

## Comment 201



## United States Department of the Interior

OFFICE OF THE SECRETARY  
Office of Environmental Policy and Compliance  
15 State Street – Suite 400  
Boston, Massachusetts 02109-3572



December 12, 2013

9043.1  
ER 13/689

Mr. Brian Mills  
Office of Electric Delivery and Energy Reliability  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585

**RE: COMMENTS**  
**DEIS Champlain Hudson Power Express Transmission Line Project**  
**New York**

Dear Mr. Mills:

The U.S. Department of the Interior (Department) has reviewed the Draft Environmental Impact Statement (DEIS) for the Champlain Hudson Power Express Transmission Line Project (Project) dated September 2013. The applicant, Champlain Hudson Power Express, Inc. (CHPE), proposes to construct an approximately 336-mile (541-kilometer [km]) long, 1,000-megawatt (MW), high-voltage direct current (HVDC) electric power transmission system that would route from the U.S./Canada border to Astoria, Queens, New York. The overall Project purpose is to transmit electricity from Canada to markets in New York City. The U.S. Department of Energy (DOE) is considering an application for a Presidential Permit for this Project.

The Department's U.S. Fish and Wildlife Service (Service) has contributed the following comments on the DEIS pursuant to, and in accordance with, provisions of the National Environmental Policy Act (42 U.S.C. 4321 et seq.), Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), Bald and Golden Eagle Protection Act (54 Stat. 250, as amended; 16 U.S.C. 668-668d), and the Migratory Bird Treaty Act (MBTA) (40 Stat. 755; 16 U.S.C. 703-712). The Service previously provided comments to DOE on the Preliminary EIS for this Project in a letter dated February 5, 2013, and may provide additional comments on this Project under the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) or other legislation, as applicable.

The proposed CHPE Project involves the construction and installation of two HVDC lines within a primarily underwater and underground corridor, although some specific Project components of

the transmission system, including various cooling equipment and a converter station, would be aboveground. There are four segments to the Project, Lake Champlain, Overland Route, Hudson River, and New York City Area.

COMMENTS

**Federally-Listed Endangered, Threatened, and Concern Species**

Federal agencies have responsibilities under Section 7(a)(2) of the ESA to consult with the Service regarding projects that may affect Federally-listed species or designated critical habitat. We understand that the DOE is currently developing a Biological Assessment (BA) to analyze the impacts to the Federally-listed endangered Indiana bat (*Myotis sodalis*) and Karner blue butterfly (*Lycæides melissa samuelis*). The DOE has preliminarily determined that the proposed Project may affect, but is not likely to adversely affect (NLTAAs), these species. However, the DEIS includes statements such as, "Potential non-significant effects from vegetation management include habitat degradation via removal, crushing, or other disturbances to protected species and their habitat," which would not support an NLTAAs determination. The DEIS also states that "A vegetation management plan for the operational phase would be developed and included in the EM&CP." Please note that the DOE and the Service will need to assess the potential impacts of vegetation management during the consultation process.

201-01

The DOE has also preliminarily determined that the proposed Project will result in no impacts to the Federally-listed endangered piping plover (*Charadrius melodus*) or roseate tern (*Sterna dougallii*), the Federally-listed threatened northern wild monkshood (*Aconitum noveboracense*), bog turtle (*Clemmys* [= *Glyptemys*] *muhlenbergii*), or the Federal candidate for listing, New England cottontail (*Sylvilagus transitionalis*), as no suitable habitat is present for these species within the Project area. The DEIS states that impacts are unlikely to the Federally-listed threatened small whorled pogonia (*Isotria medeoloides*) because the Service considers this species as extirpated from New York. Please note that the DEIS is citing out of date information as small whorled pogonia was rediscovered in Orange County, New York, in 2010. However, we have no information to suggest the species occurs within the proposed Project area. We look forward to receiving additional details for all of the above-listed species in the BA.

201-02

The northern long-eared bat (*Myotis septentrionalis*) (NLEB) is currently proposed for Federal listing under the ESA. At this time, no critical habitat has been proposed for the NLEB. The entire state of New York is considered to be within the potential range of the NLEB. During the summer, NLEBs typically roost singly or in colonies in a wide variety of forested habitats, in cavities or crevices or underneath loose bark of both live trees and snags (≥3 inches d.b.h.). The NLEBs have also been documented roosting in man-made structures (i.e., buildings, barns, etc.) during the summer. They forage for insects in upland and lowland woodlots and tree lined corridors. During the winter, NLEBs predominately hibernate in caves and abandoned mine portals. Additional habitat types may be identified as new information is obtained.

Pursuant to Section 7(a)(4) of the ESA and 50 CFR 402.10(a), federal action agencies are required to confer with the Service if they determine that the proposed federal action is likely to jeopardize the continued existence of the NLEB. Action agencies may also voluntarily confer

**201-01:** The language regarding potential nonsignificant effects has been clarified in the Final EIS in Sections S.8.7 and 2.6.7 to note that any potential effects on the species would be discountable (i.e., unlikely to occur) and that these potential effects would be avoided and minimized through implementation of conservation measures during construction, operation, and maintenance of the proposed project. The Biological Assessment (BA) (see EIS Appendix Q) for the proposed CHPE Project also provides specific details on the potential impacts resulting from the CHPE Project, and the measures that would be used to avoid and minimize impacts on the Indiana bat and Karner blue butterfly to justify an ESA "not likely to adversely affect" determination for listed species that might be present in the project area. Section 5.2.7 of the Final EIS states that vegetation management in Karner blue butterfly habitat (wild lupine) would be avoided by use of HDD and large potential roost tree removal would occur outside the Indiana bat roosting season. Any vegetation management otherwise required to occur in this habitat would be subject to further consultation between the Applicant and U.S. Fish and Wildlife Service (USFWS).

**201-02:** This information has been added to the Final EIS in Sections 3.2.7, 3.3.7, and 5.1.7, and the BA addresses the rediscovery of small whorled pogonia in Orange County, New York, in 2010. Because the location of rediscovery is more than 3 miles (5 km) away from the proposed CHPE Project region of influence (ROI) and the transmission line in Orange County would be entirely underwater in the Hudson River Segment where there is no suitable habitat to support the small whorled pogonia, the rediscovery of this species in Orange County does not change the effects determination.

with the Service if the proposed action may affect a proposed species. Although species proposed for listing are not afforded protection under the ESA, if a proposed species is listed, the prohibitions against jeopardizing its continued existence and unauthorized “take”<sup>1</sup> are effective immediately, regardless of an action’s stage of completion. Therefore, if suitable NLEB habitat is present within the proposed Project area, we recommend further coordination to determine if the species may be present or if impacts are likely to avoid potential significant Project delays. Additional information regarding NLEB and conference procedures can be found at <http://www.fws.gov/midwest/endangered/mammals/nlba/index.html>.

201-03

**201-03:** This information is presented in the Final EIS in Sections 3.1.7, 5.1.7, 5.2.7, and similar sections, and the BA addresses the life history requirements of the northern long-eared bat, the potential impacts on the bat resulting from the proposed project, and measures that would be implemented to avoid such impacts. The project impacts would be similar to those discussed for the Indiana bat. Prior to construction, the Applicant would coordinate with the USFWS to determine the potential presence of northern long-eared bat along the proposed construction route and to receive additional recommendations on measures to be taken that would prevent adverse impacts on this species.

**Bald Eagles**

Bald Eagles use the Hudson River corridor for all aspects of their life cycle including feeding, breeding, wintering, and during migration. The DEIS notes that data from the New York Natural Heritage Program indicates active bald eagle nests in several counties in the Lake Champlain, Overland, and Hudson River sections of the Project. The Project sponsor should contact Sarah Nystrom, the Service’s Northeast Region Eagle Coordinator at 413-253-8592 or [sarah\\_nystrom@fws.gov](mailto:sarah_nystrom@fws.gov), if Project construction is expected to impact bald eagles, especially during the breeding season. Notably, the DEIS indicates that blasting may be required in some areas if excavation equipment cannot dig the cable trench. Surveys may be required to determine active nesting areas prior to construction. The Service can provide recommendations on surveys for this species prior to construction.

201-04

**201-04:** Comment noted.

**Migratory Birds**

We appreciate the consideration given by CHPE to co-locate the land portion of the Project almost entirely along existing infrastructure such as rail lines, roads, and utilities. This will reduce habitat loss, fragmentation, and disturbance of areas important to migratory birds. As DOE is likely aware, the Project’s effects on migratory birds should be documented, even if found adjacent to previously disturbed areas, in order to comply with the MBTA and the requirements of Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds.

201-05

**201-05:** See EIS Sections 5.1.7, 5.2.7, 5.3.7, and 5.4.7 for the analysis of potential impacts on migratory birds. The EIS sufficiently addresses impacts on migratory birds based on available information. Prior to construction, the Applicant would coordinate with the USFWS to determine the presence of migratory birds along the proposed construction route and the appropriate mitigation measures to be taken that would prevent adverse impacts on migratory bird species.

The Service previously requested that wildlife habitat be adequately mapped so that impacts to the various cover types can be assessed. However, it appears that only a portion of the Project corridor has been reviewed. In addition, few details are available on the locations of cooling stations, equipment storage and staging areas, access roads, and contractor yards. Further, we note that the construction of the Project would likely encompass the nesting and migration seasons of migratory birds. However, it is not clear in the DEIS, if and when construction activities would occur in migratory bird habitat.

201-06

**201-06:** See response to Comment 201-05.

We recommend DOE provide a more complete estimate of the potential disturbance to terrestrial habitat and the impact of the Project on migratory birds. Further, we request DOE coordinate with the Service’s New York Field Office to determine if conservation measures to benefit migratory birds are needed.

<sup>1</sup> Take is defined in Section 3 of the ESA as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

According to data from the New York Natural Heritage Program, colonial waterbirds have nested on the Four Brothers Islands complex in Lake Champlain. The Project sponsor should determine if construction will occur close to these nesting areas and if so, whether the Project can be constructed outside of the breeding season in this location.

} 201-07

**201-07:** The easternmost island of the complex is more than 0.75 miles (1.21 km) from the proposed CHPE project corridor. Impacts associated with construction are not anticipated to affect colonial waterbirds nesting on the Four Brothers Islands.

**Fish**

In previous comments, the Service requested information on the potential effects of electromagnetic fields on the American eel, a candidate for ESA listing. We have concerns that the electromagnetic fields produced by the Project may affect the feeding, migration, or homing abilities of eels. However, the information in the DEIS concludes that the Project would not negatively impact this species. Some research, mostly in the marine environment and with alternating current, concludes that the effects on benthic organisms and fish depend largely on the species and their sensitivity to these fields (Normandeau et al. 2011, Schultz et al. 2010). However, adequate research for freshwater fish is lacking and the impacts to freshwater biota are mostly based on modeling or laboratory experiments. It is recommended that the Project sponsor consider monitoring the Project to determine if the electromagnetic fields emitted by the transmission line are influencing eel behavior. We understand that additional monitoring and reporting is expected to occur following cable installation which will supplement the existing knowledge base and guide future siting decisions for similar projects that may be proposed in the future. The Service requests to be involved in the development of study plans and review of data, when available.

} 201-08

**201-08:** Comment noted.

We recommend that DOE and the applicant consider these comments prior to Project approval. The Service's New York Field Office will continue to work with the Project sponsor and DOE in evaluating the Project's potential impacts on Federally-listed species, sensitive fish species, and migratory birds.

Thank you for the opportunity to review and comment on this DEIS. Please contact Tim Sullivan at 607-753-9334 if there are any questions regarding these comments. Please contact me at (617) 223-8565 if I can be of further assistance.

Sincerely,



Andrew L. Raddant  
Regional Environmental Officer

Comment 202



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Electricity Delivery and  
Energy Reliability

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Energy Reliability

Brian Mills, National Environmental Policy Act Document Manager  
Office of Electricity Delivery and Energy Reliability, OE-20  
US Department of Energy  
Washington, D.C. 20585

Dear Mr. Mills:

The U.S. Environmental Protection Agency (EPA) has reviewed the Department of Energy's draft environmental impact statement (DEIS) dated September 2013 for the Champlain Hudson Power Express Transmission Line Project (CHPE). The proposed project would be an approximately 336-mile long, 1,000-megawatt, high-voltage merchant electric power transmission system that includes a dual transmission line that would extend to Astoria, Queens, New York. The CHPE is a high voltage direct current transmission system, consisting of two cables, which will run electricity from Canada south to the New York City area. The cables will be placed under the sediments of Lake Champlain, the Hudson River, the Harlem River and the East River with some upland placement along the route. The project will include a converter station to be located in Astoria, New York, and several cooling stations to be located with the cables in upland areas. This review was conducted in accordance with Section 309 of the Clean Air Act, as amended (42 U.S.C 7609, PL 91-604 12 (a), 84 Stat. 1709) and the National Environmental Policy Act (NEPA).

EPA recognizes that this project has already undergone an in-depth review by the New York State Public Service Commission (NYSPSC), and has been granted a Certificate of Environmental Compatibility and Public Need by that Commission. While the Commission's proceedings are mentioned in various places in the DEIS, it might have been more useful for the public if the DEIS summary had contained a brief explanation of the NYSPSC proceedings, and a listing of important documents and the websites for those documents, especially the NYSPSC Certificate Conditions for the CHPE project.

We have enclosed a list of technical comments on the DEIS, and in light of our concerns on habitat loss due to anchor chain sweep, lack of wetlands mitigation plans and the document's lack of impacts analysis for underwater blasting, EPA has rated the DEIS as "EC-2" (Environmental Concerns- Insufficient Information; see enclosed rating sheet).

202-01

202-02

**202-01:** A brief explanation of the NYSPSC proceedings, important documents, and links to those documents has been added to Section S.6.2 of the EIS Summary. Section 2.3 of the EIS also details NYSPSC reviews and the granting of the Certificate of Environmental Compatibility and Public Need. Reference from both sections to EIS Appendix C referencing the Certificate and other information has been added to the Final EIS. The Certificate is available in the Document Library on the EIS Web site (<http://www.chpexpresseis.org>)

**202-02:** Comment noted. Habitat loss due to anchor chain sweep is addressed in Sections 5.1.4, 5.3.4, and 5.3.5 of the Final EIS. The wetland mitigation plan is addressed in Section 5.2.8 of the Final EIS, and impact analysis for underwater blasting is in Sections 5.4.2, 5.4.3, 5.4.4, 5.4.5, 5.4.9, 5.4.10, 5.4.11, 5.4.14, and 5.4.17 of the Final EIS. Additionally, responses to Comments 202-03 through 202-21 provide more detailed information on these and other concerns.

Internet Address (URL) • <http://www.epa.gov>

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Thank you for the opportunity to comment. Also included is a list of resources, “**U.S. EPA Region 2, Green Recommendations**” that can assist you in greening this and future projects. If you have any questions regarding this review or our comments, please contact Lingard Knutson of my staff at (212) 637-3747.

Sincerely,



Judy-Ann Mitchell, Chief  
Sustainability Planning and Multi-Media Programs Branch

Enclosures

EPA Comments on Champlain Hudson Power Express  
Draft Environmental Impact Statement dated September 2013

General Conformity

1. The general conformity applicability analysis emissions are not presented on a calendar year basis. However, EPA acknowledges that by including the total emissions in each nonattainment area, even for segments that may span greater than one year, the applicability analysis provides a conservative estimate.
2. There appears to be an error in calculating the emission factor for several marine vessels and dredges. Using EPA's "Current Methodologies in Preparing Mobile Source Port-Related Emission Inventories" (<http://epa.gov/cleandiesel/documents/ports-emission-inv-april09.pdf>), a typical NOx emission factor for tugboats is 10 g/kW-hr. Converted to pounds, this factor would be 0.02 lb/kW-hr. However, Appendix M shows an emission factor of 0.02 lb/hr, where it appears that the engine's rated power has not been taken into account. We recommend checking all marine and dredging emission factors and updating the general conformity analysis as necessary.

202-03

202-04

202-03: Comment noted.

202-04: A review of the calculations used to determine the emissions factor for marine vessels and dredges confirmed that an error was made in the conversion from grams per kilowatt-hour to pounds per hour for tugs, boats, and dredging ships. Although the correction did result in an increase in projected emissions, the *de minimis* threshold still was not exceeded. The language in the EIS relevant to the corrected emissions factor has been revised in Sections 5.3.16 and 5.4.16 of the Final EIS.

202-05: The conceptual wetland mitigation plan is available for public access in the Document Library on the CHPE EIS Web site (<http://www.chpexpresseis.org/>) and the link to the plan was added to Section 5.2.8 in the Final EIS.

Wetlands

1. Several sections of the DEIS, such as S.5.8, 2.6.8 and 5.2.8 mention that a conceptual wetlands mitigation plan has been supplied to the New York District Army Corps of Engineers. That mitigation plan should be included in the EIS to allow for wider public and agency comment.
2. According to Section 5.2.8 of the DEIS, restoration of the temporary wetland impact areas will consist of re-grading to original contours and seeding with annual ryegrass, followed by natural plant establishment and succession. Some tree species may re-sprout from stumps and roots, but this passive restoration of 16.2 acres of forested wetland will likely take 30 to 50 years to yield a mature wetland community. EPA recommends that the planned restoration of cleared forested wetland areas be augmented with a wetland seed mix and planting of native tree and shrub saplings.

202-05

202-06

202-06: Comment noted. As discussed in Section 5.2.8 of the EIS, restoration of temporarily impacted forested wetlands would consist of backfilling with removed wetland soils (where necessary), final grading, and seeding with a temporary appropriate seed mixture. Restoration work would be completed within 24 hours after backfilling is finished. Additionally, the Applicant would implement a program to monitor the success of wetland restoration. If it is determined that restoration is unsuccessful after 2 years, the Applicant would implement (in consultation with a professional wetland ecologist) a plan to revegetate the wetland actively with native wetland herbaceous plant species.

Sediment/Habitat

1. Sections S.6.3 and 2.4.10.1 discuss the aquatic construction sequence, and state that the "plowing process would be conducted using either a dynamically positioned cable ship or a positioned cable barge." EPA assumes that a "positioned cable barge" is the same as an anchored position vessel, as described in Section 5.1.2. Because of the anchor chain sweep, the use of an anchored position barge or vessel will exponentially increase the impact to benthic habitat compared to a dynamically positioned vessel. Section 5.1.9 does mention anchor sweep, but does not quantify the loss of benthic habitat, nor does Section 5.3.4 "Impacts of construction on shellfish and benthic communities." Should the applicant use an anchored position vessel in either Lake Champlain or the Hudson River,

202-07

202-07: In instances where anchors are deployed by construction vessels, U.S. Environmental Protection Agency (USEPA) recommendations regarding the use of mid-line buoys would be followed as mitigation to prevent anchor sweeps. Lay barges would have full anchoring capability to hold position at any point along the route. Anchorage can occur in the event that bottom conditions are encountered that either stop forward progress at reasonable tow tension or result in excessive rolling or pitching of the plow. In this case, the barge would be stopped and spuds or anchors would be

deployed to hold the barge in position. The project would also employ spud barges during the construction and removal of the temporary cofferdams at the five transmission line transitions from water to land, a 460-foot (140-meter) length of rock trenching in the Harlem River (MP 324.5), and at seven marine splice locations. In the cofferdam and rock trenching locations, the spud barges would be used in a confined area. The aquatic splices can be performed with either dynamic barge positioning or with deployment of anchors or spuds. The collective length of all work where anchors or spuds can be deployed and cause impacts on benthic habitat is less than 1 percent of the approximately 197-mile total aquatic portion of the proposed CHPE Project route.

Sections S.8.4, 2.4.10.1, 2.6.4, 5.1.4, 5.3.4, and 5.3.5 of the Final EIS were revised to include information on anchor sweeps and measures that would be employed to minimize impacts on benthic habitat. Additionally, use of midline buoys as mitigation to prevent anchor sweeps has been added to Appendix G.

mid-line buoys should be employed to minimize the effect of anchor chain sweep on the benthic habitat. Use of mid-line buoys is standard on Federal Energy Regulatory Commission pipeline certificates in this region. EPA is also concerned as to whether the disturbance from anchor chain sweep was included in Table 2-3 - Summary of Potential Impacts Associated with the Proposed CHPE Project, Aquatic Habitat and Species resource area.

