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Admitted in: MA, ME, NH

April 13, 2020

James R. Beyer
Regional Licensing & Compliance Manager
Bureau of Land Resources
Maine Department of Environmental Protection
106 Hogan Road, Suite 6
Bangor, ME 04401

Re: Comments on Draft Order for the New England Clean Energy Connect

Dear Jim:

Central Maine Power Company (CMP) would like to thank you, the Commissioner, and DEP staff for all your work in processing CMP's permit application for the New England Clean Energy Connect Project (NECEC or Project). The application processing period, which has extended over two and one-half years, involved a thorough and considered review of the proposed Project, as well as revisions to the Project that have reduced its impacts. CMP is pleased to be able to move forward with this important Project, which will create a path for Hydro-Québec to export 9.45 terawatt hours annually of new, clean, hydroelectric energy from Hydro-Québec's existing hydropower facilities to New England over a twenty-year period.

Enclosed with this letter is our markup of the DEP's March 13, 2020 draft Order, showing in redline suggested corrections to typographical and factual errors, along with several explanatory comments. We request that the DEP revise the Order to reflect these suggested edits before issuing the Order in final form.

Title, Right, or Interest

One such comment, at page 8 of the enclosure, warrants explanation here. The draft Order describes the lease CMP entered into with the Bureau of Parks and Lands (BPL or Bureau) for the corridor across West Forks Plantation and Johnson Mountain Township T2R6 BKP WKR, which the draft Order mistakenly describes as being located across the Upper Enchanted Tract and the Cold Stream Forest Tract. The draft Order finds that "The Department accepts the decision of its sister agency to enter into the leases and the fully executed leases as sufficient title, right, or interest in that portion of the proposed corridor to apply for permits for the project."

CMP understands that the DEP received a March 24, 2020 comment letter from John and Nancy Nicholas, as well as an April 7, 2020 comment letter from Tom Saviello (dated March 28, 2020), both of

PORTLAND, ME BOSTON, MA PORTSMOUTH, NH PROVIDENCE, RI AUGUSTA, ME STOCKHOLM, SE WASHINGTON, DC

which question the validity of the BPL lease and rely on extra-record evidence.¹ DEP addressed the arguments presented therein in Presiding Officer Miller's November 16, 2018 letter that was copied to the service list in this proceeding. In that letter, which addressed intervenor NextEra's question as to whether the BPL lease is "statutorily permissible," Presiding Officer Miller stated,

The Bureau entered into that lease with CMP pursuant to 12 M.R.S. § 1852(4), which authorizes the Bureau to "lease the right, for a term not exceeding 25 years, to," among other things, "[s]et and maintain or use poles, electric power transmission and telecommunications facilities." CMP's lease with the Bureau, a copy of which CMP provided to the Department, demonstrates to the Department's satisfaction sufficient title, right, or interest to the lands subject to that lease. 096 C.M.R. ch. 2, § 11(D)(2) (2018). Legal challenges to the Bureau's authority to enter a transmission line lease pursuant to 12 M.R.S. § 1852(4) would be for the courts—not the Department—to adjudicate.

As the DEP explains in its draft Order, "That lease decision was never appealed and is therefore final." In complaining that those who commented on the sufficiency of the lease "were not advised in writing that they had to file an appeal of the lease agreement," Mr. and Ms. Nicholas, as well as Mr. Saviello, misunderstand this comment in the draft Order. This comment addresses the lack of an appeal of the 2014 lease, not the lack of an appeal of responses to arguments during the DEP's application processing. Because the 2014 lease decision was not appealed at that time, it is final.

Furthermore, as CMP explained in its June 28, 2019 Reply Brief, at pages 1-6, the lease for these two parcels is plainly valid under Maine law. CMP does not repeat that explanation here, but notes briefly that the Project does not rise to a substantial alteration of the public reserved lands that it crosses, as asserted by Mr. and Ms. Nicholas and by Mr. Saviello but rejected by both the BPL in granting the lease and by the DEP in deferring to its sister agency.

In any event, as CMP explained in its January 25, 2019 letter to Presiding Officer Miller and its June 28, 2019 Reply Brief, Maine courts are clear that even when there is doubt about an applicant's title, right, or interest (TRI) in a property, the permitting authority nonetheless should process the permit application unless the applicant clearly lacks sufficient TRI. Because CMP presented *prima facie* evidence of TRI in the corridor across West Forks Plantation and Johnson Mountain Township T2R6 BKP WKR, the DEP's findings in its draft Order on the BPL lease are correct.

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¹ The Nicholas letter references a February 14, 2020 BPL response, a July 25, 2018 opinion of Assistant Attorney General Lauren E. Parker concerning different property, and September 14, 2018 testimony to the Maine Public Utilities Commission, as well as LD 1893 (which is not Maine law, and further is no longer before the Legislature, which adjourned sine die without passing this bill) and LD 2260 (which authorized the Maine Department of Inland Fisheries and Wildlife to enter into certain easements in Webster Plantation, Penobscot County), all of which are outside the record before the DEP. Similarly, the Saviello letter references and attaches a number of extra-record statements and documents, including alleged statements of David Rodrique and Andy Cutko, discussion of the activities of the Legislative Joint Standing Committee on Agriculture, Conservation and Forestry, references to LD 1893, a July 25, 2018 memorandum of Assistant Attorney General Lauren Parker (which Mr. Saviello admits is directed to a Land for Maine's Future purchase and not the West Forks Plantation and Johnson Mountain Township lease), a letter and documents from Andy Cutko, and the Legislature's Agriculture, Conservation, and Forestry Committee's Amendment to LD 1893 (which, again, is not Maine law). Because the DEP record in this proceeding is closed, those references and exhibits should be excluded and not considered by DEP.

Conservation Land

At page 80 the draft Order, DEP requires that within two years CMP must develop and submit to the Department for review and approval a plan to permanently conserve 40,000 acres on land in the vicinity of Segment 1. The Department reached the 40,000-acre figure based on The Nature Conservancy's estimate that approximately 5,000 acres would be impacted by the corridor itself and its associated edge effect, multiplied by the 8:1 ratio set forth in Department rule Chapters 310 [Wetlands and Waterbodies Protection] and 335 [Significant Wildlife Habitat]. The draft Order notes that "this estimated area of impact remains a reasonable baseline for evaluating the appropriate amount of additional conservation that should be required." Draft Order at 79. The 5,000 acres baseline does not consider the shorter Merrill Strip Alternative, and also does not consider the draft Order's proposed conditions intended to reduce the impact of the corridor itself and its associated edge effect, specifically the 35-foot minimum height vegetation plus full height vegetation ordered along 14.1 miles of Segment 1, and the reduced tree clearing (from the proposed 150 feet to 54 feet) and associated tapering ordered within the remainder of Segment 1.

Because the 5,000-acre figure was intended as an estimate of permanent impacts resulting from corridor clearing and edge effects, and assumes an edge effect width of 330 feet beyond each edge of the proposed cleared corridor, it should be recalculated to reflect the reduced impact resulting from the proposed Order's requirements for 35-foot minimum height vegetation, full height vegetation, reduced clearing, and tapering. The adverse impacts associated with the Project will be either eliminated or significantly reduced in these areas and, as such, the calculation of conserved land required should be based only on that portion of right-of-way where CMP will maintain the 54 feet as non-forested scrubshrub habitat (plus the edge effect associated with that reduced area).

The draft Order acknowledges that its requirement to retain minimum 35-foot-tall vegetation, full-height vegetation, or tapering along the entire length of Segment 1 is protective of water quality (including temperature), fisheries habitat, scenic character, and wildlife travel corridors, and minimizes habitat fragmentation. Based on these considerations, and the draft Order's acknowledgement that the 5,000-acre figure is a "baseline," the conservation land calculation should be updated as follows:

- Length of transmission line corridor requiring compensation = 53.1 miles (Segment 1 total length) minus 14.08 miles (length of Segment 1 within which minimum 35-foot-tall vegetation or full height vegetation is required, thus having no edge effect) = 39.02 miles;
- Width of transmission line corridor requiring compensation = 54 feet (width of wire zone) plus 660 feet (combined widths of edge effect areas measured from each edge of wire zone) = 714 feet;
- Area of transmission line corridor requiring compensation = 39.02 miles x 714 feet = 3,377 acres
 x 8 (compensation ratio) = 27,016 acres.

For your convenience, we have indicated in our attached markup where these figures should appear.

Objection to Certain Comments

Finally, CMP objects to certain comments that have been and will be filed in response to the draft Order. The DEP's rules allow the applicant, intervenors, and interested persons to review and comment on a draft license decision. DEP Regs. Ch. 2 § 18(A). That opportunity is not a re-opening of the record, nor is it an invitation for general comments concerning an applicant, an application, a proposed project generally, or tangential proposed legislation. Instead, the comments on a draft license decision must be limited to the draft decision itself. DEP Regs. Ch. 2 § 18(B) ("The Department shall accept and may incorporate comments on the draft license decision after it has been made available."). Many of the comments submitted to the Department are well outside the four corners of the draft license decision, and fail even to mention that draft decision itself. CMP objects to those comments, as well as to any comments that attempt to supplement the closed record with additional evidence, and requests that all such comments be excluded from the record.

Thank you for your work on this draft order.

Sincerely,

Matthew D. Manahan

Enclosure

cc: Service Lists



STATE OF MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION 17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

IN THE MATTER OF

| | Draft Order |
|-----------------------------|------------------------------------|
| CENTRAL MAINE POWER COMPANY |) SITE LOCATION OF DEVELOPMENT ACT |
| See Appendix A for Location |) NATURAL RESOURCES PROTECTION ACT |
| NEW ENGLAND CLEAN |) FRESHWATER WETLAND ALTERATION |
| ENERGY CONNECT |) SIGNIFICANT WILDLIFE HABITAT |
| L-27625-26-A-N (approval) |) WATER QUALITY CERTIFICATION |
| L-27625-TG-B-N (approval) |) |
| L-27625-2C-C-N (approval) |) |
| L-27625-VP-D-N (approval) |) |
| L-27625-IW-E-N (approval) |) FINDINGS OF FACT AND ORDER |
| | |

OVERVIEW

This Order conditionally approves Central Maine Power Company's applications for State land use permits for the New England Clean Energy Connect project. The record of this proceeding demonstrates that the project will satisfy the Department's permitting standards subject to the conditions in this Order. Issuance of this Order follows a 29-month regulatory review, which included six days of evidentiary hearings and two nights of public testimony. Twenty-two parties, consolidated into ten groups, participated in the evidentiary hearings by helping to shape the administrative review process, providing sworn testimony from dozens of witnesses, cross examining those witnesses, and submitting argument on the interpretation and application of relevant permitting criteria. Hundreds of Maine citizens testified during the public hearings and submitted written comment on the many issues the application presented. The hearing and public comment process provided the Department with critical information and analysis of the applicant's proposal, its impacts, whether and how those impacts can be mitigated, and the availability of alternatives.

The record shows the project as originally proposed would have had substantial impacts, particularly in the 53.5 mile 53.1-mile portion of the corridor that extends from the Quebec border to The Forks, known as Segment 1. The record also shows that it is feasible to avoid or minimize those impacts through a variety of mitigation measures. This Order does so by imposing a set of conditions identified and developed through the public process. These conditions provide an unprecedented level of natural resource protection for transmission line construction in the State of Maine. They are also fully supported by the evidence. For example, the hearings highlighted the impacts the proposed project would have on fish and wildlife habitat, scenic character, and recreational uses of the Segment 1 area. The evidence shows that the width of the corridor, and the manner in which vegetation is managed within it, are key factors that drive the severity of those impacts. This Order limits the width of the cleared corridor in Segment 1 – originally proposed to be 150 feet – to 54 feet at its widest point. The Order requires the applicant to use poles in ecologically sensitive areas that are tall enough to preserve forest canopy. It requires that wildlife corridors be preserved in deer wintering area.

Commented [A1]: With the Merrill Strip Alternative, the actual length is 53.1 miles.

In all other portions of Segment 1, the Order requires that cutting of vegetation be limited and tapered tree growth be maintained within the corridor, significantly reducing the area cleared and minimizing visibility of the project. Herbicide use is prohibited throughout Segment 1. The combined effect of these conditions is to shrink the footprint of the project and reduce its overall impacts dramatically.

Some project impacts, however, will remain. The Order requires substantial measures to compensate for these impacts, including that the applicant conserve 40,000 27,016 acres in western Maine permanently. The conserved lands may be open to commercial forestry utilizing sustainable harvesting practices. The Order also requires the applicant to set aside \$1,875,000 for culvert replacements in western Maine, which includes the Segment 1 area. The evidence shows this should be adequate to fund 25 culvert replacement projects, which will enhance fish habitat by facilitating passage, reducing erosion, and improving water quality.

The hearings also focused on whether a practicable alternative exists to the applicant's chosen route and proposed design that would be less damaging to the environment. The evidence shows that it does not. The alternative routes potentially available are each problematic for their own reasons, including the need to cross or go around conservation lands such as the Bigelow Preserve, greater impacts to the Appalachian Trail, and an increase in cleared corridor area. Nor is the undergrounding alternative preferable. Record evidence supports the conclusion that undergrounding in Segment 1 may be so technically challenging as to be impracticable. Even if technically practicable, the trenching that undergrounding entails would result in greater impacts to natural resources such as wetlands. Undergrounding also would require a permanent clearing in Segment 1 that is 75 feet in width, almost 50% wider than the corridor clearing approved in this Order.

The applicant's stated purpose for this project is to provide renewable electricity from Quebec to the New England grid. The Department applied the statutes and regulations it administers in this Order to approve the least environmentally damaging alternative available to achieve that purpose. The Order puts in place a comprehensive set of conditions designed to avoid and minimize the project's impacts to the extent possible, while also requiring substantial offsite compensation for those impacts that remain. So conditioned, the project fully satisfies the Department's permitting standards.

ANALYSIS, FINDINGS, & CONCLUSIONS

Pursuant to the provisions of the Natural Resources Protection Act (38 M.R.S. §§ 481–489-E) (NRPA), the Site Location of Development Act (38 M.R.S. §§ 480-A–480-JJ) (Site Law), Section 401 of the Federal Water Pollution Control Act (33 U.S.C. § 1341), and Chapters 310, 315, 335, 373, 375, 376, 500 and 502 of -the Department of Environmental Protection (Department) rules, the Department -has considered the application of CENTRAL MAINE POWER COMPANY_(CMP or applicant) -with the supportive data, agency review comments, party comments, public comments, hearing materials, and other related materials on file and FINDS THE FOLLOWING FACTS:

Commented [A2]: See our cover letter for the updated calculation.

1. PROJECT DESCRIPTION AND ADMINISTRATIVE BACKGROUND

A. History

CMP has been developing its transmission corridors over a period of years. Much of this development pre-dated the Site Law and the NRPA, but there also have been Department Orders issued in the past that have approved the construction of new electrical transmission lines, upgrades of existing electrical transmission lines and the construction or expansion of new and existing substations. Previous Department Orders issued for projects located in the transmission corridor at issue in this proceeding include the Maine Power Reliability Program (MPRP) #L-24620-26-A-N/ L-24620-TG-B-N/ L-24620-VP-C-N/ L-24620-IW-D-N/ L-24620-L6-A-N, dated April 5, 2010. Previous Department Orders issued for substation projects located within the corridor under consideration in this Order include: #L-T00822-TB-A-N (Surowiec Substation expansion in Pownal), dated September 8, 1999; #L-17973-26-AJ-M and #L-17973-26-AK-T (Maine Yankee Substation expansion in Wiscasset), dated December 15, 2006; and the MPRP Order. CMP submitted an application summarized below on September 27, 2017 for the New England Clean Energy Connect (NECEC) project seeking both a Site Law and NRPA permit. Portions of the proposed NECEC project are located on or adjacent to the projects listed above.

B. Overview

The applicant proposes to construct a 145.3-mile long, 320 kilovolt (kV) High Voltage Direct Current (HVDC) transmission line from Beattie Township to Lewiston; a converter station to convert the Direct Current (DC) electricity to Alternating Current (AC) electricity on Merrill Road in Lewiston; a new substation on Fickett Road in Pownal; and a new 26.5-mile, 345-kV AC transmission line from the existing Coopers Mills Substation in Windsor to the existing Maine Yankee Substation in Wiscasset. The applicant also proposes to rebuild several existing transmission lines and upgrade three substations. The HVDC portion of the transmission line will be placed primarily on single steel poles that will average approximately 100 feet tall and will be spaced approximately 1,000 feet apart. The new 345-kV lines and the reconstructed 115-kV lines will be constructed on a variety of different structures, including 125-foot tall steel structures, 80-foot tall single pole structures, 75-foot tall, wooden H-frames, and 45-foot tall, wooden, single pole structures. The applicant divided the project into five transmission line segments and construction or upgrades of substations.

(1) Transmission Lines

a. Segment 1

Segment 1 starts at the Maine/Quebec border in Beattie Township and continues within a 300-foot wide right-of-way (ROW) to The Forks Plantation. Segment 1 is an approximately 53.15-mile long, 320-kV DC transmission line. The applicant proposes to use the southernmost 150 feet of the ROW for the Segment 1 corridor.

This segment is located primarily in working forest. Segment 1 crosses 4810 freshwater wetlands; 292 300 rivers, streams, or brooks, of which 240 224 contain coldwater fisheries habitat, including the Upper Kennebec River, which is an Outstanding River Segment; six Inland Waterfowl and Wading Bird Habitats (IWWH) with 8.243 acres of conversion; and six 11 Significant Vernal Pools (SVP). As originally proposed, a 150-foot wide cleared corridor would have been created except for areas within 25 feet of rivers, streams, or brooks. Within 25 feet of these resources, the applicant originally proposed to remove all woody capable vegetation during initial clearing and subsequently to allow non-capable woody vegetation to grow up to ten feet tall outside within the wire zone.

During the course of the permit review process, the applicant modified its proposal to include: (a) tapered vegetation within the corridor near Rock Pond and Coburn Mountain, (b) full canopy height vegetation near Gold Brook, Mountain Brook, and the Upper Kennebec River, (c) 25- to 35-foot tall vegetation managed for deer habitat in eight areas in the Upper Kennebec River Deer Wintering Area, and (d) 100-foot wide riparian filter areas² on either side of all perennial streams in Segment 1.³

In areas where the corridor will be tapered, instead of clearing the entire width of the 150-foot corridor only a 54-foot side section, centered under the conductors, will be cleared. Non-capable species⁴ of vegetation will be allowed to regrow in this area after construction, establishing scrub-shrub habitat with a height of approximately 10 feet. Taller, capable vegetation outside of this 54-foot-wide area will be retained, with the height of the retained vegetation increasing from approximately 15 feet to 35 feet as the distance from the scrub-shrub area increases.⁵

On September 18, 2019, the applicant submitted a Petition to Reopen the Record to allow it to amend the pending application. The amendment modified the proposed route of a short section of the Segment 1 corridor in the area near Beattie Pond. This alternative, the Merrill Strip Alternative, as discussed below in Finding 7, initially was rejected by CMP due to the cost to obtain the land from the current landowner. The Merrill Strip Alternative is approximately 0.4 miles shorter than the originally proposed route, results in one less pole (also referred to as transmission line structure or structure), reduces the

Commented [A3]: These and the updated numbers that follow are based on the updated Waterbody Crossing Table posted on the DEP's website on February 4, 2019 (Group 4's Exhibit 23-JR) that was further revised in CMP's October 10, 2019 Merrill Strip Alternative filing.

¹ As used in this Order, unless context clearly indicates otherwise, the term Significant Vernal Pool or SVP is used to refer to significant vernal pool habitat, which includes the significant vernal pool depression and that portion of the critical terrestrial habitat within 250 feet of the depression. See 06-096 C.M.R. Ch. 335, § 9.

² Appendix C discusses riparian filter areas.

³ This Order imposes substantial, additional conditions on the construction and maintenance of the Segment 1 corridor, for example, by requiring taller vegetation in 12 Wildlife Areas and tapering the entirety of Segment 1 outside of these areas.

⁴ Capable species are species capable of growing tall enough to reach into the conductor safety zone. Non-capable species are not capable of growing that tall and typically grow no taller than 10 feet.

⁵ Appendix C contains a discussion of different vegetation management along the corridor, including tapering and management for deer travel corridors.

wetland impact by 12,286 square feet, and eliminates impacts to one SVP and one stream that contains brook trout.⁶

b. Segment 2

Segment 2 extends from The Forks Plantation to the Wyman Substation in Moscow and is a 21.9-mile long, 320-kV DC transmission line. The applicant proposes to co-locate Segment 2 with the existing line that runs from Harris Dam to the Wyman Substation. The corridor within the existing utility ROW will be widened by an average of 75 feet to accommodate co-location of the proposed transmission line. Segment 2 is located primarily in working forest. Segment 2 crosses 1467 freshwater wetlands; 60-71 rivers, streams, or brooks, 462 of which contain coldwater fisheries habitat; two IWWHs with 1.13 acres of conversion; and one-two SVPs. With the exception of areas within 100 feet of coldwater fisheries, the corridor will be widened an average of 75 feet and maintained as scrub/shrub vegetation following construction. Within 100 feet of coldwater fisheries and 75 feet of other rivers, streams and brooks, the applicant proposes to remove all woody vegetation during initial clearing for construction and subsequently allow noncapable woody vegetation to grow up to 10 feet tall outside the wire zone.

c. Segment 3

Segment 3 runs from the Wyman Substation in Moscow to the proposed Merrill Road Converter Station in Lewiston. This segment is 71.1 miles long and is co-located with transmission lines in an existing ROW. This segment also includes the rebuilding of 0.8 miles of 345-kV AC line outside the Larrabee Road Substation and constructing 1.2 miles of new 345-kV AC transmission line from the Merrill Road Converter Station to the Larrabee Road Substation. The utilized portion of the ROW will be widened by an average of 75 feet. Segment 3 crosses: 227-489 freshwater wetlands; 191-234 rivers, streams, or brooks, of which 69-138 contain coldwater fisheries habitat, including the Kennebec River, the Carrabassett River, and the Sandy River, which are Outstanding River Segments; eight IWWHs with 5.65 acres of conversion; and 42.40 SVPs. With the exception of areas within 100 feet of coldwater fisheries and 75 feet of other rivers, streams and brooks, the corridor will be widened an average of 75 feet and maintained as scrub/shrub vegetation following construction. Within 100 feet of coldwater fisheries and 75 feet of other rivers, streams, and brooks, the applicant proposes to remove all woody vegetation during initial clearing for construction and subsequently allow noncapable woody vegetation to grow up to 10 feet tall outside within the wire zone.

d. Segment 4

Segment 4 consists of: rebuilding 16.1 miles of 115-kV AC transmission line between the Larrabee Road Substation and the Surowiec Substation; rebuilding 9.3 miles of 115-kV AC transmission line between the Crowley's Road Substation and the Surowiec

⁶ The ROW obtained by CMP for the Merrill Strip Alternative is 150-feet wide. The remainder of the ROW within Segment 1 is 300-feet wide.

Substation; and constructing a new 345-kV AC transmission line from the Surowiec Substation to a proposed substation on Fickett Road in Pownal. Segment 4 will not require any additional clearing and will not result in any new impacts to protected natural resources, other than .006 acres of SVPH upland fill and 0.02 acres of wetland fill. Segment 4 crosses: 12932 freshwater wetlands; 332 rivers, streams, or brooks, 241 of which contain coldwater fisheries habitat; no IWWHs; and 510 SVPs.

e. Segment 5

Segment 5 consists of a proposed 26.5-mile long 345-kV AC transmission line from the existing Coopers Mills Substation in Windsor to the Maine Yankee Substation in Wiscasset within an existing corridor; partial rebuilding of 0.3 miles of 345-kV AC line near the Coopers Mills Substation; rebuilding a 0.8-mile section of 345-kV AC line near the Coopers Mills Substation; and rebuilding a 0.8-mile section of 115-kV AC line outside the Coopers Mills Substation. Segment 5 will not require any additional clearing and will not result in any new impacts to protected natural resources other than 0.03 acres of wetland fill and 3.6 acres of DWA conversion. Segment 5 crosses 1597 freshwater wetlands; 99-104 rivers, streams, or brooks, including the West Branch of the Sheepscot River, which is an Outstanding River Segment, and all of which contain coldwater fisheries habitat; one two IWWHs; and eight four SVPs; and one Tidal Waterfowl and Wading Bird Habitat (TWWH).

(2) Substations

a. Merrill Road Converter Station

The Merrill Road Converter Station will convert DC electricity from Canada to AC electricity to be fed into the power grid. The converter station will be located immediately adjacent to the transmission corridor, and with the access road, will occupy 13.4 acres of the site. The proposed converter station will result in 3.16 acres of wetland fill and 0.273 acres of fill in a SVP.

b. Fickett Road Substation

The Fickett Road Substation will be constructed across Allen Road from the Surowiec Substation and will occupy 4.876.12 acres of the site. The site currently contains existing 345-kV and 115-kV transmission lines, which were permitted as part of the MPRP. The substation will result in 1.33 acres of direct impact to a freshwater wetland.

c. Coopers Mills Substation

The Coopers Mills Substation was originally permitted as part of MPRP. Proposed work on the Coopers Mills Substation includes 345-kV bus work, circuit breaker installations, and relocating 345-kV transmission lines from the Maine Yankee Substation and the Larrabee Road Substation. These improvements will not require the existing yard to be

expanded. The proposed work will result in 0.275 acres of new impervious area. No new impacts to any protected natural resource are proposed for this portion of the project.

d. Crowley's Substation

Proposed modifications at Crowley's Substation include the replacement of a 115-kV switch and bus wire. No new impervious area is proposed. No new impacts to protected natural resources are proposed for this portion of the project.

e. Larrabee Road Substation

The Larrabee Road Substation originally was permitted as part of the MPRP. The Larrabee Road Substation upgrades include the addition of a 345-kV line termination structure, a 345-kV circuit breaker, disconnect switches, instrument transformers, surge arrestors, buswork modifications, support structures, foundation modifications to the existing protection and control system, and network upgrades. The upgrades also include the replacement of an existing transformer with three single-phase autotransformers. The Larrabee Road Substation currently occupies 15.44 acres. These upgrades will result in 0.08 acres of new impervious area. No impacts to protected natural resources are proposed for this portion of the project.

f. Maine Yankee Substation

Proposed modifications at the Maine Yankee Substation involve the addition of a 345-kV three-circuit breaker bay, the relocation of the existing Coopers Mills 345-kV line, the addition of a terminal for the new 345-kV line from Coopers Mills Substation, and the repositioning of the existing 345-kV line from the Surowiec Substation. The substation currently occupies 4.91 acres. All proposed work will be in the existing yard and will result in 0.02 acres of new impervious area. No new impacts to protected natural resources are proposed for this portion of the project.

g. Surowiec Substation

Proposed additions at the Surowiec Substation include a terminal for a new 345-kV transmission line from the proposed Fickett Road Substation, a new dead-end A-frame structure, and a new 345-kV circuit breaker. The existing substation occupies 9.41 acres and all of the additions will be located within the existing yard. There will be 0.01 acres of new impervious area. No new impacts to protected natural resources are proposed for this portion of the project.

h. Raven Farm Substation

The Raven Farm Substation originally was permitted as part of the MPRP, which approved the construction of a 15.5-acre substation yard. Currently, the entire yard has been brought up to subgrade, but only half of the substation has been built to date. This half contains electrical equipment that was part of the MPRP. The proposed additions

will be placed on top of a layer of crushed stone and will be on the remaining half of the yard. The electrical equipment will include a new 345/115-kV autotransformer and three new 115-kV transmission line terminations with associated equipment and foundations. No new wetland impacts are proposed for this portion of the project.

i. Overall

The project, in its entirety, is shown on a set of plans, the first of which is entitled "New England Clean Energy Connect Existing and Proposed ROW Segment 1," prepared by Central Maine Power, and dated April 11, 2017, with a last revision date of September 18, 2019. The project site is located in 24 municipalities, 14 townships/plantations, and seven counties. (See Appendix A.)

C. Title, Right, or Interest

Applicants for Site Law and NRPA permits are required by 06-096 C.M.R. Chapter 2, § 11(D) to submit evidence demonstrating that they have sufficient title, right, or interest in all the property proposed for development. This can be in the form of deeds, leases, or easements, among other forms. The applicant submitted deeds or leases for the entire project. Several members of the public and Intervenor Groups 2 and 8 (see discussion of the public hearing below for a list of intervenor groups) contend that CMP does not have sufficient title, right, or interest in one portion of the corridor. Specifically, they question the legality of the lease CMP entered into with the Bureau of Parks and Public Lands for the corridor across West Forks Plantation and Johnson Mountain Township T2R6 BKP WKRthe Upper Enchanted Tract and the Cold Stream Forest Tract. That lease decision was never appealed and is therefore final. The Department accepts the decision of its sister agency to enter into the leases and the fully executed leases as sufficient title, right, or interest in that portion of the proposed corridor to apply for permits for the project.

