



**Response to the
September 4, 2018 MDEP / LUPC Information
Request**

New England Clean Energy Connect (NECEC)



Prepared for:
**Maine Department of Environmental Protection
and Maine Land Use Planning Commission**

October 19, 2018

I. July 26, 2018 Submission

A. Cover Letter

1. Regarding alternatives, your letter makes numerous statements regarding impacts to recreational users of the river. “At the Preferred Alternative location, the river is generally flat water, and is not particularly valued by recreational users . . . This commercial [rafting] and recreational use of this section of the river arguably has more impact on any bucolic nature of the river than does the proposed overhead crossing . . . This existing human-caused visual impact at the Harris Dam put-in is significantly greater than the Preferred Alternative would be (see the discussion below), and affects rafters’ and other boaters’ aesthetic expectations on the river downstream . . . Due to the position, buffering, and limited duration of viewing, the overhead crossing in the proposed location will not diminish the recreational use or scenic character of the outstanding river segment located between the Forks and Indian Pond Dam. Accordingly, the two conductors and two shield wires that would cross the river at the Preferred Alternative location, which as described above is not particularly unique or wild, would not adversely affect existing uses of the Kennebec River.” Did CMP draw these conclusions based on user survey data? Can you provide the basis for these statements?

RESPONSE

These conclusions were based on objective observations and professional judgment. In response to this request, however, CMP conducted a user survey, developed by Market Decisions, Inc., a Portland-based survey firm with extensive experience developing this type of analytical tool. The survey was administered over three consecutive weekends in September and October of 2018 to evaluate the impacts on users of the river of a proposed overhead transmission line crossing at the Upper Kennebec River. The results of the survey, which was completed by 53 rafters plus 9 guides (for a total of 62 respondents) who had just completed a rafting trip, indicated that a) the presence of the overhead transmission line crossing would have an effect on the perceived scenic quality of that section of the river, and b) the Project would have little to no effect on the respondents’ desire to return to the Upper Kennebec River (continuing use) or their enjoyment of the experience of being on the river. The full report by Market Decisions is provided in Attachment A.

In response to this request and concerns that have been raised by DEP, LUPC, the Army Corps, and intervenors, CMP conducted a careful analysis of both construction feasibility considering total project cost and the potential visual and recreational impacts of an overhead line crossing the Kennebec River. Through this analysis CMP determined that an underground crossing of the Kennebec River would avoid recreational and visual impacts, adverse or otherwise, and is financially practicable. As such, concurrent with

this submittal, CMP is amending its Site Location of Development Law (Site Law) and Natural Resources Protection Act (NRPA) applications to incorporate a horizontal directional drill (HDD) design crossing and thereby avoiding impacts to recreational use or scenic character of this Outstanding River Segment (38 M.R.S. § 480-P(8) and 12 M.R.S. § 402).

2. In your letter, you state that the underground transmission alternative would require approximately 1,500 feet of open trenching to connect the Cable Termination Stations on each side of the river. I have seen several horizontal directional drilling operations, including the natural gas pipeline which was installed under the Penobscot River in Orrington. These have not required a trench to be dug to complete the drilling operation. Please explain why this trenching is required, how this would impact the buffer, and, if needed, whether these trenches would be temporary and vegetated after construction.

RESPONSE

CMP's design of the HDD crossing of the Kennebec River is presented in the NECEC Kennebec River HDD Site Law and NRPA Application Amendments, submitted concurrently with this information request response.

The HDD design depicts 270 feet of trenching between the Moxie Gore Termination Station (east side of the river) and the HDD entry point, and 303 feet of trenching between the West Forks Termination Station and HDD exit point (west side of the river).

This trenching is necessary for the following reasons:

- It allows transition from the HDD to the cable riser structures. Specifically, it allows for the separation of four DC poles (conductors) plus the spare cable (5 total) into their respective riser structures and terminators.
- The vault system designed into the trench allows for intermediate splicing in the event of an underground cable terminator failure.
- On the west side of the Kennebec River the trench avoids a small radius compound (i.e., horizontal plus vertical) bend in the HDD which significantly simplifies the drilling effort.

Trenches would be temporary and would be backfilled and revegetated after construction. To eliminate the potential for roots to interfere with the underground cables, CMP will prevent large tree growth within the trenched sections and will maintain vegetation in these areas consistent with the NECEC Post-Construction Vegetation Maintenance Plan (August 2018).

An HDD installation will increase the vegetated buffer on both sides of the river, when compared to the overhead design. As a result, the buffers on the east and west side of

the river have increased by 1150 feet and 660 feet, respectively. The total vegetated buffer retained is 1450 feet and 1160 feet on the east and west sides of the river, respectively.

- 3. Your letter states that CMP continues to gather information to be in a better position to answer questions from the public. What additional information are you gathering, when will it be available, and how will that information inform CMP's decision concerning alternatives to the overhead crossing?**

RESPONSE

See response to #1; CMP was gathering information relating to the feasibility of an underground crossing of the Kennebec River, and that information is now available.

- 4. Your letter identifies that upgrades on approximately 15 miles of unimproved roads and associated bridges would be required to provide access to the Termination Stations associated with the underground alternative. Improvements to existing roads and water crossings may be beneficial to fisheries and water quality. Is it possible to limit vehicular access (i.e., gates) on improved roads so that any increased use of the Cold Stream Forest conservation area would have minimal or no impact?**

RESPONSE

CMP has non-exclusive easement rights on the 15 miles of roads necessary to access the two termination stations. These roads are used by the landowners for access and timber harvesting and are generally accessible to recreational uses, including access to public lands. CMP does not possess land rights that would allow it to limit vehicular use of these roads or to gate these roads. As the engineering design and additional assessments of the HDD option have developed, CMP determined that there will be little to no difference in the access road improvement requirements, which is a change to CMP's first assessments. Minor tree clearing, road widening, and additional widening of turning radiuses will be required, but this will not change the existing road conditions significantly. Since the access roads will be maintained similarly to present conditions, increased vehicular use is not expected and therefore, it is unlikely that CMP's use of these roads will impact fisheries or water quality adversely or otherwise.

5. It is noted that page 3 of the cover letter states that no special exception criteria review is required by the LUPC. This statement conflicts with that provided in Section 25.1 of the pending Site Law application. “The LUPC must certify that the proposed development is an allowed use within all subdistricts within which it is proposed, and that the proposed development meets any LUPC land use standards that are applicable to the Project and that are not considered by the MDEP in its review. 38 M.R.S. § 489-A-1(2)(D)(1-A), (B-1). The MDEP may not issue a permit until the LUPC certifies the Project.” *Id.*

RESPONSE

CMP does not believe these statements conflict. Pursuant to 38 M.R.S. § 489-A-1(2), the DEP shall approve a development proposal within the unorganized and deorganized areas if, in addition to the other statutory and regulatory approval requirements, two criteria are met: (1) the proposed development is an allowed use within the LUPC subdistrict in which it is to be located, 38 M.R.S. § 489-A-1(2)(A); and (2) the LUPC has certified that the proposed development meets any of its land use standards that are not considered as part of the DEP’s review, 38 M.R.S. § 489-A-1(2)(D).

Regarding criterion 1, “utility facilities” are expressly allowed within the P-RR subdistrict by special exception. LUPC Reg. § 10.23,I.3.d(9). A use allowed by special exception is an allowed use. LUPC Reg. § 10.23,I.3.f (“All uses not expressly allowed, with or without a permit or by special exception, shall be prohibited in P-RR subdistricts.”). The criteria a special exception use must meet are: (a) there is no alternative site which is both suitable to the proposed use and reasonably available to the applicant; (b) the use can be buffered from those other uses and resources within the subdistrict with which it is incompatible; and (c) such other conditions are met that the Commission may reasonably impose in accordance with the policies of the Comprehensive Land Use Plan. LUPC Reg. § 10.23,I.3.d. Because these special exception criteria will be considered by the DEP as part of its review, and because the LUPC does not issue a permit in this case (12 M.R.S. § 685-B(1-A)(B-1)), no special exception criteria review is required by the LUPC. Instead, LUPC should certify that the proposed development is an allowed use within the subdistrict or subdistricts for which it is proposed, on the condition that DEP concludes that there is no alternative site which is both suitable to the proposed use and reasonably available to the applicant and that the use can be buffered from those other uses and resources within the subdistrict with which it is incompatible. 12 M.R.S. § 685-B(1)(B-1). The LUPC must, however, review its land use standards that are not considered in DEP’s review, and certify that the proposed development meets those land use standards, should it so find. *Id.*

CMP understands that LUPC has nonetheless decided to conduct a special exception criteria review; CMP makes these points simply to preserve them for the record.

B. Attachment III

- 6. In response to my question #3 concerning structures within 25 feet of a river, stream or brook, you stated that CMP intends to provide an updated waterbody crossing table and a site-specific erosion plan. I have reviewed the updated waterbody crossing table and note that there are eleven structures within 25 feet of rivers, streams and brooks. When does CMP intend to submit these site-specific erosion control plans?**

RESPONSE

During detailed transmission line design, structures that are currently proposed to be located within designated stream buffer areas will be relocated, to the extent practicable based on topography, adjacent structures, and other siting constraints, outside of the designated stream buffers. After these relocations and prior to construction, CMP will develop and provide to the Department for its review and approval site-specific erosion control plans for all structures that cannot be relocated outside of stream buffers (e.g., angle structures). Site specific erosion control plans developed for this purpose will incorporate elements of the typical figure for *Erosion and Sedimentation Control for Structure Installation in High Risk Areas* submitted to MDEP on June 29, 2018 and also included within Attachment B of this response.