202-07

2. In section 2.4.2, the fourth paragraph, last line states, "If necessary, blasting could be used to create a trench in which to bury the cables." EPA understands that in water blasting is proscribed by the NYS PSC order and was not mentioned in the New York District Army Corps of Engineers Public Notice (NAN-2009-01089-EYA) for this project. However, if in water blasting is considered a possible construction technique, the DEIS must evaluate its environmental impacts, especially to endangered fish.

202-08

3. Section 5.3.5 of the DEIS states, "Installation of the proposed aquatic transmission line would result in up to 485 acres of riverbed disturbance in the Hudson River Segment," however the Army Corps of Engineers Public Notice (above) states that the anticipated impacts from the buried cable installation for the entire project is 338 acres. This discrepancy must be rectified.

202-09

4. The applicant needs to clarify what areas will be backfilled with clean fill and what they propose as "clean fill." Particular clarification is necessary for those areas of federal channels (total 9 miles) where the applicant will be excavating 15-feet of material below the federal channel. The DEIS states, "Once a segment of trench is excavated, cable would be laid, and the clamshell dredge or excavator would place clean backfill back into the trench," details need to be provided for this backfilling.

202-10

**Cumulative Impacts**

1. The discussion of cumulative impacts should be expanded and updated to address the potential for the installation of the New England Clean Power Link (transmission line) project which includes burial of 100 miles of two six-inch cables under Lake Champlain. It is our understanding that the New England Clean Power Link project is to be developed by the same development team behind the Champlain Hudson Express project and that it will also require DOE review. Therefore, we believe it is appropriate for the analysis to include a description of both projects in the cumulative impacts analysis. Moreover, the EIS should explain whether opportunities exist for synchronized and co-located installation of the projects to further reduce impacts. More information about the New England Clean Power Link project can be found at: <http://www.necplink.com/about.php>

202-11

2. Section 6.1.1.3 and 6.1.2.2 discuss the Coast Guard' proposed federal anchorage in the Hudson River west of Yonkers, between mile posts 319 and 320. The Coast Guard effort is well into its planning process, and is very likely to occur. While section 6.1.2.2 states that the anchorage should be constructed before the CHPE is installed, and that the CHPE would be rerouted "slightly" to the east, EPA is concerned that the DEIS did not assume

202-12

**202-08:** Installation of the transmission line would entail blasting of approximately 460 linear feet (140 meters) of rock bed at MP 324.5 in the Harlem River. Blasting would occur within the construction windows agreed upon by the settlement parties, including the NYSDEC and the NYSDOS, to minimize impacts on endangered fish species. Information on the creation of trenches in bedrock is provided in Attachment 5 of the USACE New York District Public Notice (NAN-2009-01089-EYA) for the proposed CHPE Project dated October 2013. An analysis of impacts from blasting activities in the Harlem River has been added to Sections 5.4.2, 5.4.3, 5.4.4, 5.4.5, 5.4.9, 5.4.10, 5.4.11, 5.4.14, 5.4.17, and 5.4.19 of the Final EIS.

**202-09:** The EIS used a conservative disturbance area estimate of 25 feet on each side of the transmission line, which includes settlement zones where a majority of the sediment disturbed by the line would settle, whereas it appears the USACE Notice assumes a lower disturbance area width. This clarification has been made in Sections 5.3.4 and 5.3.5 of the Final EIS.

**202-10:** The proposed CHPE Project transmission line route was developed to avoid or minimize potential environmental impacts. As discussed in Section 2.4.10.1 of the EIS, in most cases, the aquatic cables would be installed using a jet plow or shear plow. These methods do not create typical trenches as are created during terrestrial transmission line burial activities. The plow methods push the sediment aside to allow the cables to sink into the void created. The sediment then slumps back into the void immediately after the plow moves on. "Clean fill" would not be used to backfill the plow trenches. Installation of the transmission line would involve use of clean backfill only at the five water-to-land transition areas (see Section 2.4.3 of the EIS); and temporary cofferdams would be installed requiring the excavation of less than 180 cubic yards (138 cubic meters) of material from within each of the cofferdams. Excavated material would be environmentally tested and any contaminated materials would be disposed of at a state-approved upland site. Once the cofferdam serves its purpose, its sheeting

would be removed from the waterways and the areas within the temporary cofferdams returned to pre-construction elevations by the placement of approximately 200 cubic yards (153 cubic meters) of clean sand into each location. Similarly, as described in Section 2.4.10.1, in the rock excavation area in the Harlem River, clean sand along with blasted aggregate rock materials from the trench would be used to backfill the trench.

**202-11:** A discussion on the potential installation of the New England Clean Power Link (transmission line) is incorporated into Sections S.8.20, 6.1.1, and 6.1.2 of the Final EIS. The New England Clean Power Link project is in the early planning stages; therefore, detailed plans and construction schedules are not yet known. Because the New England Clean Power Link would be installed only in Vermont, and the proposed CHPE Project would be installed a distance away across the state border in New York, significant cumulative impacts on the environment would be unlikely. However, if construction of the New England Clean Power Link and CHPE projects temporally overlap in Lake Champlain, then construction-related impacts on water resources and aquatic species and habitats, including state-listed fish and mussels, would be greater. The distances between the projects would be sufficient to avoid overlaps among temperature and magnetic field increases during operation.

**202-12:** The Applicant has analyzed the proposed CHPE Project's route in relationship to proposed anchorage areas in the Hudson River as those anchorage areas are defined in the applicable USCG *Federal Register* Notice (78 *Federal Register* 44917). Based on the coordinates given in the Notice, it appears the transmission line route is within the boundary of proposed Anchorage Area 18. At this time, however, Anchorage Area 18 has yet to be formally approved and the final coordinates of the proposed anchorage area have yet to be determined. The Applicant has authority under its NYSPSC certificate to modify the current route to account for, and ultimately avoid, established anchorage areas. If modified, impacts from construction within the anchorage area would be avoided. Therefore,

impacts would occur along the installation route that would be outside of the anchorage area. The Applicant is prepared to reroute the proposed transmission line route following finalization of proposed Anchorage Area 18. The Applicant continues to coordinate installation plans for the proposed CHPE Project transmission line with the USCG and the USACE. The transmission line would not traverse any existing designated anchorage areas, and safety measures would be implemented, including issuances of Notices to Mariners, as appropriate, to ensure the safety of vessels transiting near the construction barge throughout the proposed route, including near existing anchorage areas.

- the new routing as part of the preferred alternative, has not included any approval or discussion by the Coast Guard or that the CHPE would be safe for mariners near the new anchorage.
3. Section 6.1.2.14 should include a discussion of marine vessel safety during the simultaneous construction of both the CHPE and the Tappan Zee Hudson River Crossing. Any required Coast Guard permits or safety plans with the New York State Thruway and its contractors should be noted.
- General**
1. EPA notes that the DEIS does not appear to contain information about the Champlain Valley National Heritage Partnership (CVNHP) in its evaluation of cultural resources. The CVNHP is administered by the Lake Champlain Basin Program. More information can be found at <http://www.champlainvalleycynhp.org/index.htm>
2. EPA recommends that the Endangered Species Action Biological Assessments and Essential Fish Habitat consultation be included in the DEIS, or incorporated by reference.
3. In Section S.8.6, final paragraph, please provide the reference the study on forest fragmentation that indicates that displacement impacts associated with a 26-foot-wide corridor is not significant.
4. Section 1.6.2. Please supplement the description of EPA’s role in the CHPE project by including the following - EPA is required under Section 309 of the CAA to review and publicly comment on the environmental impacts of major federal actions including actions that are the subject of draft and final EISs, and responsible for implementing certain procedural provisions of NEPA (e.g., publishing the Notices of Availability of the draft and final EISs in the *Federal Register*) to establish statutory timeframes for the environmental review process.
5. Page 2-7, last sentence on the page. There is a partial sentence “2-7 and” that should be deleted.
6. Page 5-78 discusses the use of vegetative buffers around the cooling stations. All vegetative buffers should use native plants.
7. On page 5-115, the second paragraph states “post-installation monitoring for the Long Island Replacement Cable in 2010...suggested that concrete mats were not a major disturbance to benthic communities.” Please add the reference for that statement.
- 202-12** 202-13
- 202-13:** Prior to construction, the Applicant would coordinate installation of the proposed CHPE Project transmission line with the USCG as discussed in various sections of the EIS, including Sections 5.1.2 and 5.3.2, and discussion has been added to Section 6.1.2.2. Safety measures would be implemented that would include issuances of Notices to Mariners, as appropriate, to ensure the safety of vessels transiting near the cable-laying barge throughout the proposed route (see Appendix G of the EIS). As noted in Comment 203-01, the USCG states that currently there is no indication that the proposed CHPE Project requires any USCG permits.
- 202-14:** Several of the properties recognized by the Champlain Valley National Heritage Partnership are identified in the EIS, specifically those with a potential to be impacted by the proposed CHPE Project. An example is Fort Ticonderoga, which is discussed in Sections 3.1.10 and 5.1.10 of the EIS. Text referencing the Champlain Valley National Heritage Partnership has been added to Section 3.1.10.1.
- 202-15:** The BA (EIS Appendix Q) and Essential Fish Habitat (EFH) Assessment (EIS Appendix R) and information from the consultations are included in the Final EIS.
- 202-16:** The reference citation for this study is provided in the main document text in Sections 5.2.6, 5.2.7, and 5.3.6: see Rich, A.C., D.S. Dobkin, and L J. Niles. 1994. Defining Forest Fragmentation by Corridor Width: The Influence of Narrow Forest-Dividing Corridors on Forest-Nesting Birds in Southern New Jersey. *Journal of Conservation Biology* 8 (4): 109-1121.
- 202-17:** Section 1.6.2 describes Federal authorizations and approvals. Text in Section 1.6.1 has been revised in the Final EIS to further clarify USEPA’s role relative to the EIS, which is the intent of the agency descriptions of Section 1.6.1.
- 202-18:** Partial sentence has been deleted in the Final EIS.

**202-19:** The text referred to in the comment was deleted. Nonetheless, use of native plants is mentioned throughout the EIS. In addition, the EM&CP and BMP documents for the proposed CHPE Project, which were included in draft form in the Joint Proposal and the NYSPSC Certificate, address the use of vegetation buffers, restoration plans, and standards. Specifically, Sections 11.2.2, 18.4, 19.2.3, and others in the BMP document describe vegetation restoration measures that include planting of native seeds, grasses, shrubs, and tree species, as appropriate for the habitat type. Furthermore, measures, including grading and topsoil segregation, and monitoring and cleaning of equipment, would be taken to ensure the preservation of the native seed bank and to prevent or control the spread of nonnative plant seeds.

**202-20:** The reference information for this monitoring effort is cited (ESS Group 2011) in the text that precedes the quoted text (see ESS Group, Inc. 2011, Concrete Mattress Macroinvertebrate and Video Census Monitoring Report, Long Island Replacement Cable (LIRC) Project, Prepared for Northeast Utilities Services Company as agent for the CT Light & Power Company, Berlin, Connecticut, Prepared by ESS Group, Inc., Wellesley, Massachusetts, 2011).

**EPA Region 2 Green Recommendations**

To the maximum extent possible, project managers are encouraged to utilize local and recycled materials; to recycle materials generated onsite; and to utilize technologies and fuels that minimize greenhouse gas emissions.

Further, to the extent feasible, renewable energy (including, but not limited to solar, wind, geothermal, biogas, and biomass) and energy-efficient technologies should be incorporated into the design, construction, and operation of all types of projects.

To that end, the following information and internet hyperlinks are provided for your consideration and use:

- **Multi-media green building and land design practices**  
Utilize green building practices which have multi-media benefits, including energy efficiency, water conservation (see WaterSense below), and healthy indoor air quality. Apply building rating systems and no-cost online tools and guides, such as ENERGY STAR, Portfolio Manager, Target Finder, Indoor Air Quality Package, and WaterSense for building construction. The ENERGY STAR website (see below) includes, among other things, information on new single-family homes, multi-family homes, commercial and other buildings, and schools. The website also provides an ENERGY STAR "Training Center" free of charge.

U.S. Green Building Council (USGBC) LEED Programs and Guides: <http://www.usgbc.org/>

ENERGY STAR home page: <http://www.energystar.gov>

ENERGY STAR Target Finder (no-cost online tool to set energy performance targets): <http://www.energystar.gov/targetfinder>

Indoor Air Quality: <http://www.epa.gov/iaq>

- **Water conservation and efficiency in building construction**  
Promote water conservation and efficiency through the use of water efficient products and practices. For new building construction and restoration projects, we recommend considering the use of products with the WaterSense label where appropriate. Devices receiving the EPA WaterSense label must be at least 20% more water efficient than (and must meet or exceed the performance standards of) non-labeled devices of the same type. Additionally, when possible, consider the use of WaterSense Certified Professional Irrigation Partners and WaterSense Builder Partners. These professionals use WaterSense labeled devices where appropriate, are trained in the latest water conservation practices, and use the latest water efficiency tools and technologies, including irrigation equipment and xeriscaping for landscaping and best management practices for construction in the WaterSense New Home Specifications. Visit the WaterSense website for tips on water efficiency, a WaterSense labeled product search tool, a list of WaterSense Partners, access to the Water Budget Tool at: <http://www.epa.gov/watersense/>

In addition to using WaterSense labeled products and certified professionals, there are many water conservation strategies and best management practices that can be used in new construction and/or restoration. Here are some useful links to water conservation information:

- Green Building Encyclopedia: [http://www.whyygreenbuildings.com/water\\_conservation.php](http://www.whyygreenbuildings.com/water_conservation.php)



**202-21:** USEPA Region 2 Green Recommendations are being considered and implemented by the Applicant to the extent practicable.

During construction of the terrestrial portion of the proposed CHPE Project, clean excavated soils would be reused as fill and waste would be recycled to the maximum extent practicable (see Sections S.8.12 and 2.6.12 of the EIS); a vast majority of the debris generated, such as excavated soil, brush, tree limbs, logs, slash and stump waste, and blasted rock would be recycled as mulch or other uses and not disposed of in a landfill (see Section 5.2.12); and a majority of the estimated 65 tons of debris generated during construction of the Luyster Creek HVDC Converter Station would consist of recyclable materials and would be diverted from landfills (see Section 5.4.12). Additionally, once construction is complete, all debris and equipment would be removed from the site and recycled to the maximum extent feasible (see Section 2.4.4).

The proposed CHPE Project itself would facilitate the use of renewable energy as the Applicant expects that most of the power transported through the proposed transmission line would primarily be from renewable resources, primarily hydropower (see Section 1.4 of the EIS).

Cooling stations would be designed as closed-loop systems in which approximately 245 gallons (927 liters) of cooling water would be required initially to fill the cooling system, and negligible amounts of water would be needed to maintain this level during operation (see Sections 5.2.13, 5.3.12, and 5.4.12).

Consider designs for storm water management on compacted, contaminated soils in dense urban areas:

Additional information: <http://www.epa.gov/brownfields/tools/swdp0408.pdf>

- **Alternative and Renewable Energy**

The Department of Energy's "Green Power Network" (GPN) provides information and markets that can be used to supply alternative generated electricity. The following link identifies several suppliers of renewable energy:

Additional information: [http://apps3.eere.energy.gov/greenpower/buying/buying\\_power.shtml?](http://apps3.eere.energy.gov/greenpower/buying/buying_power.shtml?)

- **Clean Diesel**

For new equipment utilize contract specifications requiring advanced pollution controls and clean fuels: <http://www.northeastdiesel.org/pdf/NEDC-Construction-Contract-Spec.pdf> and <http://www.epa.gov/cleandiesel/technologies/index.htm>

Implement diesel controls, cleaner fuel, and cleaner construction practices for on-road and off-road equipment used for transportation, soil movement, or other construction activities, including:

1. Strategies and technologies that reduce unnecessary idling, including auxiliary power units, the use of electric equipment, and strict enforcement of idling limits; and
2. Use of clean diesel through add-on control technologies like diesel particulate filters and diesel oxidation catalysts, repowers, or newer, cleaner equipment.

Additional information: *A How To Guide for Diesel Engine Retrofits in the Construction Industry.* <http://www.mass.gov/dep/air/diesel/conretro.pdf>

- **Utilizing recycled materials in construction projects**

Many industrial and construction byproducts are available for use in road, building or infrastructure construction. Use of these materials can save money and reduce environmental impacts. The Recycled Materials Resource Center has developed user guidelines for many recycled materials and compiled existing national specifications.

Additional information: <http://rmrc.wisc.edu>  
<http://www.fhwa.dot.gov/pavement/recycling/retools.cfm>  
<http://www.epa.gov/osw/conserva/lmr/index.htm>

- **Encourage cost-efficient, environmentally friendly landscaping**

EPA's GreenScapes program provides cost-efficient and environmentally friendly solutions for landscaping. Designed to help preserve natural resources and prevent waste and pollution, GreenScapes encourages companies, government agencies, other entities, and homeowners to make more holistic decisions regarding waste generation and disposal and the associated impacts on land, water, air, and energy use.

Additional information: <http://www.epa.gov/wastes/conserva/tools/greenscapes/index.htm>

- **Incorporate on-site energy generation and energy efficient equipment upgrades into projects at drinking water and wastewater treatment facilities**

202-21



Consider using captured biogases in combined heat and power systems, and renewable energy (wind, solar, etc.) to generate energy for use on-site. Evaluate the potential energy savings associated with upgrading to more energy efficient equipment (pumps, motors, lighting, etc.).

Additional information: <http://water.epa.gov/infrastructure/sustain/goinggreen.cfm>  
<http://www.epa.gov/region9/waterinfrastructure/howto.html>

- **Incorporate green practices into remediation of contaminated sites**  
Encourage or incentivize the use of green remediation practices, including designing treatment systems with optimum energy efficiency; use of passive energy technologies such as bio-remediation and phyto-remediation; use of renewable energy to meet power demands of energy-intensive treatment systems or auxiliary equipment; use of cleaner fuels, machinery, and vehicles; use of native plant species; and minimizing waste and water use.

Additional information: <http://cluoin.org/greenremediation/index.cfm>

- **Encourage development in brownfield sites**  
Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. These sites are often "infrastructure-ready," eliminating the need to build new roads and utility lines which are necessary in undeveloped land.

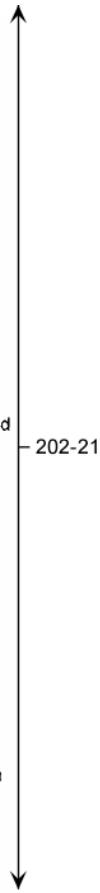
Additional information: <http://www.epa.gov/brownfields/>

- **Encourage use of Smart Growth and transit-oriented development principles**  
Smart Growth and transit oriented development (TOD) principles help preserve natural lands and critical environmental areas, and protect water and air quality by encouraging developments that are mixed-use, walkable and located near public transit. Encourage use of bicycling with bike commuter parking, storage, and changing facilities. Facilitate increased carpooling or alternative vehicles with preferable parking spaces and/or electric vehicle plug in spots.

Additional information: <http://www.epa.gov/smartgrowth>

- **Integrated Design Process**  
The Integrated Design Process calls for the active and continuing engagement of all stakeholders throughout the building design, development, construction, and post-construction phases including the owners, architects, engineers, building department officials, and others. This process creates a higher-performing building at lower cost, allows various building systems to work together to eliminate redundant and unnecessary capacity, and minimizes change order costs.

Additional information: [http://www.wbdg.org/design/engage\\_process.php](http://www.wbdg.org/design/engage_process.php)



**SUMMARY OF RATING DEFINITIONS AND FOLLOW-UP ACTION**  
**Environmental Impact of the Action**

**LO-Lack of Objections**

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

**EC-Environmental Concerns**

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

**EO-Environmental Objections**

The EPA review has identified significant environmental impacts that must be avoided to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

**EU-Environmentally Unsatisfactory**

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of environmental quality, public health or welfare. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommend for referral to the Council on Environmental Quality (CEQ).