At the time of the initial submission of the application, CMP submitted a Letter of Understanding between CMP and the Passamaquoddy Tribe pertaining to a section of the corridor in Lowelltown Township. That Letter of Understanding stated that parties would negotiate in good faith the terms of a lease. The Letter of Understanding had an expiration date of January 31, 2018. At the request of Department staff, the applicant submitted a signed lease for the property, dated October 23, 2017. The lease term is 25 years and can be renewed. The lease has the signatures of representatives of the Passamaquoddy Tribe and CMP, but the copy submitted does not have a signature for a representative of the Bureau of Indian Affairs. These documents constituted sufficient showing of title, right, or interest in this portion of the proposed corridor for the Department to process the application. Prior to the start of construction, the applicant must submit to the Department a copy of the lease that includes the signature of a duly authorized representative of the Bureau of Indian Affairs. Because the Merrill Strip Alternative avoids the section of the corridor originally proposed to be located in Lowelltown Township, there is no need for CMP to have continuing title, right, or interest in that land.

Commented [A4]: This heading should be (3).

D. Public Hearing

The Department accepted CMP's permit application for the NECEC project as complete for processing on October 13, 2017. On November 17, 2017, the Department's Commissioner determined that a public hearing would be held on this project pursuant to the Department's Rule Concerning the Processing of Applications and Other Administrative Matters, 06-096 C.M.R. Chapter 2, § 7(B). The Commissioner delegated the authority to conduct and preside over the hearing to Christina Hodgeman, an employee of the Department. The Presiding Officer's role was to conduct an adjudicatory hearing by administering governing procedural statutes and regulations and develop the administrative record. The Presiding Officer's delegation did not include the ultimate decision-making authority, which was retained by the Commissioner.

On December 7, 2017, the Land Use Planning Commission (Commission) voted to hold a public hearing on the allowed use portion of the Certification process only, specifically with regard to whether the project is an allowed use within the Commission's Recreation Protection (P-RR) subdistrict. The Commission's role in the Department's proceeding would be to certify to the Department whether the project meets those land use standards administered by the Commission that are not duplicative of Department standards, and whether the project is an allowed use in the zoning subdistricts in which it is proposed. Utility facilities are allowed by special exception in the P-RR subdistrict. As originally proposed, the NECEC project crossed through three separate P-RR subdistricts, one around Beattie Pond, one near the upper Kennebec River crossing, and one near the crossing of the Appalachian Trail (AT). The Merrill Strip Alternative moved that portion of the project originally proposed in the P-RR Subdistrict around Beattie Pond outside of that subdistrict.

On June 27, 2018, the Department's Presiding Officer issued a notice setting July 19, 2018, as the deadline to submit petitions for leave to intervene. The Department received 23 petitions to intervene. On July 24, 2018, the Department requested more information from four of the petitioners and by July 31, 2018, three of those petitioners provided additional information, and one petitioner, the Sierra Club, withdrew its petition. On August 18, 2018, the Presiding Officer issued the First Procedural Order in the matter, and granted intervenor status to 22 parties. The parties granted intervenor status in the Department's proceeding were:

- 1. Old Canada Road National Scenic Byway (Old Canada Road)
- 2. Ed Buzzell
- 3. The City of Lewiston
- 4. Friends of the Boundary Mountains
- 5. The Appalachian Mountain Club (AMC)
- 6. Western Mountains and Rivers Corporation (WM&RC)
- 7. NextEra Energy Resources, LLC (Nextera)
- 8. Hawk's Nest Lodge
- 9. The Industrial Energy Consumer Group (IECG)
- 10. Natural Resources Council of Maine (NRCM)

- 11. The Town of Carratunk
- 12. The Maine State Chamber of Commerce
- 13. The International Brotherhood of Electrical Workers (IBEW)
- 14. Ashli Coleman
- 15. Maine Guide Services (MGS)
- 16. Brookfield White Pine Hydro, LLC (Brookfield)
- 17. Trout Unlimited (TU)
- 18. Chris Russell
- 19. The Nature Conservancy (TNC)
- 20. Maine Wilderness Guides Organization (MWGO)
- 21. The Conservation Law Foundation (CLF)
- 22. -Mike Pilsbury

The first pre-hearing conference was held on September 7, 2018. At the conference the parties were notified that a consolidated hearing would be held by the Department and the Commission to make the two processes more efficient for the agencies, the applicant, the intervenors, and members of the public. In the Second Procedural Order, issued on October 5, 2018, the parties were notified of a new Presiding Officer. Presiding Officer Christina Hodgeman had left her position with the State of Maine and the Commissioner designated Susanne Miller, another employee of the Department, as the Presiding Officer. The Second Procedural Order granted intervenor status to Wagner Forest Management, Ltd. (Wagner), an entity that was not included in the Department's First Procedural Order. The Second Procedural Order also outlined how intervenor groups would be grouped together and consolidated for purposes of making the hearing more efficient.

These groupings are described below:

Group 1: Friends of Boundary Mountains, MWGO, and Old Canada Road. These intervenors were all opposed to the project and were intervenors for the Department proceeding only.

Group 2: West Forks Plantation, Town of Caratunk, Kennebec River Anglers, MGS, Peter Dostie (Hawk's Nest Lodge), and Mike Pilsbury. These intervenors were opposed to the project. With the exception of West Forks Plantation, all of the members of this group were intervenors in both the Department and Commission proceedings. West Forks Plantation was an intervenor in the Department proceeding only.

Group 3: IECG; City of Lewiston; IBEW; Maine Chamber of Commerce; and the Lewiston/Auburn Chamber of Commerce. These intervenors were in support of the project. With the exception of the Lewiston/Auburn Chamber of Commerce, all of the members of this group were intervenors in both the Department and Commission proceedings. The Lewiston/Auburn Chamber of Commerce was an intervenor in the Commission proceeding only.

Group 4: NRCM, AMC, and TU. These intervenors were opposed to the project, and were intervenors in both the Department and Commission proceedings.

Group 5: Brookfield and Wagner Forest Management, Ltd. These intervenors were neither for nor against the project. Both were intervenors in the Department's proceeding, but Wagner was also an intervenor in the Commission's proceeding.

Group 6: TNC and CLF. These intervenors were neither for nor against the project and were Department-only intervenors.

Group 7: WM&RC was in support of the project and was an intervenor in both the Department and Commission proceedings.

Group 8: NextEra. NextEra was opposed to the project and was an intervenor in both the Department and Commission proceedings.

Group 9: Office of the Public Advocate (OPA). The OPA was neither for nor against the project, was granted intervenor status in the Department⁷ proceeding, and was granted status as a governmental entity in the Commission proceeding.

Group 10: Edwin Buzzell, and "Local Residents and Recreational Users," which included eleven individuals named in the Commission's Second Procedural Order. These intervenors were opposed to the project. Edwin Buzzell was an intervenor in both the Department and Commission proceedings. The remaining individuals were intervenors in the Commission proceeding only.

After consideration of input from the parties, the Department's Second Procedural Order identified the topics to be covered at the hearing. Those topics included:

- A. Scenic Character and Existing Uses 38 M.R.S. § 480-D(1), 38 M.R.S. § 484(3), Department Rules 06-096 C.M.R. Chapters 315 and 375, § 14: The applicant must demonstrate that the proposed activity would not unreasonably interfere with the scenic character, or existing scenic, aesthetic, recreational, or navigational uses, and that the development fits harmoniously into the natural environment.
 - i. Visual Impact Assessment and Scenic/Aesthetic Uses
 - ii. Buffering for Visual Impacts
 - iii. Recreational and Navigational Uses
- B. Wildlife Habitat and Fisheries 38 M.R.S. § 480-D(3), 38 M.R.S. § 484(3), and Department Rules 06-096 C.M.R. Chapters 335 and 375, § 15: The applicant must demonstrate that the proposed activity would not unreasonably harm any

⁷ While not explicitly stated in any of the Department's Procedural Orders, the Office of the Public Advocate was granted intervenor status in the Department's proceedings by the Department in a letter dated and signed August 31, 2018 by Presiding Officer Hodgeman.

significant wildlife habitat, freshwater wetland plant habitat, or threatened or endangered plant habitat.

- i. Endangered Species Roaring Brook Mayfly (RBM), Northern Spring Salamanders (NSS)
- ii. Brook Trout Habitat
- iii. Habitat Fragmentation
- iv. Buffer Strips around Coldwater Fisheries
- C. Alternatives Analysis 38 M.R.S. § 480-D (1) & (3), 38 M.R.S. § 484(3), Department Rules 06-096 C.M.R. Chapters 310, 315, and 335: The applicant must demonstrate that the proposed project would not unreasonably impact "protected natural resources" as defined by the NRPA, in light of practicable alternatives to the proposal that would be less damaging to the environment. Topics for the hearing also included evidence addressing 38 M.R.S. § 480-D-(8): The applicant must demonstrate that, with regard to the crossing of the outstanding river segment, no reasonable alternative exists that would have less adverse impact upon the recreational and natural features of the river segment.
- D. Compensation and Mitigation 38 M.R.S. § 480-D, 38 M.R.S. § 484(3), Department Rules 06-096 C.M.R. Chapters 310 and 375, § 15. The applicant must demonstrate compensation for unavoidable impacts to certain resources.
 - i. Coldwater Fisheries Habitats
 - ii. Outstanding River Segments
 - iii. Wetlands

On January 17, 2019, the Department and the Commission held a second pre-hearing conference to discuss logistics and planning for the hearing. At the conference, the Department and Commission stated that information in CMP's application was sufficient to move forward with the hearing process. Intervenors requested inclusion of greenhouse gas emissions as a topic to be considered at the hearing, maps listing the submissions on title, right, or interest for the project, clarification on the timing of the close of the record, and postponement of the hearing and the filings deadlines for pre-hearing filings. In response to the requests, the Presiding Officers:

- 1. Granted parties until January 24, 2019, to submit, in writing and with the statutory and regulatory basis, a request for greenhouse gas emissions to be one of the hearing topics. Other parties would be allowed to respond to those requests until January 31, 2019.
- 2. Reiterated that the Department and the Commission had determined that they had sufficient information from CMP to demonstrate title, right or interest.
- 3. Denied requests to postpone the hearing, but agreed to consider postponing the pre-hearing filing deadlines.
- 4. Clarified that the date the record would close had not yet been determined.

CMP stated at the pre-hearing conference that it would provide maps to all intervening parties regarding title, right or interest, <u>and provided</u> these updated maps on January 25, 2019.

On January 24, 2019, Intervenor Group 4 filed a written request to include greenhouse gas emissions as a hearing topic and Intervenor Groups 2 and 10 filed a letter in support of that request. In the February 5, 2019 Third Procedural Order, the Presiding Officer determined that greenhouse gas emissions would not be included as a hearing topic. However, intervenors and the general public would be allowed to submit evidence including comments, data, and reports on this topic until the close of the record.

On February 1, 2019, Intervenor Groups 2 and 10 submitted a Motion for Reconsideration, requesting to postpone the hearing and the deadlines for the pre-hearing filings. On February 4, 2019, Intervenor Group 4 submitted a letter in support of this motion. The Presiding Officer denied the February 1, 2019 Motion for Reconsideration in the February 5, 2019, Third Procedural Order and confirmed the dates for the hearing to be April 1 through April 5, 2019, at the University of Maine at Farmington. On March 19, 2019, a Motion to Delay the Hearing and Allow Additional Testimony was filed, based on information that was submitted on March 18, 2019 from the Maine Department of Inland Fisheries and Wildlife (MDIFW). On March 21, 2019, the Department and Commission issued a joint Sixth Procedural Order that denied the motion.

On March 25, 2019, CMP submitted 469 pages of exhibits and rebuttal testimony and included five new rebuttal witnesses. On March 26, 2019, the third pre-hearing conference was held, by telephone. During the call the establishment of a potential additional hearing date was discussed.

The Department and the Commission issued a Seventh Procedural Order on March 28, 2019. This Order confirmed that an additional hearing day would take place May 9, 2019. The Seventh Procedural Order also allowed the intervenors to file sur-rebuttal testimony in response to CMP's March 25, 2019, filings.

The Department conducted five days of public hearing from April 1 through April 5, 2019, with the Commission joining the hearing on April 2, 2019. Two evening sessions were devoted to receiving testimony from the general public. The testimony from both the parties and the public generally focused on the impacts of Segment 1. Many of the witnesses in opposition to the project testified that the applicant failed to meet the licensing criteria regarding impacts to scenic character, recreational impacts, impacts to brook trout habitat, and impacts to water quality from herbicide applications. Witnesses in support of the project testified that the proposed project meets the licensing criteria because it would not cause an unreasonable impact and the applicant has proposed adequate compensation for the wildlife, wetland and scenic impacts that will occur.

On April 3, 2019, during the April hearing week, Intervenor Groups 2 and 10 filed a motion requesting additional public hearing time be scheduled for cross-examination of

the applicant's engineers on questions that were deferred the first few days of the hearing. Many of the questions that were deferred were deferred to the applicant's and Group 3's sur-rebuttal witnesses who were not present during the April hearing. This motion was denied in the Ninth Procedural Order issued April 10, 2019. The order stated that time would instead be allotted for this purpose on the May 9, 2019 hearing date.

On April 19, 2019, the Department issued a Tenth Procedural Order in which the Department requested specific supplemental information from the Applicant to assist the Department with its analysis of the application and in an attempt to make the hearing process on May 9, 2019 more efficient.

The hearing continued on May 9, 2019, and the majority of testimony pertained to habitat fragmentation and the alternatives analysis, including the underground alternative. At the close of the May 9, 2019, hearing, the Presiding Officer allowed the record to remain open for specific limited evidence to be entered into the record by May 17, 2019, and responses from parties to that evidence until May 24, 2019. The record also remained open for written comments from the general public until May 20, 2019, and then the parties' responses to those written comments from the general public until May 27, 2019.

On June 27, 2019, the Department and Commission conducted separate site visits to sites of interest pertaining to the project.

On October 3, 2019, at the applicant's request, the Presiding Officers issued the 15th Procedural Order reopening the record to allow the applicant to amend its application to propose the Merrill Strip Alternative route around Beattie Pond. On October 7, 2019, the Presiding Officers issued the 16th Procedural Order outlining the process by which the agencies would gather evidence on the Merrill Strip Alternative and providing a deadline for the parties and the public to submit comments.

2. FINANCIAL CAPACITY

Pursuant to the financial capacity standard of Site Law, and Chapter 373, § 2, the applicant must demonstrate financial capacity to design, construct, operate, and maintain the proposed development in a manner consistent with state environmental standards and the provisions of Site Law. The applicant must have the financial capacity for all aspects of the development and not solely the environmental protection aspects. Evidence regarding financial capacity must be provided prior to a decision on an application, except, pursuant to 38 M.R.S. § 484(1), the Department may defer a final finding on financial capacity by placing a condition on a permit that requires the permittee to provide final evidence of financial capacity before the start of any site alterations.

The applicant submitted financial capacity materials and a capital cost estimate with the original September 2017 Site Law application materials.⁸ During the application review process, the applicant submitted the following revised data relating to financial capacity:

- A. On December 12, 2017, the applicant submitted a total revised project cost estimate of \$949,745,330. Line items were included for various aspects of the design and construction of the project and included \$73,405,592 for erosion control and access roads.
- B. On July 31, 2018, the applicant submitted revised financial capacity documents, but did not change the total project cost estimate.
- C. On August 13, 2018, a revised project construction schedule was submitted, but the total project cost estimate remained unchanged.
- D. On October 19, 2018, the applicant submitted a Site Law amendment application to incorporate horizontal directional drilling (HDD) of the line beneath the upper Kennebec River to avoid an overhead crossing. The applicant stated that the HDD alternative would not affect the line items or capital cost total of \$949,745,330.

The applicant proposed the project in response to a 2017 Request for Proposals for long-term contracts for clean energy projects issued by the Massachusetts Department of Energy Resources and the Electric Distribution Companies of Massachusetts. The proposed project was selected in 2018 as the winning bidder to deliver annually 9,450,000 megawatt-hours of clean energy generation. The applicant provided evidence demonstrating that the proposed project's costs will be recovered from Hydro-Quebec and Massachusetts electricity ratepayers in accordance with Federal Energy Regulatory Commission-approved transmission service agreements.

The applicant states that Central Maine Power Company and its parent companies, Avangrid, Inc. and Iberdrola, S.A., will finance the cost of the proposed project. This will be done using short-term and long-term debt financing and equity funding through retained earnings and capital contributions from Avangrid, Inc. The applicant submitted audited copies of Avangrid Networks, Inc. 2015 and 2016 Combined and Consolidated Financial Statements, and CMP's 2015 and 2016 Consolidated Financial Statement, as well as a letter of commitment to fund dated September 18, 2017, from Howard Coon, Vice President and Treasurer of Avangrid Management Company. These documents adequately demonstrate that the applicant will have adequate funds to construct, operate and maintain all aspects of the project.

In light of the significant cost associated with complying with the conditions of approval, prior to the start of construction, the applicant must submit additional information that confirms that it has the ability to finance the project at that time, including the ability to construct and operate the project in compliance with the terms and conditions of this Order. Prior to the start of construction, the applicant must submit evidence that it has

⁸ The applicant requested that the original cost estimate data be protected from disclosure as a trade secret under Chapter 2, § 6(B) of the Department's rules, to which the Department agreed. In the December 2017 submission and further cost estimate submissions, the applicant stated that the revised cost estimates did not constitute a trade secret.

been granted, to the extent necessary, a line of credit or a loan by a financial institution authorized to do business in this State or evidence of any other form of financial assurance consistent with Department Rules, Chapter 373, § 2(B), to the Department for review and approval.

Based on the information in the Department's administrative record, the Department finds that the applicant has demonstrated adequate financial capacity, provided the applicant:

• Submits evidence that it has been granted a line of credit or a loan by a financial institution authorized to do business in this State, or evidence of any other form of financial assurance consistent with Department Rules, Chapter 373, § 2(B), to the Department for review and approval prior to the start of construction.

3. TECHNICAL ABILITY

The applicant has a long history of operating and maintaining an electrical grid and the associated infrastructure. CMP is the largest transmission and distribution utility in Maine and serves 615,000 customers in southern, western, and central Maine. CMP currently operates and maintains over 2,536 miles of transmission lines and 254 substations, 63 of which are administered by ISO-NE.

Over the last 10 years, CMP has constructed approximately 500 miles of new transmission facilities in Maine. The applicant provided resume information for key persons involved with the proposed project and a list of projects CMP has successfully constructed. The applicant also retained the services of the following companies to assist in the permitting of the project.

- Burns and McDonnell for environmental matters, including noise
- Boyle Associates and Power Engineers for wetlands and vernal pool assessments
- T.J. DeWan and Associates for visual impact assessment
- MCBER and Daymark for economic consulting
- Powers Engineers for transmission line and substation design
- Dirigo Partners, Ltd. for real estate services

The Department finds that the applicant, through the combination of its institutional knowledge and experience, and its retained consultant expertise, has demonstrated the technical ability to develop the proposed project in compliance with Department standards.

4. NOISE

The Department's noise standards are set forth in Chapter 375, § 10. Section 10(B)(1) states that "when a development is located in a municipality which has duly enacted by ordinance an applicable quantifiable noise standard, which ... (1) contains limits that are

not higher than the sound level limits contained in this regulation by more than 5 decibels (dBA), and (2) limits or addresses the various types of noises contained in this regulation or all types of noise generated by the development, that local standard, rather than this regulation, shall be applied by the Department within that municipality for each of the types of sounds the ordinance regulates."

In those municipalities without a local noise standard meeting these criteria, the project is required to meet the Department's noise standards. Chapter 375, § 10 applies hourly sound pressure level limits (LAeq-Hr) at facility property boundaries and at nearby protected locations. Chapter 375, § 10(G)(16) defines a protected location as "any location accessible by foot, on a parcel of land containing a residence or approved subdivision" In addition to residential parcels, protected locations include, but are not limited to, schools, state parks, and designated wilderness areas.

The hourly equivalent level resulting from routine operation of a development is limited to 75 dBA at any development property boundary as outlined in Chapter 375, § 10(C)(1)(a)(i). The hourly equivalent sound level limits at any protected location varies depending on local zoning or surrounding land uses and existing (pre-development) ambient sound levels. At protected locations within commercially or industrially zoned areas, or where the predominant surrounding land use is non-residential, the hourly sound level limits for routine operation are 70 dBA daytime (7:00 a.m. to 7:00 p.m.) and 60 dBA nighttime (7:00 p.m. to 7:00 a.m.).

At protected locations within residentially zoned areas or where the predominant surrounding land use is residential, the hourly sound level limits for routine operation are 60 dBA daytime and 50 dBA nighttime. In addition, where the daytime pre-development ambient hourly sound level is equal to or less than 45 dBA and/or nighttime ambient hourly sound level is equal to or less than 35 dBA, "quiet location" limits apply. For such "quiet locations," the hourly sound level limits for routine operation are 55 dBA daytime and 45 dBA nighttime. At protected locations more than 500 feet from living and sleeping quarters, the daytime hourly sound level limits shall apply regardless of the time of day.

The Department finds that tonal sound exists if, at a protected location, one-third octave band sound pressure level in the band containing the tonal sound exceeds the arithmetic average of the sound pressure levels of two contiguous one-third octave bands by 5 dBA for center frequencies at or between 500 Hertz (Hz) and 10,000 Hz, by 8 dBA for center frequencies at or between 160 and 400 Hz, and by 15 dBA for center frequencies at or between 25 Hz and 125 Hz as outlined in Chapter 375, § 10(G)(24). For the purpose of determining compliance with the sound limits, 5 dBA shall be added to the observed levels of any tonal sounds that result from routine operation of the development, as outlined in Chapter 375, § 10(1)(d).

Several municipalities that the project passes through have their own noise regulations. The local regulations would be applied by the Department in place of the Department noise standards, provided that the local regulation meet the requirements of Chapter 375,

§ 10(B)(1), as described above. The municipalities with local regulations are: Lewiston, Greene, Leeds, New Sharon, and Pownal. None of these municipal ordinances contain provisions more restrictive than the Department's nighttime standard for quiet areas – 45 dBA. As a result, if the proposed transmission lines satisfy the nighttime quiet area standard in Chapter 375, § 10, they also will satisfy the ordinance requirements of these municipalities. (As described below, the proposed transmission lines satisfy the Department's nighttime quiet areas standard.)

Two municipalities in which the applicant proposes new or upgraded substations have their own noise standards, Pownal and Lewiston. Pownal's standard of 55 dBA, which is not limited to time of day, is more than 5 dBA higher than the Department's quiete area nighttime standard of 45 dBA, which is the Department standard that applies to the project at the substation locations in Pownal. As a result, the Department does not apply Pownal's standard. Lewiston's ordinance establishes a 50-dBA limit in residential areas for all times of day. As discussed below, the substation locations in Lewiston are not located in quiet areas, so under the Department's rules the 60-dBA daytime and 50-50-dBA nighttime standards would apply. Even applying a 5-dBA penalty to account for potential tonal sound, Lewiston's standard is not more than 5 dBA less restrictive than the applicable Department nighttime standard. As a result, the Department must apply Lewiston's standard of 50 dBA pursuant to Chapter 375, § 10(B)(1).

A. Overview of Project Sound

The applicant hired Burns & McDonnell to study and model transmission line and substation sound levels for the project and to compare the model results to the applicable sound level standards. The Department retained the services of Tech Environmental (TE) to conduct a peer review of the noise report.

(1) Construction Noise

Site Law, in 38 M.R.S. § 484(3)(A), exempts construction noise generated between the hours of 7 a.m. and 7 p.m. or during daylight hours, whichever is longer. The applicant has agreed to construct the project between 7 a.m. and 7 p.m., or during daylight hours with the exception of the HDD construction as the applicant proposed in its October 19, 2018 application amendment.

(2) Transmission Lines

The applicant proposes to use conductors that, under dry conditions, are nearly noise free. In high humidity and storm conditions these conductors would produce a slight crackling sound. The applicant modeled sound levels for the operations of new 345-kV AC and

⁹ See City of Lewiston's Code of Ordinances, Appendix A, Section 19 (most restrictive standard is 50 dBA in residential areas); Town of Greene's Code of Ordinances, Section 6-501.1 (most restrictive standard is 45 dBA between 10:00pm and 7:00am in residential zone); Town of Leeds' Code of Ordinances, Section 5.F.14 (most restrictive standard is 45 dBA between 10:00pm and 7:00am in residential zone); Town of New Sharon's Site Plan Review Ordinance, Section IV; and Town of Pownal's Site Plan Review Ordinance, Article 4 (55 dBA).

320-kV HVDC transmission lines, using the Bonneville Power Administration (BPA) Corona and Field Effects Program to calculate the expected sound from the transmission lines. Based on the BPA model results for the project, the applicant expects all sound levels produced by new and/or upgraded transmission lines associated with the project to remain within the levels allowed under Chapter 375, § 10. The applicant calculated the 320-kV HVDC and 345-kV transmission line conductor noise levels at the edges of the various rights-of-way (ROWs), in fair weather. The results showed the noise level at the closest ROW edge (75 feet) would be well below the applicable noise standards, with the maximum fair-weather level expected to be 28 dBA. During foul weather or when the moisture content in the air is higher, the applicant states that the expected maximum sound produced by a conductor that is part of the project is expected to be 41 dBA at the edge of the ROW. This sound level would be produced by a 345-kV line. The applicant notes this maximum is below the most stringent Department standard – a nighttime hourly sound level limit of 45 dBA.

The applicant's assessment and modeling results were reviewed by TE. In June 13, 2018 comments TE stated there was no supporting data in the reviewed materials for the acoustic modeling. TE further commented that the transmission line noise assessment should be updated to include tonal noise and discussion of the 5-dBA tonal sound penalty.

The applicant provided additional information on July 3, 2018. This information included the modeling assumptions and the amplitude of tonal noise.

The additional information demonstrated that under worst-case conditions, the maximum predicted sound level of 41 dBA at the transmission corridor ROW edge is not tonal in character and, thus, is below the Department's most restrictive limit. TE reviewed this information and, in its July 9, 2018 review memo, stated that the applicant's transmission line sound assessment was technically correct and complete.

(3) Substations

There are three existing substations that would be associated with the project – Maine Yankee Substation in Wiscasset, Surowiec Substation in Pownal, and Crowley's Substation in Lewiston – that do not require noise studies since the proposed modifications do not include the installation of significant noise emitting equipment or increase noise. The proposed project includes the construction of two new substations, the Merrill Road Converter Station in Lewiston and the Fickett Road Substation in Pownal; both include noise producing equipment. The proposed project also includes expansions at three existing substations at which the applicant does propose to install new noise producing equipment: the Larrabee Road Substation in Lewiston, Coopers Mills Substation in Windsor, and Raven Farm Substation in Cumberland.

At the two new substations, Burns & McDonnell personnel recorded ambient noise throughout the day and night to determine whether the areas would be considered quiet areas as defined in Chapter 375, $\S 10(C)(1)(v)$. The area around the Merrill Road

Converter Station was determined not to be a quiet area. The area around the Fickett Road Substation qualified as quiet area. Additionally, short-term measurements were performed as part of the noise survey to establish operational sound levels of the existing substations. Burns & McDonnell took measurements at the fence lines of the existing substations in the directions of the nearest protected areas.

a. Merrill Road Converter Station

The proposed Merrill Road Converter Station consists of converter transformers, valves, reactors, capacitors, and switches. The substation converts DC power to AC power. The applicant monitored ambient sound levels and stated that the area around the proposed converter station is not a quiet area, since the ambient daytime and nighttime hourly averages were 47 dBA and 39 dBA, respectively. The most restrictive Department standard, which applies to residential areas, would be a daytime limit of 60 dBA and a nighttime limit of 50 dBA. The City of Lewiston Code of Ordinances limits noise to 50 dBA during the day and night at the nearest residential property lines. Burns & McDonnell modeled the noise for this substation using CadnaA. The applicant's results showed that sound levels from the converter station would not exceed the applicable noise level standard, Lewiston's 50 dBA standard, at any of the adjacent residential property lines. The highest modeled result at any property line was 48.3 dBA.