- 7. In response to Question 15 concerning the VCP around streams, you state that within the "wire zone" all woody vegetation will be cut. This statement is repeated in the complete revised VCP (August 14 submission Attachment B) but goes on to add that non-capable species would be allowed to remain if they won't pose a hazard. Please provide a list of non-capable species. How are non-capable species identified? Also in regard to the VCP and the VMP both contain your typical diagram of an H-Frame structure which shows the wire zone. However, a majority of the HVDC line will be on single pole structures. Can you please provide a diagram to be included with these vegetation management plans that shows the wire zone for a single pole structure? This detail should be included in the VMP and the VCP.**

RESPONSE

CMP's standard practice, within the portion of the stream buffer *within the wire zone* (i.e., within 15 feet, horizontally, of any conductor), is to cut all woody vegetation *over 10 feet in height* to ground level with the resulting slash managed in accordance with Maine's Slash Law. No other vegetation, other than dead or hazard trees, will be removed. Within the stream buffer and *outside of the wire zone (i.e., within the border zone)*, non-capable species (also referred to as "compatible" species) will be allowed to

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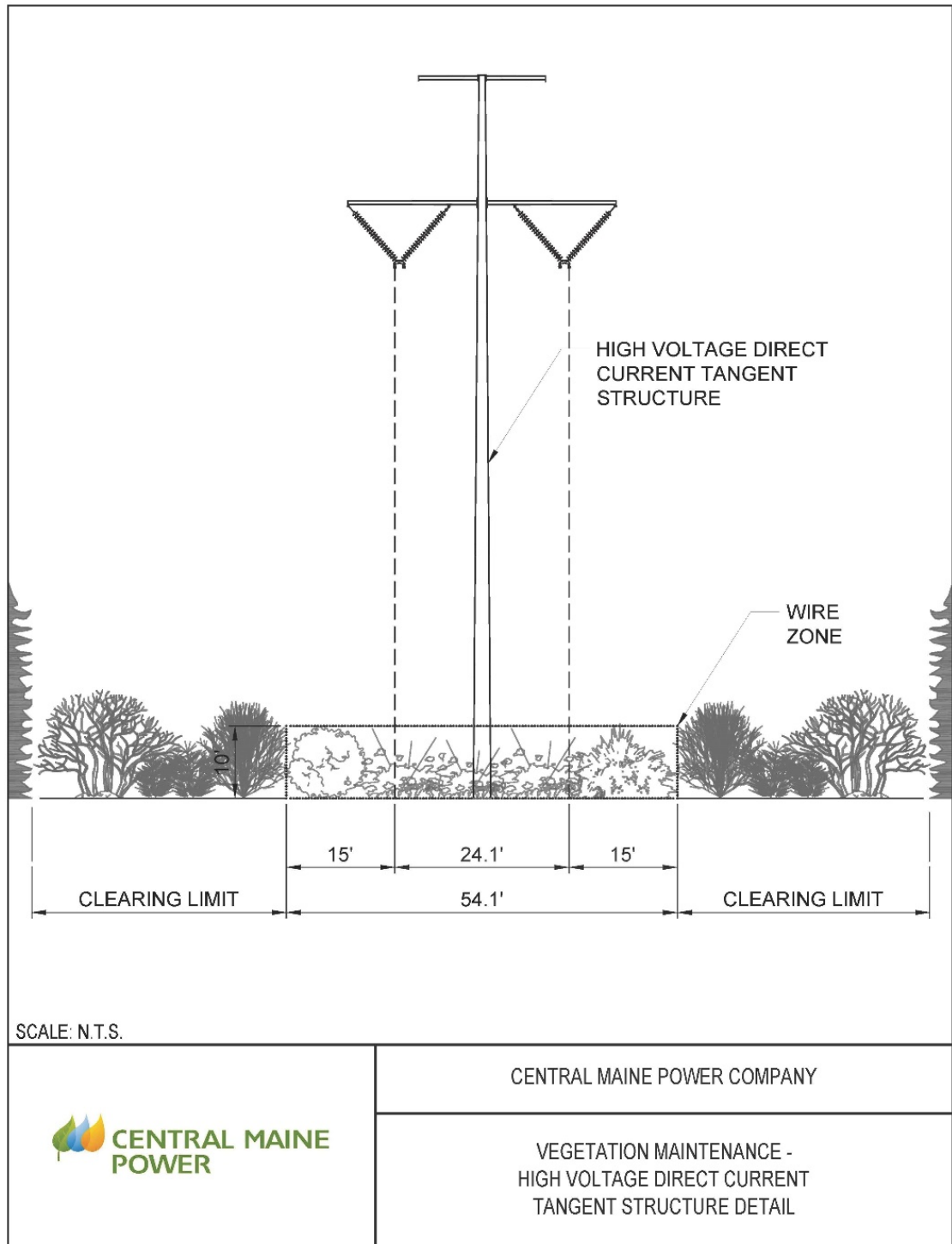
exceed 10 feet in height unless it is determined that they may encroach into the conductor safety zone prior to the next four-year maintenance cycle.

Determining whether a species is compatible considers several factors. The primary consideration is the height of the plant at maturity. Species that have the potential to grow into the Minimum Vegetation Clearance Distances (MVCD) are deemed to be capable or incompatible and are targeted for removal from the right-of-way. Another consideration is typical vegetation growth rates in Maine to account for growth between the four-year maintenance cycle to insure adequate clearance for public safety and reliability of the lines. The allowable vegetation heights are based on the minimum ground to conductor clearance at maximum conductor sag.

CMP met with the Maine Department of Inland Fisheries and Wildlife (MDIFW) on October 11 and 15, 2018, to discuss MDIFW's June 29, 2018 correspondence regarding opportunities for additional impact avoidance and minimization. As a result of these meetings, CMP identified a number of taller growing compatible species that would be allowed in areas outside of the wire zone in stream buffers and committed to allowing compatible species to remain in the wire zone in stream buffers if these were not anticipated to grow into the MVCD prior to the next four year vegetation management cycle.

An updated CMP Compatible Woody Species List (October 2018) provides a partial list of woody plants (shrubs and small trees) native to Maine and that frequently grow in this type of early successional environment (Attachment C). Taller compatible species added at the request of MDIFW are included in this list.

Figure 2, below, depicts the wire zone for a typical single pole structure associated with the HVDC transmission line.



C. Attachment IX Powers Engineering Report on Horizontal Directional Drilling

- 8. The Power Engineers, Inc. report (Power's Report) and your cover letter state that a horizontal directional drill would require upgrades to approximately 15 miles of access roads. To construct the overhead crossing it appears that these upgrades are required. Is that correct?**

RESPONSE

Yes, these access road upgrades would be required for the construction of either the overhead or underground option. As the conceptual engineering design and additional site assessments of the HDD option has developed, CMP determined that there will be little to no difference in the access road improvement requirements. Minor tree clearing, road widening, and additional widening of turning radiuses will be required and are discussed further in the NECEC Kennebec River HDD Site Law and NRPA Application Amendments, submitted concurrently with this information request response.

- 9. The Power's Report also states that the cost of constructing the roads is included in the estimate for the overhead crossing and the Termination Station construction, but not in the underground estimate. Furthermore, an examination of the structure locations for the overhead line and the location of the Termination Stations reveals that the overhead option requires a few hundred feet more road construction. If you must build a road to the site regardless of what option you ultimately choose to pursue, does the price change significantly? If so, why?**

RESPONSE

The purpose of the note was simply to indicate where the access road improvement cost was included in each option (overhead vs. underground). CMP assumes the same off right-of-way access road improvement costs in both options. Although the overhead design would require more temporary access road construction within the corridor, the additional cost would likely be minimal.

10. The Power's Report, in describing the Termination Stations states, "This is also an opportunity, if needed, to drop off some of the fibers for local distribution connection." Power's Report, page 4 paragraph 3. Media reports have suggested that CMP is willing to provide broadband internet access along the Route 201 corridor, among other places. Wouldn't having fiber optic cable in this location be beneficial to that effort?

RESPONSE

CMP agrees that fiber optic cable across the Kennebec River to Route 201 is beneficial to the region. CMP has made the commitment to include fiber optic cable in both the overhead and underground crossing designs.

II. July 31, 2018 Submission

A. Cover Letter

11. In CMP's response to DEP's additional questions, CMP states that the numerous white pine trees that are in excess of 100 feet tall on either side of the proposed overhead river crossing assist in buffering the transmission lines and poles from the river. It appears that considerable reliance is given to these trees to provide screening. How can CMP assure that these trees will continue to function for this purpose for the 40-year useful life project? Has the age/health of these trees been evaluated? What is the likelihood that trees in the understory would provide similar screening if the tall pines are destroyed by disease or storms?