202-21

**Adequacy of the Impact Statement**

**Category 1-Adequate**

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

**Category 2-Insufficient Information**

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

**Category 3-Inadequate**

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analysis, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

\*From: EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

Comment 203



Commander  
First Coast Guard District

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January 15, 2014

Mr. Brian Mills  
U.S. Department of Energy  
Senior Planning Advisor  
Office of Electricity Delivery and Energy Reliability (OE-20)  
1000 Independence Avenue, SW  
Washington, DC 20585

Dear Mr. Mills,

Thank you for the opportunity to comment on the Champlain Hudson Power Express (CHPE) Draft Environmental Impact Statement (DEIS).<sup>1</sup> The First Coast Guard District (CGD ONE), with input from Sector Northern New England (SECNNE) and Sector New York (SECNY), evaluated the DEIS to determine how the project may impact navigational safety along the transmission line route. The U.S. Coast Guard (USCG) provides the following input, in addition to a submission by SECNY on January 17, 2013 on the Preliminary DEIS (See Enclosure).

1. Cooperating Agency Clarification:

The USCG's role is to serve as a subject matter expert to the DOE regarding impacts to navigation. The USCG requests that Table 1-2 on page 1-11 in Volume 1 of the DEIS be revised to read as follows: "Provides recommendations concerning possible impacts to navigational safety and security under the authority of the Ports and Waterways Safety Act (PWSA), 33 U.S.C. § 1231, and the Rivers and Harbors Act, 33 U.S.C. § 471."

The USCG is authorized to issue permits for certain bridge projects, marine events, and for private aids to navigation. At this time, there is no indication that this project requires the USCG to exercise any such permitting authorities.<sup>2</sup>

2. Navigational Safety:

Installation of cable beneath navigable waters along the project route will impact navigational safety by increased presence of construction vessel traffic. To reduce risks during construction, cable laying vessels must be vigilant to guard against marine incidents through prudent seamanship and adherence to navigation rules. After the installation phase is finished, the permanent existence of a transmission cable under these waterways will likely create safety risks for vessels needing to anchor if appropriate mitigation strategies are not employed.

The DEIS mentions employing limited access areas for the project in multiple locations to mitigate risk.<sup>3</sup> The USCG may, at its discretion, establish a limited access area along the

203-01

**203-01:** The Final EIS has been revised to clarify the role of the USCG in the review of the proposed CHPE Project per the comment. The requested text has been added to Section 1.6.1 of the Final EIS since Table 1-2 is a list of permitting processes, not recommendations.

203-02

**203-02:** Comment noted. EIS Section 3.3.2 has been revised to cite the correct safety and security zone regulations.

<sup>1</sup> OE Docket No. PP-362.

<sup>2</sup> Page 2-81 (end of paragraph 6); Appendix J Memo dated November 26, 2012 (Section 2.0)

<sup>3</sup> Pages 3-35 paragraph 1 and page 5-101 paragraph 4.

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waterways when necessary to provide for safe navigation. As stated in 33 C.F.R. § 165, any person (or applicant) may request that the USCG establish a limited access area by following the appropriate protocol. Finally, for clarification, the DEIS references an outdated version of 33 C.F.R. 169.165 safety and security zone regulations.<sup>4</sup> The “Commercial Waterfront Facilities” site has been revised to “33 C.F.R. Part 105 Facilities”.

3. Transmission Cable Line:

The USCG has concerns with several locations and burial depths along the proposed cable route. While the Applicant did consult with SECNY and with members of the NY/NJ Harbor Safety, Navigation and Operations Energy Subcommittee, it appears the Applicant has made few changes to the project route based on input provided during such consultation, contrary to what the DEIS states.<sup>5</sup>

It is unclear if the proposed cable burial depth, which varies from three to fifteen feet along the route, is sufficient to prevent anchor snag. A vessel fetching up on an insufficiently buried cable could result in a marine incident with interruption to the waterway and dire environmental consequences. The USCG recommends that the Applicant substantiate through testing or research that the proposed route and burial are such that anchor snags on vessels typical of the waterway are unlikely to occur. The Applicant’s proposed cable route and burial should be based on independent and objective data and information derived from reliable, expert sources, such as the Sharples Report.<sup>6</sup> After an adequate cable route and depth is established, the USCG recommends that the Applicant verify and document the “as built” cable depth with certainty. Currently, the DEIS does not detail how the burial depth will be verified.<sup>7</sup>

The USCG requests clarification regarding the anchor replacement and cable repair process, which as written implies the USCG has a role in the process.<sup>8</sup> Additionally, the USCG requests an opportunity to review the Anchor Snag Manual, and the subsequent Navigation Risk Assessment, prior to construction.<sup>9</sup> The USCG requests a meeting with the Applicant and their cable installer prior to construction to better understand the installation methods and discuss safety and security concerns.

4. Multiple Use of the Waterway:

The Hudson and NYC Metropolitan segments are congested with many waterway projects and are components of the greater Port of New York/ New Jersey. Lake Champlain has passenger ferries, including a cable ferry, essential to the regional transportation systems. While the USCG maintains awareness of activities taking place in the maritime domain, it is the responsibility of

<sup>4</sup> Page 3-86, paragraph 3.

<sup>5</sup> Page 5-38, paragraph 4.

<sup>6</sup> [http://www.bsee.gov/uploadedFiles/BSEE/Research\\_and\\_Training/Technology\\_Assessment\\_and\\_Research/671AA-Final%20Report%20Offshore%20Electrical%20Cable%20Burial%20for%20Wind%20Farms.pdf](http://www.bsee.gov/uploadedFiles/BSEE/Research_and_Training/Technology_Assessment_and_Research/671AA-Final%20Report%20Offshore%20Electrical%20Cable%20Burial%20for%20Wind%20Farms.pdf)

<sup>7</sup> Appendix G, page G-2, bullet 6.

<sup>8</sup> Page 5-103, paragraph 1.

<sup>9</sup> Appendix G, page G-3, bullet 11.

203-02 **203-03:** In determining the proposed CHPE Project’s proposed burial depths, the Applicant reviewed technical journals and industry reports, including information provided by the manufacturer of concrete mattresses that is proposed for certain discrete areas, to ensure the cables would not present navigation risks or anchor snag concerns. The Applicant has also developed an independent navigation risk assessment that addresses both navigational risks and anchor snag concerns (see Appendix U of the Final EIS). The Sharples report was used during the development of the navigation risk assessment. This document has been made available to the USCG and other stakeholders for comment.

203-03 Following completion of cable installation, the Applicant is required to prepare and submit as-built design drawings that show the locations of the cables as installed. These drawings would indicate areas in which the cables are laid in deep waters without cover and areas in which the cables are laid on the bottom but covered. Cable installation would be recorded and monitored in real-time by the cable-laying vessel’s navigation, lay control, and burial control computer systems, which would be used to produce the as-built report. Text communicating this information has been added to Section G.2 of Appendix G in the Final EIS.

203-04 **203-04:** Section 5.3.2 of the Final EIS has been revised to clarify that in the event of an anchor incident or cable repair, the USCG would be notified. The Applicant would undertake the actual repair of the cable.

203-05 The USCG would have an opportunity to review the Anchor Snag Manual and the subsequent Navigation Risk Assessment prior to construction. The Applicant also commits to meeting with the USCG, along with the Applicant’s cable installer, prior to construction.

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the Applicant to coordinate this project with other waterway users, and when possible, avoid conflicts.

203-05 **203-05:** Comment noted. See response to Comment 202-13.

The DOE has no authority to prohibit vessel anchorage for the “aquatic transmission line ROW for the lifespan of the proposed CHPE Project” as stated in Section 5; nor would the USCG prohibit vessel anchorage, as stated in Section 5.3.2.<sup>10</sup> For these reasons, the USCG recommends that this proposed language be further examined and revised. In the event of a vessel emergency, vessels must have the ability to rapidly deploy their anchor regardless of whether or not they are in an established anchorage.

203-06 **203-06:** Text regarding vessel anchorage prohibitions in the proposed CHPE Project aquatic transmission line ROW has been deleted from Section 5.3.2 and other similar sections in the Final EIS.

The DEIS states that where the transmission line might cross a channel or anchorage area, it would be buried according to specifications described in Section 2.4.10.1.<sup>11</sup> The DEIS also states that the proposed CHPE project would traverse the Yonkers Anchorage Ground.<sup>12</sup> SECNY notified HDR Inc. of this proposed Anchorage Ground on November 12, 2010<sup>13</sup> and is unaware of attempts to re-route the cable. Any cabling through a designated anchorage presents an unacceptable risk. This risk is amplified where no study of anchor penetrations and bottom characteristics has been conducted. The USCG strongly disagrees with a cable route that lies beneath any existing or proposed anchorage ground.

203-07 **203-07:** The Applicant has analyzed the proposed CHPE Project’s route in relation to the proposed anchorage areas in the Hudson River as those anchorage areas are defined in the applicable USCG *Federal Register* Notice (78 *Federal Register* 44917). Based on the coordinates given in the Notice, it appears the transmission line route is within the boundary of proposed Anchorage Ground No. 18 (i.e., Yonkers Anchorage Ground). At this time, however, Anchorage Ground No. 18 has yet to be formally approved and the final coordinates of the proposed anchorage area have yet to be determined. The Applicant has authority under its NYSPSC certificate and intends to modify the currently proposed transmission line route to account for, and ultimately avoid, established anchorage areas as required.

5. Bridges:

The Applicant and DOE are reminded that the USCG is responsible for enforcing certain rules and regulations related to bridges and causeways over U.S. navigable waters. If the Applicant plans activity affecting a bridge built under the authority of a USCG permit, the Applicant may be required to consult with the bridge owner and CGDONE before commencing that work.

203-08 **203-08:** Comment noted.

6. Ice Breaking:

According to the DEIS, various project construction milestones extend into late November and December.<sup>14</sup> The Applicant and DOE are reminded that Lake Champlain may ice over at that time of year and the USCG has no ice breaking resources available on Lake Champlain.

203-09 **203-09:** Comment noted.

Although the DEIS states that installation activities will be limited to certain times of the year, it is silent about the timing of inspection and repair activities. If inspection and repair activities take place during winter months, the USCG may not have the capacity to conduct ice breaking operations in the Hudson River and NYC segments for the Applicant.

203-09 **203-09:** The Applicant would be responsible for ice breaking operations if so required by emergency repair activities. Text added to EIS Section 5.1.2 accordingly.

7. Ballast Water Management:

Because ballast water management is not mentioned in the DEIS, the Applicant and DOE are reminded that, pursuant to the Non-indigenous Aquatic Nuisance Prevention and Control Act of

203-10 **203-10:** The Applicant would adhere to all current regulations regarding proper ballast management to minimize introduction of additional aquatic invasive species. Text has been added to Appendix G of the Final EIS and the EFH Assessment (EIS Appendix R) regarding such.

<sup>10</sup> Page 5-2, paragraph 4, page 5-103, paragraph 1.

<sup>11</sup> Page 5-3, paragraph 6.

<sup>12</sup> Page 6-4, paragraph 5.

<sup>13</sup> Email with attachment, Jeff Yunker, USCG to R. Alevras, HDR.

<sup>14</sup> Page 2-27, Table 2-2.

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1990 (33 C.F.R. § 151 Subpart C and D), the USCG has authority to regulate and enforce proper ballast water management. Aquatic nuisance species are a major concern especially for the Lake Champlain ecosystem. Current regulations and guidance on USCG ballast water regulations can be found on the USCG's Home port web site.<sup>15</sup>

8. Compass Deviation

All vessels that fall under 33 C.F.R. § 164 and USCG Navigation and Vessel Inspection Circular No 02-03, require a properly adjusted magnetic compass. According to the DEIS, the DOE states impacts to the required magnetic compasses will be negligible as a result of the project.<sup>16</sup> USCG requests the DOE research used to make this determination.

9. Cumulative and Other Impacts:

The Clean Energy Power Link project, which is also proposed by the Applicant of the CHPE project, runs closely along the same route through Lake Champlain.<sup>17</sup> In Section 6.1.1.2 of the DEIS, there is no mention of the potential for cumulative impacts on the marine environment. Additionally, the West Point Net Zero Initiative proposes to install a water intake pipeline, extending approximately 1500 feet from the Hudson River shoreline between MP 283 and 284, to be used for terrestrial infrastructure cooling. The USCG, through SECNY, commented on June 24, 2013 to the U.S. Army NEPA coordinator, that the location of this project presents navigational safety concerns on its own. The addition of the CHPE project would increase the risk of a marine incident.

10. Summary:

To reduce the negative impacts on navigation and reduce the risk to safety on the affected waterways, the USCG strongly recommends that the Applicant:

- To the greatest extent possible, set the cable route outside of all federally maintained, designated navigation channels, and frequented natural deepwater channels;
- Set the cable route outside of all current anchorage areas and those anchorage areas currently proposed through the rulemaking process; and
- Establish a cable route and burial depths sufficient to prevent anchor fouling, then verify and publish the route post-construction.

If the CHPE project is approved by DOE and constructed by HDR, Inc, the USCG strongly desires continued involvement, including:

- Coordination of cable laying within or across federally maintained navigation channels<sup>18</sup>;
- Distribution of project updates via Local Notices to Mariners;

<sup>15</sup> <https://homeport.uscg.mil/>

<sup>16</sup> Page 5-103, paragraph 1

<sup>17</sup> <http://www.necplink.com/>

<sup>18</sup> Appendix G, page G-2, bullet 6.

203-10 ↑  
203-11 ↑  
203-12 ↑  
203-13 ↓

**203-11:** The compass deviation estimates were provided in Exhibit 87 to the Joint Proposal. This analysis was done by Exponent, a U.S.-based scientific and consulting firm. The deviation estimates presented in the Draft EIS were conservative, in that they were based on a 6-foot (1.8-meter) cable spacing. Exhibit 87 also states that if the cables are close together, the deviation would decrease (CHPEI 2012ccc). It is currently proposed by the Applicant that the two cables would be installed in the same trench with an effective spacing of 1 foot (0.3 meters) or less. Under this scenario, the expected declination from magnetic north would be less than 3 degrees at 19 feet (6 meters) above the cables and deviation would only occur within 10 to 20 feet (3 to 6 meters) of the cables. Because cables in water shallower than this are outside of the navigation channel (where vessel traffic would be heaviest) and the Hudson River is not open water where compass navigation is a greater necessity, the impact of this deviance is expected to be minimal. In addition, the Hudson River Pilot Association and National Oceanic Atmospheric Administration's (NOAA) Coast Pilot 2 both state that ships traversing in the New York Harbor and up the Hudson River require a river pilot, thus minimizing any potential navigation system effects resulting from compass deviations. On Lake Champlain, in general, the smaller sizes of vessels that use that waterway and the substantial depth of the water would likely not result in compass deviations impacting navigation systems. The potential declination from magnetic north of less than 3 degrees would be expected to be within the range of natural variation. For example, as per NOAA's January 5, 2014, U.S. Coast Pilot 2, Chapter 11, page 353, differences of as much as 5 degrees from the normal variation have been reported in the lower Hudson River. Based on this information, DOE concurred with the Joint Proposal Exhibit findings that impacts would be negligible.

**203-12:** The Final EIS now includes the Clean Energy Power Link and the U.S. Military Academy West Point Net Zero Initiative projects in the discussion of Cumulative Impacts in Chapter 6.

**203-13:** Comment noted. Also see responses to Comments 203-01 through 203-12.

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- Active participation in review of several Applicant written documents (e.g. Aquatic Safety and Communications Plan; Environmental Management and Construction Plan; Spill Prevention, Control; and Countermeasures Plan; Emergency Repair and Response Plan; and the Anchor Snag Manual) prior to construction start; and
  - Notification as soon as possible of all reportable marine incidents and cooperation through marine investigations, if applicable.
- 203-13

Finally, the USCG recommends frequent communication with the appropriate Coast Guard Sector waterway managers and affected stakeholders.

Thank you for this opportunity to participate as a cooperating agency. Should you have additional questions or concerns in this matter, feel free to contact Mr. Daniel L. Hubbard, Branch Chief for Maritime Energy and Marine Planning at [Daniel.L.Hubbard@uscg.mil](mailto:Daniel.L.Hubbard@uscg.mil) or 617-223-8372.

Sincerely,



W.A. MUIENBURG  
Captain, U.S. Coast Guard  
Chief, Prevention Division  
By direction of the District Commander

Enclosure: (1) Coast Guard Sector New York CHPE PDEIS Comment Letter 17 JAN 2013

Copy: Commandant, U.S. Coast Guard (NAV-3)  
Commander, Coast Guard Atlantic Area (LANT-544)  
Commander, First Coast Guard District (dpb)  
Commander, Coast Guard Sector Northern New England (spw)  
Commander, Coast Guard Sector New York (spw)  
Commander, U.S. Army Corps of Engineers New York District (Eastern Permits)



Commander  
United States Coast Guard  
Sector New York

212 Coast Guard Drive  
Staten Island, NY 10305  
Staff Symbol: (epw)  
Phone: (718) 354-2363  
Fax: (718) 354-4190

16670  
17 Jan 2013

U. S. Department of Energy  
Senior Planning Advisor  
Office of Electricity Delivery and Energy Reliability (OE-20)  
1000 Independence Avenue, SW  
Washington, DC 20585  
Attn: Mr. Brian Mills

To Whom It May Concern:

Thank you for the opportunity to comment on the Preliminary Draft Environmental Impact Statement (DEIS) regarding the Champlain Hudson Power Express Transmission Line Project. We offer the following comments:

The Coast Guard has a responsibility to ensure the safety of navigation and protection of the marine environment under the Ports and Waterway Safety Act (PWSA), 33 U.S.C. 1231. The Champlain Hudson Power Express Project, in its current form, presents concerns to the Coast Guard Captain of the Port (COTP) New York, as it proposes to install power cables underneath and along the navigable waters of the Hudson, Harlem and East Rivers.

In the event of an emergency, commercial vessels must have the ability to rapidly deploy their anchor. If cables are not buried sufficiently, there is a risk of the cable being struck or snagged by a commercial vessel's anchor which could have a severe impact on commercial and recreational navigation, the environment, maritime facilities, and the transmission line itself. While installing this cable in shallower water near the shoreline would alleviate many navigation concerns, the agencies and groups involved in the Joint Proposal of Settlement have approved a route in deep water where the likelihood of anchor related marine casualties is increased.

As evidenced by the recent closure of the Hudson River due to the M/V STENA PRIMORSK grounding, a two or three day waterway closure would have severe impacts to Upstate New York and the New England region. The DEIS referenced 14 day closure for future cable repairs would have unacceptable impacts to the marine transportation system.

The transmission route should be revised to avoid all federally designated navigation channels and other navigable waters historically used by commercial vessels. Due to the effects of winds, tides, currents, and other vessel traffic, commercial vessels must transit where deep water is available regardless of the location of federal channels. The burial depths currently proposed in the DEIS are insufficient. If the cable is buried within navigable waters, it is of the utmost importance that the cables are buried sufficiently to allow for future channel deepening projects and to prevent cable strikes or snags. The cable burial depths should be established through consultation with the US Army Corps of Engineers' Technical Group. The Shaples Report provides additional guidance about the burial depths that should be required of the applicant. If

ENCLOSURES( 1 )

203-14

**203-14:** The comments in the USCG's letter dated January 17, 2013, are repeated in varying form in its letter dated January 15, 2014. See earlier comments in the January 15th letter.

16670

In addition, the applicant must not assume right of way over other pre-approved projects. The Coast Guard will not facilitate scheduling conflicts between other projects. Requests for the movement of any federal channel marker buoys must be made a minimum of 30 days in advance if necessary for the completion of this project. Regardless of the request, the Coast Guard may not be able to reposition buoys to accommodate cable installation based upon previously scheduled Coast Guard operations and/or unavailability of alternate buoy locations.

On page 326, the DEIS describes that cable burial depths will be verified, but it is not stated who will do the verification, the cable installer or a separate party.

The Coast Guard would like an opportunity to provide comments on the BMP referenced as an Anchor Snag Manual (p. 441). We recommend the anchor snag manual include a navigation risk assessment including a bottom assessment of the entire cable route within the Hudson, Harlem, and East Rivers, including, but not limited to, expected impacts to current and future commercial vessels based upon Deadweight Tonnage.