TE reviewed the information and commented that the analysis did not include information on any possible tonal noise produced by the substation.

TE also stated that the analysis still needed the ground factor "G" used in the CadnaA modeling; octave band sound power levels for all noise sources used in the acoustic modeling; the CadnaA-predicted octave band sound levels, by source and the total, for receptor PL-5; and a discussion of tonal sound.

Burn & McDonnell responded to these data requests on July 3, 2018, providing the requested information and discussing Lewiston's ordinance. They reaffirmed the original modeling that showed the equipment selected will have sound levels no higher than 48.3 dBA at the nearest property line. This is under the City of Lewiston Ordinance standard of 50 dBA. TE reviewed this information and determined that the sound assessment was technically correct and complete and recommended that any new equipment installed at the Merrill Road Substation meet the sound power limits listed in Table 5-8 of the application.

b. Larrabee Road Substation

The applicant proposes to add a 345-kV line termination structure, a 345-kV circuit breaker, disconnect switches, instrument transformers, surge arrestors, buswork modifications, support structures, foundations, and modifications to the existing protection and control systems at the Larrabee Road Substation in Lewiston. According to the Burns & McDonnell noise study, the highest predicted sound level at a residential

property line pertinent to this substation is 43.1 dBA. Lewiston's ordinance sound level limit for this portion of the project is 50 dBA at the nearest residential property line.

TE reviewed this information and requested that the applicant provide the ground factor "G" used in the CadnaA modeling. Burns & McDonnell provided the requested information on July 3, 2018. TE reviewed this information and application materials and determined that the sound assessment is technically correct and complete. TE recommended that any permit issued by the Department require that new equipment installed at the Larrabee Road Substation meet the sound power limits listed in application Table 5-11.

c. Fickett Road Substation and Surowiec Substation

Given space constraints at the Surowiec Substation in Pownal, the applicant proposes to construct the Fickett Road substation, which is across Allen Road from the Surowiec Substation. The Fickett Road Substation would house a static synchronous condenser (STATCOM) device, which does produce sound. The expansion at the Surowiec Substation would not generate any additional sound. The applicant proposes to expand the existing Surowiec Substation to facilitate the STATCOM at the Fickett Road Substation. The applicant proposes to add a 345-kV line terminal, 345-kV circuit breakers, disconnect switches, instrument transformers, surge arrestors, buswork modifications, support structures, foundations, and modifications to the existing protection and control system. All existing Surowiec Substation equipment is excluded from the analysis since the substation was constructed prior to 1970, and therefore is not subject to the Site Law.

Burns & McDonnell took measurements at the fence line and surrounding areas of the Surowiec Substation where the Fickett Road Substation would be constructed. A long-term noise meter was installed near the proposed substation to monitor ambient noise. The data showed that the area surrounding the substation would be considered a quiet area according to Department criteria since the daytime sound levels are below 45 dBA. As a result, the Department's sound level limits would be 55 dBA during the day and 45 dBA during the night at the property lines. The nearest residential receiver is located 500 feet from the substation. The noise impacts were modeled using a CadnaA noise model. The noise sources were determined not to have a tonal component. The applicant determined that the substation would not exceed noise level standards at the adjacent property lines.

TE reviewed the information and requested additional information on June 13, 2018. This information included providing the ground factor "G" used in the modeling, providing the octave band sound power levels used for modeling, and explaining whether the 5-dB penalty was added or not added to the results.

Burns & McDonnell responded on July 3, 2018 to this request. Burns & McDonnell summarized in this response that the highest predicted sound level, without a tonal penalty, would be 41.9 dBA. TE determined that the sound assessment was technically

correct and complete and recommended that any new equipment installed at the Fickett Road Substation meets the sound power limits listed in Table 5-15 of the application.

d. Coopers Mills Road Substation

The applicant proposes to expand the existing Coopers Mills Substation located in Windsor. The expansion would require the addition of a 345-kV line termination structure, 345-kV circuit breakers, disconnect switches, instrument transformers, surge arrestors, buswork modifications, support structures, foundations, and modifications to the existing protection and control system. In addition, the substation work would require reconfiguration of the existing 345-kV lines. The project also requires the addition of a +/-200 MVAR STATCOM to provided dynamic reactive support. The addition of the STATCOM would include multiple noise sources, which would increase sound levels at the property line and beyond.

Burns & McDonnell took short-term measurements at the fence line and surrounding the area of the substation. A long-term noise monitor was installed near the substation to monitor ambient noise. The measurements confirmed that the substation area would be considered a quiet area. Therefore, sound level limits would be 55 dBA during the day and 45 dBA during the night at residential property lines. The noise was modeled using CadnaA. The sound level was assessed using the 5-dBA penalty for tonal noise. The applicant determined that the sound levels from the substation would need to be mitigated to meet the applicable noise level standards at two of the adjacent residential property lines. The applicant proposes to mitigate with two sound walls, a 20-foot tall wall next to the main transformer and a 10-foot tall wall next to the STATCOM cooling fans, to lower the predicted sound levels below 45 dBA, assuming new sources produce tonal sound. TE reviewed this information and requested the applicant provide the ground factor "G" used in the CadnaA modeling, verify that the three existing transformers were included in the CadnaA model, and provide a firm commitment to construct the two sound walls described in the response to Information Request #8.

The applicant responded to these requests on July 3, 2018. TE reviewed the additional information and determined that the sound assessment for the Coopers Mills Substation is technically correct and complete. TE recommended that any permit issued require that new equipment installed at Coopers Mills Substation meet the sound power limits listed in the application Table 5-19, and the installation of the sound walls, as proposed by the applicant, with final design supported by additional acoustic modeling using vendor-supplied octave band sound power levels.

e. Raven Farm Substation

The applicant proposes to expand the terminal at the existing Raven Farm Substation in Cumberland. The applicant would add a 345-/115-kV, 448-MVA auto-transformer and a breaker, and one half 115-kV bus at the existing Raven Farm Substation.

Burns & McDonnell took measurements around the existing substation to establish the ambient sound level, as there is currently no noise emitting equipment on site. The measurements showed that the area surrounding the Raven Farm Substation would not be considered a quiet area. At five monitoring points daytime ambient sound levels ranged from 45.3 to 50.2 dBA, with nighttime levels ranging from 42.4 to 46.4 dBA. Therefore, sound level limits would be 60 dBA during the day and 50 dBA during the night at residential property lines. Since the substation will produce tonal noise, a 5-dBA penalty was applied by Burns & McDonnell. The modeling results included in the original application predicted the highest sound level at a property line, including a 5-dBA penalty, would be 49 dBA. The applicant later supplemented its application with The Raven Farm Substation Sound Study, prepared by Burns & McDonnell and dated May 17, 2018. This sound study contained updated modeling results that showed the highest expected sound level, including a 5-dBA penalty, would be 44.6 dBA. This lower model estimate was the result of the applicant updating the transformer and associated sound pressure level. The transformer planned for in the sound study would emit less sound (75 dBA at 6 feet).

TE reviewed the Raven Farm Substation Sound Study and stated, in its July 9, 2018 review, that the study assessment is technically correct and complete. TE recommended that any permit by the Department require that the new transformer installed at the Raven Farm Substation meet the sound source limit for the base option listed in the study Table 6-1, a sound pressure level of 75 dBA at 6 feet.

B. Department Analysis and Findings

Based on the applicant's submissions, and with consideration of the comments provided by TE, the Department finds the applicant will construct the project between 7 a.m. and 7 p.m., or during daylight hours, with the exception of the HDD construction as the applicant proposed in its October 19, 2018 application amendment, and, therefore, will comply with the controlling statutory standard regulating construction noise. The Department finds the maximum sound generated by the new transmission lines proposed as part of the project will be approximately 41 dBA at the nearest edge of the ROW. This sound level is below the Department's most restrictive nighttime standard of 45 dBA and is also below the municipal standards in Lewiston, Greene, Leeds, and New Sharron.

With regard to the new substations and substation modifications, the Department finds the supplemented application materials assessing expected sound levels were complete and technically sound. The Maine Yankee Substation in Wiscasset, Surowiec Substation in Pownal, and Crowley's Substation in Lewiston, while part of the project, will not be modified in a way that will have a material impact on the noise generated at these facilities. The Department finds the project work at the Merrill Road Converter Station in Lewiston, the Fickett Road Substation in Pownal, the Larrabee Road Substation in

Lewiston, the Coopers Mills Substation in Windsor, and the Raven Farm Substation in Cumberland will satisfy the applicable standards of Chapter 375, § 10, including any applicable municipal ordinance provisions, provided the applicant:

- For any new equipment at Merrill Road, Larrabee Road, Fickett Road, and Coopers Mills-Road, installs equipment that meets the sound power limits listed in Appendix D, Table D-1 (incorporating the limits from the Site Law application, Tables 5-8, 5-11, 5-15, and 5-19);
- For any new equipment at Raven Farm, installs equipment that meets the sound power limit listed in Appendix D, Table D-1 (incorporating the base option listed in the Table 6-1 of the Raven Farm Substation Sound Study); and
- Installs sound walls at the Coopers Mills Road-Substation, as proposed, with the final design supported by additional acoustic modeling using vendor-supplied octave band sound power levels, and submits the final design and modeling results to the Department for review and approval prior to operation of the new equipment at the substation.

5. SCENIC CHARACTER

Site Law, 38 M.R.S. § 484(3), and NRPA, 38 M.R.S. § 480-D(1), both have standards pertaining to scenic impacts that must be satisfied in order to obtain a permit from the Department. Pursuant to section 484(3), an applicant must make adequate provision for fitting the proposed project into the existing natural environment and the development may not adversely affect scenic character in the surrounding area. Pursuant to section 480-D(1), an applicant must demonstrate that the proposed project will not unreasonably interfere with scenic or aesthetic uses of protected natural resources.

A. Overview – Visual Impact Assessment

To address the scenic impact criteria, the applicant submitted a Visual Impact Assessment (VIA) prepared by Terrence J. DeWan & Associates. The VIA examined the potential scenic impacts of the transmission line and related substation upgrades by describing in both narrative and graphic forms the changes to the visual environment that may result from the project. The initial VIA included photosimulations from 32 key observation points (KOP) and also noted efforts taken by the applicant to avoid, minimize, and mitigate visual impacts. Through the course of the review process, the applicant responded to questions and comments about the VIA and provided additional information, including 21^{10} additional photosimulations. These photosimulations were submitted to provide additional evidence concerning the project's impacts when viewed from additional locations and at various times of the year.

As explained in the VIA and outlined in the applicant's witnesses' testimony, preparing the VIA involved the following steps:

¹⁰ At several KOP multiple photosimulations were created depicting views of the project from different directions.

- Develop project understanding
- Determine viewshed study area of potential effect (APE or study area) based on viewing distances
- Research, inventory, and identify scenic resources
- Prepare viewshed analysis to determine potential project visibility
- Perform fieldwork to document regional and local landscape character and site context
- Determine project visibility from identified scenic resources
- Prepare photosimulations from key observation points and other identified locations
- Rate potential visual impacts based on evaluation of photosimulations and other analysis
- Determine sensitivity levels of user groups
- Determine visual impact
- Develop mitigation recommendations

With regard to the identification of potentially impacted scenic resources, the applicant focused its assessment and inventory development on the area within three miles of the project, and within five miles if it would be viewed from an elevated area. These three/five-mile radius areas served as the APE. Within these areas the applicant identified scenic resources within the categories identified in Chapter 315, § 10.

The VIA also included a viewshed analysis. This consisted of both a topographic analysis and a landcover analysis. In the topographic viewshed analysis the areas from where the project would be visible were identified assuming no obstructions other than topography. Trees, buildings, and other obstructions were assumed not to exist. The landcover viewshed analysis incorporated structures and assumed 40-foot-tall vegetation in forested areas.

Based on identified scenic resources and important public vantage points, the viewshed analysis, additional desktop analysis and GIS review, and on-the-ground field work, the applicant identified KOPs. The KOPs were intended to capture areas where the visual impact could be greatest, as well as reflect the project as a whole along the entire corridor and at the related substations. The applicant developed photosimulations for the KOPs. As noted above, through the course of the Department's review process additional photosimulations were produced, beyond the original 32. In total, 53 photosimulations were submitted, including photosimulations for the following locations¹¹:

Segment 1

- Beattie Pond, Lowelltown Township
- Wing Pond, Lowelltown Township
- Rock Pond, T5 R6 BKP WKR

¹¹The photosimulations for the Brookfield Alternative at Harris Dam are not included in this list.

- Fish Pond, Hobbstown Township
- No. 5 Mountain, T5 R7 BKP WKR
- Parlin Pond, Parlin Pond Township
- Coburn Mountain, Upper Enchanted Township
- Route 201, Johnson Mountain Township
- Attean View Rest Area, Jackman
- Kennebec Gorge, Moxie Gore (two locations with six different photosimulations)
- Moxie Stream, Moxie Gore

Segment 2

- Moxie Pond, East Moxie Township (three locations)
- Mosquito Mountain, The Forks Plantation (two locations)
- Troutdale Road, The Forks Plantation
- AT, Pleasant Pond Mountain, The Forks Plantation
- AT, Troutdale Road, Bald Mountain Township
- AT, Bald Mountain, Bald Mountain Township

Segment 3

- Wyman Lake Recreation Area, Pleasant Ridge Plantation
- Route 201, Moscow
- Route 8, Anson
- Route 2, Farmington
- Androscoggin Riverlands State Park, Leeds
- Merrill Road, Lewiston
- Sandy River, Farmington
- Carrabassett River, Anson

Segment 4

- Riverside Drive, Auburn
- Fickett Road Substation, Pownal

Segment 5

- Route 194, Whitefield
- Route 27, Wiscasset
- Route 1, Wiscasset
- West Branch Sheepscot River, Windsor (two locations)

Using the Department's Basic Visual Impact Assessment Form, the applicant rated impacts to the following resources as Minimal, Moderate, or Strong. This assessment was part of the VIA included in its initial application. Summaries of the applicant's descriptions of the impacts to each of these resources and the applicant's ratings are set forth below. Design changes made in the course of the review process that modified some ratings are also noted below.

Segment 1

- A. Beattie Pond Beattie Pond is a remote pond with one camp located at the southeast end. Initially, the applicant proposed a transmission structure -to be located 1,300 feet away, which would have been visible from the pond. At the request of the Commission and prior to the hearing, the applicant reduced the height of that one structure. The applicant subsequently, on September 18, 2019, proposed a different route called the Merrill Strip Alternative, which would wirtually-eliminate the project's visibility from Beattie Pond. With the Merrill Strip Alternative route, existing vegetation and topography will result in an increased screen all-of structures, conductors, and shield wires from view. (No wisibility, as revised Minimal)
- B. Wing Pond Wing Pond is located in Lowelltown and Skinner townships and is recognized as a remote pond. The pond does not have a scenic resource rating, as identified in the *Maine Wildlands Lake Assessment*¹². Views of the project from Wing Pond would include two structures and conductors within 1.75 miles. The visible portions of the project are within a recently harvested area visible from the pond. The contrast with the surrounding vegetation would be minimal since the structures would be self-weathering steel. (Minimal/Moderate)
- C. Rock Pond Rock Pond is a 124-acre pond with a boat launch and campsites. The pond is rated as a Significant scenic resource by the *Maine Wildlands Lake Assessment*. Project structures and the corridor would be visible approximately 3,100 feet away from the Pond. A portion of the corridor visible from Rock Pond crosses Gold Brook, which contains Roaring Brook Mayflies (RBM) (see Finding 7 for a discussion of RBM).

At the request of the MDIFW several structures near Gold Brook were elevated to allow for full canopy vegetation within 250 feet of the brook.

This increased the visibility of those structures from Rock Pond. To minimize the visual impacts, the applicant proposed to taper vegetation in a portion of the corridor and use non-specular conductors¹³ in the areas where they would be visible from Rock Pond. (Moderate)

D. Fish Pond – Fish Pond is located in Hobbstown Township and is rated a Significant scenic resource by the *Maine Wildlands Lake Assessment*. A boat launch is located on the northwestern end of the pond adjacent to a small campground; overall, the shoreline appears undeveloped. Project visibility would be very limited to the tips of up to four structures above the tree line at a distance of three to four miles. The corridor clearing will not be visible. (Minimal)

¹² The *Maine Wildlands Lake Assessment* is a report prepared by the Land Use Regulation Commission on June 1, 1987 that evaluated, among other things, the scenic quality of 1,500 lakes in the unorganized areas of the State. ¹³ Segal explained in her testimony on April 1, 2019 that non-specular conductors are pre-treated so they reduce potential reflectivity from sunlight.

Commented [A5]: CMP's October 10, 2019 filing states: "There will be minimal visibility of the Merrill Strip Alternative. The tops of two structures will be slightly visible from a very limited area (approximately 8% of the pond) on the northern shore of Beattie Pond. Due to the distance at which the structures may be potentially visible from within the area approximately 0.76 mile to nearly one mile) and the use of self-weathering steel, the overall visual impact to the pond will be minimal and the impact to recreational users of the pond will be negligible. The Alternative route will result in an increased visual buffer and further reduce the visual impact on Beattie Pond when compared to the previous route through the Beattie Pond P-RR subdistrict. (See Photosimulation 60 on page 9 and comparison on page 10 of Exhibit C-1)."

- E. No. 5 Mountain No. 5 Mountain is located in T5 R7 BKP WKR and within the Leuthold Forest Preserve. The summit can be reached via an existing trail that is open to the public. The VIA states the project structures and corridor would be visible approximately 3.9 miles away. (Minimal/Moderate)
- F. Parlin Pond Parlin Pond is a 543-acre pond with a boat launch, numerous camps, and a rest area. The pond is rated as a Significant scenic resource by the *Maine Wildlands Lake Assessment*. Project structures and the corridor would be visible at a distance of 1.8 miles or more from the pond. (Minimal/Moderate)
- G. Coburn Mountain Also known as the Upper Enchanted Township Unit, the viewpoints from Coburn Mountain were designated as Scenic Viewpoints of State or National Significance in 2010. This designation was established for the purposes of evaluating impacts from grid-scale wind energy projects. The project corridor and numerous structures would be visible from the summit, which is accessible via a multi-use trail maintained by the Bureau of Parks and Lands. A small building, communications infrastructure, and a solar array are located at the top of the mountain. From the summit, the corridor will be visible in the midground looking toward the west side of the mountain at distances of 1.2 to 3.0 miles, and in the background (4+ miles) to the southeast. During the application review process, to address concerns and minimize the visual impact of the project, the applicant proposed tapering the vegetation in the corridor within the viewshed of Coburn Mountain and using non-specular conductors ¹⁴ in this same area. (Moderate)
- H. Route 201 Also known as the Old Canada Road Scenic Byway, Route 201 is designated as both a State and a National scenic byway. The 78.2-mile long byway will be impacted by both Segments 1 and 2. The VIA states that the project poles and conductors will be visible to motorists traveling on the byway. The applicant proposed to plant a vegetative, visual buffer along both sides of Route 201 at both crossing locations. (Moderate)
- I. Attean View Rest Area From the rest area located on Route 201 the project will be visible at a distance of 7+ miles. (Minimal)
- J. Upper Kennebec River The applicant modified the application, which originally included an overhead crossing, to incorporate an underground crossing using HDD technology. In the initial VIA with an overhead crossing the applicant rated the visual impact as Strong. Utilizing HDD to run the transmission line under the river results in no project visibility from the Kennebec River. (No visibility, as revised)

¹⁴ Use of non-specular conductors in the viewshed of Coburn Mountain was not discussed in the original VIA but is identified as part of the project in Exhibit CMP-5-C, pg. 7, included with Segal direct testimony for the hearing.

K. Moxie Stream – This stream has been designated as scenic in the *Maine River Study*. The corridor and conductors would be visible at approximately 760 feet on the upstream side and approximately 1,000 feet on the downstream side. The line is proposed to be sited to avoid an adjacent open wetland which minimizes visibility from upstream. The structures would be set back more than 400 feet from the stream on the north side and more than 550 feet on the south side. Riparian vegetation, consisting of non-capable species, along the stream bank is proposed to be maintained and would minimize views into the corridor. The applicant also proposes to use non-specular conductors at this crossing. The VIA concludes the limited duration of exposure and screening effects of preserved vegetation result in minimal visual impact. (Minimal)

Segment 2

A. Moxie Pond – Moxie Pond is a 2,370-acre pond rated as an Outstanding scenic resource by the *Maine Wildlands Lake Assessment*. The pond contains a boat launch and over 100 camps. The proposed project will be co-located in the existing transmission corridor that parallels the western side of Moxie Pond before crossing the southern end of the pond. The existing corridor will be widened by 75 feet to accommodate the proposed transmission line. The majority of new transmission structures adjacent to the pond will be screened by existing vegetation and will not be visible from the pond; however, the tops of approximately 12 structures will be visible from various areas of the pond. The widened corridor will be visible from two locations; the existing corridor is visible from these same locations today.

The VIA concludes the presence of the existing transmission line and the screening effects of shoreline vegetation result in the project having a minimal visual impact on the lake. (Minimal)

- B. Mosquito Mountain Mosquito Mountain is located on private land but used informally by the public for hiking. The widened corridor and numerous structures would be visible from the mountain, adjacent to the existing transmission line that is presently visible. The VIA concludes that in the context of the existing transmission line and existing roads seen from the mountain the visual impact of the proposed line would be minimal. (Minimal)
- C. Troutdale Road This private road is used to access camps on Moxie Pond, as well as several other roads in the Town of Moscow. The road runs parallel to, and within the cleared corridor of, the existing transmission line. The VIA states the project structures and widened corridor would be visible from the road. The longest duration of exposure would be for approximately 1,000 feet where the

¹⁵ This order requires taller vegetation at the Moxie Stream crossing. (See Section 7 and Appendix C, Table C-1.) This taller vegetation will increase buffering of the corridor beyond the riparian vegetation and screening evaluated by the applicant in the VIA.

road is located within the eastern side of the existing cleared corridor. Due to the project being co-located with the existing corridor the VIA concludes the impact on motorists' continued use and enjoyment of the Troutdale Road, and other private roads in the area where there would be less exposure to the project than along the Troutdale Road, would be minimal. (Minimal)

- D. Appalachian Trail (AT) Approximately 14.5 miles of the AT is located within five miles of Segment 2. The proposed Segment 2 transmission line would be colocated with an existing 115-kV transmission line. The applicant evaluated the visual impact on AT hikers from three general areas: Pleasant Pond Mountain summit area, Troutdale Road area, and Bald Mountain summit area. Within these three general areas a total of 11 viewpoints were reviewed (including from Middle Mountain). From Pleasant Pond Mountain the VIA concluded there would be minimal visual impact due to the viewing distance and the resulting minimal project visibility. From the areas near Troutdale Road, including where the AT runs along the road, the VIA concludes that the visual impact from the AT would be minimal to moderate due to the presence of the existing transmission line corridor. The applicant proposes to plant a buffer along Troutdale Road to minimize the visual impact of the corridor. From the Bald Mountain summit area, the VIA concludes there would be minimal visual impact due to the partial screening and viewing distance. (Minimal/Moderate)
- E. Wyman Lake Recreation Area This area is located in Pleasant Ridge Plantation and managed by Brookfield Renewables and the Bingham-Moscow Chamber of Commerce. The project will be visible from the recreation area and from Wyman Lake, but will be located near the existing Wyman Hydroelectric Dam, which impounds Wyman Lake and also is visible from the lake and recreation area. (Minimal)

Segment 3

- A. Road Crossings Segment 3 will cross several State roads, including Route 2 in Farmington, Route 8 in Anson and Route 201 in Moscow. A total of 64 road crossings are proposed in this segment. At 39 of these crossings, motorists currently see an existing 115-kV transmission line. At the remaining 25 crossings, motorists currently see two 115-kV transmission lines. The widened corridor and structures would be visible at the crossings. The VIA states the project will result in a minimal increase in overall visual impact. (Minimal)
- B. Androscoggin Riverlands State Park This 2,675-acre State Park includes 12 miles of Androscoggin River frontage. The park provides river access for boating and numerous all-season trails. The existing corridor crosses a portion of the park, and the widened corridor and new structures would be visible to park visitors from land. The corridor would not be not-visible from the river. (Moderate)

C. Merrill Road – The existing corridor crosses Merrill Road in Lewiston. The proposed new Merrill Road Converter Substation would be located approximately 2,400 feet north of the road and would not be visible from the road where the corridor crosses it. There are no scenic resources with potential views of the converter station. The applicant proposes to plant a vegetative, visual buffer around this substation. (Moderate)

Segment 4

- A. Riverside Drive The rebuilt line crosses Riverside Drive and then the Androscoggin River in Auburn. The existing 45-foot high H-frame structures would be replaced by 75-foot high single pole supports. (Minimal)
- B. Fickett Point Substation The applicant proposes to construct a new 345-kV STATCOM substation in Pownal. The substation would be located on a 4-acre parcel, approximately 60 feet from Allen Road and 115 feet or more from Fickett Road. The substation would be visible to motorists and several homes on the north side of Fickett Road. The applicant proposed to plant a vegetative, visual buffer along the south side of Fickett Road. (Moderate)

Segment 5

- A. Route 27 The new transmission line would be located between two existing lines, within the current corridor. The new structures and conductors would be visible as the line crosses Route 27 in Wiscasset. No new corridor clearing is proposed. (Minimal)
- B. Route 194 The new transmission line would be located between two existing lines, within the current corridor.

The new structures and conductors would be visible as the line crosses Route 194 in Whitefield. No new corridor clearing is proposed. (Minimal)

Additionally, the applicant analyzed potential impacts for the following sites and determined there would be limited impact (typically minimal or no impact), or determined there is no reasonable public access to the site:

Segment 1

- No. 5 Bog
- Snowmobile Trails, ITS 89 and ITS 87
- Moose River
- South Branch Moose River
- Iron Pond
- Egg Pond
- Grace Pond, Upper Enchanted Parcel

Commented [A6]: CMP did not propose a vegetative, visual buffer as the Converter Station will not be visible from Merrill Road. Site Law Application Section 6.1.9 at 6-15.

Commented [A7]: See August 10, 2018 Response to Request for Basic Visual Impact Forms (Appendix A) for NECEC.

Segment 2

- · Arnold Trail Historic District
- Snowmobile Trail, ITS 86
- Moxie Mountain
- Baker Stream

Segment 3

- Monument Hill
- Clearwater Pond
- Dead River
- Allen Pond
- Berry Pond
- Sterry Hill
- Nutting
- Snowmobile Trails, ITS 82, 84, 87, and 115
- Kennebec Valley Trail
- Mount David

Segment 4

- No Name Pond
- Androscoggin River
- Randall Road Ballfields
- Snowmobile Trails, ITS 87 and 115

Segment 5

- Montsweag Dam Preserve
- Residential structures

The VIA also included proposed mitigation strategies, including the use of self-weathering single-steel poles to minimize visual contrast, particularly in Segment 1 where structures would often be seen against a wooded backdrop.

Co-location in Segments 2 and 3 also was noted as minimizing new clearing. Mitigation strategies at substations described in the VIA included limiting additional clearing and development of buffer plans. Through the course of the Department's review of the application, additional mitigation measures were incorporated into the overall VIA, including vegetation tapering at Coburn Mountain and Rock Pond, non-specular conductors at Rock Pond, Coburn Mountain, and Moxie Stream, and plantings at several locations, such as Route 201 crossings.

Finally, on May 1, 2019, the applicant submitted supplemental testimony in response to the Department's request in the Tenth Procedural Order. In this supplemental filing the applicant evaluated both whether taller poles within Segment 1 would be visible and their potential visual effect. The focus of this evaluation was the area surrounding the nine priority areas for habitat connectivity identified by TNC through pre-filed witness

testimony.¹⁶ In the vicinity of these nine areas the applicant identified resources with potential views, identified whether taller poles with a height of 130 feet would be visible from the resource, and discussed the nature of any impact.

The applicant states that its VIA demonstrates that the project meets the standards for scenic character in both Site Law and NRPA.

B. Peer Review Comments and Applicant Response

The Department hired James F. Palmer of Scenic Quality Consultants (SQC) to provide comments to the Department on the portions of the application related to scenic character. SQC reviewed the VIA included by the applicant in its initial submission and provided the Department with comments dated August 20, 2018. SQC also visited several of the project photosimulation locations on September 5, 2018. The Department reviewed and considered SQC's August 20 comments, as well as subsequent comments provided by SQC dated November 23, 2018. SQC's comments presented a number of questions, including about the viewshed analysis, whether scenic resources were appropriately identified, and the process for selecting key observation points for which photosimulations were produced. These questions all related to the overall value of the applicant's VIA in assessing potential visual impacts of the project.

