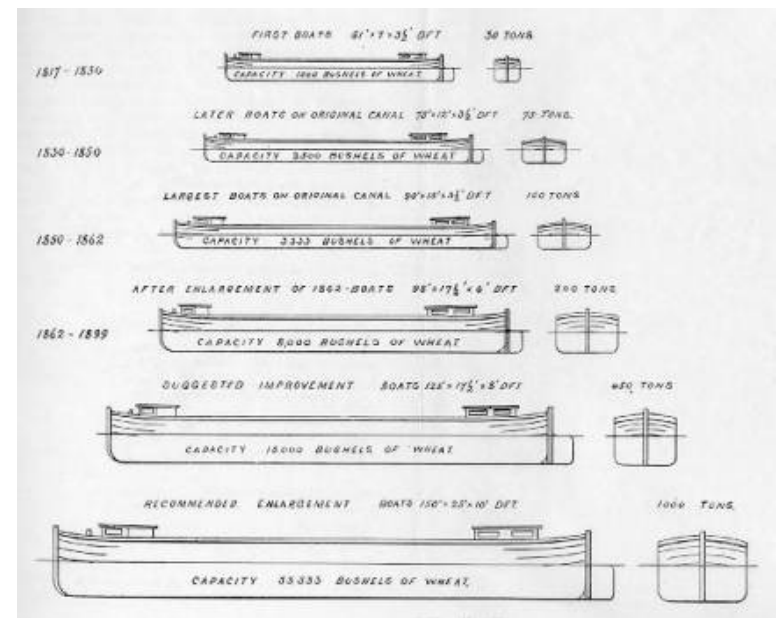
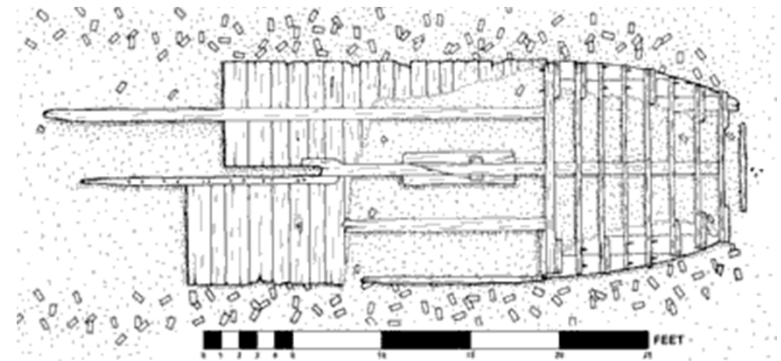
Cultural Resources Studies

- The comprehensive analysis conducted by the LCMM and HAA, Inc. resulted in the development of a geographic information system (GIS) database of maritime archaeological resources and anomalies identified by the LCMM within approximately 300 meters (984 feet) of the Project's centerline.
- In 2011, modifications to the Project's alignment along an 80-kilometer (50-mile) segment of the proposed transmission cable corridor within the Hudson River required a reanalysis of side scan sonar data provided by the NYSDEC. This analysis of NYSDEC data identified maritime archaeological resources and anomalies and within 100 meters (328 feet) along sections of the Hudson River.