Under 33 CFR 64.06 – Definition of Terms, a transmission cable snagged by an anchor is designated as an “obstruction”. Following an anchor related marine casualty due to transmission cables, the applicant would be required to provide a repair proposal to the COTP New York including a new, deeper cable burial depth to prevent future snags within the affected area. Again, the DEIS referenced a 14 day closure for future cable repairs which would have unacceptable impacts to the marine transportation system.

The “Present and Reasonably Foreseeable Future Actions in the Hudson River” segment should include the proposed establishment of a Federal anchorage ground west of Yonkers, NY bound by the following points: 40°56’54.0”N, 073°54’40.0”W; thence to 40°56’51.0”N, 073°54’24.0”W; thence to 40°55’53.0”N, 073°54’40.0”W; thence to 40°55’56.0”N, 073°54’58.0”W; thence to the point of origin (NAD 83).

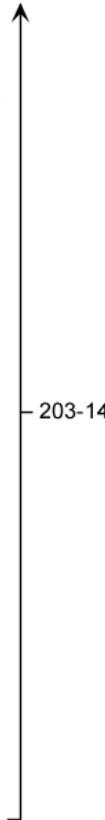
Finally, the Coast Guard recommends including our agency in the Index, similarly to the USFWS and USACE.

Thank you for these considerations. If you have any questions or comments regarding this matter, please contact me at (718)354-2353 or Mr. Jeff Yunker at (718) 354-4195.

Sincerely,

  
A. M. MORRISSEY  
Lieutenant Commander, U.S. Coast Guard  
Chief, Waterways Management Division  
By Direction

Copy: USACE Eastern Permits Section  
CGD ONE (dpw)



Comment 204



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
NORTHEAST REGION  
55 Great Republic Drive  
Gloucester, MA 01930-2276

JAN 15 2014

Mr. Brian Mills  
Office of Electricity Delivery and Energy Reliability (OE-20)  
U.S. Department of Energy  
1000 Independence Avenue SW  
Washington, DC 20585

Ms. Jodi McDonald, Chief  
Regulatory Branch  
New York District  
U.S. Army Corps of Engineers  
26 Federal Plaza  
New York, NY 10278-0900

RE: Champlain Hudson Power Express; Draft Environmental Impact Statement and Public Notice NAN-2009-01089-EYA; Request for Additional Information

Dear Mr. Mills and Ms. McDonald:

We have reviewed the September 2013 Draft Environmental Impact Statement (DEIS) for the Champlain Hudson Power Express Project prepared by the U.S. Department of Energy (USDOE), the lead federal agency for the project, as well as the U.S. Army Corps of Engineers (USACE) Public Notice NAN-2009-01089-EYA, dated October 2, 2013. We are pleased to provide the following technical comments, and based on our review, we have determined that the DEIS and Public Notice do not provide us with the necessary information to complete EFH or ESA consultation on this project. In particular, an expanded Essential Fish Habitat (EFH) Assessment is necessary to begin consultation under the Magnuson-Stevens Fishery Conservation and Management Act (MSA). Additional project specific information is also needed to conduct consultations under the Fish and Wildlife Coordination Act (FWCA), and a Biological Assessment to complete consultation under Section 7 of the Endangered Species Act (ESA). Our specific information needs are described in detail below.

204-01

**204-01:** The EFH Assessment (EIS Appendix R) and BA (EIS Appendix Q) have been prepared and have been provided for the respective consultation efforts. The requested information on the habitats and species potentially affected by the proposed CHPE Project is in the Draft EIS and is also reflected in those documents, and additional information as identified in this letter and in Comments 204-02 through 204-32 have been incorporated into the Final EIS, BA and EFH Assessment as appropriate.

The applicant, Champlain Hudson Power Express, Inc. (CHPEI), is proposing to construct a 1,000 megawatt (MW) high voltage direct current (HVDC) electric transmission system extending 332.8 miles from the international border between Canada and the United States to Queens, New York. The project would extend through fifteen New York State counties and impact approximately 347 acres of waters of the U.S. including Lake Champlain, Narrows of Lake Champlain, the Hudson River, Harlem River and East River. The expected life span of the project is 40 years.

The proposed HVDC transmission system would be comprised of two cables, buried within the same trench. The DEIS indicates burial depths would range between 3 and 5 feet below the



bottom; however, the Public Notice states the cable would be buried 4 feet below the bottom in Lake Champlain and 7 feet below the bottom in the Hudson River. In areas where surface bedrock may not permit adequate cable burial depths, or where the proposed cable would encounter existing infrastructure, the applicant proposes either placement of the cable on the riverbed or burial of cable at depths less than 4 feet. Protective coverings such as concrete mats or rip rap would be placed over the proposed cable where burial is not possible. Cable installation methods would include horizontal directional drilling, jet plow installation, shear plow installation, and conventional dredging. Mitigation in the form of wetland creation, restoration and/or enhancement is proposed for 10.5 acres of permanent impacts to wetlands. According to the DEIS, the applicant is also proposing to fund a trust for restoration and research as compensatory mitigation.

The applicant of this project, CHPEI, has applied to the USDOE for a Presidential permit to authorize international border crossing of the proposed HVDC transmission system. The USACE has also received an application from CHPEI for authorization of project activities pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C 403) and Section 404 of the Clean Water Act (33 U.S.C. 1344). USDOE and USACE are required to consult with us under the MSA, FWCA, and Section 7 of the ESA.<sup>1</sup> In order for us to successfully complete consultation, we will need the additional information and analyses described below.

#### **Magnuson-Stevens Fishery Conservation and Management Act**

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) requires federal agencies such as the USDOE and USACE to consult with us on any action or proposed action authorized, funded, or undertaken by the agency that may adversely affect essential fish habitat (EFH) identified under the MSA. [16 U.S.C. § 1855(b)(2)]. The statute defines EFH as “those waters and substrates necessary to fish spawning, breeding, feeding or growth to maturity.” [16 U.S.C. § 1853(a)(7) and § 1802(10)]. Our regulations further define EFH adding, among other things, that “‘necessary’ means the habitat required to support a sustainable fishery and the managed species’ contribution to a healthy ecosystem.” (50 C.F.R. §600.10). Adverse effects to EFH are defined in our regulations as “any impact that reduces the quality or quantity of EFH.” The regulations state:

An adverse effect may include direct or indirect physical, chemical or biological alterations of the water or substrate and any loss of, or injury to, benthic organisms, prey species and their habitat and other ecosystems components, if such modifications reduce the quality and/or quantity of EFH. Adverse effects to EFH may result from action occurring within EFH or outside EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions [50 C.F.R. 600.810(a)].

The regulations at 50 C.F.R. 600.920 set forth the consultation process that will allow us to make a determination of this project’s effects on EFH and provide conservation recommendations on actions that would adversely affect such habitat pursuant to section 305(b)(4)(A) of the MSA. To initiate an EFH consultation, you must submit an EFH assessment to us. Required components of

<sup>1</sup> The USDOE is the lead federal agency for this project.

an EFH assessment include “a description of the action; and analysis of the potential adverse effects of the action on EFH and the managed species; the federal agency’s conclusions regarding the effects of the action on EFH; and the proposed mitigation, if applicable” [50 C.F.R. §600.920(e)(3)]. Since this project may result in substantial adverse impacts to EFH, an expanded EFH consultation would be necessary [§600.920(i)]. In preparing an expanded EFH consultation, we encourage you to include additional information in the EFH assessment such as results of on-site inspections, views of recognized experts, a review of pertinent literature, an analysis of alternatives and any other relevant information [50 C.F.R. §600.920(e)(4)]. Finally, depending on the degree and type of habitat impact, compensatory mitigation may be necessary to offset permanent and temporary effects of the project.

**Fish and Wildlife Coordination Act**

The Fish and Wildlife Coordination Act (FWCA) provides authority for our involvement in evaluating impacts to fish and wildlife from proposed water resource development projects and other human activities that may affect waters of the United States. The FWCA specifically requires that wildlife conservation be given equal consideration to other features of water resource development programs through planning, development, maintenance and coordination of wildlife conservation and rehabilitation. Wildlife and wildlife resources are defined by the Act to include: birds, fish, mammals and all other classes of wild animals and all types of aquatic and land vegetation upon which such wildlife dependent. These consultation and coordination activities are intended to prevent loss or damage to fish and wildlife resources and to provide appropriate measures to mitigate adverse impacts associated with proposed human activities.

While many of the impacts that would accrue to federally managed fishery resources under the MSA also would accrue to FWCA species, it is important to note that the interests of some species would not be represented adequately by relying on the EFH assessment alone. For instance, shellfish do not have an appropriate surrogate among the federally managed fishery resources that have EFH designated in the project vicinity and their needs and those of other non-represented species should be discussed at length in this section. Similarly, the behaviors and habitat needs of diadromous and estuary-dependent fishes may not be represented by a discussion surrounding marine fishes. The discussion for FWCA species should be designed around an ecological guild model that uses locally important species to evaluate the project impacts to organisms or populations associated with the various trophic levels and life history strategies exhibited by FWCA species known to occupy the project site as residents or transients. Focus should be on issues surrounding particular species, life history stages, or habitat components that would be most susceptible to the various potential impacts.

**Endangered Species Act Section 7 Consultation**

Section 7 of the Endangered Species Act (16 U.S.C. § 1536(a)(2)) requires Federal agencies to consult with the Secretary of Commerce, through NOAA, to insure that "any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or adversely modify or destroy [designated] critical habitat . . . ." See also 50 C.F.R. part 402. As ESA listed species under our jurisdiction will occur in the project areas (see below), and effects to these species are likely, consultation under the

204-02: Comment noted. The EFH Assessment addresses the topics raised in the comment. EFH consultation is ongoing.

204-02: The NYSPSC Certificate for the proposed CHPE Project requires the establishment of the Hudson River and Lake Champlain Habitat Enhancement, Restoration, and Research/Habitat Improvement Project Trust. The Trust would be funded in increments over 35 years, and the total funding would reach \$117 million. Any person can propose a project for funding, but approvable projects must serve to protect, restore, or improve biological resources such as the aquatic resources and fisheries resources in Lake Champlain or the Hudson, Harlem, or East rivers to minimize, mitigate, study, or compensate for the impacts and risks posed to these waterbodies by the CHPE Project.

204-03: Fish (including anadromous fish) and shellfish in the Hudson River and New York City Metropolitan Area segments and impacts on such are described in EIS Sections 3.3.4, 3.4.4, 5.3.4, and 5.4.4. As discussed in these sections (e.g., Page 5-109), “based on the proposed CHPE Project aquatic construction schedule (August 1 through October 15), impacts on many spawning fish would be avoided.” An analysis on Fish and Wildlife Coordination Act (FWCA) species, including anadromous species, has been added to the EFH Assessment as Section 3.2, in Section 4, and as Section 5.2.

ESA will be necessary (50 C.F.R. § 402.14). As such, further coordination will be necessary with our Protected Resources Division (PRD) to meet your obligations under section 7 of the ESA. In particular, we now expect the USDOE, designated the lead Federal Agency on this project, to submit a complete Biological Assessment to us including the information and analysis presented in your EIS and responding to the technical issues raised below, in order for us to complete consultation on the proposed action.

#### Resources within the Proposed Project Area

##### Essential Fish Habitat

Water salinity can be variable in the Hudson River as the salt front migrates due to tidal conditions, weather patterns and extreme weather events. Data has indicated that the salt front occurs on a daily basis as far south as Battery (River Mile (RM) 0) to as far north as Poughkeepsie (RM 77), but is generally found between RM 30 and 70 (NYSDEC 2012). Since these salinities may provide suitable habitat for species with EFH designations within the project area, we consider EFH to be located as far north as RM 77 in Poughkeepsie. This stretch of the Hudson River and its tributaries, as well as the East River and Harlem River have been designated as EFH for a number of federally managed species including Atlantic butterfish (*Peprilus triacanthus*), Atlantic sea herring (*Clupea harengus*), bluefish (*Pomatomus saltatrix*), black sea bass (*Centropristis striata*), red hake (*Urophycis chuss*), scup (*Stenotomus chrysops*), summer flounder (*Paralichthys dentatus*), winter flounder (*Pseudopleuronectes americanus*), windowpane flounder (*Scophthalmus aquosus*), clearnose skate (*Raja eglanteria*), little skate (*Leucoraja erinacea*), and winter skate (*Leucoraja ocellata*).

Winter flounder may be particularly vulnerable to the impacts of the proposed project. Sensitive life stages of this species tolerate wide salinity ranges, including 10‰ to 30‰ for eggs and 4‰ to 30‰ for larvae (Pereira *et al.* 1999), and are expected to be found in the project area. Winter flounder migrate into shallow water or estuaries and coastal ponds to spawn, and tagging studies show that most return repeatedly to the same spawning grounds (Lobell 1939, Saila 1961, Grove 1982 in Collette and Klein -MacPhee 2002). They typically spawn in the winter and early spring although the exact timing is temperature dependent and thus varies with latitude (Able and Fahay 1998). Winter flounder have demersal eggs that sink and remain on the bottom until they hatch. Winter flounder eggs, once deposited on the substrate, are vulnerable to sedimentation with decreased hatching success of eggs observed when covered in as little as 1 mm of sediment and burial in sediments greater than 2.5 mm have been shown to cause no hatch (Berry *et al.* 2011). After hatching, the larvae are initially planktonic, but following metamorphosis they assume an epibenthic existence. Winter flounder larvae are negatively buoyant (Pereira *et al.* 1999), and are typically more abundant near the bottom (Able and Fahay 1998). These life stages are less mobile and thus more likely to be affected adversely by cable installations and the associated turbidity impacts. As a federally managed species, winter flounder are harvested both commercially and recreationally, and are considered an aquatic resource of national importance. Winter flounder populations are in decline through much of their range so it is critical precautions are taken to minimize impacts to this species. To minimize impacts to winter flounder early life stages and their EFH, we generally recommend that activities be avoided from January 1 to May 31 of each year in areas that have been designated as EFH for winter flounder early life stages.

***Anadromous Fish***

Anadromous fish such as alewife (*Alosa pseudoharengus*), blueback herring (*Alosa aestivalis*) and American shad (*Alosa sapidissima*) spend most of their adult life at sea, but return to freshwater areas to spawn in the spring. These species are believed to be repeat spawners, generally returning to their natal rivers (ASMFC 1998; Collette and Klein-MacPhoc 2002). Anadromous fish are found throughout much of the project area including the Harlem River, East River, and Hudson River. These species use the Hudson River and its tributaries as spawning, nursery and forage habitat. The abundance of diadromous fish in the Hudson River has declined over the decades largely due to over harvesting, pollution, and habitat loss (Limburg and Schmidt 1990, Waldman 2006, ASMFC 2007, 2009). Changes in fish distribution in the Hudson River watershed have also occurred due to passage through the canal system (Daniels 2001, Waldman 2006). Diadromous fish are known to pass through the navigation locks at the Federal Dam in Troy, moving into the Mohawk River and the Erie Canal (Waldman 2006). However, movements between the tidal Hudson River, the Mohawk River and the canal system are complex and poorly documented (Schmidt and Lake 2006).

Anadromous fish are a food source for several federally managed species. Buckel and Conover (1997) in Fahey *et al.* (1999) report that diet items of juvenile bluefish include *Alosa* species such as these. Juvenile *Alosa* species have all been identified as prey species for windowpane flounder and summer flounder in Steimle *et al.* (2000). The EFH final rule states that the loss of prey may have an adverse effect on EFH and managed species because the presence of prey makes waters and substrate function as feeding habitat and the definition of EFH includes waters and substrate necessary to fish for feeding. Therefore, actions that reduce the availability of prey species, either through direct harm or capture, or through adverse impacts to the prey species' habitat may also be considered adverse effects on EFH. As a result, activities that adversely affect the spawning success and the quality for the nursery habitat of these anadromous fish can adversely affect the EFH for juvenile bluefish, windowpane and summer flounder by reducing the availability of prey items.

Anadromous fish can be significantly impacted by both turbidity and acoustic impacts. Increases in turbidity due to the resuspension of sediments into the water column during construction can degrade water quality, lower dissolved oxygen levels, and potentially release chemical contaminants bound to the fine-grained estuarine/marine sediments. Suspended sediment can also mask pheromones used by migratory fishes to reach their spawning grounds and impede their migration and can smother immobile benthic organisms and demersal newly-settled juvenile fish (Auld and Schubel 1978; Breitburg 1988; Newcombe and MacDonald 1991; Burton 1993; Nelson and Wheeler 1997). Noise impacts are another factor that could delay or disrupt spawning, or even injure or kill fish. Of greatest risk for fish impacts are the gas-filled swim bladder and surrounding tissues that expand and contract with passage of pressure waves. The inner ears of fish are also sensitive to extreme pressures and motions (Popper *et al.* 2006). High-levels of acoustic exposure have been shown to cause physical damage and/or mortality in fishes. Damage and mortality rates increase with both the level of sound and length of exposure (Hastings and Popper 2005, Popper and Hasting 2009). Impacts of blasting and pile driving activities are of particular concern for fish species, as they are anthropogenic sound sources known to cause fish kills (Popper and Hastings 2009). In order to minimize the adverse effects of suspended sediment and noise impacts on migrating anadromous fish, we generally

recommend in-water work be avoided from March 1 to June 30 during the upstream migration to their spawning grounds.

In the mid-Atlantic, landings of anadromous species have declined dramatically since the mid-1960s and have remained very low in recent years (ASMFC 2007). Because landing statistics and the number of fish observed on annual spawning runs indicate a drastic decline in alewife and blueback herring populations throughout much of their range, they have been designated as species of concern. A recent listing determination for alewife and blueback herring found that listing under the ESA was not warranted at this time. However, it was recognized that there is a low abundance of these species relative to historical levels and monitoring is warranted due to significant deficiencies in data. Blueback herring were found to be decreasing within the Mid-Atlantic stock complex (F.R. Vol 78, No.155, Aug 12, 2013). Since river herring are classified as a species of concern and anadromous fish provide a food source for federally managed species, these populations are considered an aquatic resource of national importance.

#### **Benthic Resources**

Benthic communities play a significant role in the Hudson River ecosystem. Dominated by annelids, mollusks, crustaceans and insects, these benthic communities vary greatly throughout the system depending upon position of the river, salinity, nature of the bottom, and presence or absence of submerged aquatic vegetation (SAV). These communities play a critical role as suspension feeders and a food source for fish, including aquatic resources of national importance such as shortnose sturgeon, Atlantic sturgeon, blueback herring, and American shad (Strayer 2006). The benthic community biomass and filtration rates in the Hudson River Estuary significantly declined with the invasion of zebra mussels (Strayer 2006); however with the observed long-term decline in invasive zebra mussels in the watershed, parts of the ecosystem appear to be recovering toward pre-invasion levels, including benthic animals such as native mussels and clams (Strayer *et al.* 2011). Historically, the Hudson River estuary also supported a commercial scale oyster fishery. Benthic mapping and sampling efforts have revealed several historic oyster reefs near the Tappan Zee reach as well as live oysters in this area and Havestraw Bay (Bell *et al.* 2006). Restoration efforts for oysters are also currently ongoing.

Elevated levels of suspended sediments can interfere with spawning success, feeding, and growth for shellfish such as mussels, clams, and oysters (Wilber and Clark 2001). Shellfish provide an important ecological role through water column filtration, sediment stabilization as well as supplying habitat for estuarine species (Zimmerman *et al.* 1989, Coen *et al.* 1999, Newell 2004). Shellfish are also known to provide a food source for federally managed species, including winter flounder and scup (Steimle *et al.* 2000), two species with EFH designation in the project area.

Over twenty species of aquatic plants, both native and invasive, occur in the Hudson River with native water celery (*Vallisneria spiralis*) as the predominant SAV species. SAV in the tidal Hudson River occupies shallow shoals in depths less than 3 meters and covers approximately 6 percent of the river with the greatest coverage occurring in the mid-Hudson, from Kingston to Hudson and lower coverage south of Hyde Park (Findlay *et al.* 2006). SAV provides valuable nursery, forage and refuge habitat for a variety of fish including summer flounder, striped bass, bluefish, American shad, alewife, and blueback herring. SAV in the Hudson River has been

shown to contribute to primary production and habitat for benthic and fish species in the river (Findlay *et al.* 2006, Strayer 2006).