Following consideration of each set of comments from SQC, the Department asked the applicant for clarification or for additional information the Department determined was needed to further its review of the project's visual impacts. The applicant provided responses to Department information requests on October 19, 2018 and December 7, 2018. Both responses contained sections focused on assessment of visual impacts, including responses to the questions posed by the Department and comments prepared by SQC. Through this process the applicant significantly supplemented its VIA.

In addition to providing comments on the applicant's VIA, SQC also reviewed and commented on an Upper Kennebec River rafting experience survey commissioned by the applicant. The survey, which involved individuals rafting on the Upper Kennebec and Dead Rivers in the fall of 2018, was completed in response to comments SQC offered at the time the applicant was proposing an overhead crossing of the Upper Kennebec River. The survey was designed to help assess the impact an overhead crossing would have on rafters. SQC offered its interpretation of the survey results – that rafters would notice degraded scenery from an overhead crossing, but would still enjoy the rafting trip and

¹⁶ The purposed of the taller poles would be to allow taller vegetation to grow within the corridor under the conductors, improving wildlife connectivity. Wildlife impacts, including the benefits of taller vegetation within the corridor, is discussed in Section 7.

¹⁷ The August 20 and November 23, 2018 comments noted here were the most lengthy and substantive comments offered by SQC. SQC provided additional comments, including on the Merrill Strip Alternative and the Winter Recreation Survey conducted by Sandra Howard, PhD, as well as on potential wildlife impact mitigation strategies in April 23, 2019 comments.

¹⁸ On December 9, 2018, the applicant submitted revised Attachments E and F to its December 7, 2018 response to the Department's additional information request. Both attachments relate to the assessment of visual impacts. Reference in this Order to the applicant's December 7 submission includes the December 9 revisions.

likely return for a repeat rafting experience. SQC also commented that the survey may have value when assessing the visual impacts at other locations, particularly for people engaged in water-based activities, and saw the survey as indicating that people believe seeing power lines has a greater negative impact on the river recreation experience than most other human activities, including wind turbines, clear cuts, and bridges. The applicant responded to SQC's comments, explaining why it believed SQC overstated the relative visual impact of transmission lines relative to other types of human activity or development.

C. Public Hearing Evidence and Written Comments

(1) Applicant Testimony

During the applicant's testimony, Terrence DeWan and Amy Segal, from Terrence J. Dewan & Associates, explained their methodology for the creation of the VIA. In their testimony they stated that they evaluated scenic impacts within three miles of the corridor, which is standard procedure. In addition, they also evaluated impacts beyond that, out to five miles from the corridor, for scenic resources as defined in Chapter 315. DeWan and Segal provided testimony on methods used to avoid, minimize, and mitigate the impacts to the numerous affected scenic resources. Some of these methods include: avoiding ridge lines; planting visual buffers in the corridor along the Old Canada Road (Route 201); using non-specular conductors to avoid reflecting sunlight; tapering vegetation around Rock Pond and the areas visible from Coburn Mountain to minimize the line contrast between the corridor and the surrounding forest; and using self-weathering steel poles to maximize landscape compatibility.

DeWan and Segal testified that in their professional opinion, the project would not have an unreasonable adverse effect on the scenic character of the area and would fit harmoniously into the environment. The applicant also testified that the proposed compensation plan adequately compensates for any unavoidable impacts to recreational use of all the scenic resources impacted by the project.

(2) Intervenor Testimony

Group 1 argues that the impact to the Old Canada Road Scenic Byway extends beyond what is visible from the road. In testimony, Robert Hayes argues that travelers coming to the byway come for the entire experience, not just for driving. In his view, the purpose of the byway is to promote tourism in the area and part of that promotion is the scenic beauty of the Upper Kennebec and Moose River valleys, as well as Coburn Mountain. He contends that the project will diminish the proud character of the area resulting in decreased tourism and traditional economic activity.

Groups 2 & 10 argue that the applicant's VIA is inadequate, pointing to comments of SQC in its review memos pertaining to the project. They also contend that the applicant should have conducted user surveys of snowmobilers utilizing the trails in and around the project area near The Forks and argue that this omission is a fatal flaw in the application.

Groups 2 & 10 witnesses who testified that the project would have a serious impact on the recreational use of the area because many of their clients would no longer come to the area due to the negative scenic impact of the transmission line.

A witness for Group 3, Robert Meyers, the Executive Director of the Maine Snowmobile Association, testified that the snowmobile clubs that make up the association have many miles of trails located in power line corridors. He further testified that he has never received a complaint from a snowmobiler about viewing transmission lines.

A Group 4 witness, Dr. David Publicover, testified that the applicant had not adequately buffered the new transmission line from views that would be experienced by users of the AT. He suggested that this could be accomplished by relocating the trail and recommended that this be a condition of approval if the proposed project is approved.

Group 7 witnesses testified that the applicant's proposal to run the proposed transmission line under the Upper Kennebec River addressed the most significant scenic impact and that based on their familiarity with the character of the area of the proposed corridor, experience in the outdoor recreation industry, and other steps the applicant took to site the project to minimize visual impacts, the project will not have an adverse impact on existing scenic, aesthetic, and recreational uses of the area surrounding the project.

(3) Public Testimony and Written Public Comments

Many of the written and oral comments the Department received from members of the public related to the scenic impact of the project, particularly from Segment 1.

A large majority of the comments in opposition to the project contained statements that the scenic impacts of the proposed project would be unreasonable. Often these comments were general in nature without focusing on potential impacts at specific locations. When reference was made to specific locations, the impacts to views from Coburn Mountain and the Old Canada Road were commonly noted. Many of the comments received by the Department in support of the project that mention scenic impacts state that the scenic impacts are outweighed by the benefits of the project in terms of a reduction in greenhouse gas emissions.

D. Department Analysis and Findings

(1) Regulatory Framework

Site Law, 38 M.R.S. §§ 484(3) and 487-A(4), and NRPA, 38 M.R.S. § 480-D(1), both have standards pertaining to scenic impacts that must be satisfied in order to obtain a permit from the Department. Site Law prohibits development that will "adversely affect" scenic character, while NRPA prohibits activity that will "unreasonably interfere" with existing scenic and aesthetic uses. The criteria of the two laws reflect a similar intent in that they both allow development or activity that will result in a visual impact, but when this impact is too great an applicant fails to satisfy the review criteria. This is reflected in

the corresponding NRPA and Site Law rules, both of which specify that the applicant's burden is to demonstrate that there would be no "unreasonable adverse" impacts or effects and the Department's assessment is on that basis. Ch. 315, §§ 1 & 4 and Ch. 375, § 14(B) & (C).

When reviewing scenic impacts under NRPA and evaluating whether an impact is unreasonable, the Department is guided in part by Chapter 315, § 9. This section provides:

The Department's determination of impact is based on the following visual elements of the landscape:

- A. Landscape compatibility, which is a function of the sub-elements of color, form, line, and texture. Compatibility is determined by whether the proposed activity differs significantly from its existing surroundings and the context from which they are viewed such that it becomes an unreasonable adverse impact on the visual quality of a protected natural resource as viewed from a scenic resource;
- B. Scale contrast, which is determined by the size and scope of the proposed activity given its specific location within the viewshed of a scenic resource; and
- C. Spatial dominance, which is the degree to which an activity dominates the whole landscape composition or dominates landform, water, or sky backdrop as viewed from a scenic resource.

In making a determination within the context of this rule, the Department considers the type, area, and intransience of an activity related to a scenic resource that will be affected by the activity, the significance of the scenic resource, and the degree to which the use or viewer expectations of a scenic resource will be altered, including alteration beyond the physical boundaries of the activity. 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. An application may be denied if the activity will have an unreasonable impact on the visual quality of a-protected natural resources as viewed from a scenic resource even if the activity has no practicable alternative and the applicant has minimized the proposed alteration and its impacts as much as possible through mitigation. An "unreasonable impact" means that the standards of the NRPA, 38 M.R.S.A. § 480-D, will not be met.

Site Law similarly requires the Department to evaluate whether a scenic impact is unreasonable. The corresponding Site Law rules instruct the Department to consider all relevant evidence as part of its evaluation, including evidence on whether:

- A. The design of the proposed development takes into account the scenic character of the surrounding area;
- B. A development which is not in keeping with the surrounding scenic character will be located, designed and landscaped to minimize its visual impact to the fullest extent possible;
- C. Structures will be designed and landscaped to minimize their visual impact on the surrounding area;
- D. The plans for the proposed development provide for the preservation of existing elements of the development site which contribute to the maintenance of scenic character.

Chapter 375, § 14(B).

The Site Law rules do not contain a section similar to NRPA's Chapter 315, § 9, which identifies more specific elements to be considered that guide the Department in determining whether a scenic impact is unreasonable. Finding the guiding concepts in Chapter 315, § 9 instructive to the Department's charge under Site Law in evaluating visual impacts, the Department considers the same elements for evaluating visual impacts set out in Chapter 315, § 9 when evaluating the same type of impacts under Site Law. ¹⁹ As noted above, while similar, NRPA and Site Law are not identical. The Department's evaluation of visual impacts under NRPA focuses on impacts to existing scenic uses. As specifically set forth in Chapter 315, scenic impacts under NRPA are evaluated from those public resources and public lands used by the public, defined as "scenic resources." Ch. 315, §§ 5(H) and 10.

The Department's review of visual impacts under Site Law is broader. Under Site Law the Department must consider whether the applicant has made adequate provision for fitting the proposed project harmoniously into the natural environment and whether the proposed project would adversely affect scenic character in the municipality or in neighboring municipalities. As a result, in reviewing the project the Department evaluated potential visual impacts from locations fitting the NRPA definition of scenic resources, as well as from other areas where the project would be visible to the public, including from privately owned land. Through evaluating the project from these many vantage points, the Department is able to evaluate the project as a whole and assess both whether the project unreasonably impacts existing scenic uses and whether it adversely affects scenic character of the area. For the purpose of this Order, where the Department finds the project will not have an unreasonable adverse effect on scenic uses or character

¹⁹ When applying this general framework as part of its Site Law review, the Department does so without focusing on scenic resources as specifically defined in Chapter 315. The general framework includes consideration of the elements of landscape compatibility, scale contrast, and spatial dominance when evaluating visual impacts, as well as consideration of context, such as the type of area, significance of the area, and viewer expectations.

it finds the scenic impact standards in both NRPA and Site Law, where applicable, are satisfied.

(2) Sufficiency of the VIA

The burden rests with the applicant to demonstrate that its proposal satisfies the visual impact standards under Site Law and NRPA. The applicant's VIA is an important component of its application with respect to visual impacts. Along with the original VIA, supplemental information provided in response to questions and comments on the original VIA, including from the Department and the consultant it retained, became part of the overall VIA. The Department evaluated the sufficiency of the overall VIA, guided by Chapter 315, § 7 and Chapter 375, § 14(C), which address the components of VIAs.

The applicant selected an Area of Potential Effects (APE) of three miles, extending to five miles from elevated viewpoints. As explained in the VIA, the project would be considered to be in the foreground when within 0 to 0.5 miles from the observer, in the midground at a distance of 0.5 to three miles, and in the background at a distance of greater than three miles. At distances greater than three miles, changes to the landscape are highly visible only if they present noticeable contrast in form or line. While poles could be visible to some observers when in the background, the corridor itself, depending on the angle of the observer relative to the corridor, is more likely to be noticeable. The APE is tailored accordingly, extending to three miles everywhere and to five miles where viewpoints are elevated, making the ability to see poles or wires in the background more likely and identification of the corridor, which typically will have trees on both sides, particularly along Segment 1, easier. This approach is the APE the Department — informed by decades of experience applying Site Law and NRPA — typically requires for large-scale projects such as the present one.

In its comments, SQC observed that the APE distances for the transmission wires and poles are in general agreement with the literature, but expressed uncertainty about whether those distances were sufficient to evaluate the visual impact of the corridor. It was not clear to SQC at the time of initial comments to what extent the applicant had considered visibility of the corridor (as opposed to just the structures in it) when selecting the APE. In its October 19, 2018 response to a Department information request, the applicant explained where and how corridor visibility had been considered and accounted for in photosimulations. Also, additional photosimulations were provided on December 7, 2018 and January 9, 2019, showing the corridor in the winter, when most visible, from Coburn Mountain and elsewhere. This responsive material and accompanying photosimulations allowed evaluation of the APE with respect to the corridor. Based on the evidence in the record, the Department finds the APE is appropriately sized for the size, scope, and nature of the project, recognizing its location, including the location of Segment 1 in a primarily forested, largely undeveloped area.

Within the APE, identifying locations from which the project would be visible and then assessing the visual impact from key locations is a central component of the VIA. SQC's comments and the applicant's responses assist with review of the sufficiency of the VIA

in this area. SQC expressed uncertainty about whether the VIA evaluated impacts from the appropriate places. SQC posed questions about the applicant's viewshed analysis, identification of scenic resources, and selection of key observation points – the points for which photosimulations were created.

The applicant's viewshed analysis includes one analysis based on topography only and another analysis assuming the presence of vegetation, structures, and other obstructions. SQC questioned the data used to reflect forested conditions in the second (landcover) viewshed analysis. While SOC stated the forest cover height of 40 feet used by the applicant was consistent with professional practice, SQC pointed to different and more recent data reflecting the location of forest cover that could have been used. SQC acknowledged, however, that the precision of the viewshed analysis in and of itself was not particularly significant. The significance of the viewshed analysis was dependent on how it was used. SOC believed the landcover viewshed analysis was central to the applicant's identification of locations within the APE from which to evaluate the scenic impacts of the project. Reliance on the viewshed analysis, for example, could mean a place could incorrectly be assumed to be screened from the project. SQC pointed to the fact that roughly half of the key observation points selected by the applicant for photosimulations, because the project would be visible from those points, are not points identified on the landcover viewshed map. SQC stated that this reflected the limited value of the viewshed analysis.

The Department concurs with SQC on its observations about how the viewshed analysis was used as part of the VIA and notes that the relative role of the viewshed analysis in the overall identification of key observation points could have been more thorough in the original VIA. However, the explanation provided by the applicant in its December 7, 2018 response adds important clarity.

The applicant noted that the landcover viewshed analysis was just a starting point and that for Segments 1 and 2, recognizing forestry patterns change, a topographic viewshed analysis also was used. Vegetation was not included in this analysis. Additionally, the viewshed analysis (both landcover and topographic) was supplemented by Google Earth aerial imagery for 2016 to determine where harvesting operations may have recently altered visibility. The applicant explained that while field investigations started with locations where it appeared there would be views of the project, its consultants collected GIS data, conducted on-line research to identify scenic resources, reviewed aerial imagery, and field checked viewshed maps. The table listing scenic resources submitted by the applicant shows the extensive field work done by the applicant, including site visits to locations where viewshed mapping suggested no visibility. The Department finds SOC's comments helpful and informative; they identified the limitations of the landcover viewshed analysis completed by the applicant. The Department also finds the applicant recognized the value and limitations of the landcover viewshed analysis and appropriately used the analysis, in conjunction with field work and other tools and analysis, as part of the overall VIA. This is supported by the fact that the applicant appropriately identified many KOPs outside the landcover viewshed.

NRPA requires evaluation of visual impacts from scenic resources. While the term scenic resource is defined in Chapter 315, § 5(H), in its review of the applicant's VIA, SQC questioned whether the applicant may have failed to identify scenic resources within the APE. For example, in its August 20, 2018, comments SQC wondered whether all public roads, cemeteries, and land included in Maine's Open Space Tax Law program qualify as scenic resources. The Department notes that privately owned lands, by virtue of inclusion in the Open Space tax program, are not converted to "public natural resources" or "public lands." However, certain cemeteries (those on public land) and public roads (those with notable scenic views) are scenic resources. In its December 7, 2018 submission, the applicant expanded its analysis to include these resources and provided a comprehensive list of all identified scenic resources in its Attachment F, Scenic Resources Chart. The Department finds the applicant identified the scenic resources within the APE, consistent with the Department's expectations for a VIA as laid out in Chapter 315, § 7.

The applicant selected KOPs and prepared photosimulations from these points to illustrate what observers see from these vantage points presently and what they would see if the project were constructed. These points reflect worst-case scenarios and, by including KOPs across the entire project, also reflect the project as a whole. The initial VIA included photosimulations from 32 KOPs. Through the course of review, 21 additional photosimulations were added²¹, including:

- One photosimulation depicting the tapered vegetation proposed at Rock Pond, and
- Thirteen photosimulations at ten locations showing snow cover conditions.

While the initial submissions by the applicant on this issue were lacking in thoroughness, the submission of additional information in response to questions and comments is not unusual during project review. The Department finds the resulting package of photosimulations is robust and allows full evaluation of the project, including transmission structures and wires, the corridor, and substation, and under various conditions (including snow cover and leaf-off). The Department recognizes the project has drawn considerable public attention and generated extensive comment from intervenors and the public, including from individuals who live and recreate in the area of the project. Much of the evidence presented by intervenors and testimony and written comments submitted by members of the public has addressed the potential visual impacts from various locations. Particular areas of focus in the evidence are the Upper Kennebec River crossing, Coburn Mountain, Rock Pond, several areas along the Spencer Road, the Appalachian Trail, Old Canada Road (Route 201), and Beattie Pond. These are among the places focused on by the applicant in the VIA.

 $^{^{20}}$ The applicant continued to update this chart, for example, submitting an updated Attachment F on January 30, 2019.

²¹ During the course of the Department's review of the project, the applicant submitted photosimulations that supplemented its initial VIA and were for alternatives that are not part of the final proposal, including four photosimulations for the Brookfield Alternative and four photosimulations for a three-structure design for an overhead crossing of the Upper Kennebec River.

In addition to the identification of scenic resources and KOPs, and the development of photosimulations, the overall VIA describes the significance of visual impacts from various locations, addresses uses of the area and viewers expectation, and discusses proposed measures to avoid and minimize impacts to scenic resources, including: use of self-weathering poles, co-location of segments with existing transmission line corridor, tapering in certain areas, reducing pole heights in certain areas, and planting buffer vegetation in select areas to minimize impacts looking up a corridor and at the Fickett Road substation. The applicant's supplemental testimony also addresses the potential visibility of and associated visual impact of taller poles in certain areas along Segment 1. The Department finds the VIA, with the supplementary evidence submitted, was developed in a manner consistent with Chapter 315, § 7 and Chapter 375, § 14(C) and is sufficient to enable evaluation of whether the project satisfies the visual impact standards in NRPA, 38 M.R.S. § 480-D(1), and Site Law, 38 M.R.S. § 484(3).

(3) Evaluation of Scenic Impacts

In evaluating the scenic impacts of the proposed project under Site Law, 38 M.R.S. § 484(3), and NRPA, 38 M.R.S. § 480-D(1), the Department considered all relevant evidence in the record, including the application and supplementary filings by the applicant, information gathered during the public hearing, the written comments received, the comments of the independent scenic consultant, and the evidence gathered directly by Department staff. The Department staff visited the project area several times in 2018. In addition, on June 29, 2019, the Commissioner, Presiding Officer, Assistant Attorney General, and Department staff conducted a site visit.

The Department evaluated the scenic impact of the project as a whole, as well as from specific vantage points along the length of the project.

This evaluation includes consideration of the potential visual impact of taller poles, transmission structures with a height of 130 feet, within Wildlife Areas identified in Appendix C and required by this Order as explained in Section 7. As SQC commented with regard to taller poles, recreators in the forest will not have views of taller poles and will not encounter a cleared corridor. The taller poles are intended to allow the growth of vegetation within the corridor. Potential visual impacts of taller poles would occur in two situations, open waters and rivers associated with wetlands and elevated viewpoints.

The following discussion and analysis focus on the key locations and topics identified by the Department, its consultant, the applicant, the intervenors, and members of the public during the course of the Department's review.

a. Upper Kennebec River Crossing

The section of the Upper Kennebec River where the applicant originally proposed an overhead crossing is nationally known for its whitewater rafting with approximately 40,000 people a year booking trips with local rafting companies to float this section of the river. Initially, the applicant proposed an overhead crossing utilizing a five-structure

design. The conductors, shield wires and the tops of at least two structures would have been visible from the Kennebec River. The applicant redesigned the crossing to eliminate two of the structures in an attempt to reduce the visibility of the project from the river. After the early portions of its review, and review of public input submitted to that point, on May 7, 2018, the Department sent the applicant a letter expressing its concerns with an overhead crossing of the Kennebec River and the scenic impact it would have on existing recreational use of the area. It is unlikely the Department could have found an overhead crossing in this area satisfied the scenic impact standards in NRPA and Site Law.

In October 2018, the applicant amended its application and proposed to utilize a HDD to install the transmission line under the river. With this design, none of the project elements will be visible from the river, although some area of reduced vegetation may be visible from the river.

Based on the change from an overhead crossing to a HDD crossing with no project visibility from the Upper Kennebec River, the Department finds that the proposed project will not have an unreasonable adverse effect on scenic uses or character of the Upper Kennebec River.

 Spencer Road, Hardscrabble Road, and Other Logging Roads Near Segment 1

These roads, located on private land, were constructed and are maintained to support the commercial forestry operations in the area. It is not uncommon for an individual traveling these roads to see evidence of recently harvested areas or logging equipment, as well as scenic vistas. There even may be areas where a harvest opens up a scenic view from the logging road that was not there prior to commercial forestry operations. Although a person may travel a private land management road and enjoy the surrounding scenic qualities or even travel such a road specifically for the scenery, private roads do not qualify as scenic resources under NRPA. They are neither a public natural resource nor public land.

Under Site Law, scenic impacts to the public from private property may be considered. With regard to land management roads, Maine has a long tradition of private timberland owners allowing members of the public, by permission, to access their timberland for recreational purposes, as well as to reach points more conveniently accessed by travelling private logging roads. The granting of this permission to access and travel across private property does not establish an expectation that any such traveler will enjoy a particular view. Reasonable viewer expectations are a factor considered by the Department when applying the scenic standards in Site Law and untouched forest is not a reasonable expectation when traveling roads used for forest management and harvesting. Some views of a transmission line with low-growth or tapered vegetation would not be sharply out of character along a land management road. The Department declines to interpret the concept of reasonable viewer expectations under the Site Law as including -an expectation of certain scenic character when traveling on a private road across private

property, by permission. There is no indication that the Legislature intended the Site Law to have that result, which could have a chilling effect on the long tradition of public access to private land in Maine. The Department finds the project will not have an unreasonable adverse effect on scenic uses or character of the Spencer Road, Hardscrabble Road, or the other impacted private land management roads, including as a result of the installation of taller poles in the Wildlife Areas identified in Appendix C.

c. Coburn Mountain

The initial VIA contained only photosimulations with leaf on conditions. On September 4, 2018, the Department requested additional information, including photosimulations depicting the project when snow covered the ground. In response to this request, on October 19, 2018, the applicant submitted photographs taken by an unknown person in 2004 from the top of Coburn Mountain. The Department, in a November 5, 2018 letter, again requested the applicant produce photosimulations with snow cover conditions and stated that the October 19, 2018 submission was not satisfactory. On December 7, 2018, the applicant submitted the requested photosimulations, including simulations from the top of Coburn Mountain. The Department finds that the snow-cover photosimulations from the top of Coburn Mountain depict the project as a highly visible cleared area that is not compatible with the existing landscape because the cleared, snow-covered corridor differed significantly from the existing surroundings, and the cleared, snow-covered corridor becomes the dominant landform due to the contrast between it and the primarily forested areas surrounding it.

To mitigate this impact, on January 9, 2019, the applicant proposed to taper the vegetation in the corridor for an approximately 2.2-mile section of corridor that is visible from Coburn Mountain.

Instead of clearing the full width of the 150-foot-wide corridor, tapering retains increasingly taller vegetation within the corridor as the distance from the wire zone increases. Under the proposed tapering, the wire zone – the 54-foot-wide, middle section of the corridor centered under the two conductors — would be cleared during construction and allowed to regrow with noncapable vegetation up to a height of approximately 10 feet, but immediately outside the wire zone, vegetation up to 15 feet tall would be maintained, with vegetation height increasing to 35 feet at the edges of the corridor. (Appendix C contains a further description of tapering.) Within this same section of the corridor the applicant also proposed to use non-specular conductors.

The Department received numerous comments from the parties, as well as interested persons, concerning scenic impact, generally, and from the summit of Coburn Mountain, specifically. Intervenor Groups 1, 2, and 10 all testified that the scenic impact from the top of Coburn Mountain in general, and particularly the impact to snowmobilers' use and enjoyment of Coburn Mountain, would be adversely impacted by the project. These groups provided testimony regarding the amount and value of the recreational use of Coburn Mountain, especially for the snowmobiling community. Intervenor Group 2 witness Greg Caruso testified that the adverse scenic impacts to views from the trails

around Coburn and Johnson Mountains would severely affect his snowmobiling business. He described this area as the "mecca" of snowmobiling in Maine. Others provided similar testimony. It is not clear whether those offering testimony on the visual impact of the corridor from Coburn Mountain considered how tapering would affect this impact.

Intervenor Group 3 witness Robert Meyers, the Executive Director of the Maine Snowmobile Association, testified that the project would not adversely affect snowmobilers' enjoyment of the area. Meyers stated that many of the existing snowmobile trails in Maine are located along transmission lines and that he has never heard a complaint from the members of his organization about having a view of a power line

The Department finds compelling the evidence that the project, as originally proposed, would have an adverse impact on the users of Coburn Mountain, particularly snowmobilers. The applicant's proposal to taper vegetation in the area visible from the summit, as well as to use non-specular conductors, significantly reduces the visual impact of the project. Tapering softens the edge of the corridor and makes the corridor less visible overall. The addition of tapered vegetation reduces the spatial dominance of the project and improves its compatibility within the landscape. This is shown in the photosimulations with snow cover. A fully cleared, 150-foot-wide corridor is the dominant feature in the landscape. The tapered corridor, in contrast, is no longer dominant, and is just one of the features of the landscape seen from the summit of Coburn Mountain, and no more prominent, for example, than an existing land management road.

Any taller poles needed to achieve the minimum required vegetation height in the Wildlife Areas identified in Appendix C would not be visible from Coburn Mountain.

The Department finds that the project will not have an unreasonable adverse effect on scenic uses or character of Coburn Mountain, provided the applicant:

- Tapers the vegetation in the corridor within the viewshed of Coburn Mountain (between structures #3006-634 and #3006-616), and
- Uses non-specular conductors within the viewshed of Coburn Mountain (between structures #3006-634 and #3006-616).

d. Number 5 Mountain, T5 R7 BKP WKR

Number 5 Mountain is owned by TNC and is located 3.9 miles from the project. TNC has developed a parking area, a large informational map, and a trail to the top of the mountain. TNC invites members of the public to hike the mountain. No. 5 Mountain is within the Leuthold Preserve, which is collaboratively managed by TNC, Forest Society of Maine, and the Maine Bureau of Parks and Lands. Access to the trailhead parking area for No. 5 Mountain is over the privately-owned Spencer Road, a land management road owned by a third party. The applicant identified the mountain as a scenic resource as a result of being part of the preserve.

The corridor and structures, located at a distance of 3.9 miles, will be visible from the summit of No. 5 Mountain. The project will have a moderate impact as a line zigzagging within the scenic view. However, since the structures will not be silhouetted against the sky backdrop, the project lines are not a significant object in the viewshed. Additionally, taller poles within Wildlife Area 2 would be eight miles from No. 5 Mountain and would not affect the view from the mountain due to this distance. The Department finds the overall scenic impact to be minimal; the project will not have an unreasonable adverse effect on scenic uses or character of No. 5 Mountain.

e. Beattie Pond

Beattie Pond is a remote pond developed with a single camp that is accessed by a private road. The applicant's original proposal included standard poles heights (approximately 100 feet tall) in the area near Beattie Pond. At the request of the Commission, one of these structures was redesigned to be shorter. As redesigned, the visibility of the project from the pond would be limited to just the very top of that structure. On September 18, 2019, the applicant submitted a petition to reopen the record to allow it to modify the application to change the proposed route and use the Merrill Strip Alternative. As described in Section 1, this alternative moved the project out of the P-RR Subdistrict around Beattie Pond and virtually eliminated the visibility from the pond. Existing vegetation and topography would further screen the project from view when compared with the original proposal. Within Wildlife Area 1, taller poles may be needed to achieve the required minimum vegetation height. This Wildlife Area does not include the structures closest to Beattie Pond, which would be visible if increased to a height of 130 feet. Wildlife Area 1 is outside of the viewshed of Beattie Pond. Based on the applicant's proposal to use the Merrill Strip Alternative, the Department finds that the project will not have an unreasonable adverse effect on scenic uses or character of Beattie Pond.

f. Rock Pond

Rock Pond is a 124-acre pond with a boat launch and campsite. Project structures and the corridor would be visible approximately 3,100 feet away. The portion of the project that is most visible from Rock Pond is the area where the corridor is perpendicular to the view from the pond, when an individual is looking northwest and up the corridor. The applicant's revised plan incorporates tapering vegetation along this section of the corridor. This minimizes the visibility of the corridor, making is it much less prominent and improving compatibility with the landscape. The applicant also proposes to use non-specular conductors in this area where the project is visible from the pond. This further reduces visual intrusion. The Department notes that in contrast to Coburn Mountain, the Department received very few comments from users of Rock Pond, or individuals concerned about the view from the pond. In addition, the Department staff, the Commissioner, Assistant Attorney General, and the Presiding Officer visited Rock Pond during their June 29, 2019 site visit. During that visit the existing conditions were compared with the photosimulations contained in the record.