RESPONSE

Extensive wooded buffers on both sides of the Kennebec River will remain undisturbed throughout the installation of an HDD crossing. The HDD option would also alleviate the need for CMP to conduct vegetation maintenance within the retained buffers since the HVDC line would be buried to a depth that would not be disturbed by tree root systems. CMP will retain 1450 feet of mature cover on the east side and 1160 feet of mature cover on the west side of the river. Visual impacts associated with the HDD design change have been evaluated within Section 6.0 of the NECEC Kennebec River HDD Site Law Application Amendment; this evaluation concluded that the termination stations and all other HDD components will not be visible from users on the river.

With respect to whether the trees will provide a long-term visual buffer, as a matter of forestry and forest ecology, younger trees will incrementally and continually replace older, dead, or dying trees within these buffers so long as there is no detrimental causal effect that would prevent this natural succession. Younger sub-canopy trees are often descendants of the overstory and persist in the understory for years or decades as

juveniles until openings in the forest overstory permit their growth into the upper canopy. In a healthy environment younger trees typically grow to heights similar to that of the trees they are replacing. CMP does not propose any direct or indirect impact to trees within these buffers, therefore unless some unanticipated environmental factor unrelated to the NECEC Project is introduced, tree succession will follow the typical life cycle described above.

III. August 14, 2018 Submission

A. Attachment B Vegetation Clearing Plan and Post-Construction Vegetation Maintenance Plan

12. Section 2.3 describes how petroleum products and hazardous material will be handled during construction. Subsection (d) states that vehicle and equipment refueling will not take place within 25 feet of certain resources. The list includes area in Maine's biological conservation data system and S1 through S3 rare communities. All of these areas will have been mapped as part of the permitting process. Why not use this project specific data?

RESPONSE

These project-specific data will be used. As described in the response to #7 above, all the areas subject to the restriction contained within Section 2.3(d) of Exhibit 10-1-NECEC Plan for Protection of Sensitive Natural Resources During Initial Vegetation Clearing (VCP), have been identified and mapped as part of the permitting process. These resources are identified on the project natural resource maps that will be provided to project personnel. Additionally, distinct flagging and/or no-refueling/maintenance signage will be installed adjacent to these resources prior to construction to alert workers of their presence. CMP will also include a discussion of proper petroleum product and hazardous material handling in pre-construction environmental orientation training that will be provided to all project personnel. Further, these features will be uploaded to the SmartMap system used by CMP personnel during operation and maintenance of the project following construction.

13. Section 4.1(f) states no structures will be placed within 25 feet of any stream regardless of classification, however the revised waterbody crossing table (in your cover letter dated, August 13, 2018) indicates at least eleven structures within 25 feet of streams and brooks. Please clarify.

RESPONSE

As provided in response to question 6, above, during detailed transmission line design CMP will relocate structures that are currently proposed to be located within a stream

buffer to the extent practicable. In the event a structure cannot be relocated outside of the buffer due to engineering or other constraints, CMP will provide a site-specific erosion and sedimentation control plan for Department review and approval prior to construction incorporating the elements of the typical figure for *Erosion and Sedimentation Control for Structure Installation in High Risk Areas* (Attachment B). As described in Section 4.1(f) of the VCP, any structure that cannot be relocated outside of the 25-foot buffer will have to be “specifically authorized by the MDEP and accompanied by a site-specific erosion control plan.”

14. In the VMP section that deals with herbicide application your proposal specifically prohibits foliar herbicides within 100 feet of perennial streams and 25 feet of intermittent streams on Segment 1 and 25 feet of any stream on the other segments. You may consider modifying this provision to allow the use of herbicides in those areas for the control of invasive species, in accordance with other State and federal laws.

RESPONSE

Prior to construction, CMP proposes to provide a pre-construction invasive species monitoring plan and post-construction survey and treatment plan to prevent and minimize the introduction and spread of invasive species resulting from the construction of the project. CMP will consult with MDEP on this plan and will incorporate its recommendations for herbicide type and application practices within riparian buffers into the post-construction survey and treatment plan.

B. Attachment F Architectural History Report.

15. The Architectural History Report states that 127 properties have been previously listed or determined to be eligible for listing on the National Register of Historic Places (NRHP) within the project area. In addition, the report states that there are 186 which have been recommended as potentially eligible to be listed on the NRHP. Does CMP intend to provide an analysis for potential impact to these resources, including a visibility analysis? If so, when would CMP expect to have that completed? If CMP intends to prepare an analysis of the impacts to historic properties, it will need to be completed with a reasonable opportunity for other parties to review it prior to the public hearing.

RESPONSE

CMP prepared an NRHP evaluation and Finding of Effects report for all Listed/Eligible and Potentially Eligible properties identified as part of the above ground historic resources reconnaissance survey, Attachment D. This analysis includes the project’s visibility from each of these resources as well as consideration of the viewshed for the

existing transmission line infrastructure, where present. The report recommends a finding that 4 properties that encompass 19 historic structures would be adversely affected by the undertaking. One of these properties is located in Livermore Falls and had been previously determined NRHP eligible. The remaining properties are recommended eligible by SEARCH as part of the forthcoming report and are located in Anson, Farmington, and Starks. Following MHPC review and comment on SEARCH's report, CMP will consult with MHPC on preparation of a Memorandum of Agreement ("MOA") that will include measures to mitigate the adverse effects to these properties. A finding of no effect or no adverse effect has been recommended for all remaining properties that were eligible, listed, or recommended eligible for the NRHP.

C. Attachment G Archaeological Survey

16. The Archaeological Survey identifies 26 archaeological sites where avoidance is recommended. Are any structures or construction roads located in these sites? If so, how does CMP intend to construct the project while maintaining the integrity of these sites?

RESPONSE

The number of cultural resources recommended for avoidance has been reduced from 28 to 16. This reduction is the result of continued analysis of the materials recovered and research regarding each resource. These 16 resources include 15 archaeological sites and 1 cemetery. For these resources, avoidance plans to prevent inadvertent impacts or adverse effects during construction are included with the Phase I archaeological report. A hard copy of this report will be provided to MHPC by October 22nd, 2018. If impacts cannot be avoided, then NRHP evaluation and mitigation (if necessary) will be completed in advance of any construction activities in these areas.

D. Attachment K Compensation Plan

17. The proposed compensation plan includes several proposed conservation parcels, including the Lower Enchanted Tract, the Basin Tract, and the Grand Falls Tract. In my June 1, 2018 email to you in response to your request for feedback on the preservation parcel, I stated that the two parcels (the Grand Falls Lot and the Basin Tract) which have no legal access would not be suitable for any compensation that is required by the Wetlands and Waterbodies Protection Rules. Without legal access, there would be no way for the Department to determine whether any activity on the parcel is in compliance with the terms and conditions in any easement or deed restriction. The same would hold true for the Lower Enchanted Lot depending on what "Limited legal access on woods roads" means and whether Department staff can access the site. My position on this has not changed. CMP is

free to transfer ownership of these lots to some other party, with or without deed restrictions, but the Department cannot have third-party enforcement authority as part of any easement to deed restriction.

RESPONSE

There is existing legal access to the three proposed parcels - Grand Falls, Lower Enchanted, and Basin tracts - which would allow MDEP staff access to determine whether activities on these parcels are in compliance with the terms and conditions of any proposed easement or declaration of restrictions in accordance with the Wetland and Waterbodies Protection Rules. In response to this question, legal counsel for CMP, Judith Woodbury (Pierce Atwood LLP), reviewed the deeds and determined that in addition to CMP's deeded access rights, there are subsequent agreements, conveyances, and historic public use rights that would give MDEP the necessary access rights. See Attachment E for the full discussion of these rights, including copies of the documents describing and documenting the access rights.

18. The Flagstaff Lake Tract appears to have some historic logging impacts. Has CMP considered any restoration efforts on this parcel to enhance the functions and values of the wetlands?

RESPONSE

In proposing the Flagstaff Lake Tract as part of CMP's compensation plan, CMP considered that through preservation and protection of this parcel via deed restrictions, natural revegetation of areas affected by historic logging activity will promote and enhance wetland functions and values over time.

19. In Section 1.2.2.4 of the Revised Compensation Plan, CMP is proposing to implement a "chop and drop" habitat enhancement program in consultation with MDIFW. Please provide more details on this program, including how many streams you intend to treat, how long this program would last, how much money you are willing to spend on this effort and what regions are you expecting to utilize this program. This aspect of the project is of interest to several intervenors, so the plan will need to be developed with ample opportunity for parties to comment on it prior to the public hearing.

RESPONSE

In an email from Robert Stratton dated September 14, 2018, the MDIFW stated its position that they were not in favor of chop and drop as a habitat enhancement measure for coldwater fisheries on the NECEC Project and instead recommended a contribution to the Maine Endangered and Nongame Wildlife Fund (Title 12, § 10253) as mitigation. As requested by MDIFW, in lieu of "chop and drop," CMP will make a

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payment to the Maine Endangered and Nongame Wildlife Fund in the amount of \$180,000 to support fisheries related projects, including habitat conservation, improvement, or enhancement.

An updated NECEC Compensation Plan (October 2018), reflecting this change, is being submitted concurrently with this response.