Impacts to SAV can include direct impacts through physical removal as well as indirect impacts such as sedimentation and shading. Loss of SAV is often attributed to reduced water quality and clarity resulting from elevated inputs of nutrients or other pollutants such as suspended solids and disturbances such as dredging (Kemp *et al.* 1983, Short *et al.* 1993, Short and Burdick 1996, Orth *et al.* 2006). Studies have confirmed that seagrasses are highly vulnerable to changes in sediment levels. With a low tolerance for sedimentation, indirect effects of post-disturbance processes can also greatly affect SAV (Cabaco *et al.* 2008).

The U.S. Environmental Protection Agency has designated SAV as "special aquatic sites" under the Section 404(b)(1) of the federal Clean Water Act, due to their important role in the marine ecosystem for spawning, nursery cover and forage areas for fish and wildlife. Furthermore, the Mid-Atlantic Fishery Management Council has designated SAV as a Habitat Area of Particular Concern when associated with juvenile and adult summer flounder EFH. This includes all native species of macroalgae, seagrasses and freshwater and tidal macrophytes in any size bed as well as loose aggregations within EFH. Due to the value of this habitat for federally managed species, SAV is considered an aquatic resource of national importance.

#### **ESA Listed Species**

ESA listed species will be found within the portion of the cable transmission route located in the Hudson River and East River. Listed species of Atlantic and shortnose sturgeon will be found in the Hudson River, while listed species of Atlantic sturgeon, shortnose sturgeon, and sea turtles may be found in the East River. The use and distribution of each species within each affected waterbody is provided below.

#### **Hudson River**

##### ***Shortnose Sturgeon***

A population of the federally endangered shortnose sturgeon occurs in the Hudson River. Shortnose sturgeon have been documented in the Hudson River from upper Staten Island (approximately rkm 4.8) to the Troy Dam (approximately rkm 245). From late fall to early spring, adult shortnose sturgeon concentrate in a few overwintering areas. The largest overwintering area is just south of Kingston, New York, near Esopus Meadows (rkm 139-152) (Dovel *et al.* 1992). The fish overwintering at Esopus Meadows are mainly spawning adults. Captures of shortnose sturgeon during the fall and winter from Saugerties to Hyde Park (greater Kingston reach), indicate that additional smaller overwintering areas may be present (Geoghegan *et al.* 1992). Both Geoghegan *et al.* (1992) and Dovel *et al.* (1992) also confirmed an overwintering site in the Croton-Haverstraw Bay area (rkm 54-61). Fish overwintering in areas below Esopus Meadows are mainly thought to be pre-spawning adults. Typically, movements during overwintering periods are localized and fairly sedentary.

When water temperatures reach 8-9°C, typically in late March through mid-April, reproductively active adults begin their migration upstream to the spawning grounds that extend from below the Federal Dam at Troy to about Coeymans, New York (river kilometer (rkm) 245-212) (Dovel *et*

*al.* 1992). Spawning typically occurs at water temperatures between 10-18°C (generally from late April through May) after which adults disperse quickly down river into their summer range. In fact, Dovel *et al.* (1992) reported that spawning fish tagged at Troy were recaptured in Haverstraw Bay in early June. The broad summer range occupied by adult shortnose sturgeon extends from approximately rkm 38 to rkm 177. Similar to non-spawning adults, most juveniles occupy the broad region of Haverstraw Bay (rkm 54-61) by late fall and early winter (Geoghegan *et al.* 1992; Dovel *et al.* 1992). Juveniles are distributed throughout the mid-river region during the summer (rkm 38-152) and move back into the Haverstraw Bay region during the late fall (Bain *et al.* 1998; Geoghegan *et al.* 1992). Eggs and larvae are expected to be present within the vicinity of the spawning grounds for approximately four weeks post spawning (i.e., at the latest, through mid-June).

#### ***Atlantic Sturgeon***

Use of the river by Atlantic sturgeon has been described by several authors. Briefly, spawning likely occurs in multiple sites within the river from approximately rkm 56 to rkm 182 (Dovel and Berggren 1983; Van Eenennaam *et al.* 1996; Kahnle *et al.* 1998; Bain *et al.* 2000). Selection of sites in a given year may be influenced by the position of the salt wedge (Dovel and Berggren, 1983; Van Eenennaam *et al.* 1996; Kahnle *et al.* 1998). The area around Hyde Park (approximately rkm 134) has consistently been identified as a spawning area through scientific studies and historical records of the Hudson River sturgeon fishery (Dovel and Berggren, 1983; Van Eenennaam *et al.* 1996; Kahnle *et al.* 1998; Bain *et al.* 2000). Habitat conditions at the Hyde Park site are described as freshwater year round with bedrock, silt and clay substrates and waters depths of 12-24 m (Bain *et al.* 2000). Bain *et al.* (2000) also identified a spawning site at rkm 112 based on tracking data. The rkm 112 site, located to one side of the river, has clay, silt and sand substrates, and is approximately 21-27 m deep (Bain *et al.* 2000).

Young of year have been recorded in the Hudson River between rkm 60 and rkm 148, which includes some brackish waters; however, larvae must remain upstream of the salt wedge because of their low salinity tolerance (Dovel and Berggren 1983; Kahnle *et al.* 1998; Bain *et al.* 2000). Catches of immature sturgeon (age 1 and older) suggest that juveniles utilize the estuary from the Tappan Zee Bridge through Kingston (rkm 43- rkm 148) (Dovel and Berggren 1983; Bain *et al.* 2000). Seasonal movements are apparent with juveniles occupying waters from rkm 60 to rkm 107 during summer months and then moving downstream as water temperatures decline in the fall, primarily occupying waters from rkm 19 to rkm 74 (Dovel and Berggren 1983; Bain *et al.* 2000). Based on river-bottom sediment maps (Coch 1986), most juvenile sturgeon habitats in the Hudson River have clay, sand, and silt substrates (Bain *et al.* 2000). Newburgh and Haverstraw Bays in the Hudson River are areas of known juvenile sturgeon concentrations (Sweka *et al.* 2007). Sampling in spring and fall revealed that highest catches of juvenile Atlantic sturgeon occurred during spring in soft-deep areas of Haverstraw Bay even though this habitat type comprised only 25% of the available habitat in the Bay (Sweka *et al.* 2007). Overall, 90% of the total 562 individual juvenile Atlantic sturgeon captured during the course of this study (14 were captured more than once) came from Haverstraw Bay (Sweka *et al.* 2007). At around 3 years of age, Hudson River juveniles exceeding 70 cm total length begin to migrate to marine waters (Bain *et al.*, 2000).

Please note, as the New York Bight DPS of Atlantic sturgeon is the only DPS of Atlantic sturgeon that spawns in the Hudson River, the information provided above only applies to this DPS. However, other DPSs of Atlantic sturgeon (i.e., Gulf of Maine and Chesapeake Bay) are known to be present within the Hudson River. As such, subadult and adult Atlantic sturgeon from any DPS may be present within the Hudson River.

#### **East River**

##### ***Shortnose Sturgeon***

There have been no documented captures of shortnose sturgeon in the East River; however, shortnose sturgeon have been captured near the confluence of the East River and New York Harbor and at least two shortnose sturgeon tagged in the Hudson River have been recaptured in the Connecticut River. As there have been no documented captures of shortnose sturgeon in the area where the East River converges with Long Island Sound, it is unknown whether these fish traveled through the East River and through Long Island Sound (the most direct route) or exited New York Harbor into the Atlantic Ocean and swam around southern Long Island and back into Long Island Sound. Based on this information, although the East River is not expected to be a high use area for shortnose sturgeon, occasional transient shortnose sturgeon may be present in the East River.

Due to the distance from shortnose sturgeon spawning grounds in the Hudson River (i.e., greater than 200 km downstream of the project area) and the higher salinity of the East River, shortnose sturgeon eggs or larvae, whose occurrence is limited to the low salinity waters near the spawning grounds, and young of the year, whose occurrence is also restricted to areas of low salinity, will not occur in the project area.

##### ***Atlantic Sturgeon***

Atlantic sturgeon are known to occur in the East River. Atlantic sturgeon spawn in their natal river, with spawning migrations generally occurring during February-March in southern systems, April-May in Mid-Atlantic systems, and May-July in Canadian systems (Murawski and Pacheco 1977; Smith, 1985; Bain 1997; Smith and Clugston 1997; Caron *et al.* 2002). Young remain in the river/estuary until approximately age 2 and at lengths of 30-36 inches before emigrating to open ocean as subadults (Holland and Yelverton 1973; Dovel and Berggren 1983; Dadswell 2006; ASSRT 2007). After emigration from the natal river/estuary, subadults and adult Atlantic sturgeon travel within the marine environment, typically in waters between 16 to 164 feet in depth, using coastal bays, sounds, and ocean waters (Vladykov and Greeley 1963; Murawski and Pacheco 1977; Dovel and Berggren 1983; Smith 1985; Collins and Smith 1997; Welsh *et al.* 2002; Savoy and Pacileo 2003; Stein *et al.* 2004; Laney *et al.* 2007; Dunton *et al.* 2010; Erickson *et al.* 2011). Therefore, adult and subadult Atlantic sturgeon from any of five DPSs could occur in the project area; however, as Atlantic sturgeon spawn in freshwater portions of large rivers and early life stages are not tolerant of salinity, no eggs, larvae or juvenile Atlantic sturgeon are likely to occur in the project area.

##### ***Sea Turtles***

Four species of federally threatened or endangered sea turtles under our seasonal jurisdiction of NMFS occur seasonally (June to early November) in New York waters. The sea turtles in these

waters are typically small juveniles with the most abundant being the federally threatened loggerhead (*Caretta caretta*) followed by the federally endangered Kemp's ridley (*Lepidochelys kempfi*). New York waters have also been found to be warm enough to support federally endangered green sea turtles (*Chelonia mydas*) from June through October. While federally endangered leatherback sea turtles (*Dermochelys coriacea*) may be found in the waters off Long Island during the warmer months, this species is less likely to occur in the action area for this project as leatherbacks are typically found in more offshore waters.

There have been no documented captures of sea turtles in the East River and it is not likely to be a high use area for these species. However, as the East River is a tidal strait with water passage between Upper New York Harbor/Manhattan and Long Island Sound, and sea turtles are known to occur in western Long Island Sound, occasional transient sea turtles may occur within the East River.

**Memorandum of Agreement (MOA) 3(b) determination of impacts to Aquatic Resources of National Importance**

Based on the limited information provided within DEIS and Public Notice, we have determined that the proposed project will result in adverse impacts to aquatic resources of national importance. These impacts include elevated turbidity impacts to fish sensitive life stages, migration, and habitat; acoustic impacts through pile driving and blasting; direct loss of SAV, benthic communities, and shellfish resources; permanent fill and modification of bottom habitat; as well as potential elevations in temperature and electromagnetic fields along the substrate during project operation. Therefore, we must conclude that this project will have substantial and unacceptable adverse effects on aquatic resources of national importance pursuant to Part IV, Paragraph 3(b) of the 1992 Clean Water Act Section 404(q) Memorandum of Agreement (MOA) between the USACE and our agency. We recommend, pursuant to Part IV, Paragraph 3(b) of the MOA, that you provide us the following information so we may fully evaluate the impacts of this project on our trust resources.

**Additional Information Needs**

**EFH Assessment**

Your consultation requirements under the MSA and FWCA are outlined above. Unfortunately, our ability to assess potential impacts to EFH and associated marine resources is being complicated by a lack of information. The information required for us to consult on this project, specifically an EFH Assessment, is not included in either the DEIS or the Public Notice. Rather, the DEIS states that an EFH Assessment will be provided with the Final EIS. We are greatly concerned with this timeline, as our consultation cannot begin without receipt of an EFH Assessment. Incorporation of an EFH Assessment in the Final EIS does not provide us with sufficient time to review the information and provide comments or conservation recommendations. The EFH consultation should be conducted prior to the issuance of the Final EIS to ensure that EFH conservation recommendations may be incorporated into the project plans and included in the final document and permit conditions.

204-04: Because the proposed CHPE Project would cross under the East River via HDD and that sea turtles are occasional transients, no effects on sea turtles are expected. Text regarding such was added to the Final EIS (in Sections S.8.5, 2.6.5, and 3.4.5) and the BA.

204-05: These potential impacts have been addressed in EIS Sections 5.3.4 and 5.4.4 (which also incorporated discussion from Section 5.1.4 by reference), BA (in particular, note Table 5-1), and EFH Assessment (in particular, note Table 4-1).

204-06: The EFH Assessment has been prepared and made available for National Marine Fisheries Service (NMFS) review prior to the publication of the Final EIS. EFH consultation is ongoing, and EFH conservation recommendations have not yet been received.

We believe that the information included in the DEIS for this project is an incomplete assessment and lacks a full analysis of the project components. Before you proceed with preparing an EFH assessment, we recommend that you coordinate with us to ensure that the list of designations is complete and that we mutually agree that the nature and scope of issues that you plan to include in the EFH assessment will adequately present and analyze the direct, indirect, and cumulative effects of the project both during its construction and in the interim until it is decommissioned. The information provided in this letter is intended to assist in the development of a complete EFH assessment. Upon submittal of an EFH assessment, we will provide conservation recommendations for the proposed project, as necessary.

**ESA Assessment**

Your consultation requirements under the ESA are outlined above. As the DEIS states that a Biological Assessment (BA) will be prepared for purposes of ESA section 7 consultation, the additional informational and analyses requested below for the DEIS, should also be incorporated and used in the development of your BA. Please note, a BA must provide us with sufficient information to allow us to carry out a section 7 consultation for the action identified. That is, the information provided in the BA must be sufficient to demonstrate that the direct and indirect effects of the action on NMFS listed species are not likely to jeopardize the continued existence of any species or result in the destruction or adverse modification of critical habitat. We look forward to reviewing the information and analyses requested below in your BA. Prior to submitting your BA, if you have any questions or concerns regarding information or analyses requested, or the ESA section 7 process in general, please contact us.

204-07

**204-07:** A BA has been prepared and made available to NMFS prior to the publication of the Final EIS. In addition, decommissioning has been addressed in the Final EIS (in Sections 2.4.15, 5.1.2, 5.3.2, and 5.4.2), BA, and EFH Assessment (at the end of Section 2.5.4, in the introduction to Section 4, and at the end of Section 4.2), as appropriate, as requested in the preceding paragraph in the comment.

**Project Information Needs**

The DEIS indicates an Environmental Management and Construction Plan (EM&CP) will be developed which would document environmental and construction management procedures and plans to be implemented during project construction and facility operation. This level of specific information on management and construction plans and procedures is necessary for review prior to completing a consultation under MSA, FWCA, and ESA. This information should be included as a component of the project description for the EFH Assessment and the BA. The DEIS also indicates the final EM&CP would be developed in consultation with the New York State Department of Public Service (NYS DPS) and the New York State Department of Environmental Conservation (NYS DEC). We would request the federal resource agencies also be consulted on the development of these plans, as we may have additional recommendations for ensuring impacts to our trust resources are minimized.

204-08

**204-08:** While the EM&CP is not yet available, a comprehensive list of avoidance and minimization measures has been developed by the Applicant and provided in EIS Appendix G. These include pre- and post-installation monitoring surveys for benthic macroinvertebrates and sediment, bathymetry surveys, and Atlantic sturgeon hydrophone surveys that were identified in the NYSPSC Certificate of Environmental Compatibility and Public Need for the CHPE Project issued in April 2013. These measures have been considered in the impact analysis in the Draft EIS and are included in the EFH Assessment (Section 6) and the BA (Section 2.6). The Applicant will make the draft EM&CP available for public comment.

The DEIS indicates that there will be some locations throughout the project area where burial of the cable to the preferred depth is not possible due to existing utility lines and/or shallow bedrock substrate. In such cases, the cables would be buried at a shallower depth or laid on the bottom. Concrete mats or rip-rap would be installed on the substrate to help protect the proposed transmission line. The DEIS offers little information on the extent and locations of the concrete mats. The USACE Public Notice provides some information on anticipated non-burial locations, of which several are located within areas designated as Significant Coastal Fish and Wildlife Habitats (SCFWHs) (NYS DEC 2012). More information regarding the specific locations of the concrete mats, the extent of area to be impacted, the recovery rate within each of these affected locations, and the resources present in these locations is necessary. Additional information is

204-09

**204-09:** Additional information on concrete mats has been provided by the Applicant and added to the Final EIS (Section 5.3.5 and other similar sections), EFH Assessment (Section 4.1, starting on the second page of the *Riverbed Disturbance* subsection), and BA (Section 5).

also needed on the direct and indirect effects to our trust resources from placing these structures in the Hudson River. The placement of concrete matting or rip-rap will result in the removal of the underlying benthic community, as well as result in a permanent change in substrate from soft sediments to hard. These changes will not only effect the structure of the benthic community in the affected area, but also may affect our trust resources use of the affected area (e.g., relocate to different area for spawning, foraging, or overwintering), specifically if these changes are located in a SCFWH. As a result, additional analyses is necessary on the short and long term (i.e., 40 years) effects of such habitat modifications to our trust resources. This information needs to be included in the EFH Assessment and BA.

The Public Notice and DEIS indicate that burial at sites with bedrock substrate may be done to a shallower depth; however, no details are offered on how the cable would be buried to any depth in these areas. A reference in Chapter 2 of the DEIS indicates that blasting may be used to create a trench and bury the cable; however, no further details are provided. Blasting could have significant impacts on aquatic resources of national importance, resulting in physical injury and death in fish (i.e., peak pressure levels above, 75.6 psi, and peak impulse levels above 18.4 psi-msec, are believed to cause injury or mortality to species of fish, including sturgeon; Moser 1999;Hastings and Popper 2005, Popper *et al.* 2006, Popper and Hasting 2009). If the project includes any proposals for blasting, areas to be blasted need to be identified, and a thorough assessment of the acoustic impacts to our trust resources, as well as the short and long term effects to the benthic community and habitat from such activities is necessary. Additionally, a blast plan must be created and submitted for our review. Detailed information on other forms of burial that may be considered at sites with bedrock (e.g., scraping of bedrock), as well as an analysis of effects to our trust resources from such activities is also needed. This detailed information and analysis needs to be included in the EFH Assessment and BA.

Installation of the transmission cable will require multiple installation methods (e.g., jet plowing, placement of concrete matting, blasting (if required), excavation) which will affect the benthic community of the Hudson River. The DEIS states that effects to the benthic community will be temporary, and localized, with recolonization occurring over time. However, there is lack of information on recovery rates for benthic communities affected by different installation methods along the cable route, as well as a lack of information on the permanent changes to the benthic community that may occur. As a result, more detailed information and analyses is needed on expected recovery rates, the anticipated permanent impacts to benthic communities, as well as the short and long term effects to our trust resources as a result of these changes to the benthic community. Specifics should also be provided on proposed plans for surveys of the cable trench, monitoring of impacts to benthic communities, and backfilling of the trench to ensure the bathymetry is returned to existing conditions. All of this information and analysis needs be included in the EFH Assessment and BA.

A substantial amount of fill is also proposed throughout the project area, including low thermal backfill material, concrete mats, and rip rap. Additional information on the proposed locations for fill, extent of material, and a thorough assessment of impacts to benthic communities is needed. For example, Chapter 2 of the DEIS states that low thermal backfill material will be used instead of native soil in portions of the project. In addition to detailed information on project location and extent of material proposed, an evaluation of impacts including available

↑ 204-09

**204-10:** The Applicant has indicated that the transmission line would be laid on the surface and covered with concrete mats for approximately 3.0 miles (4.8 km) of the 195-mile (314-km) aquatic portion of the project route, and one blasting location is proposed at MP 324.5 in the Harlem River. Additional information and analysis on concrete mats (see response to Comment 204-09) and blasting from the Applicant have been added to the Final EIS in various sections, EFH Assessment (*Blasting* subsection of Section 4.1), and BA.

204-10

**204-11:** The Applicant plans to include a detailed blasting plan as part of its EM&CP, which the Applicant will make available for public comment. The detailed blasting plan would not include any area beyond that identified for blasting in the EIS, and, therefore, would not exceed the effects identified in or require additional mitigation beyond that described in the EIS, EFH Assessment, and BA. Scraping of bedrock is not proposed, but burial with concrete mats over bedrock is and this method is fully described in the EIS, EFH Assessment, and BA. See response to Comment 204-10.