The Wildlife Areas closest to Rock Pond are Wildlife Areas 3 and 4. The Department finds the applicant's supplemental testimony demonstrates taller poles in these <u>Wildlife Area 3 areas</u> will not be visible from Rock Pond. Wildlife Area 3 corresponds with TNC's priority area 3 and Wildlife Area 4 corresponds with a portion of TNC's priority area 4, but not the portion of this area that would be visible from the pond if taller poles were used.

Based on the applicant's VIA, evidence concerning potential impacts to uses of Rock Pond, and the site visit, the Department finds the project will not have an unreasonable adverse effect on scenic uses or character of Rock Pond, provided the applicant:

- Maintains 35-foot vegetation in Wildlife Areas 3 and 4,
- Tapers the <u>remainder of the</u> vegetation in the corridor within the viewshed of Rock Pond (between structures #3006-731 and #3006-729), and
- Uses non-specular conductors within the viewshed of Rock Pond (between structures #3006-7311 and #3006-724).

g. Old Canada Road (Route 201)

The Old Canada Road Scenic Byway is a 78.2-mile long section of Route 201. People experience the byway when traveling by motor vehicle. The project is perpendicular to and intersects the Old Canada Road in Johnson Mountain Township. The project will introduce a moderately incompatible line to the landscape when it crosses Route 201. Due to a rise in the roadway, when traveling northwest the line will be silhouetted against the scenic backdrop. However, it appears as a small object and is insignificant in dominance. Motorists will see the project for a very short time as they drive by (approximately 30 seconds when traveling south and 60 seconds when traveling north), compared to the overall time it takes to travel the entire scenic byway, which is approximately 78 miles long. In Moscow, the crossing is not perpendicular to the road, it crosses at an angle, and it is co-located with another transmission line.

The existing corridor will be widened by 75 feet. From the roadway, the additional cleared corridor and several structures will be visible. The new structures are a moderate color difference from the surrounding landscape and the existing wooden transmission line poles. The new structures will introduce minimally incompatible lines to the landscape. Because this crossing is very close to the Wyman Dam and its associated electrical infrastructure, the view is not sharply out of character from other views in the vicinity. The applicant proposes to add buffer plantings at both crossings to minimize visibility down the corridor from the road.

The project will also be visible from two other areas along the byway; however, these views do not involve the corridor crossing the road. In Parlin Pond Township a field on the west side of the road will allow an intermittent view of the corridor for southbound motorists for approximately 15 seconds of travel time. As the photosimulations show, existing distribution lines running along Old Canada Road also may be visible in the

Commented [A8]: Attachme nt I of CMP's December 8, 2018 Response to the MDEP November 5, 2018 Additional Information Request showed the change in view associated with taller structures to accommodate full height vegetation at Gold Brook (Structures 731-735) and tapering to minimize the visual impact on the shoulder of Three Slide Mountain (in between Structures 735 and 737), and concluded that approximately 13 structures will be visible in the Rock Pond viewshed.

foreground. Northbound motorists will not have a view of the project at that location, and the project will not be visible from the rest area in this township. The second viewpoint that is not a crossing is from the Attean View Rest Area in Jackman. While visible from the scenic viewpoint, the Department finds the scale of the structures will be minimal and the spatial dominance will be insignificant as the project will be more than seven miles away from this rest area.

None of the Wildlife Areas will be visible from Old Canada Road.

Based on the minimal time a motorist will have views of the corridor, the scale of the structures involved in comparison to the landscape, and the proposed buffer plantings, the Department finds the project will not have an unreasonable adverse effect on scenic uses or character of the Old Canada Road, provided the applicant:

 Plants and maintains vegetated roadside buffers at the Old Canada Road (Route 201) crossing in Johnson Mountain Twp and in Moscow.

h. Moxie Stream

The project, including the corridor, transmission lines and structures are discussed in the VIA and summarized above. The applicant proposes to use non-specular conductors to reduce the reflectiveness of the wires from the stream. In addition, the applicant originally proposed additional buffer plantings following the clearing for construction. However, the topography in the area enables retaining vegetation up to the height of 35 feet across the entire corridor within 100 feet of the stream. In response to Department questioning at the hearing, the applicant acknowledged this could be achieved without taller poles. This taller vegetation, required in this Order to minimize wildlife impacts, and identified as Wildlife Area 10, also would minimize the scenic impact and eliminate the need for the additional planting originally proposed by the applicant.

The Department finds the project will not have an unreasonable adverse effect on the scenic uses or character of Moxie Stream, provided the applicant:

- Maintains a minimum vegetation height of 35 feet within 100 feet of Moxie Stream (Appendix C lists the Wildlife Areas where taller vegetation is required, including at Moxie Stream), and
- Uses non-specular conductors within the viewshed of Moxie Stream (between structures #3006-542 and #3006-541).

i. Appalachian Trail

The applicant evaluated the scenic impacts of the project on the AT from three general areas: Pleasant Pond Mountain summit area (including Middle Mountain); Troutdale Road area, where the trail crosses the line in three locations; and the Bald Mountain summit area. Within these three general areas the applicant examined 11 viewpoints.

- AT, Pleasant Pond Mountain summit area, The Forks Plantation. The new transmission line will be visible from the mountain at a distance ranging from 2.7 to 6.5 miles. The project will create a minimally incompatible line in the background. The conductors may be more visible in the afternoon when sunlight reflects off the lines. This impact may be reduced through the use of non-specular conductors. The Department finds the visual impact will be minimal from the Pleasant Pond Mountain summit area due to viewing distance and the resulting minimal project visibility, provided the applicant uses non-specular conductors within the viewshed of the summit area, including Middle Mountain.
- AT, Troutdale Road area, Bald Mountain Township. The widened corridor and new structures will be clearly visible from the AT, which runs on Troutdale Road for 0.2 miles. Additionally, the corridor will be visible at a perpendicular angle to the trail where it crosses the southwest corner of Moxie Pond. The Department finds that, although the new structures and widened corridor will increase the scale of intrusion to the landscape, it is subordinate when considered with the existing road and transmission line (which affect the expectations of the users in this area), provided the applicant plants and maintains the proposed buffer vegetation along Troutdale Road.
- AT, Bald Mountain summit area, Bald Mountain Township. At the point closest to the AT at this location, the co-located transmission line will be visible at a distance of 2.8 miles. The widened corridor will be visible at a distance of 5.1 miles. When viewed from the summit area, the widened corridor will create a moderately incompatible line within the context of the existing viewshed along the west side of Moxie Pond. Additionally, due to the height of the structures, the lines will be a moderately incompatible line in the midground. The conductors will be the most visible project component, especially in the morning when the sun reflects off of the lines. This impact can be minimized with non-specular conductors. On June 29, 2018, the applicant submitted revised plans proposing a lowered height for the structures along Moxie Pond, which will minimize the scenic impact from both Bald Mountain and Moxie Pond.

The Department finds the visual impact from the Bald Mountain summit area will be minimal due to the viewing distance, partial screening, and the resulting minimal project visibility, provided the applicant uses non-specular conductors within the viewshed of the summit area and shorter poles along Moxie Pond.

The Department finds the project will not have an unreasonable adverse effect on the scenic uses or character of the AT, provided the applicant:

- Uses non-specular conductors within the viewshed of the Appalachian Trail (between structures #3006-529 and #3006-458);
- Plants and maintains vegetated roadside buffers along Troutdale Road; and
- Uses shorter poles along Moxie Pond (between structure #3006-529 and #3006-458).

j. Other Scenic Resources and Vantage Points Along the Corridor

Other scenic resources and vantage points along the corridor evaluated by the Department include the following:

Segment 1

- Wing Pond, Lowelltown Township. Two structures and lines are visible approximately 1.75 miles from the pond. No clearing will be visible from the pond. The structures do not introduce any incompatible lines or shapes to the sky backdrop and are subordinate when seen against the backdrop of Smart Mountain.
- Fish Pond, Hobbstown Township. No corridor clearing will be visible from the pond. The structures do not introduce any incompatible lines or shapes to the sky backdrop and are largely obscured by existing vegetation.
- Northern Forest Canoe Trail, Hobbstown Township, T5 R7 BKP. Four structures may be visible to paddlers from Fish Pond and the line will be visible during a portage on Spencer Rips Road and Spencer Road. As discussed above, the scenic impact on Fish Pond will be minimal. The structures do not introduce any incompatible lines or shapes to the sky backdrop and are largely obscured by existing vegetation. While portaging on both roads, there may be intermittent views of the project. The scenic impacts will be minimal to moderate.
- Parlin Pond, Parlin Pond Township. The project will have a moderate impact as an incompatible line crossing the shoulder of Coburn Mountain and continuing to the northwest. Additionally, one structure will appear as a silhouette line against the sky. Overall from this pond, the project will be compatible with the landscape given the viewing distance of 1.8 to 2.8 miles and only a single silhouetted pole will be visible.
- Iron Pond, T5 R6 BKP WKR, Hobbstown Township. The top of one structure will be visible, approximately 2,700 feet from the pond. This impact will be minimal.
- Toby Pond, Hobbstown Township. The pond is not a rated waterbody. With taller structures within Wildlife Area 5, two poles would be visible from the pond, with one of these silhouetted against the sky. This impact will be minimal.
- Whipple Pond/Whipple Brook, T5 R7 BKP WKR. As demonstrated in the applicant's supplemental testimony, no structures would be visible from Whipple Pond, including any taller structures within Wildlife Area 5. Where the corridor crosses Whipple Brook, the taller vegetation required in Wildlife Area 5 would screen the poles on either side of the brook and eliminate a view down the corridor. In front of the campsite located on Whipple Brook south of the corridor, a single taller pole might be visible. Overall, the visual impact of the project on Whipple Pond and Whipple Brook, including any taller poles within Wildlife Area 5, will be minimal.
- Egg Pond, Bradstreet Township. The top of one structure, located 332 feet from the pond, will be visible. Given the inaccessible nature of the pond, and the insignificance of the single structure in the overall viewshed, the scenic impacts from the project for this site are minimal.

- Little Wilson Hill Pond, Johnson Mountain Township. The top of two structures will be visible, approximately 1,300 feet from the pond. This impact will be minimal.
- South Branch Moose River, Skinner Township. In response to questions by Department staff at the public hearing, the applicant testified that due to the topography in this location, without changing pole heights, only vegetation taller than 35 feet will need to be cut along the river. Such a change from the proposed plan will reduce project visibility, resulting in a significantly mitigated, moderate visual impact. Even if taller poles were used as part of Wildlife Area 2, the taller vegetation would continue to help screen the taller poles by preventing a view down a cleared corridor.
- Cold Stream, Johnson Mountain Township. As a requirement of this Order, the applicant will be required to maintain 35-foot tall vegetation within 100 feet of this stream. This may require the installation of taller poles on both sides of Cold Stream. (See Wildlife Area 7 in Appendix C, Table C-1.) Poles and wires will be visible from the stream regardless of final pole height. The taller vegetation will minimize visual impacts by buffering the view of the corridor from the stream.

Segment 2

- Moxie Pond, East Moxie Township. The co-located project lines and structures will be visible near the west side of the pond. The applicant modified the design of the project to reduce the height of the structures and lines so that the majority of the structures are screened from view from the pond. The redesigned project will not be silhouetted against the sky backdrop and the project is not a significant object in the viewshed. The Department finds the visual impact will be moderate.
- Mosquito Mountain, The Forks Plantation.²² The transmission line will be visible
 to the northeast and east when viewed from the scenic overlook. Some clearing
 for the widened corridor also will be visible. However, the transmission line will
 be partially screened by existing vegetation and is subordinate in the whole
 landscape composition.
- Troutdale Road, The Forks Plantation. The transmission line will be visible immediately adjacent to the existing line but will be only briefly visible to passing motorists. This road is a private land management road accessed by the public with permission, like Spencer Road discussed above. With the existing line there and user expectations, including forest management activities, the Department finds that this impact will not unreasonably impact the scenic character of the area.
- Wyman Lake Recreation Area, Pleasant Ridge Plantation. The Department finds that, although the proposed project is visible from the Recreation Area, with approximately four structures and conductors visible, it is subordinate in the landscape composition to the existing dam that impounds the lake and visible

²² Mosquito Mountain is privately owned and contains an informal hiking trail used by the public. The Department does not consider this elevated viewpoint to <u>be</u> a scenic resource as that term is defined in Chapter 315. Regardless, the project will not have an unreasonable adverse effect on scenic uses or character of Mosquito Mountain.

from other vantage points on the lake. The visual impact of the project on the recreation area is minimal.

Segment 3

- Route 8, Anson. The co-located transmission line will cross Route 8 in Anson. The new line will require an additional 75 feet of cleared corridor. From the roadway, the additional cleared corridor and several structures will be visible. The new structures will be a moderate color difference from the surrounding landscape as well as the existing wooden structures. The new structures will introduce minimally incompatible lines to the landscape.
- Route 2, Farmington. The co-located transmission line will cross Route 2 in Farmington. The new line will require an additional 75 feet of cleared corridor for a portion of the visible section, however, some of the area is already open fields. From the roadway, the additional cleared corridor and several structures will be visible. The new structures will be a moderate color difference from the surrounding landscape and the existing wooden structures. The new structures will introduce minimally incompatible lines to the landscape.
- Androscoggin Riverlands State Park, Leeds. The new co-located line will only be visible in the State Park as it crosses an access road in Leeds. The additional 75 feet of corridor clearing and the new structures will be visible for a considerable distance when viewed at the crossing due to the topography. Though there will be moderate contrast in material, color, and structure height, the visual impact to users of the park is expected to be minimal.
- Merrill Road, Lewiston. The additional 75 feet of corridor clearing and the new structures will increase the scale contrast to moderate, but the new transmission line is compatible with the existing landscape.
- Sandy River, Farmington. The corridor will be visible at a perpendicular angle to the River. The Department finds that although the new structures and widened corridor will increase the scale of intrusion to the landscape, it is codominant when considered with the existing transmission line.
- Carrabassett River, Anson. The new structures will be a moderate color difference from the surrounding landscape and the existing wooden structures. The Department finds that although the new structures and widened corridor will increase the scale of intrusion to the landscape, it is codominant when considered with the existing transmission line.

Segment 4

Riverside Drive, Auburn. The new self-weathering steel structures will be a
moderately different color from the landscape and existing structures. A total of
six wooden poles will be replaced with two steel structures. The reduction in the
number of man-made structures reduces the scenic impact and the new line will
be compatible with the existing landscape.

Segment 5

- Route 194, Whitefield. The new transmission line will be located between two
 existing sets of structures. No new corridor clearing is proposed. The
 Department finds the new line is compatible with the existing landscape.
- Route 27, Wiscasset. The new transmission line will be located between two existing sets of structures. No new corridor clearing is proposed. The Department finds the new line is compatible with the existing landscape.
- Route 1, Wiscasset. The proposed project will add conductor lines to an existing lattice structure. The Department finds minimal to no visual impact from the additional lines.
- West Branch Sheepscot River, Windsor. The proposed corridor is located between two existing transmission lines. The Department finds minimal to no visual impact from the additional lines.

For each of these scenic resources and vantage points, the Department evaluated any photosimulations included in the VIA and the VIA as a whole, and considered the testimony and comments of its consultant, the applicant's testimony and supplementary submissions, the testimony of the intervenors, and the testimony and written comments from members of the public. In addition, Department staff conducted site visits to many of the locations at issue and examined topographic maps of the areas. Based on this information and the record as a whole, the Department finds the five transmission line segments, including the poles, wires, and corridor, will not have an unreasonable adverse effect on scenic uses or character at any of the locations listed in this subsection.

k. Substations

The Department evaluated the scenic impacts of the substation upgrades that are part of the project.

- Merrill Road Converter Station. The proposed converter station will be approximately 85 feet or less in height. Existing vegetation with heights between 50 and 70 feet will remain as a visual buffer surrounding the station. Several residences are located within 600 feet of the proposed converter station but will have minimal views of the converter station due to the surrounding vegetation.
- Fickett Road Substation Portions of the substation, including the access road and infrastructure, will be visible from Fickett Road, Allen Road, and three residences off Fickett Road. The applicant submitted a planting plan, dated August 9, 2018, with proposed plantings on both sides of the substation entrance on Fickett Road. The plantings range in heights at maturity from 4 to 70 feet and are intended to provide buffering to motorists and residents on Fickett Road. The substation will introduce a moderately incompatible form and moderately incompatible edges to the landscape; however, the proposed plantings will significantly mitigate these impacts.
- Coopers Mills Substation. Proposed additions to the north side of the Coopers Mills Substation include a new 345-kV transmission line terminal. No tree clearing is proposed. While three abutting residences and motorists on Coopers

Mill Road will have some views of the project, the form, line, and texture will be compatible with the existing substation.

- Crowley's Substation. Replacement of a 115-kV switch and bus wire are proposed within the existing substation structure. No tree clearing is proposed.
- Larrabee Road Substation. Proposed upgrades to the existing substation include an additional 345-kV transmission line terminal and the replacement of an autotransformer. The upgrades will be visible from Mount David, a scenic hike on the Bates College campus, however, no significant changes in line, form, texture, or color will result from the project. An existing vegetative buffer will provide visual screening to a residence that abuts the substation.
- Maine Yankee Substation. An additional 345-kV transmission line terminal will be installed within the fenced yard of the existing substation, but it will be compatible with the existing character at this location.
- Surowiec Substation. A terminal for a new 345-kV transmission line from the proposed Fickett Road Substation, a new dead-end A-frame structure, and a new 345-kV circuit breaker will be installed at the existing substation. No tree clearing is proposed and the additional structures will be similar in color, texture, and line to the existing substation.
- Raven Farm Substation. Proposed additions to the existing substation include a
 new 345/115-kV autotransformer and three new 115-kV transmission line
 terminations with associated equipment and foundations. An existing berm
 installed for the MPRP will provide visual screening for the project.

For each of the substation upgrades, the Department considered, along with all the record evidence, the surrounding area and its character, the nature and extent of the changes relative to the existing substation development, and the buffering and screening (both existing and proposed).

The Department finds the substation upgrades will not have an unreasonable adverse effect on scenic uses or character of the surrounding area, provided the applicant:

 Plants and maintains vegetated roadside buffers on the south side of Fickett Road in conjunction with the Fickett Road Substation.

1. Cumulative Impacts

Consistent with Chapter 315, § 9, the Department considered the cumulative effects of the project. These are effects that even if minimal or not adverse in any one instance could, in aggregate, unreasonably interfere with existing scenic and aesthetic uses. Given the length of the project, it will be visible from multiple viewpoints and multiple scenic resources. In evaluating cumulative effects under Chapter 315, the Department considered the frequency with which an observer might see the project from scenic resources, which is influenced by the distance and travel time between viewpoints.

Hikers along the AT and travelers along Old Canada Road (Route 201) are two groups with the potential to view the project from multiple points. Along the AT, the project will be visible from three general locations: Pleasant Pond Mountain, Troutdale Road, and Bald Mountain. The visibility of the project from these locations is discussed above. Hiking down from Pleasant Pond Mountain to Troutdale Road would take approximately three to three and a half hours, although hiking pace can vary considerably. Hiking up from Troutdale Road to Bald Mountain would take a similar amount of time. The Department finds that as a result of this separation, and the limited extent of the visual impact of the project at these locations (which takes into account the co-location of the line), there will not be an unreasonable cumulative interference with existing scenic or aesthetic uses of the AT.

With regard to Old Canada Road, the four locations from which the project will be visible are separated by the following distances: 6.2, 6.7, and 17.1 miles. While the travel time between viewpoints for a motorist on the road is short, so too is the amount of time for which the project would be visible at each point for someone traveling at the speed limit. (View times are discussed above.) In the context of the 78-mile stretch of road designated as a scenic byway, the cumulative time the project would be visible is minimal. The Department finds that when the viewing time, distance between viewpoints, and scenic impact at each viewpoint are considered, the project will not result in an unreasonable cumulative interference with the existing scenic or aesthetic use of Old Canada Road.

The Department also considered that an observer could experience successive views of the project through travel that involved views from more than the AT or Old Canada Road alone. For example, by driving along Old Canada Road to Jackman and then snowmobiling to Coburn Mountain, an individual could engage in multiple activities where the project could be seen from different scenic resources.

In this example, the travel along the road and subsequent snowmobile travel are sufficiently distinct and separated by intervening activities, such as unloading snowmobiles and preparing for that activity, that any cumulative visual impact would be minimal. The Department finds that this example is representative and that even if an individual engages in multiple activities that included viewing the project from a scenic resource these views would be sufficiently distinct, separated by time, distance, and differences between the different activities that the cumulative effects of the project will not unreasonably interfere with existing scenic or aesthetic uses.

The cumulative impact of the project and other structures in its vicinity will also be not unreasonable. Pre-existing scenic impacts from land use activities in the Segment 1 area are almost entirely the result of commercial forestry. The cumulative impact of the project and these forestry activities, discussed in more detail in the following subsection, is not unreasonable. Outside of the Segment 1 area, the co-location of the project in an existing transmission line corridor will minimize its scenic impacts, and the cumulative impact of the pre-existing infrastructure and the project is likewise not unreasonable.

m. Forest Management Activities in the Vicinity of the Project

Portions of the project are proposed to be located in predominantly forested areas. Segment 1, in particular, would involve creation of a new corridor through a forested area in western Maine. Witness testimony and other record evidence establish the existing landscape in this broader area is a mosaic of various aged forests, ranging from mature forest to recently harvested areas. The mosaic changes over time as harvested areas mature and mature areas are harvested. It is important to emphasize that while remote, the area that Segment 1 would traverse is not untouched wilderness, but instead mostly consists of intensively managed commercial timberland.

As a general matter, the Department characterizes commercial timberland as forested, regardless of the age of the growth of the trees on the land at any given point in time. The reasonable expectation of an individual viewing timberland and the surrounding area, however, may vary depending on whether they are viewing a mature forest or a recently harvested area.

The Department is not able to predict which privately owned timberland in the vicinity of the project will be harvested and, if harvested, when a landowner may elect to do so. In evaluating the scenic impact of the project, the Department considered the likely possibility that commercial forestry activity will alter the landscape surrounding the project, particularly Segment 1. The Department considered elevated viewpoints and other viewpoints where existing vegetation could provide screening. From elevated viewpoints, such as Coburn Mountain, the corridor will remain a consistent feature compatible within the landscape as a result of the required tapering of the Segment 1 corridor.²³

The Department finds this is the case when the tapered corridor runs through a forested area and, as the visual simulations for Coburn Mountain show, when more recent forestry activity is visible, the prominence of a tapered corridor is even further reduced. In addition to the corridor, the poles and wires that are part of the project will have a visual impact. With a tapered corridor, vegetation adjacent to the transmission line wire zone will be retained and will not be subject to commercial forestry. This tapered vegetation will minimize the contrast of the poles and wires and overall visual impact.

From other viewpoints, including those that are not elevated, existing forest patterns may provide screening. The converse also may true; recently harvested areas may enhance visibility of the project. The Department recognizes that as a result, regeneration of harvested areas may increase screening from some vantage points, and future harvesting may reduce screening. Harvesting limitations adjacent to resources such as rivers, streams, and great ponds will preserve screening in many important areas. Finally, the Department recognizes that, should commercial forestry activity result in significant

²³ Tapering near Coburn Mountain and Rock Pond (which are in Segment 1) is required in this Order to mitigate visual impacts. Tapering along the entire Segment 1 corridor, except for where taller vegetation is required across the entire width of the corridor, is also a condition of this Order and discussed further in Section 7, below.

clearing that increases visibility of the project, the reasonable expectations of an individual viewing this cleared area along with the project should be adjusted. As a result of these factors, the Department finds the location of portions of the project within commercial timberland that may be harvested at some point in the future does not alter the Department's conclusions regarding the scenic impacts of the project.

(4) Overall Findings Regarding Scenic Impacts

The project from Beattie Township to Lewiston extends a total of approximately 145 miles within the State. Much of the project, 92 miles, is co-located alongside an existing transmission line, while Segment 1 will be a new 53.15-mile corridor that will run through a predominantly forested and undeveloped area in western Maine. The scenic character of all these areas is important to residents and visitors, alike. The project as designed and as required through conditions of this Order minimizes the visual impact to the fullest extent possible and takes into account the scenic character of the surrounding area. As discussed above, in some areas the corridor will be the most visible component of the project, while from other locations the poles or conductors will be the visible project feature. From a range of vantage points along the entire corridor and near substations proposed for upgrades, the Department considered landscape compatibility, scale contrast, and spatial dominance of the project. Key observation points and other vantage points are discussed above. Upon completing this review, the Department finds the project will not have an unreasonable adverse effect on scenic uses or character of the surrounding area, provided the applicant:

- Tapers the vegetation in the corridor within the viewshed of Coburn Mountain (between structures #3006-634 and #3006-616) and Rock Pond (between structures #3006-731 and #3006-729);
- Maintains a minimum vegetation height of 35 feet within 100 feet of Moxie Stream;
- Uses non-specular conductors within the viewshed of Coburn Mountain (between structures #3006-634 and #3006-616), Rock Pond (between structures #3006-731 and #3006-724), Moxie Stream (between structures #3006-542 and #3006-541), and the Appalachian Trail (between structures #3006-529 and #3006-458-);
- Uses shorter poles along Moxie Pond (structures #3006-529 and #3006-458); and
- Plants and maintains vegetated roadside buffers, and replaces any dead buffer plantings within one year of the vegetation dying, at the following locations: Old Canada Road (Route 201) crossings in Johnson Mountain Twp and Moscow, Troutdale Road crossing in Bald Mountain Twp, and on the south side of Fickett Road in conjunction with the Fickett Road Substation.

6. <u>EXISTING USES</u>

Site Law requires an applicant to demonstrate that the proposed development will not adversely affect existing uses or scenic character. 38 M.R.S. § 484(3). Similarly, NRPA requires that the proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational, or navigational uses. 38 M.R.S. § 480-D(1). Scenic impacts of the project are evaluated in Section 5 of this Order. The Department addressed the scenic impact standards of both Site Law and NRPA and found that the project will not have an unreasonable adverse effect on scenic uses or scenic character. As a result, because the scenic impact of the project is not unreasonable, the Department further finds the project will not have an unreasonable adverse effect on existing uses that are related to the scenic character.

The impact of a project on existing uses, however, in not limited to a project's impact on scenic uses and scenic character. A project could, for example, physically interfere with existing uses and result in an unreasonable adverse effect. Thus, the Department evaluated the potential impact of the applicant's project on existing uses, looking beyond the scenic impacts.

The majority of testimony, public comment, and record evidence focuses on the potential impact of Segment 1. In this area of the project the primary activity is commercial forestry. The applicant has negotiated acquisition of the corridor and access to the corridor with private landowners engaged in commercial forestry adjacent to the corridor. The successful result of these negotiations is compelling evidence the project will not have an unreasonable adverse effect on existing commercial forestry activity. Testimony from Kenneth Freye also established that the location of the project was shaped to ensure compatibility with forestry activity. The owner of Spencer Road at the time the applicant was acquiring the rights-of-way for the project opposed locating the transmission line along this land management road because the owner wanted to preserve flexibility in its future use and location of this road as part of its forestry operations. It is a reasonable inference that the landowners and forestry operators involved that did sell a right-of-way or property to the applicant to be used for this proposed project were of the view that the construction and existence of the project would be compatible with the commercial forestry uses in the affected areas.

Testimony established that outdoor recreation is an important activity in the western Maine region in which the Segment 1 corridor is proposed.