20. Also in that section CMP states that it intends to replace existing culverts to improve fish passage and habitat connectivity. Please provide details, like the above information, for this program. This plan needs to be developed with an ample opportunity for the intervenors to review it prior to the public hearing.

RESPONSE

CMP's proposed culvert replacement program is described in the updated NECEC Compensation Plan.

21. There is no discussion concerning mitigation for any unavoidable impacts to rare, threatened, or endangered species such as Roaring Brook Mayfly or Spring Salamander. CMP needs to develop a compensation plan for these impacts, in conjunction with the Maine Department of Inland Fisheries and Wildlife. This plan needs to be developed with an ample opportunity for the intervenors to review it prior to the public hearing.

RESPONSE

Within the NECEC Compensation Plan dated August 13, 2018, CMP discusses Roaring Brook Mayfly and Northern Spring Salamander Habitat Mitigation and Enhancement (See Section 1.2.2.4). CMP conducted presence/absence surveys for both of these species in September 2018, in coordination and in accordance with the guidance provided by the MDIFW. These surveys determined that 13 streams within Segment 1 of the Project contained one or both species. A summary report has been provided to John Perry at MDIFW and is also provided as Attachment F to this information request response.

CMP has reviewed the occurrence locations and project impacts with the MDIFW. For those locations where avoidance is not possible due to required vegetation clearing limits, CMP has agreed to allow taller non-capable vegetation to grow within the riparian buffers and will comply with MDIFW's request for compensation in the form of a contribution to the Maine Endangered and Nongame Wildlife Fund (Title 12, § 10253), developed using MDEP's formula for In-Lieu Fee (ILF) for significant wildlife habitat impacts. For those locations where access road rerouting is not possible, and equipment must cross the water body with timber mat spans, CMP will coordinate with

MDIFW regarding the location and placement of these bridges prior to their installation. CMP also commits to providing environmental inspector oversight of activities within these areas.

IV. August 20, 2018 Peer Review of the VIA Submission

- A. James Palmer submitted *Review of the New England Clean Energy Connect Visual Quality and Scenic Character*, dated August 20, 2018, in response to the visual impact assessment (VIA) prepared by Terrence J. DeWan & Associates (TJD&A). Based on this peer review, several additional questions and information requests have arisen.**

22. Section 4 (page 17) of the peer review discusses the data, or lack thereof, concerning the impact of the project on use and viewer expectations of the scenic resources impacted by the project. There are only generalized statements concerning the impact and no user data. CMP needs to provide data to support your assertion that the project will not impact the use, or enjoyment of the scenic resources that have project visibility. There are two locations that come to mind where user data could easily be collect [sic], the end of rafting trips and the Attean Overlook. There are many more locations where this kind of data could be collected and these examples are not meant to limit number or location of the effort.

RESPONSE

While intercept surveys have been used to test the effect that wind energy projects may have on the public's continuing use and enjoyment of scenic resources, up until now they have not been used in the United States for transmission line projects. The Baskahegan Lake User Survey (October 2012), while not a transmission line project, established that the presence of a large highly visible utility project (in this case the Stetson Mountain Wind Farm, visible from 90% of the lake) did not negatively influence respondent's recreational experience, nor did it detract negatively from the scenic value of views around the lake.

There is no requirement to perform user intercept surveys in Chapter 315, nor was there any mention made of user surveys during the agency scoping meeting on July 19, 2017. The pros and cons of doing an intercept survey were discussed in a conference call on September 10, 2018 with Jim Beyer, MDEP Project Manager, Jim Palmer, MDEP's outside (peer) reviewer, and representatives of the Project. The call covered the logistics of surveying rafters, the timing of a survey, the optimal number of responses (at least 50), and other potential survey locations. Jim Palmer indicated that he was most interested in surveying rafters who had experienced the Upper Kennebec River. He also

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indicated that a survey at the Attean Overlook would not be necessary, due to the distance from the resource and the relatively small change that would result (based upon the photosimulation from the overlook). Following that call, CMP decided to perform a user survey to determine if the Project would have an impact on the use or enjoyment on the Upper Kennebec River.

The user survey was developed by Market Decisions, Inc., a Portland-based survey firm that has considerable experience in developing this type of analytical tool. Jim Palmer, MDEP's outside (peer) reviewer, was also consulted and provided input during the user survey development. The respondents were divided into two groups. Each group was asked to rate a series of six photographs of scenes that a typical rafting trip would encounter while going down the Upper Kennebec River. One group was given a photograph of existing conditions; the other group was shown a photo simulation (#11) of the flatwater section of the river with the transmission line and marker balls plainly visible overhead. All respondents were asked to complete a self-administered form in which they rated each photograph and answered questions regarding scenic quality and their continued use and enjoyment of the river.

The survey was administered over three consecutive weekends in September and October of 2018 to evaluate the impacts on users of the river of a proposed overhead transmission line crossing at the Upper Kennebec River. The results of the survey, which was completed by 53 rafters plus 9 guides (for a total of 62 respondents) who had just completed a rafting trip, indicated that a) the presence of the transmission line would have an effect on the perceived scenic quality of that section of the river, and b) the Project would have little to no effect on the respondents' desire to return to the Upper Kennebec River (continuing use) or their enjoyment of the experience of being on the river. The full report by Market Decisions is provided in Attachment A.

No additional survey data are necessary or appropriate to assess potential visual impacts for the Project. There are several other user groups who may come into contact (visually or physically) with the Project such as hikers, snowmobilers, boaters, and anglers.

CMP assessed potential visibility from major hiking locations within the Study Area (i.e., No. 5 Mountain, Mosquito Mountain, and the Appalachian Trail). As seen in the photosimulation from No. 5 Mountain in the Leuthold Preserve, the Project would have minimal visibility from the summit (similar to the view from the Attean View Rest Area). Hikers on Mosquito Mountain in The Forks Plt and on the Appalachian Trail currently cross the existing transmission line corridor. While the experience of crossing the corridor will be slightly longer and more open after the Project is built, the change will have a relatively minor affect on the trail as a whole and should not result in a

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significant change to the continued use of these resources. A thorough inventory on the AT included in the VIA (Site Law Application, Appendix E, September 2017) describes the locations where hikers may see or pass under the Project. A buffer planting plan has been proposed along the section of the AT located on Troutdale Road, provided in the *NECEC Update to NRPA and Site Law Applications* (filed August 14, 2018).

In some locations snowmobilers may encounter the Project. For example, the new corridor will be visible from the summit of Coburn Mountain (as illustrated in Photosimulation 8, provided within the Site Law Application, Section 6.0 (September 2017)). From this location, snowmobilers will also see numerous other common land management activities (e.g., clearcuts, strip cuts, skid trails, laydown areas, logging roads). Many of the Interconnected Trail System (ITS) routes in Maine follow existing transmission corridors. Snowmobilers are accustomed to seeing transmission corridors and traveling within the cleared corridors, so it is unlikely that the Project would have an impact on the continued use and enjoyment of snowmobile trails throughout the Study Area.

There will be areas in some of the ponds (e.g., Rock Pond and Parlin Pond in Segment 1) where views of the transmission structures and the cleared corridor may be seen by people who are boating and fishing. The conclusion that the Project will not affect the use or enjoyment of scenic resources mainly used for boating and fishing is supported by Jim Palmer's 1999 study that investigated the relation of recreation activity and the perception of scenic impacts from clearcutting. In it, Dr. Palmer found that people engaged in activities such as motor boating and snowmobiling or fishing and hunting were less sensitive to scenic impacts when compared to people who were camping and canoeing or studying nature.¹

¹ Palmer, James F. *Review of the Bowers Wind Project Visual Impact Assessment, Part 2: Independent Analysis*. Prepared for the Department of Environmental Protection, Augusta, Maine. March 8, 2013.

23. Section 4.7 (page 20) discusses the evaluation of the scenic impact on public roads. The project will cross approximately 161 public roads according to Mr. Palmer's estimate and except for the Old Canada Road, none of these crossings were evaluated in terms of scenic impact. In reviewing the permit for MPRP, CMP provided, and the Department reviewed, crossings of public roads and in fact required visual screening in some locations. CMP needs to conduct this kind of analysis for the NECEC project as well. CMP also needs to propose visual screening in areas where it is deemed appropriate.

RESPONSE

The Maine Power Reliability Program (MPRP) visual impact assessment (MPRP VIA) made a clear distinction between public roads and scenic resources. For each of the MPRP segments (and substations), the MPRP VIA provided an inventory of scenic resources (as defined by Chapter 315) within the viewshed of the Project and evaluated the effect on scenic resources in the MDEP Natural Resources Protection Act Visual Evaluation Field Survey Checklist. The response to Question F.2 on the Checklist describes the “publicly owned land visited, in part, for the use, observation, enjoyment, and appreciation of natural or man-made visual qualities.” The scenic resources identified in the response to this question included water access points, lakes, ponds, rivers, streams, parks, a fire lookout tower, a rest area on Interstate 95, notable hills and mountains affording views of the surrounding landscape, publicly accessible farms acquired by the Land for Maine’s Future program and other funding sources, a regional trail corridor, and observation towers (i.e., Penobscot Narrows Bridge). The only roadway that was considered a scenic resource in the MPRP VIA was a portion of Greely Road in Cumberland, which had been designated as a scenic roadway in the Town’s Open Space Plan.