204-11

204-12

**204-12:** Information on recovery rates is provided in Sections 5.1.4 and 5.3.4 of the EIS. This information has been incorporated and additional information supplemented into Section 4.1 of the EFH Assessment.

204-13

**204-13:** Information on surveys and post-installation compliance monitoring studies, including for benthic and sediment monitoring and bathymetric monitoring, has been added to the BA (Section 2.6) and EFH Assessment (Section 6) from the attachments to the NYSpsc Certificate. The Certificate contains attachments that provide additional details about the surveys.

204-14

**204-14:** Use of backfill material would predominantly occur in the Overland Segment and other terrestrial portions of the proposed CHPE Project, which is not under NMFS jurisdiction. The cofferdam locations for the water exit points associated with the five HDD water-to-land transition points would also be backfilled with approximately 180 cubic yards of sand at each location. Approximately 1,200 tons of rock would be excavated from the 460-foot (140-meter) trench through bedrock in the Harlem River, which would be backfilled with sand and the excavated rock. This would be a negligible impact compared to the available habitat. See response to Comment 204-10 regarding concrete mats.

data on benthic infauna colonization in this material is needed. A discussion of invasive species should be included in any analysis that evaluates impacts of rip rap or concrete mat placement. Chapter 3 of the DEIS includes some discussion of invasive species, recognizing the concerns of invasive populations in the Hudson River; however, there is no further analysis on how the project may affect invasive species populations in the project area. Additional analysis should be provided on how the proposed project, particularly the increase of artificial habitat such rip rap or concrete mats may affect the proliferation of invasive species.

The total area of impact for the project is not clear based on the information provided in the Public Notice and the DEIS. The Public Notice defines the area of impact from cable burial in terms of the length in each water body, as well as the width and depth of the trench, which range from approximately 2 feet wide by 4 to 15 feet deep. However, Chapter 2 of the DEIS states the total benthic habitat impacts from cable installation throughout the project area would be small, with direct impacts ranging from 12-16 feet. The inconsistency between the Public Notice information and the DEIS should be clarified. Additionally, as multiple construction activities and equipment will be used to install the cable across the Hudson River (i.e., jet plowing, anchors, concrete matting placement, blasting (if required) or excavation), the total area of impact is not solely confined to the area of the trench. Depending on the installation method used at various points along the cable route, the total area of impact may vary depending on the installation method used, and the direct and indirect effects (e.g., extent of turbidity and sediment resettlement) of that method on the benthos. As such, consideration of the cumulative effects to the physical environment (including water quality, see below) from construction activities along the cable route is needed to accurately define the total area of the Hudson River impacted by the proposed project. This information and analysis needs to be included in the EFH Assessment and BA.

In Chapter 3 of the DEIS, the region of influence for impacts to water resources and water quality in the Hudson River is defined as the entire width of the water body. Impacts to water quality have the potential to impact our trust resources directly and indirectly. The DEIS states that “the sensitivity of fish to localized and temporary increases in turbidity, suspended sediment, and downstream sedimentation is species- and life stage- specific, and associated impacts might include impairment to feeding, predator detection and reduced breeding activity.” The DEIS does not expand upon this statement to address these potential effects to our trust resources. As a result, detailed information and analysis is needed to address these concerns in relation to our trust resources. Additionally, the DEIS states that water quality degradation may also affect DO, pH and light levels, but again, does not expand upon its statement in relation to the effects of these changes in water quality to our trust resources. As a result, additional analysis is needed to address these concerns.

The DEIS states that there will be impacts to SAV, shellfish and benthic habitats; however, there is limited detail on these impacts within the DEIS or Public Notice. With regards to SAV, there are no specifics on the species of SAV to be impacted, the location of the impacted beds, or the extent of area to be impacted. There is also no discussion on any proposed mitigation to compensate for loss of this valuable habitat. These details are also missing for the evaluation of impacts to shellfish species, including the extent of impacts to shellfish beds, the specific location and species being impacted, and any proposed mitigation. As areas of SAV and shellfish

- 204-14 **204-15:** A discussion of impacts from concrete mats is provided in EIS Section 5.1.4. This discussion has been expanded to include impacts from invasive species, which is now included in the Final EIS and EFH Assessment (Section 4.1).
- 204-15
- 204-16 **204-16:** The EIS assumed a 50-foot-wide impact area that is wider than the trench and also accounts for nearby and downstream settling of suspended sediment following installation of the transmission line, and the assumptions used to determine this area were presented in EIS Section 5.1.4. The impact area is within the 50-foot construction corridor for the aquatic portions of the proposed CHPE Project route shown in EIS Table 2-1 and construction zone shown in Attachment 2 of the USACE Public Notice for the proposed CHPE Project. The 50-foot-wide impact area used in the EIS is wider than that identified in the Public Notice introduction, which only appears to reflect the physical width of the trench.
- 204-16
- 204-17 **204-17:** Turbidity impacts are discussed in Sections 5.3.4 and 5.4.4 of the EIS (and incorporate discussion in Section 5.1.4 by reference). Additional information about use of anchors and measures to minimize impacts during installation has been added to the Final EIS (Section 5.3.4), BA (Section 5), and EFH Assessment (*Riverbed Disturbance* subsection of Section 4.1). However, cumulative impacts from turbidity would be expected to be temporary. This information also has been incorporated into the EFH Assessment.
- 204-17
- 204-18 **204-18:** An assessment of the impacts from the issues raised in the comment on aquatic resources was provided in Sections 5.1.4 and 5.3.4 of the EIS.
- 204-18
- 204-19 **204-19:** Detailed analyses of impacts on submerged aquatic vegetation (SAV), shellfish, and benthic habitats are provided in Sections 5.3.4 and 5.4.4 of the EIS. According to this analysis, because the transmission line would avoid all mapped SAV beds in the Hudson River and the water depth where the transmission line would be buried would be greater than where SAV is typically found, any impacts on SAV would be negligible and any impacted SAV would be expected to recover. Installation of the transmission
- 204-19

line in the Hudson River would result in potential impacts on shellfish and benthic communities from localized removal or burial of communities, from turbidity, and potentially from spills or leaks of hazardous materials; and would interfere in localized areas with spawning of some shellfish species, such as blue mussel, northern quahog, and softshell clam. Significant impacts on benthic resources would not be anticipated from temperature increase during operation of the transmission line.

beds also serve as important habitat for the completion of essential life functions (e.g., spawning or foraging) for both listed (i.e., Atlantic and shortnose sturgeon) and non-listed federally managed species of fish, information and analysis is also needed on the short and long term (i.e., 40 years) effects to fish species from the removal of or disturbance to these areas. Detailed information and analysis on the above is needed in the EFH Assessment and the BA to fully evaluate the direct and indirect effects of this project on all trust resources.

The DEIS includes some discussion on electric and magnetic fields and temperature impacts; however, the conclusion outlined in the DEIS which states insignificant impacts are anticipated, is not well supported with references to specific studies. Furthermore, the discussion of species impacts is limited in scope. There is no discussion on how electric fields, magnetic fields, or temperature changes could impact sensitive life stages for ESA listed species or federally managed species with EFH designations in the project area. There is also no discussion on how, over the 40 year life of the project, these electric or magnetic fields, or temperature changes may affect our trust resources and their habitat. A thorough review and assessment of the direct and indirect effects of electric and magnetic fields on our trust resources, as well as the aquatic resources they depend on for survival (e.g., forage species), is needed. For instance, there is limited discussion on impacts of electric or magnetic fields to American eel, a species which may be impacted throughout its entire range from the lower Hudson to Lake Champlain. Chapter 5 of the DEIS provides some information on eel studies which indicate these species may respond to electromagnetic fields (EMF) from weak magnetic fields, though implications are unknown (Normandeau *et al.* 2011, Gill *et al.* 2012). In addition, there is limited discussion on the effects of electric and magnetic fields to species of sturgeon. Although some information is presented on magnetic fields effects on sturgeon behavior, the information presented on electric fields is limited and provides no substantive evidence to support an insignificant determination. The DEIS needs to provide information on the electric field to be emitted by the proposed project, as well as scientific studies on sturgeon responses to various levels of electric fields. Based on this information, implications to sturgeon from exposure to project related electric fields are needed to support a determination of effects. In regards to temperature effects, the DEIS states that any increase in temperature, as a result of the operation of the transmission line, will result in insignificant effects to our trust resources. The DEIS provides insufficient information to support this conclusion. Consideration of the ambient temperatures in the affected water body; temperature tolerances of our trust resources and the benthic community (e.g., infaunal and sessile organisms); whether the changes in temperature are within the species threshold of tolerance; and an assessment of short and long term effects of elevated temperatures on our trust resources and the benthic community, is necessary. Given the limited information available and the unknown implications of this project on American eel and Atlantic and shortnose sturgeon, the DEIS should include specific information on how the applicant proposes to minimize impacts to American eel, sturgeon, and other species as well as monitor any potential effects.

We understand that specific exclusion zones along the project area were delineated through coordination with NYSDEC in 2010 to ensure sensitive resource areas were avoided along the cable route. The State of New York and others have been conducting research in these water bodies since 2010. It is critical to ensure the best available information is used to evaluate impacts, particularly for a project of this scale. A full analysis of any new information should be



**204-20:** A detailed discussion of the impacts of magnetic and electric fields, including on species of sturgeon, is provided in Section 5.3.5 of the EIS. Note that this discussion also incorporates the analysis in Sections 5.1.4 and 5.1.5 by reference. Impacts from magnetic and electric fields are expected to be negligible. As such, long-term impacts are not expected. Additional information regarding impacts from magnetic and electric fields has been added to the EIS, BA (Section 5.1), and EFH Assessment (Section 4.2).

**204-21:** A detailed discussion of the impacts of temperature increases, including on species of sturgeon, is provided in EIS Section 5.3.5. Also see response to Comment 204-22 on temperature increases.

**204-22:** The analysis of impacts on benthic resources in Sections 5.3.4 and 5.4.4 of the EIS has been revised to reflect the analysis in Section 5.1.4. The temperature increase at the sediment surface directly above the cable is estimated to diminish by 1.8 degrees Fahrenheit (°F) (1.0 degrees Celsius [°C]), and the temperature change in the water column would be less than 0.01 °F (0.004 °C). Because the temperature increase is within the range of natural variability, a significant impact on the benthic community, including infaunal and sessile organisms, is not expected.

**204-23:** The exclusion zones were developed and the transmission line routed to avoid such in 2011 in cooperation with the State of New York (NYSDEC in particular). If new information has become available, the state would be expected to reevaluate the exclusion zones and the transmission line route. The NYSPSC and associated settlement parties (including NYSDEC) have approved and issued the NYSPSC Certificate for the proposed CHPE Project, and the state has not identified a need to revisit the exclusion zones or the construction windows.

provided to determine if any additional exclusion zones are warranted or if any modification of work windows is needed. An analysis of the most appropriate cable route should be based on the most updated and best available information. This information will be necessary to conduct our consultations on this project.

The DEIS needs to also provide specific information on the schedule of construction and installation of the transmission cable. A detailed timeline of when and where specific components of construction and installation will begin and end are necessary (e.g., mobilization, HDD operations, cofferdam installation, jet plowing). Additionally, more specific information on the time of year (TOY) work windows along the entire project is needed. The EIS, BA, and the EFH Assessment should clearly state what species are considered for each work window. Chapter 5 of the DEIS, states that some work may overlap with the spawning season for some forage fish. Additional information on the species of forage fish to be impacted as well as the expected impacts should be provided. Furthermore, there does not appear to be any TOY restrictions to protect sensitive life stages of species with designated EFH in the project area. Winter flounder have demersal eggs that sink and remain on the bottom until they hatch. These eggs, once deposited on the substrate, are vulnerable to sedimentation effects in less than 1 mm of sediment (Berry *et al.* 2011) and could be adversely impacted by this project. A full analysis of project impacts on species with designated EFH, in addition to plans to minimize impacts to EFH should be included in the EFH Assessment.

The DEIS provides limited information on vessel traffic and the potential for collisions with Atlantic and shortnose sturgeon. The DEIS does not provide information on the type or number of vessels that will be used during mobilization, installation or maintenance/repair of the transmission cable, or the speeds their operating. Although the DEIS states that within shallow water areas or within the construction corridor, vessels will operate at idle speeds, "idle speeds" are not defined. Additionally, the speeds of vessels operating outside of shallow water areas/construction corridors or during the mobilization, maintenance, or repair of the cable are not addressed. Information on the draft of each vessel involved in the construction, maintenance, and repair of the cable is also needed. In addition, the DEIS states that Atlantic sturgeon are demersal fish, that spend most of their time on the bottom and therefore, would avoid collisions due to the draft clearance available in the project area. This statement is not accurate. Atlantic sturgeon movements are not confined to the benthos. Although foraging behavior occurs on the benthos, while migrating, Atlantic sturgeon are often found in the water column and thus, there is the potential for an interaction if there is not sufficient clearance between the benthos and the draft of the vessel and vessels. Additional analysis and information is therefore needed to support the DEIS's conclusion that vessel interactions with sturgeon are unlikely.

The DEIS lacks sufficient information on the underwater acoustic effects to listed species of Atlantic and shortnose sturgeon. Installation of cofferdams, the potential use of dynamic positioning vessels during cable laying operations, and blasting (see above for discussion) will result in elevated levels of underwater noise that have the potential to result in the injury or behavioral disturbance to sturgeon. Based on the best available information, underwater noise levels of 206 dB re 1  $\mu\text{Pa}_{\text{Peak}}$  and 187 dB accumulated sound exposure level ( $\text{dB}_{\text{SEL}}$ ; re:  $1\mu\text{Pa}^2\cdot\text{sec}$ ) (183 dB accumulated SEL for fish less than 2 grams) are believed to result in injury or mortality to sturgeon (FHWG 2008), while underwater noise levels of 150 dB re 1  $\mu\text{Pa}_{\text{RMS}}$  are



**204-24:** The construction schedule is presented throughout the EIS (e.g., Table 2-2, Table 5.3.5-1). As stated in EIS Section 5.3.4, "Based on the proposed CHPE Project aquatic construction schedule (August 1 through October 15), impacts on many spawning fish would be avoided (see Table H.2-3 in Appendix H for fish spawning seasons). However, it would overlap with parts of the spawning season for some forage fish such as bay anchovies, killifish, sticklebacks, and sheepshead minnows, and some commercially or recreationally important fish such as blueback herring, Atlantic menhaden, and weakfish." Additional information on construction schedule timing and these potential impacts has been provided in the EFH Assessment. A detailed construction schedule will be provided by the Applicant in its EM&CP.

Section 5.3.4 of the EIS states that winter flounder eggs are demersal and are susceptible to light, noise, and turbidity-related impacts. These impacts would temporarily degrade EFH and would be localized in scope. The EFH Assessment provides a full analysis of impacts on species with designated EFH, and includes avoidance and minimization measures that the Applicant would undertake to avoid or reduce environmental impacts during construction and operation of the proposed CHPE Project.

**204-25:** The information on the number and types of vessels is provided in Sections 5.3.2 and 5.4.2 of the EIS. Additional information and an analysis for vessel drafts and idle speeds have been added to these sections of the EIS as well as the BA (Section 5) and EFH Assessment (*Vessel Strikes* subsection of Section 4.1).

**204-26:** This statement has been clarified in the EIS, BA, and EFH Assessment. The Biological Opinion for the Tappan Zee Bridge states, "Large vessels have been implicated because of their deep draft [up to 12.2-13.7 m (40-45 feet)] relative to smaller vessels [ $<4.5$  m (15 feet)], which increases the probability of vessel collision with demersal fishes like sturgeon, even in deep water. Smaller vessels and those with relatively shallow drafts provide more clearance with the river bottom and reduce the probability of vessel-strikes. Because the construction vessels (tug boats, barge crane, hopper scow) have relatively shallow drafts, the chances of vessel-related mortalities are expected to be low."

believed to result in the behavioral disturbance to sturgeon (Purser and Radford 2011; Wysocki *et al.* 2007). The DEIS needs to provide information on the source levels for type of acoustic disturbance; Peak, RMS, and cSEL levels of underwater noise for each noise producing activity; the distance from the source that injury or behavioral thresholds will be attained; and the duration of the disturbance.<sup>2</sup> Based on this information, the DEIS needs to provide a thorough analysis on the effects of this exposure to Atlantic and shortnose sturgeon. Consideration of the time of year, location of disturbance, and extent of ensonification will be necessary in this analysis. This detailed information and analysis needs to be included in the BA.

The DEIS states that no effects on federally listed sea turtles is expected. A portion of the transmission cable will be installed in the East River, an area where listed species of sea turtles may occur. Should construction occur during the months of June through October, when sea turtles are present, the DEIS needs to then provide a detailed analysis of the direct and indirect effects to sea turtles resulting from the installation of the transmission cable in the East River. This information and analysis also needs to be provided in the BA.

The DEIS indicates that the project will impact five areas designated as Significant Coastal Fish and Wildlife Habitat (SCFWH) by the State of New York. These habitats are recognized as the most significant habitats in the State and are designated for protection (NYSDEC 2012). The DEIS indicates the project would impact SAV and spawning fish (non-sturgeon species) in these areas. However, there is very little detail on the resources present, the time of year and life stages of species present, the specific impacts expected to occur, or any proposal to avoid, minimize, and mitigate these impacts. The DEIS also does not appear to consider effects to ESA listed species, EFH or other aquatic species utilizing these areas as important overwintering habitat. Of particular concern are the Kingston-Poughkeepsie Deepwater Habitat and the Hudson Highlands, where the Public Notice anticipates burial of the cable will not be possible. Spawning and overwintering grounds for listed and non-listed species of fish are known to occur in these reaches of the Hudson River. If either blasting or scraping of rock is required for partial burial in these areas, substantial impacts to our trust resources and their habitat is expected (see above). As proposed, the project would result in permanent habitat loss within these SCFWHs through direct physical alteration and disturbance. The DEIS, therefore, needs to consider the short and long term effects of any habitat modification to these and other sensitive areas in the Hudson River and their effects to our trust resources. Detailed information on construction plans,

<sup>2</sup> **Peak sound pressure level:** the largest absolute value of the instantaneous sound pressure and is expressed as dB re: 1 µPa.

**Root Mean Square (RMS) pressure:** the square root of the average squared pressures over the duration of a pulse; most pile-driving impulses occur over a 50 to 100 millisecond (msec) period, with most of the energy contained in the first 30 to 50 msec (Illingworth and Rodkin, Inc. 2001, 2009). Therefore, RMS pressure levels are generally "produced" within seconds of pile driving operations and represent the effective pressure and its resultant intensity (in dB re: 1 µPa;) produced by a sound source.

**Cumulative Sound Exposure Level (cSEL):** the energy accumulated over a period of time; the cSEL value is not a measure of the instantaneous or maximum noise level, but is a measure of the accumulated energy over a period of time to which an animal is exposed during any kind of signal. For impulsive noise sources, cSEL (dB) = Single-strike/impulse SEL + 10 Log (N); where N is the number of pulses or strikes (Bastasch *et al.* 2008; Stadler and Woodbury 2009). For continuous noise sources, cSEL (dB) = RMS pressure level + 10 Log (duration, in seconds, of the activity or installation).

204-27 Information and analysis of potential impacts regarding underwater noise has been added to the Final EIS (primarily Sections 5.1.4 and 5.4.5), EFH Assessment (*Noise* subsection in Section 4.1), and BA (*Noise* subsection in Section 5.1). Added information includes thresholds of analysis of underwater noise for installation activities such as installation of cofferdams, vessel operations, and blasting. It was determined that while localized behavioral effects could occur from underwater noise, no physical injury to fish would occur. Generally, acoustic impacts on aquatic species requiring mitigation are not expected beyond temporary impacts at the blasting site in the Harlem River. In that case, appropriate acoustic monitoring and mitigation would be added to the Blasting Plan being developed as part of the EM&CP by the Applicant.