Cultural Resources Studies

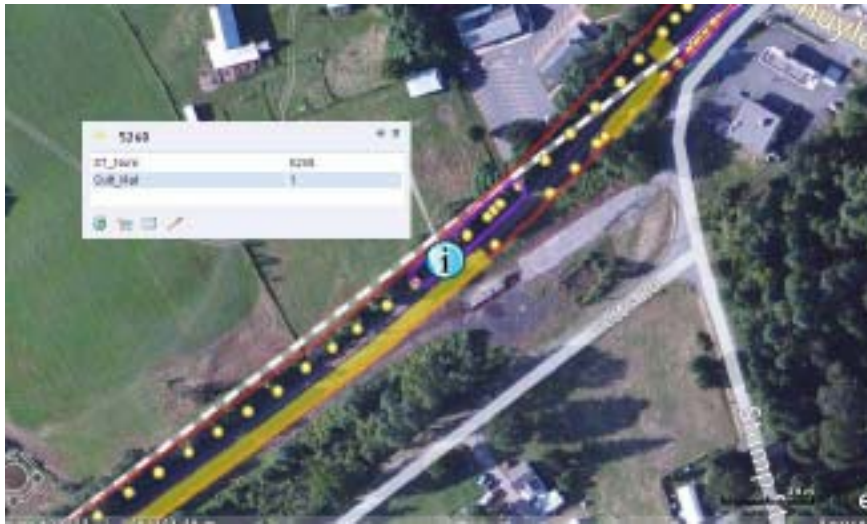
- CHPEI consulted with the NYSHPO to identify a suitable buffer distance for avoiding adverse effects on maritime archaeological resources.
- The NYSHPO determined that a 40-meter (131-foot) buffer from the APE was generally appropriate to avoid adverse Project-related effects on maritime archaeological resources.
 - NYSHPO noted that this buffer could be adjusted on a case-by-case basis depending on the nature of the identified resource, analyses conducted by the LCMM, and/or the sonar signature of the resource or anomaly.



Cultural Resources Studies

- Based on the study methodology approved by the NYSHPO, CHPEI conducted Phase IB Archaeological Field Reconnaissance along portions of the Project's alignment in 2010.
 - HAA conducted subsurface testing along approximately 66 miles of the CP ROW.
 - Testing indicated significant prior disturbance associated with construction of the railroad.
 - A total of 11 archaeological sites were identified within the prospective APE.
 - At CHPEI's request, HAA conducted Phase II Archaeological Evaluations of these 11 sites to provide additional information suitable for the NYSHPO to make a determination of NRHP eligibility.
 - Of the 11 sites, 1 was recommended as eligible for the NRHP, and 3 were recommended for avoidance or additional archaeological investigations.
- The Phase IB report was submitted in draft form to the NYSHPO for review in July 2012. The NYSHPO provided comments concurring with the recommendations and findings of the draft report.

Cultural Resources Studies



Cultural Resources Studies

- In 2012, HAA conducted a Phase IA Addendum Study to identify reported archeological sites, historic properties, and previously completed archeological investigations along new sections of the Project's alignment that were not considered in the 2010 Phase IA report.

Route Segment	Approximate Length (miles)
NY Route 22 (Dresden to Whitehall)	11
Rotterdam to Selkirk (CSX Railroad ROW)	22
Selkirk to Cementon	29
Haverstraw Bay Bypass	8
Hell Gate Bypass	1.2
Total	71.2 miles

Cultural Resources Studies

- Study Status
 - A complete Phase IA study of the Project’s entire terrestrial alignment has been completed. For this study, the Phase IA “study corridor” was developed in consultation with the NYSHPO and includes an area encompassing 500 feet on either side of the Project’s centerline (a total of 1,000 feet).
 - The broad study corridor assists in documenting the cultural setting and archaeological sensitivity of the Project Area.
 - Phase IB and Phase II studies have been conducted along 66 miles of the 142-mile long overland route. This represents approximately 46 percent of the terrestrial portion of the Project.
 - An analysis of previously reported shipwrecks, maritime archaeological sites, and side scan sonar data for the entire maritime portion of the Project’s alignment has been completed.

Cultural Resources Studies

- Summary of Findings (Terrestrial Sections)
 - A total of 268 resources have been reported within the 1,000-foot-wide study corridor, including archaeological sites, properties listed in the NRHP, and properties previously determined eligible for the NRHP.
 - Of these, only 68 are located within 25 feet of the terrestrial sections Project’s centerline (12.5 feet on either side of the centerline).