At the time MPRP was proposed, it was CMP’s practice to plant screening vegetation (primarily white pines) to buffer the views down transmission corridors and to screen substations. White pines were readily available, inexpensive, native, fast growing, relatively pest-free, and provided an ample amount of buffering in a relatively short period of time. Unfortunately, white pines also grow at a rate of 12-18” per year, requiring a high level of maintenance (i.e., pruning the leader and other top branches, aka “topping”) to keep them a safe distance from the transmission line conductors and thus avoid safety and reliability problems. In addition, as pines age they typically lose their lower limbs and therefore lose their effectiveness as visual buffers after they achieve a certain size. The combination of pruned tops and bare lower limbs presented an unnatural, often-unsightly appearance.

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As part of the planning process for MPRP, CMP developed a new, more sustainable approach to buffer transmission corridors and substations, where necessary, at a reasonable cost while satisfying North American Electric Reliability Corporation (NERC) requirements for reliability and vegetation management. The evaluation methodology developed by Terrence J. DeWan & Associates (TJD&A, Yarmouth, ME), in consultation with CMP personnel, involved a two-step process. The first step identified the potential need and effectiveness of buffers at specific locations. The second step considered existing conditions to develop recommendations based on an evaluation of site factors.

Based on comments received from MDEP and others, CMP has evaluated all roads (both public and private) that would be crossed by the NECEC transmission line, using the methodology developed for MPRP to determine where buffers would be appropriate and effective. The results of this analysis are provided in a matrix format along with a supporting narrative describing the methodology. The Road Buffer Evaluation (Attachment G), contains recommendations for full or partial buffers at specific locations.

Note that an additional full vegetative buffer is recommended on both sides of Route 201 in Johnson Mountain TWP and a light (or partial) buffer plan is recommended at Route 201 in Moscow, both recommended locations are due to the route's designation as a National Scenic Byway. CMP will provide a buffer planting plan for review and approval by DEP, similar to the buffer planting plans submitted for the two other recommended roadside locations identified by the Road Buffer Evaluation: on the east side of Troutdale Road near Joe's Hole in Caratunk, and on the south side of Fickett Road in Pownal (submitted to MDEP on August 14, 2018).

24. Section 4.8 (page 20) summarizes Mr. Palmer's review of the completeness of the VIA. In that section, he states that there are a great many places that fit the definition of a scenic resource which were not inventoried. CMP needs to provide a complete inventory of scenic resources potentially impacted by the project, including but not limited to, historic sites, streams and public roads. CMP also needs to separate the 86 conservation areas into scenic resource categories.

RESPONSE

Inventory of Scenic Resources. The format and methodology for the NECEC VIA is virtually identical to the format and methodology used in the approved and now constructed MPRP, with the exception that viewshed mapping was used for the NECEC inventory. A scoping session was held at the outset of the project (July 19, 2017), attended by staff from both MDEP and LUPC. The emphasis at that meeting was on

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generally recognized public scenic resources, such as the Upper Kennebec River, various ponds, the AT, and others.

TJD&A has prepared a summary chart that lists of all scenic resources within the 3 to 5 mile area of potential effect (APE) where there may be views of the Project, as determined by viewshed mapping and field evaluation² (see Attachments H and I). Additionally, photos from Capital Road adjacent to Cold Stream are included in Attachment J. The matrix is organized by types of scenic resource, as presented in the MDEP Visual Evaluation Field Survey Checklist (i.e., A. National Natural Landmark or other outstanding natural feature; B. A State or National Wildlife Refuge, Sanctuary, or Preserve or a State Game Refuge, etc.). The matrix provides the following information:

- Scenic Resource Name
- Location (Municipality or Township)
- Property Owner or Easement Holder
- Distance from the Scenic Resource to the nearest point of the Project
- Size of the Scenic Resource in acres (for planar resources) or miles (for linear resources)
- Access: a determination of public accessibility
- Project Visibility: a brief description of the extent of Project visibility

TJD&A relied on research of historic properties compiled by SEARCH, Inc. to identify public sites or structures on, or eligible for listing on, the National Register of Historic Places (NRHP). In their reconnaissance survey work, SEARCH identified 1,518 above-ground historic resources within the 0.5-mile APE. Of these, 229 were not Eligible for listing on the NRHP; 871 were recommended to be Not Eligible; 291 were recommended Eligible; 104 had previously been determined eligible; and 23 are currently listed on the NRHP. The majority of the properties on, or eligible for listing on, the NRHP are private; a relative few are open to the public. For more details, see Attachment D for the Architectural History Report, prepared by SEARCH, Inc.

Conservation Areas. The VIA contained a listing of 86 properties that were described as “Conservation Lands.” These include lands owned by private conservation interests, federal and state governments, and local municipalities. The Updated Summary Charts within Attachment K segregates these resources into a variety of scenic resource categories (e.g., E State Parks; F(1) Municipal Parks or Public Open Spaces; F(2) Publicly Owned Land Visited.... For its Natural or Man-Made Visual Qualities).

² The only exception is the evaluation of historic properties, where the APE was set at 0.5 miles by the Maine Historic Preservation Commission.

25. Section 5 (starting on page 47) of the peer review discusses the reasonableness of the VIA and whether it is technically correct. In Section 5.2 Mr. Palmer states that the VIA does not appear to consider the 150-foot wide cleared corridor. He goes on to state that the VIA only created photosimulations for the project with leaf on conditions. There are no simulations with leaf off or snow cover conditions. CMP will need to prepare photosimulations from scenic resources that depict snow cover conditions. CMP has identified that the use of self-weathering steel poles for the project assist in minimizing contrast with the surrounding landscape. However, this appears to only be the case during leaf on conditions and there is no consideration of the contrast of the poles against the white background of snow, which is present for a considerable period of the year. Projects that involve clearing strips of land, they are much more visible in the winter.

RESPONSE

Photosimulations were used to gain an understanding of Project visibility from scenic resources throughout the study area. These simulations were developed with modeling software that illustrates each of the Project components including the 150-foot wide new cleared corridors in Segment 1 as well as the 75-foot expansion of the existing cleared corridors in segments 2 and 3. The VIA considered the cleared corridors, transmission structures, and conductors in the evaluation of landscape compatibility (color, line, form, texture), scale contrast, and spatial dominance.

The photosimulations developed for the Carrabassett River in North Anson (Psim #34), Sandy River in Farmington (Psim #35), and the West Branch Sheepscot River in Windsor (Psims #36 and 37) are based on photographs taken in leaf-off conditions.

While the majority of the photosimulations were developed in leaf-on conditions, the extent of visibility and potential visual impact would not change in leaf-off conditions for the majority of the locations. Five locations were identified as having the potential for more visual contrast in color between the corridor clearing and surrounding vegetation if there was snow cover, due to the visibility of the corridor clearing: Rock Pond in T5 R6 BKP WKR; No. 5 Mountain in T5 R7 BKP WKR; Mosquito Mountain in The Forks Plt; elevated viewpoints of the AT; and the summit of Coburn Mountain in Upper Enchanted Twp.

Rock Pond is closed to ice fishing and there are no ITS or documented local snowmobile trails crossing the pond. Therefore, any additional Project visibility would be minimally noticeable by Rock Pond users. The majority of hikers who visit No. 5 Mountain, Mosquito Mountain, and the AT do so during non-winter months due to potentially dangerous trail conditions with snow and ice. From No. 5 Mountain and the AT, any

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additional visual impact caused by the increased contrast with snow cover in the corridor clearings would be minimized by the distance viewed (3.0 to 5.0± miles). The existing transmission line is visible in the midground and background viewing distances from Mosquito Mountain. Any additional potential impact with snow cover would be seen as an incremental increase relative to non-snow cover conditions.

In response to the Palmer/DEP request and acknowledging that the heaviest use of Coburn Mountain is likely from snowmobilers during the winter months, we have developed two photosimulated illustrations of the Project from the summit, based on online resources (Attachment L). See additional photographs for ITS trails near Coburn Mountain (Attachment M) From the summit and observation tower the 360-degree panorama will include open views of the Project. During snow conditions the visible landscape is defined by patterns of dark brown/green vegetated areas and white recently harvested areas, logging roads, and ponds. The cleared corridor will be more noticeable due to the contrasts in color, line, and texture with the surrounding landscape. The self-weathering steel structures will have more contrast with the snow-covered corridor but will more closely match the color of the surrounding vegetation. As seen in the leaf-off image, the self-weathering structures will be very similar in color to the surrounding vegetation, minimizing potential contrast.

Therefore, the Project will not have an adverse impact on scenic or aesthetic resources, even considering leaf-off conditions.

26. In his summary of comments (page 54) about the photosimulations, Mr. Palmer writes that, "...it does not appear that an attempt was made to identify and photographically document representative worst-case viewpoints from all of the scenic resources." If worse-case documentation exists, please provide it, if not, CMP will need to prepare and submit that documentation.