204-28

204-28: The Applicant currently proposes to install the transmission line entirely under the East River via HDD, which would avoid impacts on sea turtles in the East River. Construction windows were negotiated with New York State agencies and NMFS based on the time of year that sensitive resources occur in the SCFWHs. Each SCFWH narrative provided on the NYSDOS Web site discusses the windows when sensitive resources are present. This information and impacts on EFH and ESA-listed species are discussed in Sections 5.3.4 and 5.3.5 of the EIS. These sections specifically consider the impact of the construction windows on the assessed species. Information on the sea turtles, SCFWHs, and overwintering grounds has been considered and included in the Final EIS in various sections, BA, and EFH Assessment (Section 4.1), as appropriate.

including the extent of concrete mats and/or rip rap proposed for these areas, as well as any plans for blasting arc necessary for our review in order to evaluate impacts to our trust resources.

The alternatives analysis in Appendix B of the DEIS gives little detail on alternatives considered to avoid these important habitats. The analysis only appears to evaluate alternatives immediately outside the river near these significant habitat sites. These included railroad right of ways (ROW) and roadways immediately outside the river, which have similar constraints with burial due to the rocky terrain. According to the analysis in Appendix B, it was determined that alternative transmission routes were not reasonable based on criteria including engineering feasibility, cost, and logistical considerations. Environmental impacts were not fully considered in the alternatives analysis and there does not appear to have been an evaluation of the least environmentally damaging alternatives. Given the critical habitat and resources present in the SCFWH designated areas, more information on alternatives to avoid these significant habitat areas should be provided along with a detailed evaluation of impacts to these sensitive habitat areas.

204-29

Further analysis of cumulative impacts of this project and the West Point Cable project should be provided. In the cumulative impacts analysis in Chapter 6 of the DEIS, it states that these projects could overlap for 65 miles in the Hudson River. Both projects are proposing to impact the Kingston-Poughkeepsie Deepwater Habitat and the Hudson Highlands significant habitat areas. If cable burial is not possible in much of this range, these projects together could result in significant permanent alteration of the riverbed. Given the potential cumulative impacts to aquatic resources, a more thorough analysis should be provided in the BA, EFH Assessment and the EIS. The analysis provided in Chapter 6 of the DEIS does not provide a full evaluation of all potential impacts that could result from two cable installation projects in these significant habitat areas.

204-30

The following are comments on Appendix G, section G.5, of the DEIS (Applicant Proposed Impact Avoidance and Minimization Measures):

- It states that, “any unanticipated sightings of threatened or endangered species... would be reported as soon as possible to NYS DPS Staff, NYS DEC, and USFWS.” Reporting should also be directed to NMFS Protected Resources Division (PRD) (Danielle Palmer, [danielle.palmer@noaa.gov](mailto:danielle.palmer@noaa.gov); 978-282-8468).
- It states that, “all in-water work would be conducted within applicable time windows agreed to by applicable Federal and State agencies.” Agreed to “time windows” should be specified here. However, prior review by Federal and State agencies is necessary.
- Coordination and review by NMFS PRD is needed for the Standard Operating Procedures Manual that would be prepared to outline sturgeon monitoring and reporting methods.
- Details of the emergency procedures to be taken should a listed species be struck need to be provided. NMFS PRD needs to be included as a point of contact should such an event occur (contact should occur within 24 hours of incidence).
- Plans for acoustic mitigation and monitoring need to be provided.
- Mitigation and monitoring plans need to be developed for listed species of sea turtles.

204-31

**204-29:** The Least Environmentally Damaging Practicable Alternatives (LEDPA) analysis included in EIS Appendix B is provided as part of the Applicant’s Clean Water Act (CWA) Section 404 Permit Application, and to date, the USACE, who makes the decision on LEDPA sufficiency, has not objected to its analysis. In addition, because the alternatives were not feasible for a number of reasons as discussed in Sections 4 through 6 of the LEDPA analysis, a full environmental analysis of these alternatives is not required. It is DOE’s understanding that no federally designated critical habitat is designated for ESA-listed species in the Hudson River. Additionally, as identified in EIS Section 5.3.4, the state agencies have granted the Applicant conditional CZMA concurrence based on the negotiated construction work windows, which are designed to minimize impacts on the SCFWHs and the other sensitive habitats and species.

**204-30:** Section 6.1.2.4 of the EIS provides sufficient analysis that cumulative impacts would be negligible. The section states that in the unlikely event that cable installation activities were to occur at the same time, cumulative impacts from turbidity and on habitat and species would result, but the spacing between the projects would be expected to minimize impacts. Following construction, the riverbed would be expected to return to near-pre-installation activities over time due to tides and currents. This conclusion applies throughout the project overlap, including the Kingston-Poughkeepsie Deepwater Habitat and the Hudson Highlands SCFWHs.

**204-31:** Corresponding responses to the bulleted sequence in the comment follow.

1. Appendix G in the Final EIS has been revised per comment.
2. Reference to EIS Table 2-2 identifying the construction work windows has been added to Appendix G in the Final EIS. These windows have already been reviewed by state and Federal agencies and have been provided to NMFS for review.
3. The Applicant will provide NMFS the opportunity to review the Standard Operating Procedures Manual for sturgeon monitoring and reporting.
4. The Applicant will provide detailed plans, including the final EM&CP, to NMFS as they are further refined. The EM&CP will

include the same NMFS point-of-contact added to Appendix G of the Final EIS.

5. In general, acoustic impacts on aquatic species requiring mitigation are not expected beyond temporary impacts at the lone blasting site in the Harlem River. Appropriate acoustic monitoring and mitigation will be added to the Blasting Plan being developed as part of the EM&CP by the Applicant.
6. Analysis determined that impacts on sea turtles would not occur because HDD would be used to install the transmission cables under the East River. As such, mitigation would not be required.

**Conclusion**

In summary, the USDOE DEIS and the USACE Public Notice prepared for the Champlain Hudson Power Express Transmission Line Project do not provide us with the necessary information to consult on this project. An expanded EFH Assessment is necessary to begin consultation under the MSA. Additional project specific information and analysis is also needed to initiate consultations under the FWCA, and ESA. Based on existing information provided to us, we must conclude that the proposed projects will result in significant impacts to aquatic resources of national importance and invoke the elevation process outlined in Part IV Paragraph 3(b) of our interagency MOA. We look forward to your response to our comments on the DEIS as well as our comments on the Public Notice pursuant to Part IV, Paragraph 3(b) of the MOA between the USACE and our agency. We appreciate your attention to this matter. Should you have any questions about EFH and FWCA, please contact Sue Tuxbury at [susan.tuxbury@noaa.gov](mailto:susan.tuxbury@noaa.gov) or 978-281-9176. Should you have any questions regarding Section 7 ESA consultation requirements, please contact Danielle Palmer at [danielle.palmer@noaa.gov](mailto:danielle.palmer@noaa.gov) or 978-281-9468.

204-32

**204-32:** An expanded EFH Assessment and a BA have been prepared and have been provided for the respective consultation efforts. Additional information as identified in this letter has been incorporated into the Final EIS, EFH Assessment, and BA as appropriate.

Sincerely,

John K. Bullard  
Regional Administrator

cc: Mary Colligan, PRD  
Mark Murry-Brown, PRD  
Jun Yan, USACE  
Lingard Knutsen, USEPA  
David Stilwell, USFWS  
Kathy Hattala, NYSDEC

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Comment 205



DEPARTMENT OF THE ARMY  
NEW YORK DISTRICT, CORPS OF ENGINEERS  
JACOB K. JAVITS FEDERAL BUILDING  
26 FEDERAL PLAZA  
NEW YORK, NEW YORK 10278-0090

Regulatory Branch-Eastern Permits Section

JAN 16 2014

SUBJECT: Permit Application Number NAN-2009-01089-EYA  
by Transmission Developers Inc, Champlain Hudson Power Express  
Transmission Line Project, OE Docket N.O. PP-362. USACE comments on  
the Draft Environmental Impact Statement dated September 2013.

Mr. Brian Mills  
Office of Electricity Delivery and Energy Reliability (OE-20)  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585

Dear Mr. Mills:

This is in response to the September 2013 Draft Environmental Impact Statement (DEIS) for the proposed Champlain Hudson Power Express Transmission Line Project.

Specific Comments on the Text of the Document:

Please see the USACE DEIS comments within the attached Comment Response Matrix.

Thank you for the opportunity to comment on the DEIS for the proposed Champlain Hudson Power Express Transmission Line Project. If you have any questions, need additional information, or wish to discuss any of the above issues in more detail, please contact Jun Yan, of my staff, at (917) 790-8092.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephan A. Ryba".

Stephan A. Ryba  
Chief, Eastern Section

- 2 -

Enclosures

Cc:

HDR – Patrick Solomon

USCG – Jeff Yunker

USCG – Michele E. DesAutels

CENAN-OP-ST – Randall Hintz

USFWS – Steve Sinkevich

NOAA – NMFS – Sue Tuxbury

NOAA – NMFS – Christopher Boelke

NOAA – NMFS – Mary Colligan

USEPA – John Cantilli

NYSDOS – Jeffrey Zappieri

**USACE Comment Response Matrix**  
**For Draft Environmental Impact Statement (DEIS) dated September 2013**  
**Champlain Hudson Power Express Transmission Line Project (NAN-2009-01089-EYA)**

#	Location		USACE - Comment
	Page	Section	
1		General Comment	The proposed CHPE cable should be buried in accordance with industry standards. All potential adverse effects of not burying the cable should be evaluated. Potential adverse effects of not burying the cable include the risk of anchor snags resulting in damage and loss of use of cable, vessel and waterways. Other potential adverse effect could result as well. The FEIS should discuss the pros and cons of all costs of not burying the proposed cable, taking into account all potential adverse effects.
2	1-11	Table 1-2	Please include in the FEIS or NEPA ROD, the NOAA NMFS EFH comment letters and how the EFH comments will be incorporated into the proposed CHPE project.
3	1-11	Table 1-2	Please include in the FEIS or NEPA ROD, the NMFS ESA Section 7 comment letters and how the ESA comments will be incorporated into the proposed CHPE project.
4	1-11	Table 1-2	Please include in the FEIS or NEPA ROD, the USFWS ESA Section 7 comment letters and how the ESA comments will be incorporated into the proposed CHPE project.
5	1-11	Table 1-2	Please include in the FEIS or NEPA ROD, the NYS Historic Preservation Office (NHPA) Section 106 comment letters and how the NHPA comments will be incorporated into the proposed CHPE project.
6	S-34 S-36 2-64 2-66 5-2 5-5 5-148 5-151 5-152	S.8.1 Impacts from O&M S.8.2 Impacts from O&M 2.6.1 Land Use - O&M 2.6.2 Transportation - O&M 5.1.1 Land Use 5.1.2 Transportation and Traffic 5.4.1 Land Use 5.4.2 Transportation and Traffic 5.4.2 Transportation and Traffic	DEIS stated that restrictions would be placed on vessel anchorage within the cable ROW for the lifetime of the CHPE cable. USACE RECOMMENDATION: The restrictions on vessel anchorage for the lifetime of CHPE cable would create unsafe conditions for marine navigation. Vessel anchorage is a necessary safety requirement and is the only method of stopping a vessel in an emergency. We recommend inclusion in the FEIS, that the proposed CHPE cable installation will have NO restrictions on future marine vessel anchorage. We also recommend the Applicant solicit navigation comments from Mariners and incorporate the mariner's comments into the project design and the FEIS.

205-01

205-02

205-03

**205-01:** The cable burial depths provided in the Draft EIS were agreed upon during the NYSPSC Article VII process that culminated in April 2013 with the issuance of the NYSPSC Certificate for the proposed CHPE Project. Per the Certificate, in the event USACE imposes conditions conflicting with the Certificate, such conflicts must be reconciled with the USACE and the NYSPSC. The burial depths presented in the USACE Public Notice for the proposed CHPE Project are now reflected throughout the Final EIS. The EIS assumed that concrete mats would be used in areas where the transmission line could not be buried in sediment, and blasting would occur in one location in the Harlem River. The Final EIS reflects the latest information provided by the Applicant on both issues and potential anchor snags, and potential impacts from such.

**205-02:** Responses for all comments received on the Draft EIS are included in the Final EIS. Comments from NMFS (Comment 204), USFWS (Comment 201), and the New York SHPO (Comment 401) have been addressed as part of the consultation and development processes for the EFH Assessment, BA, National Historic Preservation Act Section 106, and the Final EIS, as appropriate. Responses to their comments are provided herein.

**205-03:** The Final EIS (various sections) has been updated to state that there would be no restrictions on marine vessel anchorage in the transmission line corridor. Additionally, as stated in the Draft EIS, the Applicant will coordinate with the USCG and local mariners to ensure impacts on navigation and anchorage would be avoided or minimized to the maximum extent practicable. Comments received from mariners on the Draft EIS (e.g., Comments 134, 203, 701, 717, 722, 812) have been addressed in the Final EIS.

#	Location		USACE - Comment
	Page	Section	
7	S-11 2-15	S.6.2 2.4.2 Aquatic DC Cable	DEIS stated that the proposed CHPE cable will have 3 - 6 feet of in-water burial depth. USACE RECOMMENDATION: We recommend inclusion in the FEIS that the proposed CHPE cable will be buried at least 4 - 7 feet in waterways outside of the federal navigation channel and the cable will be buried at least 15 feet below authorized depth within federal navigation channels in accordance with the CZM.
8	S-11 2-15 2-27 2-31 5-150	S.6.2 2.4.2 Aquatic DC Cable 2.4.10.1 Aquatic Cable Installation 2.4.10.1 Aquatic Cable Installation 5.4.2 Transportation and Traffic	DEIS stated the cable and mat would be laid on top of the riverbed when crossing existing utility; in deepwater sections of Lake Champlain; and where bedrock is near the water bottom. USACE RECOMMENDATION: Due to the safety requirement of water dependent marine navigation, we recommend inclusion in the FEIS that the proposed CHPE cable cannot be laid on top of the riverbed. The cable must be buried to ensure the safety of marine vessels anchorage, future maintenance dredging requirements and to satisfy the requirement of the CZM concurrence for the project. we recommend that the proposed CHPE cable would be buried at least 4 feet below the mud line within all section of Lake Champlain; at least 7 feet below the mudline within Hudson, Harlem and East River and at least 15 feet below authorized depth within any federally maintained navigation channels in accordance with the CZM.
9	S-32 S-35 2-64 2-65 5-2 5-5 5-13 5-146 5-148 5-150 5-151	S.8.1 Land Use S.8.2 Transportation 2.6.1 Land Use 2.6.2 Transportation 5.1.1 Land Use 5.1.2 Transportation and Traffic 5.1.4 Aquatic Habitats and Species 5.4.1 Land Use 5.4.1 Land Use 5.4.2 Transportation and Traffic 5.4.2 Transportation and Traffic	DEIS stated that the aquatic work site of the CHPE cable would be off-limits to other vessels, existing marine vessels could either transit around the work site or use a different area of the waterway. During installation of the aquatic transmission line, four vessels, a cable vessel, survey boat, crew boat, and tugboat with barge, would be employed at the work site. USACE RECOMMENDATION: Unlike terrestrial construction activities where detours are available around construction sites, the waterways along the path of the CHPE construction is the only route available for water dependent marine vessels. In narrow waterways, such as Narrows of Lake Champlain, Harlem River, or narrow deep channels on the Hudson River, navigating around the work site may not be feasible. To ensure the continued waterway access for water dependent marine vessels, we recommend inclusion in the FEIS that the Applicant ensure the aquatic construction or repair equipment does not interfere with navigation or adjacent facilities. If navigation conflicts occurs the applicant will relocate construction vessels to accommodate other water dependent users of the waterway.

205-04

205-05

**205-04:** The Draft EIS identified and addressed impacts from the CZM requirement for cable burial 15 feet below the authorized depth of the navigation channel. Whether or not this is reflected in the cable burial depths identified in the USACE Public Notice is subject to further negotiations between the Applicant and USACE. Burial depths in the EIS have been revised to match the Public Notice. The analysis of the burial depths in the EIS reflects the range of possible burial depths for the proposed CHPE Project. As stated in Sections S.6.2, 2.4.2, 2.4.10.1, and 5.1.2 of the Final EIS, the transmission cables would be buried beneath the bed of Lake Champlain at a depth of at least 8 feet (2.4 meters) in the sediment and at least 4 feet (1.2 meters) in rock within the federally maintained (i.e., dredged) navigation channel, and at least 4 feet (1.2 meters) in the lakebed outside of the federally maintained navigation channel. As stated in Sections S.6.2, 2.4.2, 2.4.10.1, and 5.3.2 of the Final EIS, cables installed in the Hudson River sediment bed would be buried to a minimum depth of 7 feet (2.1 meters); no burial would occur in a federally maintained navigation channel in the Hudson River. As stated in Sections S.6.2, 2.4.2, 2.4.10.1, and 5.4.2, cable installation in the Harlem River would be entirely within the federally maintained navigation channel at minimum depths of 8 feet (2.4 meters) in the sediment and 6 feet (1.8 meters) in rock. Transmission cables would be installed along the entire East River route using HDD; therefore, trench burial depths would not apply. Also see response to Comment 205-01 regarding transmission line burial.

**205-05:** Transmission line installation would not prohibit water-dependent recreational or commercial activities because vessels could transit around the work site. If conditions do not allow other vessels to transit around the work site, the Applicant would ensure that aquatic construction does not interfere with routine navigation by making adjustments to the work site as required; this measure has been incorporated into various sections of the Final EIS. These disturbances would be temporary and localized at the work site. The installation activities would be coordinated with USCG so that work areas are marked properly to ensure safety, and so that current information about the location of work zones can be broadcast to recreational users. This would minimize conflict with construction activity, and allow for advance planning for other users. Sections 5.1.2, 5.3.2, and 5.4.2 of the EIS provide specific information on avoidance of potential navigation conflicts for the aquatic segments of the installation route.

#	Location		USACE - Comment
	Page	Section	
10	S-52 2-80 2-82 3-7 3-36 5-9 5-39	S.8.15 Hazardous Material 2.6.12 Infrastructure 2.6.15 Hazardous Materials and Wastes 3.1.3.2 Proposed CHPE Project 3.1.15 Hazardous Materials and Wastes 5.1.4 Aquatic Habitats and Species 5.1.15 Hazardous Materials and Wastes	DEIS stated that 30 samples collected in Lake Champlain identified contaminants and the proposed CHPE cable installation may disturb contaminants in sediments. The DEIS also stated that the proposed CHPE Project would not include the remediation of existing contaminants within Lake Champlain because the Applicant would not be responsible for remediating contamination caused by others and the transmission line installation process would not exacerbate existing conditions. USACE RECOMMENDATION: We received public comments concerning contaminants in the waterways along the proposed route of CHPE transmission cable. Please see Attachment Number 1. In the FEIS we recommend a response to the public comments concerning the installation disturbed contaminants along the proposed CHPE aquatic route.
11	S-57 2-87 3-46 3-80 5-145 5-188	S.8.19 Environmental Justice 2.6.19 Environmental Justice 3.1.19 Environmental Justice 3.2.19 Environmental Justice 5.3.19 Environmental Justice 5.4.19 Environmental Justice	Environmental Justice. It is unclear whether the minority and low income population discussed in the DEIS are EJ communities and whether those communities will be impacted by the project? USACE RECOMMENDATION: We recommend clarification whether EJ communities are present along the proposed CHPE route and whether the EJ community are impacted by the proposed CHPE project. Please see USEPA Region II EJ website: <a href="http://www.epa.gov/region2/ej/guidelines.htm">http://www.epa.gov/region2/ej/guidelines.htm</a> We also received public comment concerning outreach and potential impacts to the Hispanic Community. Please see Attachment Number 2. We recommend a response to the public comments in the FEIS.
12	1-12	1.6.2 Federal Authorizations and Approvals	To maintain consistency with Public Hearing poster board, please remove from the USACE section the following "to issue the Section 10 and the Section 404 permits. The factors include conservation, economics, aesthetics, general environmental concerns, cultural resources, fish and wildlife values including threatened and endangered species and essential fish habitat (EFH), navigation, recreation, water quality, energy needs, safety, cumulative impacts, air quality, and marine security." and REPLACE with the following "the construction and installation of the proposed electric transmission line is not contrary to the public interest which would result in the issuance of a Department of the Army permit pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act, as amended."