Recreation is important to residents and camp owners, as well as to visitors and those who own businesses that cater to visitors, such as those offering lodging to guests or guide services. Recreation activities in the area include hunting, fishing, hiking, and snowmobiling. The project will not impose limitations on these activities. Outdoor recreationalists will be able to cross the corridor and access the same areas they have traditionally used. For example, with regard to snowmobiling, Bob Meyers, Executive Director of the Maine Snowmobile Association, testified that many snowmobile trails are located along transmission line corridors. With regard to hiking, the corridor can be

crossed by foot. The most prominent hiking trail that intersects the corridor is the Appalachian Trail.

Testimony established that in the 1980s this segment of the AT was rerouted, resulting in the trail crossing a previously existing transmission line corridor. The proposed line will be co-located with this previously existing transmission line corridor and within a previously existing transmission line right-of-way where the AT and the project intersect. Hiking will not be impeded here or at other hiking trails. With regard to fishing, the proposed line was routed to avoid some particularly sensitive fish spawning stream headwaters, and the line in some potentially affected sensitive fish spawning areas will be elevated to allow for the growth of taller vegetation within the corridor that will provide shade for fish habitat. In addition, culvert replacements required to be funded by the applicant as a condition of this Order (see Section 7) will improve fish passage and should therefore enhance fishing opportunities.

Finally, with regard to navigational uses, no portion of the project will be located in a water used for navigation. Therefore, the project will not impact navigational uses.

In Segments 2 through 5, the transmission line is proposed to be co-located either within or immediately adjacent to an existing corridor. The Department finds this co-location of the proposed line will greatly limit the impact on existing uses and not result in an unreasonable impact.

In sum, the Department finds the project will not have an unreasonable adverse impact on existing uses, including recreational or navigational uses.

7. NATURAL RESOURCE IMPACTS

Site Law, 38 M.R.S. § 484(3), requires an applicant to demonstrate that a project will not adversely affect any natural resources. Chapter 375, § 15, which is part of the Department's rules implementing Site Law, recognizes the need to protect wildlife and fisheries by maintaining suitable and sufficient habitat, including travel lanes between areas of available habitat, and the susceptibility of certain species to disruption and interference of lifecycles by proposed alterations and activities. Chapter 375, § 12 recognizes the importance of preserving unusual natural areas for educational and scientific purposes.

NRPA, 38 M.R.S. § 480-D(3), requires the applicant to demonstrate that the proposed project will not unreasonably harm significant wildlife habitat; freshwater wetland plant habitat; threatened or endangered plant habitat; aquatic or adjacent upland habitat; travel corridors; freshwater, estuarine, or marine fisheries; or other aquatic life. The Wetland and Waterbodies Protection Rules, Chapter 310, and the Significant Wildlife Habitat Rules, Chapter 335, interpret and elaborate on the NRPA criteria for obtaining a permit. These rules guide the Department in its determination of whether a project's impacts would be unreasonable. Each application for a NRPA permit that involves a wetland

alteration; an alteration to a river, stream, or brook; Inland Waterfowl and Wading Bird Habitat (IWWH); a SVP²⁴; or TWWH, must provide an analysis of alternatives, which is a part of the Department's analysis of whether a proposed project's environmental impacts are unreasonable.

A. Overview

(1) Alternatives Considered by Applicant

The applicant submitted an alternatives analysis for the proposed project completed by Burns and McDonnell and dated September 27, 2017. The stated project purpose is to deliver up to 1,200 MW of Clean Energy Generation from Quebec to the New England Control Area via a HVDC transmission line. The applicant evaluated the No-Action alternative but determined that it would not meet the project goals.

a. Corridor Routes and Underground Alternative

The applicant evaluated five potential transmission corridor routes as part of its initial analysis. The evaluation process included assessment criteria for the following priorities (in order of importance): avoidance of conserved lands; undeveloped right-of-way; amount of clearing required; number of stream crossings; transmission length; wetland impacts based on National Wetland Inventory mapping; Deer Wintering Area (DWA) impacts; IWWH impacts; public water supplies impacted; sand and gravel aquifers impacted; and number of parcels crossed.

Alternative Route 1 was based on a similar project the applicant proposed in the late 1980's. At that time, CMP had acquired title, right, or interest in a corridor that ran from western Maine to Lewiston and was 119.3 miles long. However, the options that CMP had to acquire much of that ROW have expired and portions of the area are now subject to conservation easements. A new crossing of the AT, where no transmission line currently crosses the trail, also would be required. CMP concluded the existence of these conservation easements makes acquiring new ROW easements along this route nearly impossible. AT crossing rights also would be difficult to obtain and a new crossing less desirable than the proposed co-located crossing under the Preferred Alternative.

When compared to the Preferred Alternative, this alternative Route 1 would have resulted in: crossing two more conserved parcels with an increase in the impacts on conserved land of 233.3 acres; an increase of 39.6 miles of undeveloped ROW; an increase in the amount of cleared area of 111 acres; a decrease of 27 stream crossings; a decrease of 25 wetland crossings, but an increase of 42 acres of wetland impact; the same number of DWA crossings, but an increase of 27 acres of impact; a reduction of 3 IWWH crossings, but a 0.4 acre increase in impact.

²⁴ See the project description for further discussion of how the abbreviation SVP is used in this Order and refers to vernal pool depressions and critical terrestrial habitat.

Alternative Route 2 would cross into Maine in Beattie Township and follow the proposed route for several miles, then turn south until it reached the existing Kibby Wind Farm generator lead line. The corridor would parallel the Kibby Wind Farm generator lead line to the Bigelow Substation in the Town of Carrabassett Valley. From the Bigelow Substation, Alternative Route 2 would proceed east to the Wyman Hydro Substation in Moscow and continue to Lewiston in the same corridor as is proposed. This route would cross the AT near the Wyman/Carrabassett Valley town line. A crossing of the AT in this area by a utility corridor does not presently exist. The U.S. Department of Interior refused to grant the Kibby Wind Farm generator lead line the right to cross the AT, either overhead or below ground, in this same general area. CMP concluded it was unlikely it could obtain an easement for this portion of the project, making this alternative not practicable. Alternative Route 2 would be 138.5 miles long. When compared to the Preferred Alternative, this route would have resulted in: crossing three more conserved parcels with an increase in the impacts on conserved land of 11.2 acres; a decrease of 36.2 miles of undeveloped ROW; a decrease in the amount of cleared area of 153 acres; an increase of 8 stream crossings; an increase of 20 wetland crossings, with an increase of 37 acres of wetland impact; the same number of DWA crossings, but a decrease of 0.3 acres of impact; the same number of IWWH crossings, but a 6.2 acre decrease of impact.

The applicant examined two alternative locations and HDD for the crossing of the Upper Kennebec River. The two alternative locations considered for the crossing of the Upper Kennebec River consisted of one at Harris Station (referred to as the Brookfield Alternative, or the third route alternative), and one just below Harris Station, (referred to as the CMP Land Alternative, or the fourth route alternative). These alternatives would have resulted in an extra 14.5 miles and 13.3 miles of transmission line construction, respectively. The Brookfield Alternative would have required Brookfield to agree to reopen its Federal Energy Regulatory Commission license for its hydroelectric dam to allow the additional transmission line within the project boundary. Both the Brookfield Alternative and the CMP Land Alternative would require additional ROW easements within the Moosehead Kennebec Headwaters conservation easement, which CMP concluded is not allowed under the terms of the conservation easement, making these alternatives not practicable.

The fifth alternative considered by CMP involved running the transmission line under the Upper Kennebec River using HDD technology. The applicant initially stated this alternative was too expensive and potentially not technically feasible.

However, following requests by the intervenors and members of the public to avoid an overhead crossing of the river to reduce scenic impacts, and the Department's expression of concerns with the overhead crossing, CMP further examined locating the transmission line under the Upper Kennebec River. CMP subsequently proposed running the transmission line underground in this location as part of its Preferred Alternative.

The Preferred Alternative described more fully in Section 1, Project Description, does not contain the least amount of new corridor clearing; however, CMP concluded in its analysis, that the Preferred Alternative is the shortest practicable route from the Canadian

Border to an existing transmission line corridor. In siting the Preferred Alternative, the applicant chose a route that it states would avoid crossing conserved lands or ridgelines and would avoid natural resources and scenic resources to the greatest practical extent.

CMP's initial alternatives analysis did not include examination of locating the transmission line underground, except for the proposed underground crossing of the Upper Kennebec River described above. A more widespread underground alternative, however, was examined through hearing testimony. This includes the feasibility of locating the line underground, in general, as well as along the Spencer Road or Route 201.

Finally, in the course of the permit review process the applicant also proposed modifying the original preferred route with the Merrill Strip Alternative. This alternative is a slight modification of the original preferred route. It is approximately 0.4 miles shorter, eliminates impacts to one SVP (0.02-acre reduction) and one stream crossing, and reduces the wetland impacts by 32,037 square feet. CMP stated that this route was initially ruled out because the landowner was asking 50 times the market value for the land. Ultimately, the applicant and this landowner reached an agreement and CMP purchased obtained an easement for approximately 20 acres of land to enable it to propose using the Merrill Strip Alternative as part of its Preferred Alternative. This strip is 1.0 mile long and 150 feet wide.

b. Substation and STATCOM Locations

The applicant evaluated six alternative locations and designs for the Merrill Road Converter Station. Two of the locations were ruled out because they were not large enough, one location was ruled out because a large portion of the property was mapped as either Scantic silt loam (typically a wetland soil) or Peat and muck (also wetland soils), and two other parcels were ruled out because they would have resulted in additional transmission line construction across Route 202 and the placement of double-circuit structures, which are not preferable from a reliability standpoint.

The applicant also evaluated other locations across the transmission system for the STATCOM units ultimately proposed to be located at the Fickett Road Substation. The applicant determined that the best location was as close to the Surowiec Substation as possible.

The Surowiec Substation is not large enough and site constraints, due to the location of Runaround Brook, prevent the equipment being located on the Surowiec Substation parcel. The preferred parcel minimizes the length of new transmission line that would need to be constructed between the two substations. The Fickett Road substation is located on the parcel to maximize the upland area used by the necessary structures and minimize the wetland impacts.

(2) Impact Minimization Efforts by Applicant

In addition to the landscape scale analysis, the applicant also evaluated site specific means to minimize impacts.

These included proposing to use <u>average</u> 100-foot tall steel poles that can be placed farther apart than typical H-Frame structures, site-specific adjustments to structure locations, use and location of temporary roads, and substation design. The proposed use of taller structures reduces the number of poles that need to be placed, the amount of temporary construction road that would need to be created, and the number of poles located in wetlands. Other procedures the applicant proposed to minimize impacts included implementation of CMP's Environmental Guidelines, which include erosion and sedimentation control measures, pre-construction wildlife surveys, time of year restrictions on certain construction activities, and the use of third-party inspectors.

(3) Summary of Project Impacts

With the alternative ultimately selected by the applicant, which includes HDD for the Upper Kennebec River crossing and the Merrill Strip Alternative, CMP proposes to directly alter 4.124 acres of freshwater wetland and to indirectly alter 105.55 acres of forested wetland by converting it to shrub-scrub wetland to complete the NECEC project. The applicant's proposal also includes: 674-743 crossings of rivers, streams, or brooks, of which 471 contain coldwater fisheries and five are Outstanding River Segments; 15.0261 acres of impact to IWWH, which includes 0.0173 acres of fill; 31.48725 acres of impact to SVPs, 25 which includes 1.46 acres of permanent fill, 27.5729.607 acres of clearing in uplands, and 3.89568 acres of clearing forested wetland. The applicant's proposed route also crosses 22 DWAs resulting in a total of 83.5 acres of clearing, including 39.2 acres of impact to the Upper Kennebec River DWA. None of the DWAs are rated moderate or high value.

The project is located in or near habitat for the following species included on Maine's Endangered or Threatened Species list, or identified as species of special concern:²⁶

- Roaring Brook Mayfly
- Northern Spring Salamander
- Rusty Black Bird
- Long Eared Bat
- Little Brown Bat
- Small Footed Bat
- Brook Floater Mussel
- Northern Bog Lemming

²⁵ In its initial application, CMP identified 42 SVPs and 23 Potentially Significant Vernal Pools (PSVP). MDIFW raised identification concerns with 13 of these pools and apparent discrepancies in total area of impact to SVP habitat. Ultimately, after further analysis, CMP, DEP, and MDIFW agreed that the total number of SVPs impacted by the project is 61.

²⁶ Several of these species (Long Eared Bat, Canada Lynx) are federally listed, as well. Atlantic salmon also are federally listed, but not listed in Maine.

- Great Blue Heron
- Golden Eagle
- Canada Lynx
- Bicknell's Thrush
- Wood Turtle

Additionally, the project was evaluated for impacts to 15 rare plant occurrences, as well as impacts to five unique natural communities, which were identified in or adjacent to the corridor. The identified rare plant occurrences and unique natural communities include: small whorled pogonia (a federally listed rare plant), Goldie's wood fern (a species of special concern), Jack Pine Forest (a critically imperiled plant community), Hardwood River Terrace Forest (an imperiled community), and Enriched Northern Hardwood Forest (a rare community).

B. Agency Comments

(1) Wildlife, Fisheries, and Other Natural Resources

MDIFW and Department staff reviewed the project impacts to wildlife, fisheries, and other natural resources.

In a December 11, 2017, letter to the applicant following initial review of the proposal, Department staff stated: "The project crosses 67²⁷ rivers, streams, or brooks which contain brook trout habitat and five Outstanding River Segments and according to the vegetation management plan all vegetation over ten feet tall will be removed. While the Department has not yet made a determination whether the impacts to these resources are unreasonable there will certainly be impacts to these resources. Please provide a mitigation package to compensate for these impacts. The Department envisions this mitigation package will be the responsibility of CMP to implement, not simply providing additional [In-Lieu fee program] monies."

MDIFW provided comments on wildlife and fisheries impacts on March 15, 2018, June 29, 2018; December 7, 2018; February 1, 2019; and March 18, 2019. In its March 15, 2018 comments, MDIFW raised concerns about the lack of data on the presence or absence of a number of species listed on the Endangered or Threatened Species list, including Northern Bog Lemmings, Northern Spring Salamanders, Roaring Brook Mayflies, several species of bats, Wood Turtles, Rusty Black Birds, Great Blue Herons, and Golden Eagles. In addition, MDIFW requested more information on the project impacts to SVPs and requested marker balls be installed on the overhead crossing of the Upper Kennebec River to minimize the chance of Bald Eagles colliding with the wires. MDIFW requested a 25-foot setback for the use of herbicides from any wetland located in an IWWH and only the use of spot spraying of herbicides within the IWWH. MDIFW

²⁷ Based on further field analysis by the applicant, and verification by the Department, the number of brook trout habitat streams crossed by the project has been corrected to 471 since this letter was written. (See Appendix E for a list of waterbodies crossed by the project.)

also expressed concern that the 25-foot wide buffers the applicant had proposed for streams crossed by the project was too narrow. This was a particular concern for the streams in Segment 1 and other coldwater fisheries streams.

Between March and December 2018, the applicant and MDIFW continued to meet and discuss the proposed project's various impacts to fish and wildlife and the applicant conducted field surveys for several wildlife species. During this time:

- The applicant determined the area identified as potentially providing habitat for Northern Bog Lemming did not contain that species.
- The applicant determined there were Northern Spring Salamanders and Roaring Brook Mayflies in two streams crossed by the project, Gold Brook and Mountain Brook.
- MDIFW recommended time of year restrictions for construction activities for wood turtles and Rusty Black Birds. For wood turtles, they recommended construction activities be limited in the 16 mapped habitats to between October 15 and April 15 unless CMP follows the measures described in its July 13, 2018

 Response to MDIFW March 15, 2018 Environmental Review Comments. For Rusty Black Birds, MDIFW recommended no construction activities in the mapped habitat between April 30 and June 30.
- MDIFW also recommended that a 10-_15-foot high dense stand of spruce and fir be left in the Rusty Black Bird habitat, which is located in Parlin Pond Twp. and Johnson Mountain Twp.
- The applicant proposed in its Site Law application, prior to initial transmission line clearing and between April 20 and May 31, to complete surveys for heron colonies within or immediately adjacent to (within 75-feet) existing IWWH's within the NECEC project area. If discovered, CMP would notify and consult with MDIFW biologists.
- The applicant noted the requested herbicide spraying setbacks were already a part of CMP's Vegetation Construction Plan (VCP) and the Vegetation Management Plan (VMP).

In its December 7, 2018, comments, MDIFW memorialized a commitment by CMP to incorporate into its proposal:

- Ten travel corridors in Upper Kennebec River DWA. Eight of these travel
 corridors would be created by selectively cutting the NECEC corridor to promote
 softwood growth necessary to provide winter habitat for deer (Appendix C
 describes the vegetation management for deer travel corridors); two of these
 corridors would be adjacent to the Upper Kennebec River in the area where the
 transmission line would be underground, allowing maintenance of full height
 vegetation;
- The utilization of taller poles near Gold Brook and Mountain Brook, which would allow full canopy height vegetation over these streams to minimize the impact to Roaring Brook Mayflies and Northern Spring Salamanders; and

Commented [A9]: See July 13, 2018 CMP Response to MDIFW March 15, 2018 Environmental Review Comments at 3-4.

• The preservation of 717 acres of land in the Upper Kennebec River DWA.

Additionally, in response to the Department's December 11, 2017 letter, as well the Department's and MDIFW's concerns about project impacts to coldwater fisheries, the applicant modified its proposal in several ways. CMP agreed to incorporate into its proposal:

- A 100-foot riparian filter areas around all perennial streams in Segment 1 and all coldwater fisheries streams in the otherall segments (Appendix C describes these filter areas, referred to as buffers by the applicant; Appendix E identifies waterbodies crossed by the project); and
- Compensation for unavoidable impacts in the form of: (a) land preservation (Grand Falls Tract, Basin Tract, and Lower Enchanted Tract), (b) funding to improve fish passage by providing \$200,000 for replacement of culverts, and (c) providing \$180,000 for compensation for the conversion of forested riparian habitat.

(2) Unusual Natural Areas

The Maine Natural Areas Program (MNAP) reviewed the project for impacts to rare or unique botanical features. Much of the area in Segment 1 had never been surveyed for these features and MNAP requested that the applicant conduct surveys using qualified consultants. The applicant conducted those surveys during 2018. Surveys also were conducted in the remaining portions of the project to update surveys that had been conducted for previous projects. The surveys identified 15 rare plant occurrences and five unique natural communities in or adjacent to the corridor, including the following: small whorled pogonia (also a federally listed rare plant), Goldie's wood fern (a species of special concern), Jack Pine Forest (critically imperiled plant community), Hardwood River Terrace Forest (an imperiled community), and Northern Hardwood Forest (a rare community).

To avoid impacts to the small whorled pogonia, CMP redesigned a short section of the transmission line in Greene. To minimize impacts to Goldie's wood fern, the applicant proposed to maintain a riparian buffer along a small stream but to remove capable species in the corridor. Within this buffer along the stream the applicant still will remove all capable vegetation and will remove the canopy. MNAP commented that this species is sensitive to canopy disturbances and requested the applicant provide compensation for the impacts by protecting a documented occurrence of Goldie's wood fern outside of the corridor or, if no suitable site is found, by protecting other properties containing rare forest-dwelling plant species in Western or Central Maine, providing funding toward MNAP's rare plant surveys, or some other mitigation proposal to conserve rare plant communities.

The project will result in 9.229 acres of clearing in a Jack Pine Forest located in Bradstreet Township.

Commented [A10]: Appendi x E is inconsistent with the updated record. Please see comments in Appendix E.

There is only one other Jack Pine Forest Community known in the State and that is several miles north of this affected one, in the Number 5 Bog, which is a National Natural Landmark. MNAP requested compensation for this impact to the Jack Pine Forest. MNAP also reviewed the information on the Hardwood River Terrace Forest, which had been documented in 2007 for the MPRP project and determined that it is outside the NECEC Corridor.

In response to MNAP's comments, the applicant revised its proposed compensation plan to mitigate impacts to rare or unique botanical features. This revised plan includes a contribution to the Maine Natural Areas Compensation Fund for impacts to Goldie's Wood Fern and the Jack Pine Forest. In an email dated February 4, 2019, MNAP stated that the revised compensation plan addresses their concerns. The compensation plan proposes that the applicant will make a contribution to the Maine Natural Areas Conservation Fund in the amount of \$1,234,526.82. (See Appendix F, Table F-2 for the allocation off funding for different impacts.)

C. Public Hearing and Comments

- (1) Alternatives Analysis
 - a. Applicant Testimony and Evidence on Alternatives

In its application, supporting documents, and witnesses' pre-filed testimony for the first segment of the public hearing, CMP provided evidence on its methods to avoid and minimize the impacts from the project, as described above. This evidence included evaluation of the alternative routes described above, as well as the efforts the applicant took to site the line once a general location was chosen. On April 1, 2019, CMP's witnesses provided oral testimony on its alternatives analysis. The applicant's witnesses on this first day did not address the feasibility of locating the transmission line, or sections of the line, such as Segment 1, underground.

In response to the pre-filed direct testimony of witnesses for intervenor Groups 2, 6, and 8 highlighting the absence of evidence from the applicant on the option to bury the line (the underground alternative), the applicant provided pre-filed rebuttal testimony on the issue, including from new witnesses. Following this pre-filed rebuttal testimony and further pre-filed sur-rebuttal and supplemental testimony, the underground alternative was the focus of the second segment of the hearing, held on May 9, 2019.

On May 9, CMP's witnesses Justin Tribbet, Justin Bardwell, Thorn <u>Dickenson Dickinson</u>, and Kenneth Freye provided testimony on the underground alternative for Segment 1 and the entire corridor, as well as along Route 201 and Spencer Road. CMP provided testimony concerning the constructability of an underground line, the feasibility of burying the line in the existing corridor, along Route 201, and along the Spencer Road, and the cost of different underground alternatives. For example, Bardwell testified that for each overhead conductor two underground cables would be needed, plus a spare. This is because of the power transfer capacity of the project, with the fifth cable being a

spare. He explained that while other proposed projects with the same voltage included underground components with fewer cables, this was because other projects did not have the same power transfer capacity. Bardwell provided an overview of the construction process, including trenching and other techniques, the need to splice together cable sections approximately every 2,200 feet, and the use of concrete enclosures to protect the splices. He also testified to the environmental impacts of underground construction. Tribbet and Bardwell both testified to the cost of different underground alternatives. They estimated, for example, that locating just Segment 1 underground in the currently proposed corridor would result in a total project cost of \$1.6 billion, adding approximately \$640 million to the overall coast, or roughly an increase of 67 percent. Tribbet also addressed other transmission line projects with undergrounding technology, noting that each involves project-specific considerations. He listed projects such as Connect New York, Northern Pass, TDI Vermont, and Vermont Greenline and testified that none of these projects had demonstrated economic feasibility or secured a long-term transmission service agreement.

CMP witness Kenneth Freye testified that at the time CMP was evaluating route alternative it discussed options with the landowner of Spencer Road, Plum Creek Maine Timberlands, LLC. Plum Creek was opposed to having a transmission line along the road. Freye also testified that locating the line along Route 201 was not practicable for several reasons, principally because the Department of Transportation would not allow the underground transmission line within the travel way of the road. He testified that the remainder of the DOT right-of-way was not wide enough to accommodate an underground alternative. As a result, running the line underground along Route 201 would require acquiring land rights from residential, recreational, and small commercial landowners, which Freye testified, likely would prove difficult.

b. Intervenor Testimony and Evidence on Alternatives

Group 1 testified that a similar project in Vermont has been permitted that could provide the power for the Massachusetts request for proposal, that the Vermont project would have no impacts in Maine, and therefore, Group 1 argued, the no action alternative is practicable.

Groups 2, 4, and 10 all argued that the applicant failed to meet its burden by not evaluating the underground alternative and that the project should be located either under Spencer Road or adjacent to Route 201.

Group 8 witness Christopher Russo testified concerning the undergrounding alternative. He stated that HVDC lines of the length proposed by CMP are located underground or underwater in the 13 of 14 instances worldwide.

²⁸ Bardwell stated in his pre-filed supplemental testimony that splice vaults, which would be a required component for underground construction, are prohibited within the travel lanes by Maine DOT rule, 17-229 CMR Ch. 210, § 10(5), Pt. D.

Russo also reiterated the point other intervenors made that the Vermont route and the Northern Pass route were proposed to be located at least partially underground.

Group 6 witnesses also argued the lack of an analysis of the underground alternative was a flaw in the CMP application.

Group 3 witness Gil Paquette testified that locating the transmission line underground was not a practicable alternative. Among the factors he discussed in support of his overall conclusion were cost, cable slicing and associated vaults, and the need for thermal sand.

With regard to thermal sand he testified that in his experience the need for, logistics concerning, and cost of thermal sand is the single most overlooked aspect of undergrounding an HVDC transmission line. He cited his experience with a project where the need for thermal sand was not appreciated until late in the planning process and that based on his familiarity with the geology in western Maine it is highly likely the majority of Segment 1 would require thermal sand.

c. Public Testimony and Comments on Alternatives

Members of the public submitted written comments and testified at the hearing on the applicant's alternatives analysis and the choice of the proposed route. Several members of the public opposed to the project testified that an underground alternative would have less visual impact, be safer, and require a narrower cleared corridor. Many interested persons testified they believed the line should be buried under Spencer Road or Route 201. Several members of the public testified that they believed the line should be buried under Spencer Road. One person in favor of the project testified that undergrounding would be too costly, and therefore is not a practicable alternative.

- (2) Impacts to Wildlife, Fisheries, and Other Natural Resources
 - a. Applicant Testimony and Evidence on Impacts

In its application and its hearing testimony, the applicant described the methods used to locate and design the project in the least environmentally damaging manner. The applicant's witnesses at the hearing testified that the project would not cause unreasonable fragmentation of the forest habitat because the project is located in working forest that is already fragmented by clear cuts, partial-cuts, log yards, skid trails, and logging roads. They contend that the project will provide improved habitat for certain species of wildlife that prefer early successional forest, such as deer, moose, bear, fox, rabbits, and other wildlife species. The applicant provided testimony that the proposed project would not unreasonably impact coldwater fisheries or rare or threatened species and that sufficient compensation had been proposed for the impacts that would occur. In the course of the hearing process the applicant also committed to not using herbicides within Segment 1; this was stated by CMP witness Mirabile in his pre-files-filed supplemental testimony and reaffirmed orally at the May 9 hearing.

The applicant also provided testimony, in response to questions from the Department, on the possibility of tapering additional areas along Segment 1 or allowing for taller vegetation in the corridor, including through the use of taller poles. Mark Goodwin testified that the applicant did not believe additional tapering or taller poles/vegetation were necessary, but expressed a preference for tapering. Nicholas Achorn testified on the construction process for poles \$100-feet and taller. He noted some differences in construction and extent of permanent impacts depending on whether poles are directly imbedded or constructed using caisson foundations. Under either type of construction, he testified the work pad size requirement around the pole would be same.

b. Intervenor Evidence on Impacts

Intervenor Groups in Opposition: Group 1 witness Janet S. McMahon; Group 2 witnesses, Chris Russell, Greg Caruso, and Roger Merchant; Group 4 witnesses Dr. David Publicover, Dr. Aram Calhoun, Ronald Joseph, Todd Towle, and Jeffrey Reardon, all testified that the project would have an adverse impact on wildlife and fisheries. Witnesses McMahon, Merchant, Publicover, Calhoun, and Joseph testified on the potential impacts the project may have on forest fragmentation. Witnesses Russell, Caruso, Towle, and Reardon all testified on the impacts to coldwater fisheries, particularly brook trout.

McMahon and Merchant testified on the importance of unfragmented habitat to so-called "umbrella" species such as pine marten.²⁹ They stated that even though the forest may be somewhat fragmented due to logging practices, these features are temporary in nature. The transmission corridor would represent a permanent fragmenting feature in the landscape. Publicover testified that the fragmentation of the forest would be permanent, and asserted the global importance of the western Maine mountains region in terms of ecological diversity.