RESPONSE

Appendix B of the VIA, submitted in the September 2017 Site Law Application, and supplemented with additional photographs attached to this information request response, provides photographic documentation of characteristic (representative) viewpoints throughout the study area. The supplemental photographs presented with this response include images from Route 201, including locations where there would be no visibility (e.g., Durgin Hill in West Forks Plt), as well as additional photographs at the crossing in Johnson Mountain TWP and west of Parlin Pond (Attachment N) and Moxie Mountain (Attachment O). Photographic inventories are typically submitted as part of the documentation of a VIA to give the reviewer a good sense of the character of the surrounding landscape. The locations were selected to provide the review agencies with images that illustrate what the typical visitor will experience from the scenic resource.

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The photographs illustrate a) where views will not change because of the Project; b) where views post-construction will include portions of the transmission structures and/or conductors, or c) where post-construction views may change significantly.

Photosimulations were prepared to illustrate the third situation (i.e., worst-case viewpoints). The simulations concentrate on scenic resources that may be affected by the Project. A total of 32 viewpoints from scenic resources (as defined in MDEP Regulations Chapter 315) and locally sensitive resources were selected for analysis and the development of photosimulations in the initial September 2017 Site Law Application. An additional 8 photosimulations were provided in the June 29, 2018 post-application submittal to MDEP. These photosimulations illustrate both worst-case viewpoints as well as more representative viewpoints, to give the reviewer a complete understanding of the potential visual impact of the proposed Project.

The Summary Charts of Project Visibility identify scenic resources within three miles³ of the Project centerline, using the resources of MaineOGIS databases and other sources of information. The inventory included all viewpoints of scenic resources where there would be visibility, as determined by viewshed mapping and site visits (see Attachment P).

While Chapter 315 does not provide any direction on selection of representative and worst-case viewpoints, the methodology that was employed to evaluate this Project is the standard professional practice referenced in Chapter 315.7 that TJD&A typically uses in preparing a visual impact assessment. The objective of this step in the process is to visit, analyze, and present data on representative sites within the APE. These are selected to illustrate a) the diversity of the scenic resources and viewing opportunities within the study area, b) characteristic views from scenic resources that visitors now encounter, and c) potential visual effects from the Project when viewed from the varied distances, elevations, and existing use patterns within the study area.

Scenic resources and potential viewpoints are evaluated as either: **points** (e.g., scenic overlooks, mountaintops, historic structures), **lines** (e.g., scenic byways, river segments, hiking trails), or **areas** (e.g., lakes, historic districts, state parks). The methodology included a sampling of all these types of viewpoints and resources. Selection of viewpoints at **point locations** are self-evident, i.e., there is typically a single viewpoint from a mountaintop or scenic overlook. Where there are a limited number of viewpoints, as is the case in most point locations, there is no distinction between representative and worst-case conditions.

³ The inventory extended out to five miles for elevated viewpoints that potentially afford users a downward view toward the Project.

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With **linear resources** the decision as to where to evaluate and photograph considers many factors: direction of viewer travel; representative nature of the viewpoint; typical viewer experience; maximum potential Project visibility (worst-case conditions, initially guided by the viewshed analysis); amount of time that the project would be in view along the route; viewer speed and mode of travel; orientation of the viewer; other scenic/cultural features visible; etc.

In the case of **planar resources** the considerations as to where to evaluate and photograph is similar to linear resources: ability to move within the resource; concentration points of viewer activity (e.g., boat launches, main streets in historic districts, central activity area in parks); varying degrees of impact at different viewpoints; maximum potential Project visibility (worst-case conditions initially guided by the viewshed analysis); viewer speed and mode of travel; focal points within the viewshed; other scenic/cultural features visible; etc.

The NECEC VIA Photosimulation Summary (Attachment Q) categorizes each photosimulation by distance zones (foreground, midground, background), viewpoint type/scenic resource (rated waterbodies, remote ponds, elevated viewpoints, recreation areas/parks/trails, scenic byway, and road crossing), and surrounding land use (commercial working forestland, non-forested land/agriculture, low density rural residential/camps along ponds, and village/sub-urban residential). As evidenced by the matrix, the viewpoints selected provide the reviewer with an understanding of the diversity of the landscape and the potential effect that the Project may have on representative and worst-case viewpoints.

For most linear and planar resources, TJD&A photographed the landscape from a number of viewpoints, guided by the viewshed map. Locations in the field were selected based on existing vegetation, elevation, evidence of public use, visibility of existing transmission lines, discordant features within the view, and other site-specific factors. The final selection of worst-case viewpoints used for the photosimulations considered many factors including, but not limited to: presence or absence of an existing transmission corridor; viewer elevation; distance from the observer; the number of structures visible in the photograph; and the amount of the structure(s) and conductors that may be visible based upon the computer model.

Examples. Using Moxie Pond as a representative example of a planar resource, we first determined from where the Project would be most visible, based on viewshed mapping. Field investigations helped us select and photograph representative viewpoints from the north end of the pond near the boat launch, and a worst-case viewpoint from the south end where the existing transmission line is most visible, and where the Project would be most visible. Route 201 is an example of a linear resource where we selected

viewpoints based on viewshed mapping and fieldwork. The Attean Rest Area, where the project would be seen in the background, was selected as a representative view where people gather, while the location where the transmission line crosses the highway in Moscow was used as an example of a worst-case viewpoint. From elevated viewpoints, such as Coburn Mountain, we selected a point with the most potential project visibility and highest degree of apparent use, based on viewshed mapping, field observation, and guidebook research.

In summary, TJD&A has identified and photographically documented representative worst-case viewpoints from all of the identified scenic resources.

27. Mr. Palmer provides bullet points highlighting several other issues with the photosimulations on pages 54 and 55, including, notably, that there is no clear process that guided the selection of key observation points. Please address the summary comments laid out by Mr. Palmer on these two pages.

RESPONSE

The following provides each bullet point on page 54 and 55 of Mr. Palmer's report and CMP's response.

- *There is an over reliance on using only ridgelines to register the 3D Studio Max model to the photograph. It is very desirable to use some additional markers, such as building corners or existing transmission structures.*

The photosimulations were prepared in 3D Studio Max using visible vertical and horizontal control points to register the photographs. These included existing transmission structures, ridgelines, edges of waterbodies, buildings, rock outcrops, and other similar objects. A minimum of two control points are used for horizontal alignment on far right and far left of each normal image. Vertical control points are primarily established using DTM elevation data for both ridgelines and the edges of waterbodies. When visible in the image, significant trees, roads, and buildings are also used as vertical control points. Google Earth was also used as a second means of comparison when available.

- *There does not appear to be any registration information for photosimulation 35 Sandy River looking south.*

The Sandy River Photosimulation (#35) used the existing transmission line structures as the primary control points. As part of Mr. Palmer's data request response, a 3D Studio Max file, Google Earth file, and a photoshop file were provided. The 3D Studio Max file contains a model reference for the existing transmission line structures.

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- *There are photosimulations that have high visual impact that are not presented—for instance the view looking north from Sandy River. The new 75-foot structure does not appear properly sized, but I cannot check it without having information about the existing structure. There is no registration information for this simulation.*

A photosimulation looking north from Sandy River was not provided with the VIA submission, however we are providing it in this response, see discussion below.

Photosimulation 35, submitted in the Requested and Revised Photosimulations Letter (Filed June 2018), provides a view from the Sandy River looking south. In that image, the closest proposed HVDC structure is 90 feet in height. This view provides a clear understanding of both structure /conductor visibility as well as the proposed clearing required to widen the transmission corridor. The view looking to the south was selected as a ‘worst case’ viewpoint from Sandy River because more of the cleared corridor would be visible looking to the south. The visual assessment conclusion that the visual impact would not be unreasonably adverse was based on the evaluation of this ‘worst case’ viewpoint.

Attached to this submittal are photographs and a computer model simulation from Sandy River looking north. The existing transmission structures were used as control points for the photosimulation. These images show the proposed transmission structure 150 feet from the edge of the river. It also shows that the foreground topography would limit the amount of the corridor that would be visible to a boater. No vegetation would be removed for the Project, which is a major difference between this view and the southerly view. See Attachment R.

- *The simulations only represent full-leaf vegetation (conditions with leaf-off are not evaluated).*

See response to #25.

- *The proper viewing distance is not provided with the simulation. It will be different for the single frame simulations, and for each panorama.*

In evaluating the photosimulations, the reviewer should view the ‘normal’ images approximately 19.5” from a screen set at viewing 100% or 11”x17” hard copy, to approximate the actual view. (Page 9 of VIA 9/27/17)

- *The viewpoints do not follow a consistent referencing scheme. In the original*

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simulation, the viewpoint is numbered, and then a letter is assigned to the base photograph and whether the image represents the existing or simulated condition is identified. Beginning with photosimulation 30, a number that is equivalent to the viewpoint is given, and a letter is assigned sequentially to each single frame images (e.g., the existing and simulated condition do not share a letter).

CMP acknowledges that the reference labeling for the photosimulations submitted in September 2017 is inconsistent with the post-submittal simulations. The reference labeling for the post-submittal simulations was updated to be more consistent with the content of the captions below the image. (Whether it is an 'Existing Conditions' image or 'Photosimulated image'.) The overall layout of the post submittal simulations is the same as the September 2017 layout, which includes a panoramic image, a normal view existing conditions image, and then a normal view photosimulated image.