205-06

205-07

205-08

**205-06:** A review of existing information for waterbodies that would be traversed by the proposed CHPE Project, including sediment contamination sources in the vicinity of the proposed route, was conducted as part of the CHPE Sediment Sampling Analysis Plan (SSAP) developed as part of the Applicant's original NYSpsc Article VII application and the USACE Section 404 permit application in 2010. This plan served as the protocol for conducting a marine route sampling survey along the route later in 2010, which included geotechnical surveys to collect information on the existing sediment type and quality along the proposed route. Sediment samples were collected at systematically determined intervals along the proposed transmission line route as part of the survey for either physical analysis or both chemical and physical analyses. The number of samples collected varied based on the existing sediment type, existence of recent historic sediment quality data, and proximity of the proposed route to historic sampling locations. Chemical analysis and water quality modeling was conducted to better characterize contaminants along the cable route. Chemical analyses included metals, polyaromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs). Very few standard contaminant threshold exceedances were found. A summary of data results was provided in the 2010 Marine Route Survey Summary Report, which is included in the Joint Proposal and summarized in Sections 3.1.15, 3.3.15, and 3.4.15 of the EIS. The maximum concentrations of contaminants along the cable route as identified in the water quality modeling were graphically presented and compared to

New York State's and State of Vermont's water quality standards. The comparisons, which are also summarized in the EIS sections identified above, showed that the effects of the proposed project would comply with state water quality standards. The model results also indicated that the duration time of resuspended sediments would be relatively short at less than 1.5 hours.

**205-07:** Construction and operation of the proposed CHPE Project would impact minority and low-income populations the same as it would the general population, and, therefore, the impacts would not be considered disproportionately high. A detailed discussion on impacts to Environmental Justice populations is provided in EIS Sections 5.2.19, 5.3.19, and other similar sections. Please see response to Comment 718-01 regarding outreach to the Hispanic community. The comments provided by USACE in Attachments 1-4 of this comment letter were provided to USACE in response to their Public Notice. Any that were also submitted to DOE as comments on the Draft EIS have been addressed elsewhere in this comment response document.

**205-08:** The cited text has been revised in Section 1.6.2 of the Final EIS.

#	Location		USACE - Comment
	Page	Section	
13	2-12	2.4.2 Aquatic DC Cable	DEIS stated that aquatic cable installation will bury the proposed cable "to the extent practicable". DEIS also stated the proposed CHPE cable would be buried to a depth of 6 feet within the Harlem and East River. USACE RECOMMENDATION: In the FEIS, we recommend that the proposed CHPE cable would be buried to "at least" 4 feet below the mud line within all section of Lake Champlain; "at least" 7 feet below the mudline within Hudson, Harlem and East River; and "at least" 15 feet below authorized depth within any federally maintained navigation channels in accordance with the CZM.
	2-15	2.4.2 Aquatic DC Cable	
	2-27	2.4.10.1 Aquatic Cable Installation	
	5-3	5.1.2 Transportation and Traffic	
	5-155	5.4.3 Water Resources and Quality	
14	2-29	2.4.10.1 Aquatic Cable Installation	USACE RECOMMENDATION: Please provide the trench width for aquatic jet plow installation. Similar to the trench description provided for shear plow installation on page 2-29 of DEIS.
15	2-31	2.4.10.1 Aquatic Cable Installation	DEIS stated that the proposed CHPE cable within deepwaters of Lake Champlain would be installed 20 feet apart. USACE RECOMMENDATION: Cable installation 20 feet apart is inconsistent with other sections of DEIS. On page 2-4 of DEIS it stated the that cable would be buried within a singles trench. We recommend inclusion in the FEIS that the proposed CHPE cable should not be installed 20 feet apart. The aquatic cable should buried within a single trench.
16	2-73 3-13	2.6.7 Terrestrial Protected Species 3.1.6 Terrestrial Habitats and Species	On October 2, 2013, USFWS published in the Federal Register a notice announcing the the inclusion of Northern Long Eared Bat as a proposed endangered species throughout its range under the Endangered Species Act. Its ranges includes New York State. USACE RECOMMENDATION: We recommend inclusion of Northern Long Ear Bat ESA analysis within the FEIS.
17	2-75	2.6.8 Wetlands	DEIS stated the overland segment would directly impact approximately a total of 67 acres of wetlands. USACE RECOMMENDATION: The applicant provided conceptual wetland mitigation plan stated that a total of 77.7 acres of wetland would be impacted by the proposed CHPE cable (Temp Impact: 16.2 + 51.2 + Permanent Impact: 8.2 + 2 = 77.7 acres ). We recommend inclusion within the FEIS to show a total of 77.7 acres of total wetland impact.
	5-70	5.2.8 Wetlands	
18	2-76	2.6.8 Wetlands	DEIS stated permanent impact to 2.0 acres of forested wetland. USACE RECOMMENDATION: The applicant provided conceptual wetland mitigation plan which stated there will also be 8.2 acres of permanent impact to non-forested wetland. We recommend inclusion in the FEIS the 8.2 acres of permanent impact to non-forested wetlands

205-09 **205-09:** See response to Comment 205-04.

205-10 **205-10:** The jet plow would disturb an area of up to 2 feet (0.6 meters) in width as it passes through. The jet plow trench width has been added to Section 2.4.10.1 of the Final EIS. References to the 20-foot cable separation in the deepwater areas of Lake Champlain have been removed from the Final EIS.

205-11 **205-11:** Information on the northern long-eared bat has been included in the BA and Sections 3.1.7 and 5.1.7 and similar sections of the Final EIS.

205-12 **205-12:** Sections S.8.8, 2.6.8, and 5.2.8 of the Final EIS has been revised to reflect the total of 77.7 acres of temporary and permanent wetlands impacted, and the permanent impacts have been broken out between forested and non-forested wetlands. Section 5.2.8 already breaks out the acreages of forested wetland impacts and non-forested wetland impacts.

#	Location		USACE - Comment
	Page	Section	
19	2-80 6-11	2.6.12 Infrastructure Transmission Projects	DEIS stated that Electrical infrastructure in New York State would benefit in the long run. USACE RECOMMENDATION: We received public comments concerning the lack electrical infrastructure improvement proposed by the project. Please see the comment letter in <u>Attachment Number 2</u> . We recommend the FEIS provide a response to the public comments.
20	3-21 3-105 5-30	3.1.9 Geology and Soils 3.3.9 Geology and Soils 5.1.9 Geology and Soils	DEIS Seismicity. USACE RECOMMENDATION: We received public comments concerning seismic activities dangers. Please see the comment letter in <u>Attachment Number 2</u> . The DEIS provided the NYS seismic hazard rating but it is still unclear how seismic activities could impact the proposed CHPE cable. In the FEIS, we recommend a response to the public comment. Please include 1) the safety measures to be incorporated into the proposed CHPE cable design able withstand a seismic event. 2) what are the impacts to the environment, navigation, and public safety, should the CHPE cable be damaged during an earthquake.
21	3-42 5-47	3.1.18 Socioeconomics 5.1.18 Socioeconomics	USACE RECOMMENDATION: We received public comments concerning job loss due to the proposed project, please see <u>Attachment Number 2</u> . We recommend a response to the public comment within the FEIS.
22	3-102	3.3.8 Wetlands	DEIS stated that Esopus Estuary SCFWH contains wetlands that would be intersected by the proposed CHPE Project. USACE RECOMMENDATION: Has the wetland impact in the Esopus Estuary already been included in the total wetland impact discussed in Section 2.6.8 Page 2-75? At what mile markers would the wetland impact occur?
23	5-4 6-13	5.1.2 Transportation and Traffic 6.1.2.2 Transportation and Traffic	DEIS stated that in the Lake Champlain the transmission cables would be laid along the side slopes in some locations of an existing Federal navigation channel (MPs 98 through 101). USACE RECOMMENDATION: According to the drawings provided by the applicant, between MP 98 -101, the proposed CHPE cable would be buried within the boundary of the existing federal Navigation Channel, not just the side slopes. Please see drawings in <u>Attachment Number 3</u> . We recommend the FEIS state that proposed CHPE cable would be buried within the Federal Navigation Channel in Lake Champlain, not just the side slopes.

205-13 **205-13:** See response to Comment 137-01. The benefits of implementing the proposed CHPE Project on electrical infrastructure and demand were provided in Sections 1.1, 1.4, and 5.4.12 of the EIS.

205-14 **205-14:** Sections 5.1.9 and 5.3.9 of the EIS, and other similar sections, discuss seismicity and the potential for seismic events. Text regarding potential impacts and seismic safety measures have been added to these sections in the Final EIS. Also see response to Comment 109-08.

205-15 **205-15:** See responses to Comments 137-03 and 101-02.

205-16 **205-16:** A review of the transmission route and wetland data confirmed that the transmission line would traverse the Esopus Estuary SCFWH but would not traverse any mapped wetlands in the SCFWH. This revision is indicated in Section 3.3.8 of the Final EIS. The depth of the water at the transmission line burial points within this SCFWH would range from 20 to 60 feet, which precludes wetland habitat conditions.

205-17 **205-17:** Attachment 2 of the USACE Public Notice identifies transmission line placement in the existing Federal navigation channel or the side slopes. The text in Sections 5.1.2, 5.4.2, 5.4.9, and 6.1.2.2 of the Final EIS has been revised to indicate that the transmission line would be buried within the navigation channel.

#	Location		USACE - Comment
	Page	Section	
24	5-4	5.1.2 Transportation and Traffic	DEIS stated that on a case-by-case basis, the USACE New York District Engineer could modify the 15 feet burial depth requirement if deemed necessary. USACE RECOMMENDATION: The requirement to bury the proposed CHPE cable 15 feet below the authorized depth of a federal navigation channel is a requirement of CZM Concurrence. In accordance with Costal Zone Management Act, USACE, as a federal agency, will follow the requirement of the CZM concurrence. We cannot modify a requirement within the CZM Concurrence. We recommend revising the FEIS to reflect the CZM requirement.
25	5-52	5.2.1 Land Use	DEIS overland Eminent Domain. USACE RECOMMENDATION: We received comment letters concerning Eminent Domain in <u>Attachment Number 2</u> . We recommend responding to public comment in the FEIS.
26	5-72 5-73	5.2.8 Wetlands 5.2.8 Wetlands	DEIS stated the Applicant would monitor the success of the wetland restoration and provide a report to the permitting authorities at the conclusion of 2 years of monitoring. USACE RECOMMENDATION: We recommend inclusion in the FEIS that the a 5 year Monitoring plan will be required to ensure removal of invasive species and ensure establishment of wetland species. A wetland monitoring report should be provided for each year of monitoring.
27	5-72	5.2.8 Wetlands	DEIS stated permanent significant impacts would occur on 2.0 acres of forested wetlands and on 8.3 acres of non-forested wetlands. USACE RECOMMENDATION: we recommend inclusion in the FEIS that wetland mitigation will be required for permanent wetland impacts.
28	5-70	5.2.8 Wetlands	Temporary wetland impact. USACE RECOMMENDATIONS: For temporary wetland impacts, we recommend breaking out the acres of forested wetland impact and non-forested wetland impact in the FEIS.
29	5-72	5.2.8 Wetlands	DEIS stated that forested wetlands, where not maintained, would be expected to go through several stages of succession vegetation before returning to the preconstruction vegetation cover type. USACE RECOMMENDATION: We recommend the planned restoration of cleared forested wetland areas be augmented with active planting of forested wetland tree and shrub saplings, as mitigation for the temporary impacts to 16.2 acres of forested wetland. A 5 year Monitoring plan will be required to ensure removal of invasive species and ensure establishment of wetland species. A wetland monitoring report should be provided for each year of monitoring. Please see US EPA comment as <u>Attachment 4</u> .

- 205-18: Text regarding USACE modifying the 15-foot burial depth requirement has been deleted from Section 5.1.2 of the Final EIS, and the EIS sufficiently reflects the CZM concurrence. Also see response to Comment 205-04.
- 205-19: See response to Comment 105-04.
- 205-20: Comment noted. Page 5-73 of the Draft EIS identified a wetland restoration monitoring program. The Applicant will coordinate with the USACE on the requirements for mitigation and the development, duration, and reporting requirements for the monitoring plan to ensure removal of invasive species and establishment of wetland species. The Conceptual Wetland Mitigation Plan provided by the Applicant (and in the Document Library on the CHPE EIS Web site [<http://www.chpexpresseis.org>]) identifies that an annual report will be provided for 5 years and that invasive species will be removed and monitored to avoid reestablishment, and establishment of wetland species monitored.
- 205-21: Page S-45 (Section S.8.8) of the Draft EIS (and same section of the Final EIS) reflected the mitigation that the Applicant has committed to implementing to offset permanent wetland impacts, and Section S.8.8 of the Final EIS identifies the breakout of temporary impacts in acres of forested and non-forested wetlands for the entire proposed CHPE Project. The Wetlands sections in EIS Chapter 5 identify wetland impacts per route segment.
- 205-22: See response to Comment 205-20.



#	Location		USACE - Comment
	Page	Section	
34	6-13	6.1.2.2 Transportation and Traffic	On page 6-13, the DEIS stated, since proposed CHPE Project would be buried under the East River navigation channel using HDD, and 15 feet below the authorized navigation channel depth as required by the USACE in the Hudson, Harlem, and East rivers, cumulative impacts are not anticipated from future dredging. USACE RECOMMENDATION: As it is currently presented in the DEIS there will negative cumulative impact on future maintenance dredging. On page 5-150, the DEIS stated that in instances where environmental or engineering constraints are present that the cables should be laid on Harlem River Channel Bottom. On page 2-27 the cable will be laid on top of the riverbed when encountering existing utilities or other obstructions. Laying the cable on the bottom of federal navigation channel would have a negative cumulative impact on future dredging. In accordance with the CZM, we recommend that the FEIS state the proposed cable shall be buried to 15 feet below the authorized channel depth in all areas of the federal navigation channel.
35	8-1	8. List of Preparers	USACE RECOMMENDATION: The USACE representative name is spelled incorrectly. Please revise to Jun Yan

205-27

**205-27:** The EIS is based on information provided by the Applicant (and reflected in the Public Notice) that concrete mats would be used where the transmission line cannot be buried. Whether or not this is ultimately permitted is subject to further negotiations between the Applicant and USACE. Also see responses to Comments 205-01 and 205-04.

205-28

**205-28:** The USACE representative's name has been corrected in Chapter 8 of the Final EIS.

Reviewer: Please provide your name, title, commercial phone number, email address, and date of comments

# ATTACHMENT 1

**ATTACHMENT 1****Yan, Jun NAN1**

**From:** McDonald, Jodi M NAN02  
**Sent:** Tuesday, December 03, 2013 11:37 AM  
**To:** Baden, Annette NAN02; CENAN-OC NAN02; Yan, Jun NAN1  
**Cc:** Ryba, Stephan A NAN02  
**Subject:** FW: [EXTERNAL] Fwd: FOIA FA-13-0217 (UNCLASSIFIED)  
**Attachments:** FA-13-0217 Response.pdf; Whitham.pdf

Classification: UNCLASSIFIED  
 Caveats: NONE

Annette - Please see attached response received from our Public Notice inbox with respect to this FOIA request. R/JM

-----Original Message-----

From: Judson Witham [<mailto:jurisnot@gmail.com>]  
 Sent: Tuesday, December 03, 2013 9:33 AM  
 To: RFO, CENAN NAN02; PublicNotice, CENAN NAN02; CENAN-OC NAN02; [ejacobs@neiwppcc.org](mailto:ejacobs@neiwppcc.org); [sking@neiwppcc.org](mailto:sking@neiwppcc.org); Foil r5foil; FOIL; John Warren; Records Access; [info@igpc.state.ny.us](mailto:info@igpc.state.ny.us); [public@gw.dec.state.ny.us](mailto:public@gw.dec.state.ny.us); Dale Hobson; R5 Info; Richard Hayes Phillips; Ellen Brown  
 Subject: [EXTERNAL] Fwd: FOIA FA-13-0217

Dear Ms. Baden Et Al.

The Toxics in Lake Champlain's Sludge and Sediment deposits cover a vast area of the bottom of Lake Champlain. The AUDIO TESTIMONY and RECORDED ARGUMENTS before the US Supreme Court reveal The Village of Ticonderoga, International Paper and Every Industry and Factory, Radiator Shop, Paint and Body, Hospital, Dental Clinic, Doctors Office and House Hold in Ticonderoga and along the LaChute River used the River to Flush the Sewage and Industrial Wastes from the Ticonderoga Area into Lake Champlain. The Sediments and Sludge are FULL of Chemicals and Toxins of all kinds AND Combinations thereof.

Because of the TOXIC Mixtures in these Sludge and Sediment Deposits a THOROUGH Clean Up and Removal of the Huge Mess should occur. Plowing through the Toxic Materials for burial of an electrical cable is INSANELY UNSAFE. The Project should NOT be permitted until a Full Clean Up is Finished.

I have spent more than 3 years seeking the materials Just Now Released from the US Government. It is abundantly obvious that there is EPA and Vermont Scientific Materials and University Testings and Laboratory Data still missing.

Waiting until 9 Days before the expiration of Public Comment and Dissent to the Project reveals that all the details of the TOXIC NIGHTMARE in Lake Champlain have NOT been explained to the Public. The Public has been denied the information and frankly this is more than a 100 Year Old SECRET.

This is a Formal Complaint and Demand that the Project Be Suspended until a Full and Complete Clean Up of the TOXIC NIGHTMARE is Completed.

Thank You

Judson Witham  
 North Country For Clean Water and Safe Environmental Policy

----- Forwarded message -----  
From: CENAN-OC NAN02 <CENAN-OC@nan02.usace.army.mil>  
Date: Tue, Dec 3, 2013 at 8:56 AM  
Subject: FOIA FA-13-0217  
To: Judson Witham <jurisnot@gmail.com>, CENAN-OC NAN02 <CENAN-OC@nan02.usace.army.mil>

Annette Baden  
Legal Assistant  
U.S. Army Corps of Engineers  
Office of Counsel - Room 1837  
26 Federal Plaza  
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917-790-8058 Office  
212-264-8171 Fax  
email: [annette.baden@usace.army.mil](mailto:annette.baden@usace.army.mil)  
NY District Homepage: <http://www.nan.usace.army.mil>  
FOIA Homepage: <http://www.nan.usace.army.mil/FOIA.aspx>  
Please Email All FOIA Requests To: [foia-nan@usace.army.mil](mailto:foia-nan@usace.army.mil)

Dear Ms. Baden,

I was advised by You that Hurricane Sandy destroyed all the records. You advised Me that there were No Records. In any event .... Scanning these documents and sending them to Me electronically can be accomplished. I am currently traveling for a Christmas related Family engagement and as such please send what You can electronically by scanning such.

I have discovered that New York State owns the Dam at the Lake George end of the LaChute River and I have discovered the electronic record of the US Supreme Court arguments that are on audio file revealing that International Paper Company and New York State's Lawyers ADMIT that Ticonderoga NY and other Industries in New York caused the vast Sludge Bed and Silting ( Contamination ) of Lake Champlain. I have also learned Ticonderoga's NEW Paper Mill owned by International Paper continues to dump and add to the Sludge and Poisoning of Lake Champlain.

When I return from my trip I will address anything You are unable to send electronically.

Thank You

Judson Witham

On Mon, Dec 2, 2013 at 9:10 AM, Baden, Annette NAN02 <[Annette.Baden@usace.army.mil](mailto:Annette.Baden@usace.army.mil)> wrote:

Mr. Witham, On November 5, 2013 we attempted to send you a response to FOIA Number FA-13-0217. It came back to us over the weekend stamped "Insufficient Address". The address we have on file is Barrow Cemetery and Highway 58, Martinsville, VA 24112. Please send us your correct mailing address so we may re-mail your documents because they are too large to send by email.

Annette Baden

2

Legal Assistant  
U.S. Army Corps of Engineers  
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917-790-8058 Office  
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NY District Homepage: <http://www.nan.usace.army.mil>  
FOIA Homepage: <http://www.nan.usace.army.mil/FOIA.aspx>  
Please Email All FOIA Requests To: [foia-nan@usace.army.mil](mailto:foia-nan@usace.army.mil)

Classification: UNCLASSIFIED  
Caveats: NONE