Reardon testified that the smaller perennial and intermittent streams that would be impacted by the project are "the best of the best" brook trout habitat. He testified that many of the streams impacted by the project in Segment 1 are exceptionally valuable, such as Gold Brook and Tomhegan Stream, which provide brook trout spawning and rearing habitat, and Cold Stream, in which brook trout seek thermal refuge during warm temperature months. He explained that in a 150-foot wide, cleared corridor without taller trees or a full canopy the streams would not have the necessary input of large woody debris from dead trees necessary for healthy habitat. He stated that the proposed compensation parcels offered by CMP as mitigation for these impacts do not contain the same quality habitat as the area being impacted by the project. Finally, he stated that based on his experience with stream-crossing replacements, CMP's statement that 20 to 30 culverts could be replaced with the \$200,000 proposed in the compensation fund was

²⁹ As described at the hearing, protecting for an umbrella species will also provide protection for a wide range of other wildlife with overlapping or similar habitat needs, including the need for unfragmented habitat.

not realistic. He testified that in his experience, a single crossing could cost in the range of \$50,000 to \$100,000.

An Intervenor Group 4 witness, Ronald Joseph, testified concerning the impacts to deer wintering areas. Joseph stated that the proposed project crosses 22 deer yards. He described several instances of deer mortality due to a loss or fragmentation of the winter habitat, including an example of Chub Pond deer yard, not far from the project, that is no longer used because of timber harvesting in the area. He testified that the loss of deer yards and the decline in the deer population has a negative impact on the local economy in the vicinity of the proposed corridor due to the decline in the recreational use by hunters in the area.

An Intervenor Group 4 witness, Calhoun, testified that the project would adversely impact vernal pools and in particular pools that are in proximity to one another. Calhoun testified that these closely related pools, known as poolscapes, would be unreasonably impacted by being fragmented by the clearing of vegetation for the proposed transmission line.

Neutral Intervenor Groups: Group 5 did not provide any testimony concerning impacts to wildlife and fisheries.

Intervenor Group 6 witnesses, Dr. Malcolm Hunter, Jr., Rob Wood, Andy Cutko, Bryan Emerson, and Dr. Erin Simmons-Legaard provided testimony concerning forest fragmentation. Hunter testified on the types of impacts associated with fragmentation, including habitat loss and alteration, increased edge and reduced interior, and potential long-term consequences. He asserted: "The proposed mitigation and compensation does not adequately address the cumulative impacts of the full array of Maine's wildlife." Group 6 witnesses Wood, Cutko, and Emerson jointly testified that the effect of the proposed corridor would be greater than traditional sustainable forestry. They suggested in their testimony methods to minimize the impacts of the project on forest fragmentation. They submitted an exhibit that is a map showing nine areas where taller poles could be utilized to allow 35-foot tall vegetation to remain under the wire zone in order to provide passage for umbrella species such as pine martin. They testified that the taller vegetation also would minimize impacts to any coldwater fisheries located within those nine areas. They suggested that the corridor could be narrowed or built using what they referred to as "V-shaped vegetation management," to further reduce impacts to wildlife habitat. They emphasized the need for mitigating or compensating for remaining habitat fragmentation impacts by reducing or preventing fragmentation elsewhere in the affected region through land conservation. They offered testimony, similar to that of Reardon, explaining why the funding for culvert replacements proposed by CMP was unlikely to be sufficient to support the number of replacements described by the applicant. Finally, Simmons-Legaard testified that the proposed corridor would have significant adverse impacts on pine marten and other species, and on the value of mitigation alternatives, including tapering, taller vegetation, and conservation.

Intervenor Groups in Support: Intervenor Groups 3 and 7 did not provide testimony concerning wildlife or fisheries.

c. Public Testimony and Comments

Members of the public submitted written comments and testified at the hearing on the issues of impacts to wildlife, fisheries and other natural resources. Some members of the public commented that herbicide use and an increase in water temperatures from less shading would result in an unreasonable impact to brook trout. Although it was not always clear from the testimony and comments which portion of the 145-mile long project members of the public were discussing, generally the focus was the 53.15-mile long Segment 1.

Many public comments and testimony in support of the project acknowledged the impacts to wildlife and fisheries, but stated that the benefits of the project, in particular with respect to a reduction in greenhouse gas emissions, outweigh the impacts, thereby urging the Department to find that the impacts would be reasonable.

D. Department Analysis, Findings, and Conclusions

(1) Alternatives Analysis

The Department begins its evaluation of natural resource impacts of the NECEC project with a review of the applicant's analysis of alternatives. Chapters 310 and 335 require an applicant to submit an analysis of whether there is a practicable alternative to the project that would be less damaging to the environment and this analysis is considered by the Department in its assessment of the reasonableness of any impacts. Maine statute, 38 M.R.S. § 487-A(4), requires that the Department consider whether any proposed alternatives to the proposed location and character of the transmission line may lessen its impact on the environment or the risks it would engender to the public health or safety, without unreasonably increasing its cost.

The basic methodology the applicant used in its analysis of alternative routes is sound. The applicant began by evaluating alternatives at a landscape scale and used a reasonable list of factors to assist with comparison. These are factors available to the applicant at the site selection stage of the project and that serve as a reasonable proxy for likely environmental impacts, as well as the practicability of a project. For example, National Wetland Inventory data, while not accurate enough to use at the permitting phase, is appropriate for a prospective developer to review when selecting between alternative sites or routes and attempting to minimize wetland impacts. Consideration of the location of conserved lands is reasonable and appropriate for several reasons. For example, conserved lands often are conserved because of their environmental value and are more likely to be areas used by the public for recreation purposes. Additionally, locating a corridor within conserved lands may not be legally possible depending on the nature of the conservation. The length of undeveloped right-of-way also is a valuable site selection factor. While a shorter corridor could contain more significant natural resources than a

longer corridor, the lengthy of corridor to be cleared is a reasonable proxy for environmental impact, especially when considered in conjunction with other environmental screening factors (e.g., presence of IWWH and DWAs), as was done by the applicant. In sum, the Department finds the factors considered by the applicant in its alternative analysis were appropriate and sufficient in number and scope.

The Department also finds the applicant applied these factors appropriately and reasonably selected the route reviewed in this Order.

Alternative Route 1 is not the least environmentally damaging alternative in light of the added length of undeveloped right-of-way, extent of conservation lands impacts, and new Appalachian Trail crossing. The route also does not appear practicable given the easement areas it would have to cross, parcel count, and AT crossing rights that would be needed. Alternative Route 2 is slightly shorter than the Preferred Alternative and would involve considerably less new right-of-way, although the identified resource impacts within Alternative Route 2 and the Preferred Alternative are comparable. The new AT crossing and challenge and cost of navigating through or around the Bigelow Preserve do not make Alternative Route 2 a practicable alternative. The Department also finds that neither the Brookfield Alternative nor the CMP Land Alternative are the least environmentally damaging practicable alternative in light of having to run the corridor through an area subject to a conservation easement that does not allow the project development, the added new right-of way needed, and environmental impacts when compared to running the transmission line under the Upper Kennebec River.

Within the corridor and project area for the Preferred Alternative, on the site-specific scale, the applicant sited structures, including buildings and equipment for the substations and the poles for the transmission line, outside of protected natural resources and valuable habitat to the extent practicable. The applicant also proposes to utilize construction Best Management Practices to minimize impacts to resources adjacent to the structures and roads being built. Special design accommodations are proposed for individual resources in specific locations. For example, in Greene (Segment 3) the applicant proposes to rebuild two existing lines and redesign and relocate a 1.5-mile portion of the proposed transmission line to avoid tree clearing and the associated impacts to nearby whorled pogonia. In Appleton Twp. and Johnson Mountain Twp. (both Segment 1) the applicant proposes taller poles at the crossings of Gold Brook and Mountain Brook to allow for taller vegetation to help conserve Roaring Brook Mayflies and Northern Spring Salamanders. In Parlin Pond Twp. (Segment 1) maintenance of 10-to 15-foot tall spruce/fir within the corridor is proposed to protect Rusty Black Bird habitat. Numerous rare plant occurrences also would be avoided and worked around.

The applicant has made two notable modifications to its proposal after its original alternatives analysis, locating the proposed transmission line under the Upper Kennebec River through the use of HDD technology and adjusting the corridor to stay out of the LUPC's Recreation Protection Subdistrict around Beattie Pond through selection of the Merrill Strip Alternative. The underground crossing of the Upper Kennebec River reduced impacts to existing scenic and recreational uses of that resource and the Merrill

Strip Alternative reduced impacts for users of Beattie Pond. Both have been appropriately incorporated into the project by the applicant and reflect the value of the permit review process and the potential for projects to evolve during this process. It is unlikely an overhead crossing of the Kennebec River would have satisfied the applicable visual impact standards and the modification of the route in the vicinity of Beattie Pond, through the Merrill Strip Alternative, responded to concerns raised in the course of the LUPC's review.

Also, in the course of the review process, CMP considered and presented testimony on the alternative of locating the transmission line underground. This alternative was not originally considered by CMP in its application materials. Hearing testimony by Paquette indicated this exclusion was rational because locating the line underground was so obviously unreasonable to anyone with expertise in this construction technique that it made sense CMP did not devote time to analyzing an option that would not be viable. While this may explain the exclusion, the Department finds consideration of the underground alternative is both a relevant and important component of an evaluation of the project. As intervenors testified, other existing and proposed transmission lines have been constructed or proposed to be constructed underground. The possibility of doing the same with the present transmission line warrants consideration, even if ultimately ruled out.

The applicant submitted testimony and exhibits on the underground alternative in response to evidence submitted and arguments made by intervenors. The Presiding Officers allowed the intervenors to submit written sur-rebuttal and scheduled an additional hearing day for testimony and cross-examination of witnesses on this topic, as well as some other testimony. The Department finds that the evidence in the record on the underground alternative is sufficient for the Department's review of whether the applicant has met its burden of proof on the licensing criteria, including the requirement that the applicant provide an analysis of alternatives.

There is intuitive appeal to the argument that locating the transmission line underground would be less damaging to the environment and have less of a scenic impact. No conductors or poles would be visible and a narrower corridor could be maintained. Upon examination of the underground alternative, however, the Department finds that constructing the line underground, outside of the Upper Kennebec River crossing, is not a less damaging practicable alternative. In reaching this conclusion, the Department considered the evidence submitted by all the parties and the research of Department staff.

Bardwell, in testimony the Department found credible, explained underground construction. To locate a transmission line underground, the most affordable and common construction technique, in most areas, would be direct burial. This involves laying sections of cable within an open trench. For this project, because of its power transfer capacity, four cables, plus a spare for reliability, would be located in the trench. The trench would be a minimum of six feet deep and five feet wide at the base and have a minimum surface width of 12 feet. A work area approximately 75 feet wide would be needed during installation and a cleared corridor of this same width would be maintained

after construction. The 75-foot wide cleared area, allowed to regenerate with scrub-shrub species, is needed to keep root systems from larger trees out of the cables.

A trench would be opened to accommodate a length of cable, which would be delivered in 2,500-foot long segments that would be spliced together approximately every 2,200 feet. Each splice would be protected by pre-cast concrete components measuring approximately 12 feet long by four feet wide. At each jointing location an excavation approximately 60 feet long, 20 feet wide, and seven feet deep would be opened.

A concrete pad would be poured in the bottom and the spliced cables, each with its precast concrete protection, would be located on top of this pad and backfilled. Beyond the splice vault, cables would be located on a sand bedding and covered with a protective concrete layer. The trench would be backfilled above the concrete. To facilitate construction and ongoing maintenance, permanent access to each splice vault is required.

Paquette testified that thermal sand likely would be needed for much of the Segment 1 corridor due to the cable that would have to be used for this project and the properties of the soils in western Maine. While the volume of thermal sand that would have to be used is not clear from the record, the Department finds credible that thermal sand would have to be imported to enable running the transmission line underground.

This type of underground construction effort would result in a greater environmental impact than the proposed overhead alternative. In order to install cables underground in Segment 1, the cables would need to be buried under the streams, wetlands, vernal pools, and other natural resources. While this is possible, as the was the case for the natural gas pipelines that were installed in the late 1990's, the construction is costly, time consuming, and difficult, especially if there is rainy weather. While some impacts from trenching might be temporary, such as trenching through a wetland, this same impact is avoided with the overhead alternative. The nature and extent of required site access during construction and the permanent access that would be maintained post-construction is more extensive with the underground alternative and would result in greater impact. Furthermore, with the underground alternative a cleared corridor still must be maintained and would be wider, at 75 feet of clearing, than a tapered corridor, with approximately 54 feet of clearing as discussed in this section. Additionally, a wider clearing would have greater scenic impacts from some locations, such as Coburn Mountain, and create more of a fragmenting feature. Taller vegetation within certain portions of the corridor, something required in this Order to minimize environmental impacts associated with overhead construction, would not be an option with an underground alternative.

When the environmental impacts of undergrounding is considered along-side the logistical challenges, such as the splicing boxes needed every 2,200 feet, the need for-a permanent access roads to these splicing boxes, hauling in thermal sand, hauling out or otherwise disposing of material that cannot be backfilled, the infrastructure upgrades needed to the road network, and the increased cost of this method, the Department finds locating Segment 1 (or the entire project) underground within the corridor is not a less environmentally damaging practicable alternative.

While some of the environmental impacts associated with the underground alternative along the proposed corridor, particularly Segment 1, could be reduced with co-location of an underground transmission line along Route 201 or Spencer Road, the Department finds neither alternative is practicable for the reasons testified to by Freye and Bardwell, including the feasibility of acquiring the legal right to run the transmission line in either location and the associated cost.

Additionally, the Department concurs with the applicant's alternatives analysis for the Merrill Road Converter Station, the Fickett Road Substation, and the remainder of the substation upgrades.

Finally, the Department considered the no action alternative. Group 1 argues that the Department should deny the applications because there is already an approved project in Vermont that, if constructed, would not have any impacts in Maine. The Department did not evaluate that approved project as an alternative because it does not meet this applicant's project needs. The Department declines to interpret an alternatives analysis as requiring an assessment of whether third party commercial competitors in other states may be able to fulfill the stated project purpose by some other means. The Department requires applicants to examine the no build alternative, alternative sites, alternative designs, and reductions in the scope of the project in an alternatives analysis and the applicant has done so in this case.

In sum, the Department finds that the selected above ground alternative and associated substation improvements are the least environmentally damaging practicable alternatives.

(2) Wildlife, Fisheries, and Other Natural Resources

Chapter 375, § 15, implementing Site Law, requires an applicant to make adequate provision for the protection of wildlife and fisheries by maintaining suitable and sufficient habitat, including travel lanes between areas of habitat. NRPA, and the pertinent regulations promulgated under it, Chapters 310 and 335, recognize the importance of rivers, streams, and brooks; wetlands; and SWHs, including SVPs and IWWHs. The rules support a goal of no net loss of function and values, establish the criteria for avoidance and minimization of project impacts and state that some projects, even if the impacts have been avoided and minimized to the greatest practical extent, still may be unreasonable. In its review, the Department considers evidence concerning buffer strips of sufficient area to provide wildlife with travel lanes, protection of wildlife and fisheries lifecycles, and disturbances to high and moderate value deer wintering areas, threatened or endangered species, SVPs, and high or moderate value waterfowl and wading bird habitat.

a. Habitat Fragmentation and Wildlife Travel Corridors

Segment 1 of the project involves the creation of a new corridor through a forested area in western Maine. Group 6 testimony establishes this area is part of a largely

unfragmented forest block that is more than 500,000 acres, which itself is part of an even larger area that is one of the world's last remaining contiguous temperate broadleaf-mixed forests. The western Maine region supports exceptional biodiversity and is expected to be especially effective at maintaining biodiversity as the climate changes. These qualities make the area unique and important for wildlife.

Within this area there also is an extensive network of land management roads and some residential camp and other development. Forest management is the predominant activity. Several witnesses testified the existing landscape is a mosaic of various aged forest, ranging from mature forest to recently harvested areas. The mosaic changes over time as harvested areas mature and mature areas are harvested.

Although the area is not completely undeveloped and is subject to active timber management, a transmission line corridor in the western Maine area where Segment 1 is proposed could contribute to habitat fragmentation and have unreasonable adverse impacts on wildlife as a result of the effects on wildlife travel lanes and lifecycles and accessibility to suitable and sufficient habitat. Fragmentation occurs when contiguous habitat is broken into smaller, more isolated patches. CMP acknowledged in its Site Law permit application: "Transmission line corridors present potential direct impacts, as they may affect species movement, dispersal, density, nesting success and/or survival. . . . For the undeveloped corridor of Segment 1, impact may include fragmentation and creation of new linear edges. . . . Habitat conversion along transmission line corridors results in a loss of habitat types which, in turn, may adversely impact species that are reliant on the original habitat types." (Site Law Application, pg. 7-23.) Group 4 and Group 6 testimony addresses the negative results associated with fragmentation, such as impacts to wildlife movement, reduction in accessible habitat, an increased in "edge" – the border between forest and an opening – and reduced interior, as well as biodiversity decline.

The Department finds that as Segment 1 initially was proposed, the applicant had not made adequate provision for the protection of wildlife; the proposal's contribution to habitat fragmentation and impact on habitat and habitat connectivity was an unreasonable impact on wildlife habitat. Through modifications CMP made to its proposal during the permitting process, these potential wildlife impacts have been reduced. Through further modification required as a condition of this Order, adequate provision for the protection of wildlife will be achieved.

The project improvements to which CMP committed through written submissions filed with the Department during the permitting process include:

- Maintaining taller, softwood vegetation in the Upper Kennebec River DWA to provided travel corridors for deer.
- Maintaining full canopy height vegetation at the Gold Brook and Mountain Brook crossings. While the primary purpose of maintaining taller vegetation within the corridor in these locations is the protection of Roaring Brook Mayfly and Northern Spring Salamander habitat, the taller vegetation also helps minimize the fragmenting effect of the corridor.

- Maintaining tapered vegetation in the area visible from Coburn Mountain and another area visible from Rock Pond, for the purpose of minimizing the visual impact. The tapered vegetation in the corridor also benefits wildlife.
- Expanding the riparian filter areas on coldwater fisheries streams, all perennial streams in Segment 1, Outstanding River Segments, and streams containing threatened or endangered species to 100 feet, and on all other streams to 75 feet.

These measures are expected to reduce the impacts of the Segment 1 corridor, but are not sufficient to avoid substantial and harmful fragmenting of habitat.

The Department finds that additional mitigation is required to satisfy the Site Law standards discussed above. This finding is supported by testimony from Group 4 and Group 6 intervenors. For example, Hunter states in his February 25, 2019 pre-filed testimony: "CMP has made adjustments to its original compensation plan to accommodate for corridor impacts to white-tailed deer (particularly wintering habitat) and a few selected rare species (Roaring Brook Mayfly and Northern Spring Salamander). While deer have been identified in this process because of their regulatory standing, there are approximately 800 species of vertebrate wildlife in Maine and thousands of species of invertebrates, and many hundreds of species are present in the region affected by this corridor. Although habitat fragmentation affects different species in different ways, it is clear that many other species would be affected in addition to deer." Simons-Legaard in her May 1, 2019 pre-filed testimony and her testimony at the hearing discussed pine marten, which she identified as an umbrella species – meaning that planning for marten often serves the purpose of planning for a wide range of other wildlife. She testified that pine marten utilize tree to tree movement and generally avoid large forest openings where they are vulnerable to predators. Although marten will cross corridors, they do not prefer cleared areas and their home ranges typically include areas with less than 30 percent unsuitable habitat. Simmons-Leggard Legaard explained the relative benefit of modifying the project with tapering of vegetation and/or taller poles that would allow taller vegetation within the corridor. The weight of the evidence leads the Department to find that to ensure adequate provision for the protection of wildlife, CMP must take the following steps with regard to tapering, taller poles and taller vegetation, and conservation.

1. Tapering

A new,_150-foot wide, 50-plus mile long corridor, initially cleared and then maintained with non-capable vegetation only up to 10 feet in height, in the relatively undeveloped, forested region of western Maine would have an unreasonable adverse impact on wildlife and wildlife habitat. However, evidence in the record shows the project could be designed and built in a manner that would minimize these impacts so that the impacts would not be unreasonable. The Department finds that to do so CMP must maintain tapered vegetation, as described below, along the entire Segment 1 corridor except for the areas where CMP must maintain full height canopy vegetation, vegetation with a minimum height of 35 feet, or taller vegetation managed for deer travel corridors. A tapered corridor, more fully described in Appendix C, includes an approximately 54-foot

wide area under the conductors (the wire zone) that is cleared during construction and maintained as scrub-shrub habitat during operation of the project. Outside the wire zone, which is located at the center of the 150-foot wide corridor, taller vegetation is maintained. This taller vegetation increases from 15 to 35 feet in height as the distance from the wires zone towards the outside of the corridor increases. The reduction in clearing and narrowing of the scrub-shrub area within the tapered corridor, and taller vegetation along the sides of the corridor, will substantially reduce the impacts on wildlife.

The Department recognizes much of the forested area around the proposed Segment 1 corridor is actively managed as commercial timberland. This contributes to the mosaic of different aged forest in the western Maine region. Private landowners who actively manage their land do so in response to market conditions and to achieve their individual objectives. As a result, it is not possible for the Department to predict the exact type of forested habitat that will exist along the entire Segment 1 corridor throughout the lifespan of the project. Tapering along Segment 1, however, will provide improved habitat and improved passage between areas of suitable habitat where and when they exist adjacent to the corridor. Tapering will avoid creation of a hard forest edge and help mitigate the edge effect explained by Hunter in his testimony. A tapered corridor also will result in a narrower scrub-shrub opening closer to the width of a land management road, which testimony established is less fragmenting than a 150-foot wide cleared transmission corridor. This tapering will allow a greater opportunity for wildlife to cross the corridor and reduce the time/distance crossing wildlife would be out in the more open shrub-shrub habitat.

2. Taller Poles and Taller Vegetation

A tapered corridor helps minimize impacts to habitat and wildlife movement, but, by itself, does not adequately provide for the protection of wildlife throughout Segment 1 of the corridor. For example, Publicover testified "vegetation in the range of 30 to 40 feet would meet minimum height and density requirements for marten." Simons-Legaard offered similar testimony regarding pine marten habitat and this umbrella species' preference for habitat with trees at least 30 feet tall. Taller poles can allow for taller vegetation under the conductors. Additionally, in some locations taller vegetation may be feasible under the corridors simply as a result of taking advantage of existing topography.

The Department finds that additional protection for wildlife habitat and travel corridors can be provided by maintaining taller vegetation in the corridor, including in riparian areas and adjacent to conservation lands. Based on Department staff's knowledge that wildlife utilize riparian areas as travel lanes, the Department finds that significant gains in protection can and must be made in such areas. Additionally, as Simmons-Legaard testified, when evaluating where along the corridor to maintain taller vegetation, locations where mature forest in the areas abutting the corridor is most likely to remain should be targeted. Riparian areas and areas adjacent to conserved land are two such areas she noted. TNC identified nine areas where it suggested taller vegetation would benefit wildlife.

Department staff, in questions to CMP at the May 9, 2019 hearing, identified five areas (including nine stream or river crossings) where taller vegetation with a minimum height of 35 feet could be maintained due to existing topography without taller-poles only minimally taller, or no taller, than proposed. ³⁰

In a May 17 submission, CMP agreed that this appeared feasible. Since the hearing, the Department has continued its review of the evidence in the record and identified additional areas where taller vegetation, with a minimum height of 35 feet, is appropriate to support wildlife and reasonably achievable in light of existing topography or by using taller poles in areas where the taller structures would not be visible from scenic resources, or any visual impacts would be minimal and not have an unreasonable adverse effect on scenic uses or character of the surrounding area.

In identifying areas where a minimum vegetation height of 35 feet must be maintained the Department focused on areas with stream crossings and areas adjacent to conserved land, and also considered the habitat connectivity priority areas identified by TNC. The identified areas with a required minimum vegetation height of 35 feet are listed in Appendix C and identified as Wildlife Areas 1 through 5 and 7 through 10 in Table C-1 31

In response to concerns about the potential impact of the project to Roaring Brook Mayfly and Northern Spring Salamander habitat, the applicant proposed to retain full canopy height vegetation at the Gold Brook and Mountain Brook crossings. The location of this taller vegetation also is listed in Appendix C, Table C-1. The Gold Brook crossing is part of the larger Wildlife Area 4. The Mountain Brook crossing is identified as Wildlife Area 6.

Finally, in response to concerns about potential impacts to DWAs the applicant proposed to provide 10 deer travel corridors within the Upper Kennebec River DWA. Two of the corridors would be adjacent to the Upper Kennebec River in the area where the transmission line would be underground, allowing retention of full canopy height vegetation. Eight of the travel corridors would be created by selectively cutting the corridor to promote softwood growth necessary to provide winter habitat for deer. This

³⁰ These areas are: the South Branch Moose River crossing (structures 3006-768 to 3006-767), the crossing of a group of five unnamed streams (structures 3006-742 to 3006-741), unnamed stream crossing (structures 3006-589 to 3006-588), Tomhegan Stream crossing (structures 3006-576 to 3006-575), and Moxie Stream crossing (structures 3006-542 to 3006-541). Four of these five areas – South Branch of Moose River, the groups of five unnamed streams, Tomhegan Stream and Moxie Stream – correspond with portions of the nine TNC-identified priority areas (numbers 2, 4, 8, and 9, respectively).

³¹ Wildlife Area 1 includes part of TNC area 1; Wildlife Area 2 includes all of TNC area 2; Wildlife Area 3 includes all of TNC area 3; Wildlife Area 4 includes part of TNC area 4; Wildlife Area 5 includes all of TNC area 5, plus several additional structures, including the crossing of an unnamed stream where 35-foot tall vegetation likely can be retained without taller poles (3006-708 to 3006-707); Wildlife Area 7 includes the crossing of Cold Stream; Wildlife Area 8 includes an unnamed stream crossing where 35-foot tall vegetation likely can be maintained without taller poles; Wildlife Area 9 includes Tomhegan Stream and part of TNC area 8; and Wildlife Area 10 crosses Moxie stream and is within TNC area 9.

softwood vegetation would range in height from 25 to 35 feet. Both forms of vegetation management within the corridor are described more fully in Appendix C. In this same appendix, the locations of these travel corridors are listed. The two full canopy height travel corridors are identified as Wildlife Area 11. The eight softwood vegetation travel corridors managed specifically for deer, collectively, are identified as Wildlife Area 12.³²

Together, the areas along Segment 1 with full canopy height vegetation, vegetation with a 35-foot minimum height, and softwood vegetation managed for deer travel make up 12 Wildlife Areas.

These Wildlife Areas, which total approximately 14.08 miles along the 53.15-mile-long Segment 1 corridor, will provide improved passage and connectivity across Segment 1, helping to protect wildlife, provide travel lanes between areas of habitat, and mitigate wildlife habitat impacts overall. The majority of these travel lanes will exceed 400 feet in width and benefit multiple species that prefer interior forest habitats, including pine marten.

3. Conservation

Tapering and maintaining taller vegetation, as required above, will help mitigate the impact of Segment 1 of the corridor on wildlife and wildlife habitat. The 53.15-mile section of corridor, however, still will have a fragmenting effect on the landscape of this unique forested region, affecting wildlife. For example, an approximately 54-foot wide cleared strip maintained as scrub-shrub habitat will run along much of Segment 1 and the edge effect and reduction in interior forest habitat impacts testified to by Hunter, will remain, although taller vegetation will reduce the edge effect. Additionally, even within areas with taller vegetation access ways will be required during construction and maintained as scrub-shrub habitat. Where the minimum vegetation height is 35 feet, some taller vegetation may need to be selectively cut it if would encroach into the conductor safety zone.

Because of the impacts to wildlife, even with on-site mitigation, the Department finds additional, off-site, mitigation in the form of land conservation is required to ensure the applicant has made adequate provision for the protection of wildlife in the region affected by the project.

TNC advocated through its witness testimony and post-hearing brief that conservation in the range of 40,000 to 100,000 acres would be necessary to mitigate for habitat fragmentation impacts. TNC estimates that approximately 5,000 acres would be impacted by the corridor itself and associated edge effect, assuming an edge effect width of 330 feet. While this 5,000-acre calculation of impact pre-dates the slightly shorter Merrill Strip Alternative and was made without knowing taller vegetation would be required in some areas and that tapering would be required along the entire length of Segment 1. Therefore, the Department finds this estimated area of impact, although it

³² Wildlife Area 11 and most of Wildlife Area 12 are within TNC area 9.

remains a reasonable baseline for evaluating the appropriate amount of additional conservation that should be required, should be revised to 3,377 acres. Factoring in the other forms of mitigation proposed by CMP and required in this Order, the Department finds a 20:1 ratio, which would yield approximately 100,000 acres of conservation, or even a 10:1 ratio, unreasonably high. In evaluating other environmental impacts and allowing for off-site preservation as mitigation of those impacts, the Department commonly applies an 8:1 ratio³³ and finds that that ratio and resulting conservation, 40,00027,016 acres, is reasonable and appropriate here to ensure the applicant has made adequate provision for the protection of wildlife.