- *The location maps for photosimulations 32 and 33 do not agree about whether the corridor is cleared to the water.*

The locations map for Photosimulation 33 incorrectly showed the amount of vegetation to be removed for the overhead River crossing. The corrected map is shown on the attached Photosimulation 33. See Attachment S.

- *Table 6-1 of the VIA identifies viewpoint 27 as Route 194, Whitefield, but on the actual photosimulation it is Route 1, Wiscasset, and viewpoint 29 is Route 1, Wiscasset in the table but on the actual simulation it is Route 194, Whitefield. I think the numbers on the simulation may be in error.*

A revised 6-1 Table has been provided correcting the reference to Photosimulation 27 and 29. (Attachment M) The numbers on the simulations are correct.

28. Mr. Palmer notes “There is no indication that visual impacts were considered in the selection of the route for Section 1. There might be an alternative route with lower visual impacts.” Please address this comment explaining what consideration was given to the proposed routing of the transmission line in Segments 1 and 2 where a new corridor must be developed.

RESPONSE

The proposed routing of Segment 1 (53.5 miles of new HVDC transmission line from the Quebec Border to the existing transmission line at the north end of Moxie Pond in The Forks) and Segment 2 (22.0 ±-mile segment co-located within an existing 115 kV transmission corridor from Moxie Pond to the Wyman Hydro Facility in Moscow) were carefully sited and designed to minimize visual impacts to scenic resources. CMP's

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rigorous approach to siting considered a wide range of factors, including: ownership patterns, conserved lands, stream crossings, location of existing rights of way, clearing requirements, transmission line length, mapped wetlands (NWI data), deer wintering areas, inland waterfowl and wading bird habitats, public water supplies, and significant sand and gravel aquifers. The approach is described in detail in the NRPA Application, Chapter 2, Alternatives Analysis.

In siting Segment 1, CMP considered the presence of publicly owned conservation lands (e.g., the Appalachian National Scenic Trail and Maine Bureau of Parks and Lands properties) as well as those held by private conservation organizations such as The Nature Conservancy and the New England Forestry Foundation. The paramount goal of the route selection was to avoid iconic scenic and recreational areas that characterize this part of western Maine, including the Bigelow Preserve, the Crocker Mountain High Peaks area, Mount Abraham, Saddleback Mountain, the Moosehead Region Conservation Easement, Grace Pond in Upper Enchanted TWP, the Leuthold Forest Preserve, the Number 5 Bog Ecological Reserve, and the Moose River/Attean and Holeb Ponds. Care was also taken to microsite the new corridor in a manner that would avoid visual impacts to smaller but visually sensitive areas such as the Moxie Falls Scenic Area and the Cold Stream Forest.

Siting also considered specific landowner requirements. For example, Spencer Road is a private road owned by Weyerhaeuser and is actively used for timber harvesting and transporting. Weyerhaeuser required the proposed corridor to be located away from the road to allow room for harvesting operations and lay down areas in the future. CMP sited Segment 1 to the north of the road to comply with Weyerhaeuser's request, which resulted in a substantial buffer between the Project and recreational users/camp owners who also use the road to access Grace Pond, Fish Pond, and Spencer Lake.

There are approximately 48 lakes and ponds within 3 miles of Segments 1 and 2. The Project corridor was sited to avoid visual impacts to the extent possible to lakes and ponds rated for Scenic Resources in the Maine Wildlands Lake Assessment. Of the 9 rated lakes and ponds within 3 miles of Segments 1 and 2, five will have some views of the Project (Rock Pond, Fish Pond, Parlin Pond, Moxie Pond, and Wyman Lake). Moxie Pond, currently rated as Outstanding for Scenic Resources, already has views of an existing transmission line from several locations. See the VIA for a description of the effect that the Project will have on these waterbodies.

Recognizing that Route 201 is designated as the Old Canada National Scenic Byway, and that 49 miles of the Byway are within five miles of the Project, many steps were taken to site Segment 1 to minimize visibility. For example, where the Project had to cross Route 201, the location selected was between Weyerhaeuser's Capitol Road and Judd Road, and

near the existing Jackman Tie-line transmission line corridor, in order to cluster linear transmission and transportation corridors. On Coburn Mountain the transmission corridor was sited in a pronounced notch to minimize visibility when viewed from the highway. As a result of this careful planning, the Project will be intermittently visible for up to 95 seconds for northbound motorists and intermittently up to 48 seconds for southbound traffic traveling at 45 MPH.

The siting of Segment 2 and 3 follows best practices and co-locates the Project with the existing 150' wide transmission corridor, starting at the north end of Moxie Pond and continuing to Larrabee Road Substation in Lewiston. The section of the Project located adjacent to the existing corridor west of Moxie Pond was redesigned by reducing structure heights to minimize visibility of the structures from Moxie Pond (submitted to MDEP on June 29, 2018).

Locating the new transmission line in the vicinity of the AT required similar careful siting. The selected transmission line route is within an existing transmission line corridor where it will be co-located with an existing transmission line adjacent to Joe's Hole, at the southern end of Moxie Pond. CMP has owned the land that the AT is located on in this area in fee since circa 1950. CMP conveyed an easement to the National Park Service for the AT but retained fee ownership and reserved the right to construct overhead transmission and communication lines within the entire 300-foot wide corridor. The alternatives that were considered are described in detail in the NRPA Application, Chapter 2, Alternatives Analysis.

29. Section 6 (starting on page 62) of Mr. Palmer's review provides his conclusion concerning the VIA, some of which have been discussed above. Please provide a response to the remaining issues which Mr. Palmer identified, which at a minimum must address the following concerns:

a. The VIA does not identify and evaluate all the scenic resources.

RESPONSE

See response to Question 24, above.

b. The VIA does not use the most accurate available land cover height information.

RESPONSE

To gain a realistic understanding of potential project visibility, a landcover viewshed analysis was prepared to show the effect of tree cover on potential Project visibility. The Digital Terrain Model (DTM) surface was converted to a DSM (Digital Surface

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Model) using 27 Maine Land Cover Data (MELCD) Classifications from the Maine Office of GIS. A landcover height raster was developed using specific heights for land covers in the Study Area. This raster file was overlaid on the base map to indicate where Project visibility is unlikely due to the screening effects of 40-foot tall woody vegetation, which is a conservative height estimate.

Jim Palmer's peer review suggested that the National Land Cover data (NLCD) would have been more accurate than the Maine Land Cover data. NLCD is designed to work nationwide. It includes 16 land cover types (three of which are only found in Alaska). There are three classifications of forest and 4 classifications of developed areas. The NLCD collects approximately 1500 sampling pixels per region. Maine falls in Region 10, which includes all of NY, NH, VT, ME, MA, RI, CT, and parts of PA and NJ. The Landsat imagery used was collected with a spatial resolution of 30 meters.

MELCD was primarily derived from Landsat Thematic Mapper 5 and 7 imagery from 1999-2001. This imagery was the basis for the NLCD (2001) and the NOAA Coastal Change Analysis Program (C-CAP). The land cover map was further refined to the State of Maine specific classification system (27 land cover classifications) requirements using SPOT 5 panchromatic imagery from 2004 which had a spatial resolution of 5 meters.

In summary, the MELCD provides more Maine-specific land cover types and higher resolution data.

LIDAR data for the Project area were not available when the viewshed mapping was prepared, however the data used was appropriate and adequate for the visual analysis.

- c. The VIA does not provide a procedure to identify key observation points (KOPs).**

RESPONSE

See response to Question 26, above.

- d. The VIA does not evaluate leaf off or snow cover conditions.**

RESPONSE

See response to Question 25, above.

- e. Efforts to interview or conduct surveys at viewpoints with the greatest potential visual impacts, including how user feedback changes through the seasons.**

RESPONSE

See response to Question 22, above.

- f. The VIA does not evaluate cumulative impacts of the project on scenic quality.**

RESPONSE

The issue of cumulative impact is noted in Chapter 315.9: “In addition to the scenic resource, the Department also considers the functions and values of the protected natural resource, any proposed mitigation, practicable alternatives to the proposed activity that will have less visual impact, and cumulative effects of frequent minor alterations on the scenic resource.” Chapter 315 does not define cumulative impacts, nor does it describe a methodology to evaluate the Project’s potential cumulative impacts on scenic quality.

Regulations adopted pursuant to the Maine Wind Energy Act (WEA), on the other hand, address the issue of cumulative visual impact in considerable detail (see Department Regulations Chapter 382.3.H.). Under these regulations the MDEP and the LUPC take into consideration a) impacts on scenic resources from multiple wind energy projects, and b) cumulative impacts from one project on multiple scenic resources (sequential observation).

Addressing the second category first, Chapter 382.3.H.(3) describes how the agency should evaluate this situation in the wind energy context: “When evaluating cumulative scenic impact or effect associated with sequential observation, the department will consider the distance between viewpoints on a linear route and other forms of development along the linear route that affect the expectations of the user of the SRSNS (Scenic Resource of State or National Significance).”