Reported Terrestrial Resources within 25 feet of the Project’s Centerline

Resource Type	Number
Archaeological Sites*	47
NRHP-eligible properties	13
NRHP-listed properties	8
National Historic Landmarks	0
Total	68

*Represents reported number. Only 4 archaeological sites recommended as eligible or potentially eligible for the NRHP have been confirmed through field investigations

Cultural Resources Studies

- Summary of Findings (Maritime Sections)
 - The NYSHPO has established a 40-meter buffer for avoidance around shipwrecks or anomalies.
 - CHPEI, HDR, and HAA reviewed shipwreck and anomaly data with the NYSHPO in September 2012 to identify shipwrecks and anomalies along the maritime sections of the route that may require avoidance or mitigation.
 - The buffer area for over 100 shipwrecks or anomalies may intersect with the prospective APE.
 - CHPEI's preference is to avoid these shipwrecks and/or anomalies. Additional side scan sonar data is currently being collected to identify certain anomalies and to determine if avoidance or mitigation of these is required.
 - CHPEI is currently assessing the engineering feasibility for avoidance, and has identified avoidance options for a majority of these resources in consultation with the NYSHPO.

Cultural Resources Studies

- The DOE formally initiated consultation under Section 106 by letter dated January 13, 2011. The DOE has identified the following Consulting Parties:
 - ACHP
 - NYSHPO
 - St. Regis Mohawk Tribe
 - Delaware Nation
 - Stockbridge-Munsee Community
 - Shinnecock Indian Nation (November 20, 2012)
 - Delaware Tribe (July 12, 2013)
 - Bureau of Indian Affairs
- By letter dated May 14, 2013, the DOE initiated formal consultation with the Consulting Parties* regarding the Project's APE.
 - The APE is defined to include a 25-foot area on either side of the Project's centerline.
 - The APE includes the construction corridor (approximately 12.5 feet on either side of the Project's centerline), as well as additional areas that may be necessary for laydown, staging, and to accommodate indirect effects.

*Consultation with the Delaware Tribe regarding the APE was initiated on July 12, 2013

Cultural Resources Studies

- The DOE distributed the following study reports to the Consulting Parties on May 14, 2013*:
 - Phase IA Literature Review and Archaeological Sensitivity Assessment
 - Phase IB Archaeological Field Reconnaissance and Phase II Archaeological Site Evaluation, Canadian Pacific Railway Segment
 - Phase IA Literature Review and Archaeological Sensitivity Assessment Addendum
- To date, the DOE has not received any comments regarding the results or recommendations presented in these study reports.

*The reports were distributed to the Delaware Tribe on July 12, 2013

Next Steps

- The DOE currently intends to develop a Programmatic Agreement (PA) pursuant to 36 CFR Part 800.14(b) to address the proposed Project's potential effects on historic properties.
- A PA is appropriate for this undertaking:
 - Cultural resources studies are ongoing, but significant data characterizing historic properties within or potentially within the APE has been collected.
 - CHPEI anticipates that the DOE will issue a Presidential Permit prior to completion of all cultural resources studies, and therefore the effects on all properties cannot be fully determined prior to approval of this undertaking.
 - A PA is consistent with the provisions in the Joint Proposal, including the EM&CP and BMPs.
- The DOE will consult with the Consulting Parties to develop a PA.
- The PA will require the development of a Cultural Resources Management Plan (CRMP) for this Project in consultation with the Consulting Parties prior to the initiation of construction activities.
- A CRMP is also required under the Joint Proposal.

Next Steps

- At minimum, the CRMP will address:
 - Completion of additional studies, as necessary, to assess potential Project effects
 - Control measures to avoid Project effects on identified archaeological resources.
 - The process for conducting additional evaluations, as necessary, to determine the NRHP eligibility of archaeological sites that cannot reasonably be avoided by Project construction activities.
 - Procedures for determining the appropriate measures to minimize or mitigate adverse effects on historic properties that cannot reasonably be avoided by Project construction activities.
 - Procedures for the unanticipated discovery of archaeological resources.
 - Procedures for the unanticipated discovery of human remains.
 - Identification and proposed treatment, avoidance, or mitigation of Project effects on properties of traditional religious or cultural significance.
 - Parties responsible for coordinating activities conducted under the CRMP, including coordinating consultation and maintenance of relevant records.
 - The use of qualified cultural resources professionals.
 - CHPEI staff/contractor training requirements.
 - Appropriate standards for cultural resources investigations.
 - Standards and processes for artifact curation and/or repatriation.
 - Procedures for amendment to the CRMP.
 - Consultation requirements and contacts.
 - Scheduling considerations.

Questions/Discussion