There are a few linear scenic resources in proximity to the Project where there may be cumulative visual effects:

- Appalachian National Scenic Trail. The Project would be visible from three general areas: the summit of Pleasant Pond Mountain, from which it will be seen intermittently at a distance of 2.9 to 7 miles; the site near Joe’s Hole/Moxie Pond where the AT crosses the existing transmission corridor in three locations; and Bald Mountain, where the Project will be visible at distances of 2.8 to 7.5 miles.

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The distance between the summit of Pleasant Pond Mountain with Project views and the first existing transmission line crossing west of Troutdale Road is 3.6 miles. The AT then crosses the existing transmission line three times within 0.6 miles. From the eastern transmission line crossing/proposed Project crossing to the first viewpoint on Bald Mountain is 4.0 miles. There will be virtually no cumulative impact from the summits of the AT because both the existing transmission line and the proposed Project would be minimally visible. The Project impacts would be most noticeable adjacent to the co-located section crossings where the cleared corridor will increase from 150 feet to 225 feet in width. However, the number of transmission line crossings is not increasing. A Buffer Planting Plan was previously submitted for the section of the AT along Troutdale Road.

- Kennebec River. The Project is no longer proposed to cross over the Upper Kennebec River, so the only overhead crossing of the Kennebec River will be below the Wyman Hydro Dam, adjacent to an existing substation and co-located with an existing transmission line.

- Route 201 (Old Canada Road National Scenic Byway). The Scenic Byway extends for a total of 78 miles from Madison to Jackman. As noted above, the Project would be seen for relatively short distances and durations over the 49 miles that the Scenic Byway is within the Project area. The one new crossing in Johnson Mtn Twp would be seen in the context of (i.e., in close proximity to) existing Weyerhaeuser haul roads and the Jackman Tie Line; the second crossing would be in an existing transmission corridor near Wyman Dam in Moscow. The distance between the Attean View Rest Area and a 1,000-foot long section of Route 201 (west of Parlin Pond) where the viewer will intermittently see the Project located on the shoulder of Coburn Mountain is 6.7 miles. From there, it is another 6.2 miles to the Johnson Mountain Twp crossing where the viewer will see the conductors over the road and the top of one structure (located 200 feet on the east side of the road) for approximately one mile (80 seconds traveling 45 mph) heading northbound and 1,900 feet (29 seconds traveling 45 mph) heading southbound. Motorists will encounter the proposed 150' cleared corridor for approximately 5 seconds traveling 45 mph. There is 30 miles between the Johnson Mountain Twp crossing and the co-located crossing in Moscow where the approaching motorist would see the conductors over the road and adjacent to the existing conductors and in context with the distribution lines parallel to the road. Motorists will encounter the expanded 225' cleared corridor for approximately 5 seconds traveling 30 mph. One proposed HVDC structure will be located 240 feet to the east side of the road and one structure 830 feet to the west side of the road (in proximity to the Wyman Hydro Dam). The horizontal alignment (curves in the road) and the preserved vegetation on either side of the transmission corridor will screen the structures from

view when approaching the crossing resulting in limited Project visibility traveling in either direction.

While there are no standards to evaluate cumulative impacts in Chapter 315, a broad interpretation of cumulative impacts may also include an assessment of the impact of an additional transmission line within the same corridor. It should be acknowledged that CMP secured transmission corridors at the necessary width to accommodate future transmission lines and Best Practice suggests that co-locating transmission lines within the same corridor minimizes impact.

The extent of the existing transmission line visibility and the change in visibility resulting from the Project have been described in the VIA for the identified Scenic Resources. There will be no cumulative impact in Segment 1 because there is no existing transmission line. In Segment 2 where the existing cleared corridor will be expanded from 150 feet in width to 225 feet in width, there will be an increase in corridor visibility. This cumulative change in corridor clearing will be minimally visible from most locations on Moxie Pond, Mosquito Mountain, and the AT. The exception would be from Joe's Hole on the southern end of Moxie Pond, viewed from Troutdale Road and the co-located segment of the AT, where the Project will cross adjacent to the existing 115 kV transmission line. In this location, the proposed expanded cleared corridor and HVDC structures will create a medium degree of cumulative impact due to the higher base elevation and height of the proposed structures when compared to the existing structures. To minimize this impact, CMP has prepared a Buffer Planting Plan for the area along Troutdale Road, filed August 14, 2018.

Cumulative impacts from Moxie Pond are also illustrated two locations shown in Photosimulations 13, 14, and 15 from the northern and southern ends of the Pond. While there would be visibility of portions of the tops of six HVDC structures from the northern portions of the pond where the existing transmission line structures are generally not visible, the HVDC structures would be viewed against a wooded hillside and will not be highly noticeable resulting in a relatively low degree of cumulative change.

On the southern end of Moxie Pond, where the existing transmission line is most visible, the degree of cumulative change would be moderated by both the existing infrastructure and the limited extent of visibility. From this location the existing cleared corridor, one existing H-frame structure and conductors are visible for approximately 600 feet of shoreline. The visible components of the proposed Project would include one HVDC structure and the top of another, the cleared corridor widened by 75', and conductors visible above the existing conductors. While the

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amount of visible infrastructure increases, the extent of shoreline opening that allows views of infrastructure will remain the same. The cumulative impacts from the southern end of Moxie Pond will be low. Also to note, the proposed HVDC transmission line along Moxie Pond was redesigned to minimize the heights of the proposed structures and further minimize potential Project views from the Pond.

In Segment 3, the Scenic Resources with the most potential for sensitivity to cumulative change include the Carrabassett River in North Anson and the Sandy River in Farmington. In each of these locations, the existing 150-foot wide cleared corridor will be expanded by 75 feet for a total of 225 feet. Currently, a paddler traveling at an average of 3 mph will be within the 150-foot corridor for approximately 34 seconds. When the corridor is widened, a paddler's time within the corridor will increase to about 51 seconds.

At the Carrabassett River crossing the existing structures are 230 feet to the north and 28 feet to the south from the river's edge and both average 65 feet in height. The proposed structures will be approximately the same distance from the river with the northern structure 80 feet in height and the southern structure 105 feet in height. By maintaining the same setbacks, the cumulative impacts are lowered. At the Sandy River crossing, the existing structure on the north side of the river is approximately 100 feet from the edge, the existing structure on the south is 200' from the edge, and both structures average 43 ft in height. The proposed structures will be 150 feet from the north side and 85 feet in height, and 760 feet from the south side and 90 feet in height. While the proposed structures are taller, they are set back further from the river which lowers the overall cumulative impact to Sandy River.

In Segment 4, the rebuild of Section 62 and 64 will not result in an increase in cumulative impacts because no additional vegetation will be removed, and replacement structures will not result in an increase in the number of structures or the distance from which the infrastructure will be visible.

In Segment 5, the proposed 345 kV transmission line located in between two existing transmission lines, with minimal to no additional vegetation removal, will result in a low degree of cumulative change. As shown in Photosimulations 28 and 29, the additional transmission lines will increase the visual presence of transmission infrastructure as seen over open fields but a motorist traveling on Route 194 in Whitefield or Route 27 in Wiscasset will experience the same duration of exposure.

In summary, the significant distances between visible occurrences of Project structures and/or the transmission corridor from the various viewpoints and limited

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additional duration of exposure combined with primarily minor to moderate visual impacts in those areas from which the Project would be visible (adjacent to existing transmission lines), demonstrate that the Project will not result in adverse cumulative visual impacts.

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Due to file size, attachments referenced below are provided electronically and in hard copy form (under separate cover)

Attachment A
UPPER KENNEBEC RIVER- RIVER RAFTING EXPERIENCE SURVEY

Attachment B
EROSION AND SEDIMENTATION CONTROL FOR STRUCTURE INSTALLATION IN HIGH RISK AREAS

Attachment C
CMP COMPATIBLE WOODY SPECIES LIST (OCTOBER 2018)

Attachment D
REVISED ABOVE GROUND HISTORIC RESOURCE IDENTIFICATION SURVEY, NRHP
EVALUATION, AND FINDINGS OF EFFECTS REPORT

Attachment E
ACCESS FOR COMPENSATION LAND MEMORANDUM

Attachment F
ROARING BROOK MAYFLY AND NORTHERN SPRING SALAMANDER SURVEY RESULTS

Attachment G
ROAD BUFFER EVALUATION

Attachment H
SUMMARY OF SCENIC RESOURCES

Attachment I
CEMETERY VISIBILITY REVIEW

Attachment J
CAPITAL ROAD PHOTOGRAPHS

Attachment K
CONSERVATION AREA CHARTS

Attachment L
COBURN MOUNTAIN WINTER PHOTOGRAPHS

Attachment M
ITS TRAIL NEAR COBURN MOUNTAIN

Attachment N
ROUTE 201 CROSSINGS AND PROJECT VISIBILITY

Attachment O
MOXIE MOUNTAIN PHOTOGRAPHS

Attachment P
UPDATED TABLE 6_1 SUMMARY OF PHOTOSIMULATIONS

Attachment Q
NECEC VIA PHOTOSIMULATION SUMMARY

Attachment R
SANDY RIVER LOOKING NORTH PHOTOGRAPHS

Attachment S
PHOTOSIMULATION 33 REVISED