Within two years of the date of this Order, CMP must develop and submit to the Department for review and approval a plan to permanently conserve 40,00027,016 acres in the vicinity of Segment 1. Allowable conservation may include preservation or working forest conservation easements, requiring sustainable harvesting practices, focused on large habitat blocks. Any plan including the proposed use of a conservation easement must include a proposed holder. Within five years of the date of the Order, the approved conservation plan must be fully implemented.

4. Summary

The combination of vegetation management proposed by CMP and the additional requirements imposed as conditions of this Order, which include tapering and maintenance of taller vegetation, will reduce habitat impacts, provide wildlife sufficient ability to move between suitable habitats, regardless of where adjacent to the corridor this habitat changes as forestry patterns shift. Furthermore, the landscape-scale wildlife habitat impacts associated with fragmentation that will occur, even with this vegetation management, will not be unreasonable, given that they will be mitigated and offset through the required additional conservation within the western Maine forest area in which Segment 1 is located. Provided the applicant implements these measures, the Department finds that the project will result in adequate provision for the protection of wildlife.

b. Significant Vernal Pools and Other Significant Wildlife Habitat

Significant wildlife habitat is a statutorily defined term and, of particular relevance in review of present project, includes significant vernal pool habitat and high and moderate value waterfowl and wading bird habitat. 38 M.R.S. § 480-B(10). Which vernal pools and surrounding habitat qualify as a SVP is based on the criteria in Chapter 335, § 9³⁴; what habitat qualifies as an IWWH and TWWH is specified in Chapter 335, § 10.

³³ See, e.g., Ch. 310, § 5(C)(5)(c) (requiring an 8:1 ratio for compensation for wetlands impacts) and Ch. 335, § 3(D)(3)(b) (requiring an 8:1 ratio for compensation for SWH impacts).

Commented [A11]: This calculation is no longer accurate, as it does not consider the shorter Merrill Strip Alternative, and also does not consider the draft Order's proposed conditions intended to reduce the impact of the corridor itself and its associated edge effect, specifically the 35-foot minimum height vegetation plus full height vegetation ordered along 14.1 miles of Segment 1, and the reduced tree clearing (from the proposed 150 feet to 54 feet) and associated tapering ordered within the remainder of Segment 1. See our cover letter for the updated calculation.

³⁴ Dr. Calhoun testified about vernal poolscapes and advocated for the regulation of these in the same manner as significant vernal pools. Where a vernal pool that is part of a poolscape qualifies as a significant vernal pool, this pool is regulated as such under Chapter 335. Vernal pools that do not meet the definition of significant are regulated under NRPA as wetlands pursuant to Chapter 310.

As discussed in more detail above, the applicant's project will impact 49 61 SVPs, including 1.46 acres of permanent fill in the critical terrestrial habitat, 27.57 acres of clearing in uplands, and 3.68 acres of clearing forested wetlands; 16 IWWHs, including 15.03 acres of impact, all but 0.003 acres of which is from clearing; and one TWWH.

NRPA, in 38 M.R.S. § 480-D(3), requires the applicant to demonstrate that the proposed project will not unreasonably harm significant wildlife habitat. Site Law also regulates impacts to natural resources, 38 M.R.S. § 484(3), with the Site Law rule Chapter 375, § 15(B) specifically identifying significant vernal pools and high and moderate value waterfowl and wading bird habitat, among the habitats important to protecting wildlife.

Chapter 335 interprets and elaborates on the NRPA criteria for obtaining a permit. The rules guide the Department in its determination of whether a project's impacts would be unreasonable. A proposed project would generally be found to be unreasonable if it would degrade the significant wildlife habitat, disturb the subject wildlife, or affect the continued use of the significant wildlife habitat by the subject wildlife, either during or as a result of the activity, and there is a practicable alternative to the project that would be less damaging to the environment. As discussed above, the Department has reviewed project alternatives and finds there is no practicable alternative to the project that would be less damaging to the environment.

Chapter 335 requires that the amount of habitat to be altered and the disturbance of the subject wildlife must be kept to the minimum amount necessary for meeting the overall purpose of the project. The Department finds that within the corridor and at associated substations, the applicant has designed the project to minimize impacts to significant wildlife habitat, for example, through the selection of pole locations and siting of access roads. Also, the applicant's Vegetation Construction Plan (VCP) and Vegetation Management Plan (VMP) establish:

- Protected natural resources³⁵ and their associated buffers will be flagged or located using a Global Positioning System (GPS) prior to all construction and maintenance activities;
- Initial clearing within SVP habitat will take place during frozen ground conditions, if practicable. If not practicable, clearing will be accomplished using hand tools or reach-in techniques. If required to remove vegetation, any travel lanes within the SVP habitat must be approved by the Department;
- During routine maintenance, between April 1 and June 30 in any calendar year, no vegetation will be removed using tracked or wheeled equipment in SVP habitat:
- No mechanized equipment will be used within IWWH between April 15 and July 15 in any calendar year;
- Herbicide will not be applied within 25 feet of any IWWH;³⁶ and

Commented [A12]: Updated to be consistent with footnote 25.

³⁵ Protected natural resources include rivers, streams, brooks, SVP, IWWH, coastal wetlands, and habitats for threatened, or endangered species.

³⁶ Within Segment 1, CMP will not use any herbicide at all.

 Provided they do not pose a safety hazard, naturally occurring snags within IWWH will be allowed to remain, at a minimum of two to three snags per acre.

In accordance with Chapter 335, § 3(D)(1), if an impact to significant wildlife habitat will cause habitat functions or values to be lost or degraded, compensation is required to achieve the goal of no net loss of significant wildlife habitat functions and values. The applicant proposes to make a contribution into the In-Lieu Fee (ILF) program of the Maine Natural Resource Conservation Program in the amount of \$630,449.14623,657.53 to compensate for SVP impacts and \$253,352.53 to compensate for IWWH impacts. Prior to the start of construction, the applicant must submit a payment in the amount of \$883,802,.14877,010.06 payable to "Treasurer, State of Maine", and directed to the attention of the ILF Program Administrator at 17 State House Station, Augusta, Maine 04333. (See Appendix F.)

The Department finds that the applicant has avoided and minimized Significant Wildlife Habitat impacts to the greatest extent practicable, and that, with the compensation that will be achieved through the ILF payment, the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project, provided the applicant:

• Submits an In-Lieu Fee payment to the Department for the Maine Natural Resource Conservation Program in the amount of \$883,802.14877,010.06 prior to the start of construction (See Appendix F, Table F-1.)

The Department further finds that the activity will not unreasonably harm or disturb any significant vernal pool habitat or other Significant Wildlife Habitat, including high and moderate value waterfowl and wading bird habitat, provided the applicant:

- Marks the location of all natural resource buffers with flagging prior to the start of construction;
- Permanently marks all natural resource buffers on a map upon completion of construction; and
- Marks all natural resource buffers with flagging prior to any maintenance activities.

c. Brook Trout and Coldwater Fisheries

The project corridor crosses 471 rivers, streams, or brooks that contain brook trout habitat, 351 of which will have clearing impacts, and five Outstanding River Segments. Maine is one of the last places where native brook trout habitat is still intact and wild brook trout still thrive. This fishery and the related use of the resource by fishing guides, owners of sporting camps, and Maine residents and tourists are an important use of the resource involving many communities in the area near the project. While Brook trout habitat is not among the habitats protected in NRPA as Significant Wildlife Habitat, the impacts of a proposed project on the functions and values of rivers, streams and brooks, as set forth in Chapter 310, § 5(D)(b), is a factor in the determination of whether the

Commented [A13]: We do not believe it is reasonable or necessary to mark natural resource buffers on the ground upon completion of construction, given the first and third bullets, which require flagging prior to construction and prior to maintenance. The VCP and VMP further require that CMP maintain a database, including maps and GIS shapefiles, of the buffers, restricted habitats, and sensitive areas and their locations relative to the nearest structure (pole) or road location.

proposal would have an <u>unreasonably unreasonable</u> impact on the protected resource. Fisheries, aquatic habitat, and wildlife habitat are listed among the functions to be considered. Chapter 310, § 3(J). In addition, impacts to brook trout from activities that may adversely affect fisheries lifecycles and general impacts to waterbodies that serve as brook trout habitat are considered by the Department under Site Law, 38 M.R.S. § 484(3), and Chapter 375 §15. As a result, to obtain approval for a proposed project under NRPA and Site Law an applicant must make adequate provision for the protection of fisheries and avoid, minimize, and compensate for impacts to fish habitat.

As discussed above, the Department has reviewed project alternatives and finds there is no practicable alternative to the project that would be less damaging to the environment. As the project has evolved through the permit review process, the applicant has taken steps to minimize the impact of the project on brook trout and coldwater fisheries. The applicant has committed to:

- Increase the riparian filter areas (buffers) along streams crossed by the project from the 25 feet originally proposed to 100 feet around all perennial streams in Segment 1, all coldwater fisheries streams in the otherall segments, and all Outstanding River Segments, and all streams containing threatened or endangered species. A complete list of all rivers, streams and brooks that are crossed by the project and their fisheries status is attached as Appendix E.
- Conserve the Grand Falls Tract, Basin Tract, and Lower Enchanted Tract, which contain 12.02 miles of streams combined. These tracts also contain frontage on Dead River, an Outstanding River Segment.

Where a 100-foot riparian filter area will be maintained along streams, capable species (vegetation capable of growing tall enough to reach into the conductor safety zone) will be removed using hand tools or reach-in techniques. (See Appendix C for a summary of riparian filter areas.) No herbicides will be used within these riparian filter areas.³⁷ Inside the wire zone all <u>capable</u> woody vegetation will be removed down to ground level. Outside the wire zone non-capable species will be allowed to exceed ten feet in height if it is determined the <u>species specimens</u> will not encroach into the conductor safety zone.

In addition, as noted above in the discussion of habitat fragmentation, CMP proposed to allow full canopy vegetation at Gold and Mountain brooks and is required to maintain taller vegetation with a minimum height of 35 feet in additional Wildlife Areas, which also are listed in Appendix C of this Order and include the crossing of numerous coldwater streams. The Department finds that this full canopy and taller vegetation will minimize the impacts of habitat fragmentation, and the taller vegetation at these crossings will benefit brook trout by providing shading, buffering runoff, and providing large woody debris to the streams. In areas where tapering or vegetation with a minimum height of 35 feet is required, the applicant must leave trees that have been cut during routine maintenance unless it would be violation of the Slash Law or create a fire or safety hazard. This will provide for large woody debris imports into the streams, which

³⁷ Additionally, no herbicide use will be allowed anywhere in the Segment 1 corridor.

helps create pools and provides nutrients and more closely mimics natural forest succession.

Finally, in the course of the permitting process CMP proposed, as part of its compensation for impacts to coldwater fisheries, to provide \$200,000 to fund culvert replacements in order to improve fish passage. CMP estimated this funding would be sufficient to implement 20 to 25 culvert replacements. The Department agrees with CMP that replacing 25 culverts, when viewed in light of the mitigation and conservation noted above, would adequately compensate for project impacts to coldwater fisheries. However, the Department finds the proposed \$200,000 insufficient to provide this level of compensation.

The Department recently awarded grants to numerous municipalities to install Stream Smart crossings in public roads. The average grant award was approximately \$87,000 and was matched by the municipality or other funding sources in order to fully fund the replacement. Many of the culverts that may be replaced by the funding proposed by CMP would not be located under town roads and, therefore, would be less expensive to construct. However, based on Department experience and intervenors' witness testimony, sufficiently improved crossings will cost substantially more than \$10,000 each. The Department finds the Reardon testimony on culvert replacement costs to be credible. He stated that the cost to construct a proper culvert crossing is in the range of \$50,000 to \$100,000, depending on the type of crossing. Assuming an average cost of \$75,000, the Department finds that replacing approximately 25 culverts would require \$1,875,000 in funding.

Prior to the start of construction, CMP must establish an escrow account, secure an irrevocable letter or credit, or otherwise provide a financial guarantee acceptable to the Department, to fund \$1,875,000 of culvert replacements. Prior to commercial operation of the project, the applicant must submit a plan to the Department for review and approval that establishes the locations of the culvert replacements and how the funds will be disbursed. The culverts to be replaced must be in the vicinity of Segments 1 or 2, must completely or partially block fish passage, must be replaced with crossings consistent with Stream Smart³⁸ principles, and must be selected to provide the greatest possible habitat benefit. CMP must document each culvert replacement, monitor those replacements for one year from the date of replacement, and submit a summary report to the Department for review within eighteen months of the date of the last replacement.

The Department finds the applicant has minimized impacts to waterbodies that serve as fisheries habitat to the greatest extent practicable, that the project will not unreasonably harm any aquatic habitat or fisheries, and that the applicant has made adequate provision for the protection of fisheries, provided the applicant:

³⁸ Stream Smart principles were developed to design road crossings of streams in a manner that allows for fish and aquatic organism passage while maintaining a safe, reliable road. Stream smart crossings typically involve either an open-bottom arch crossing or a culvert that is large enough to be embedded in the stream bottom.

- Conserves the Grand Falls Tract, Basin Tract, and Lower Enchanted Tract;
- Implements the vegetation management outlined in Appendix C; and
- Funds and implements \$1,875,000 of culvert replacements, and reports on the culvert replacement program, as required in this section.

See Appendix F for a list of compensation requirements.

d. Deer Wintering Areas

Impacts to deer wintering areas that have been designated as high or moderate value are reviewed under both NRPA as significant wildlife habitat pursuant to 38 M.R.S. § 480-B(10), and Site Law pursuant to Chapter 375, § 15(B)(3)(a).

The project is proposed to cross 22 DWAs, including 39.02 acres of impact to the Upper Kennebec River DWA. None of the impacted DWAs have been rated by MDIFW as high or moderate value.

Although they have not been rated by MDIFW as high or moderate value, credible witness testimony from Joseph established the recent challenges for the deer population and the habitat value of these DWAs. CMP also recognizes their value, and following discussions with MDIFW, agreed to offset impacts to the Upper Kennebec River DWA by:

- Providing 10 travel corridors within this DWA. Eight of the travel corridors
 would be created by selectively cutting the corridor to promote softwood growth
 necessary to provide winter habitat for deer (see Appendix C, Table C-1); two of
 these corridors would be adjacent to the Upper Kennebec River in the area where
 the transmission line would be underground, allowing retention of full canopy
 height vegetation; and
- Preserving 717 acres of land within this DWA (see Appendix F, Table F-2).

These actions reduce wildlife impacts and promote the protection of wildlife generally, but especially deer, and will provide travel lanes for deer between available DWA habitat. These measures, together with the conditions contained in this Order, ensure the Project will not unreasonably impact significant wildlife habitat.

e. Threatened and Endangered Species Habitat

The project is located in or near the habitat for 10 species included on the Maine's Endangered or Threatened species list. An applicant must make adequate provision for the protection of wildlife and this includes ensuring no unreasonable disturbance to the habitat of species listed as threatened or endangered. Chapter 375, § 15(B).

During the application review process, CMP gathered additional information and adjusted its proposal to minimize impacts to threatened or endangered species and their

habitat in response to questions and concerns raised by MDIFW. CMP also proposed to compensate for these impacts.

CMP has committed to the following impact minimization efforts:

- Preserving full height canopy at the Gold Brook and Mountain Brook crossings, crossings where NSS and RBM habitat is present;
- Limiting construction activities in mapped habitat for wood turtles to between
 October 15 and April 15 (prohibiting construction between April 16 and October
 14) unless CMP follows the measures described in its July 13, 2018 Response to
 MDIFW March 15, 2018 Environmental Review Comments;
- Limiting construction activities in mapped habitat for Rusty Black Birds to between June 1 and April 19 (prohibiting construction between April 20 and May 31); and
- Completing a survey for Great Blue Heron colonies within or immediately adjacent to existing IWWH between April 20 and May 31, and prior to initial transmission line clearing (consultation with MDIFW and possible modifications to the proposed project would follow the identification of any colony).

To compensate for impacts, CMP has proposed to:

- Contribute \$469,771.95 to Maine's Endangered and Nongame Wildlife Fund for impacts to NSS and RBM habitat; and
- Contribute \$180,000 to Maine's Endangered and Nongame Wildlife Fund for impacts associated with 11.02 miles of forested conversion in riparian buffers.

Provided CMP implements the steps outlined above, the Department finds the applicant has made adequate provision for the protection of threatened or endangered species. (See Appendix F for a list of compensation requirements.)

f. Wetlands and Waterbodies

The applicant proposes to directly alter 4.129 acres of wetland and indirectly impact 111.8105.25 acres of wetland to construct the proposed project. The direct impacts include construction of the Merrill Road Converter Station, the Fickett Road Substation, filling and grading for structure placement, and the installation of foundations for structures. Some of the wetlands are considered wetlands of special significance.³⁹ In addition, the transmission line will cross 674 rivers, streams, or brooks, 131 of which will have no additional clearing. Rivers, streams, and brooks that serve as brook trout habitat also are discussed above in subsection c.

³⁹ As specified in Chapter 310, § 5-A(1)(b), construction of utility lines is one of the types of activities for which a permit may be sought for a project proposed to impact a wetland of special significance, subject to there being no practicable alternative to the activity that would be less damaging to the environment.

As discussed above the applicant submitted an alternatives analysis for the project and the Department finds the proposed project route is the least environmentally damaging practicable alternative.

The Department further finds that the alteration of the wetlands will be kept to the minimum amount necessary for meeting the overall purpose of the project. For example, the applicant's project is designed to locate poles and roads outside wetlands when possible and the applicant proposes to maintain 100-foot riparian filter areas (buffers) on all perennial streams in Segment 1, all Outstanding River Segments, all streams containing threatened or endangered species, and on all coldwater fisheries streams, and to maintain 75-foot riparian filter areas (buffers) on all other streams. Within these riparian filter areas, and throughout the Segment 1 corridor, no herbicides will be used. Additionally, as specified in the VCP, any work in freshwater wetlands will occur on construction mats unless the area is frozen or the Department approves another method.

In accordance with Chapter 310, § 5(C), compensation may be required to achieve the goal of no net loss of coastal wetland functions and values. The applicant proposes to preserve 1,022.4 acres of land in three separate parcels (Little Jimmy Pond Tract, Flagstaff Lake Tract, and Pooler Pond Tract), which contain 510.75 acres of wetland. The applicant proposes to use the Department's Declaration of Covenants and Restrictions to preserve these parcels.

The Department finds that the applicant has avoided and minimized freshwater wetland and waterbody impacts to the greatest extent practicable, and that the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project, provided the applicant:

- Preserves the Little Jimmy Pond Tract, the Flagstaff Lake Tract and the Pooler Pond Tract, as described above. (See Appendix F for a list of compensation requirements.)
 - (3) Unusual Natural Areas

In Chapter 375, § 12, the Department recognizes the importance of protection of unusual natural areas, including rare botanical communities or plants. As noted above, the applicant has identified 15 rare plant occurrences and five unique natural communities in or adjacent to the corridor. The applicant has discussed these occurrences and communities with the MNAP and, among other things, agreed to redesign a section of the proposed transmission line to avoid impacts to nearby whorled pogonia and to maintain a riparian buffer to minimize impacts to Goldie's Wood Fern. The applicant's VCP and VCMP also take into account rare plant locations; herbicides will not be used in these areas and, mechanized equipment will only be allowed to cross these locations if the rare plant locations encompass the entire corridor and in such an instance the crossing will

only occur during frozen conditions, on existing travel paths, or with the use of mats. 40 The Department finds the applicant has avoided and minimized impacts to these natural areas to the extent practicable. In response to comments from MNAP suggesting compensation for impacts the applicant revised the compensation plan. This revised plan includes a contribution to the Maine Natural Areas Compensation Fund for impacts to Goldie's Wood Fern and the Jack Pine Forest. The compensation plan requires the applicant to make a contribution to this fund in the amount of \$1,234,526.82.

The Department finds that the proposed development will not have an adverse effect on unusual natural areas either on or near the development site, provided the applicant:

- Contributes \$1,234,526.82 to the Maine Natural Areas Compensation Fund prior to the start of construction. (See Appendix F, Table F-2.)
 - (4) Overall Findings Regarding Natural Resource Impacts

Upon review of the administrative record, including the application materials, hearing testimony and exhibits, agency comments, and written public comments, the Department has considered whether the applicant has met its burden of proof on the criteria pertaining to the natural resource impacts of the project. The potential impacts of most significance and that generated the most testimony and public comment are discussed in more detail above. Having completed its review and evaluation, the Department finds that the applicant has avoided and minimized natural resource impacts to the greatest extent practicable, and that the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project, provided the applicant meets the requirements summarized below and discussed more fully in Section 7 of this Order.

The Department finds that the applicant has made adequate provision for the protection of wildlife and fisheries, unusual natural areas, significant wildlife habitat, and freshwater wetlands, provided the applicant:

- Maintains taller vegetation within the Segment 1 corridor as outlined in Appendix C, including by:
 - Maintaining full canopy height vegetation in the locations identified in Table C-1,
 - Maintaining vegetation with a minimum height of 35 feet in the locations identified in Table C-1,
 - Maintaining deer travel corridors in the locations identified in Table C-1, and
 - Maintaining tapered vegetation along the entire Segment 1 corridor, except where full canopy height vegetation, vegetation with a minimum

⁴⁰ The VCP establishes that prior to construction the applicant will identify any invasive plant species within the corridor and submit; to the Department for review and approval; a vegetation monitoring plan. The objective of the plan would be prevention of the introduction or spreading of invasive species as a result of construction.

height of 35 feet, or taller vegetation managed for deer travel corridors is required;

- Tapers the entire Segment 1 corridor, except where full canopy height vegetation, vegetation with a minimum height of 35 feet, or taller vegetation managed for deer travel corridors is required;
- Leaves trees that have been cut during routine maintenance in areas where tapering or vegetation with a minimum height of 35 feet is required, unless doing so would violate the Slash Law or create a fire or safety hazard;
- Maintains 100-foot riparian filter areas along all perennial streams in Segment 1, all coldwater fisheries streams in other all project segments as identified in Appendix E, all streams containing threatened or endangered species, and all Outstanding River Segments; and maintains 75-foot riparian filter areas on all other streams:
- Conserves the Basin Tract, Lower Enchanted Tract, and Grand Falls Tract, which together include 1,053.5 acres of land and 12.02 linear miles of stream;
- Conserves the Little Jimmy Pond Tract, Flagstaff Lake Tract, and Pooler Pond Tract, which together include 510.75 acres of wetland and 1,022.4 acres of land area:
- Conserves 717 acres of land within the Upper Kennebec River DWA and provides 10 travel corridors within this DWA consistent with Appendix C;
- Limits construction activities in mapped habitat for wood turtles to between
 October 15 and April 15 (prohibiting construction between April 16 and October
 14) in any calendar year, unless CMP follows the measures described in its July
 13, 2018 Response to MDIFW March 15, 2018 Environmental Review
 Comments;
- Limits construction activities in mapped habitat for Rusty Black Birds to between June 1 and April 19 (prohibiting construction between April 20 and May 31) in any calendar year;
- Maintains 10-15-foot tall spruce/fir vegetation in the mapped Rusty Black Bird habitat:
- Completes a survey for Great Blue Heron colonies within or immediately adjacent
 to existing IWWH between April 20 and May 31, and prior to initial transmission
 line clearing; if any colonies are identified, the applicant must consult with
 MDIFW and obtain approval from the Department prior to construction in the
 vicinity of any colony;
- Marks the location of all natural resource buffers with flagging prior to the start of construction;
- Permanently marks all natural resource buffers on a map upon completion of construction;
- Marks all natural resource buffers with flagging prior to any maintenance activities;
- Updates its VCP and VMP to be consistent with the requirements of this Order, including but not limited to vegetation management requirements in Appendix C, and submits the updated plans to the Department for review and approval prior to the start of construction (which includes clearing) within the corridor;

Commented [A14]: Redunda nt of prior bullet.

Commented [A15]: As noted above, we do not believe it is reasonable or necessary to mark natural resource buffers on the ground upon completion of construction, given the first and third bullets, which require flagging prior to construction and prior to maintenance. The VCP and VMP further require that CMP maintain a database, including maps and GIS shapefiles, of the buffers, restricted habitats, and sensitive areas and their locations relative to the nearest structure (pole) or road location.

- Contributes, prior to the start of construction:
 - A total of \$\frac{\$883,802.14\frac{877,010.06}}{23,657.53}\$ to the ILF program for unavoidable impacts to SVPs (\$\frac{630,449.61\frac{623,657.53}}{23,657.53}\$) and IWWHs (\$\frac{253,352.53}{253,352.53}\$), and
 - A total of \$649,771.95 to Maine Endangered and Nongame Fund for impacts to RBM and NSS (\$469,771.95) and riparian buffers (\$180,000.00);
- Ensures \$1,875,000 of funding to replace culverts as described above; and
- Within two years of the date of this Order, develops and submits to the Department for review and approval a plan to permanently conserve 40,00027,016 acres in the vicinity of Segment 1. Allowable conservation may include preservation or working forest conservation easements, requiring sustainable harvesting practices, focused on large habitat blocks. Any plan including the proposed use of a conservation easement must include a proposed holder. Within five years of the date of the Order, the approved conservation plan must be fully implemented.

The Department finds that the proposed development will not have an adverse effect on unusual natural areas either on or near the development site, provided the applicant:

 Contributes, prior to the start of construction, \$1,234,526.82 to the Maine Natural Areas Conservation Fund for impacts to Goldie's Wood Fern and the Jack Pine Forest.

8. HISTORIC SITES

The Department recognizes the value of preserving sites of historic significance and, pursuant to Chapter 375, § 11(C), considers whether a proposed development will have an adverse effect on the preservation of historic sites either on or near the development site.

The applicant evaluated the project impacts to archeological sites within the right-of-way (ROW) and to architectural resources within a half mile of the project centerline. As part of its review of potential impacts to archeological sites the applicant conducted a Phase I archeological survey. This survey was prepared and updated by the applicant in consultation with the Maine Historic Preservation Commission (MHPC). As part of this survey, which included both desktop analysis and field work, the applicant identified sensitive areas where archaeological sites were likely and conducted shovel tests at 4,537 locations. There were 440 positive shovel tests, which identified 47 archaeological resources, including 29 archaeological sites and 18 isolated finds. The applicant found that the 18 isolated finds were not eligible for National Register of Historic Places (NRHP) listing. The 29 archaeological sites, plus 16 previously recorded sites, produced a total of 45 such sites within the ROW. The applicant focused further analysis on the 29 previously unidentified sites, finding that 28 are historic and one is prehistoric. The applicant recommended 14 sites as not eligible for NRHP listing and identified one as potentially extending beyond the ROW, but not containing significant deposits within the

Commented [A16]: Updated to reflect the Compensation Plan tables in the October 10, 2019 Merrill Strip Alternative filing.

ROW. For the remaining sites the applicant opted for avoidance because of their potential significance. The applicant noted seven of the 14 may potentially be impacted by the project and offered a treatment plan for these seven sites. With the proposed treatment the applicant concluded there would be no adverse effect on these sites. Other sites would not be adversely affected as they would not be impacted at all.

MHPC reviewed the Phase I archeological report and on February 11, 2019, issued comments concurring with the final report and report recommendations. MHPC stated that plans for site avoidance, treatments, and site monitoring during and after construction should be detailed in a project memorandum of agreement between the applicant and MHPC.

The Department finds the Phase I archeological report is thorough and informative, and the measures proposed by the applicant to avoid and minimize any impact to archeological resources reasonable and appropriate. The Department finds that the proposed development will not have an adverse effect on the preservation of historic archeological resources, provided the applicant:

• Implements the plans for site avoidance and treatments described in the final Phase I archaeological survey report.

With regard to architectural resources, the applicant conducted an above ground resources survey in which it identified over 1,500 historic resources within a half mile of the project.

The applicant identified which of these resources were listed or already recommended for listing on the NRHP, as well as those which it recommended as eligible for listing. The applicant prepared its above ground resources survey in consultation with MHPC, responding to MHPC comments throughout the survey process. The applicant identified historic resources that could be adversely affected by the project and proposed mitigation measures. MHPC agreed with the survey methods and largely agreed with the applicant's conclusions. Ultimately, of all the historic resources identified, MHPC determined, in letters dated January 18 and March 26, 2019, the project will have an adverse effect on five:

- Farmstead at 1195 Hilton Hill (Anson) Road, Starks (SM#s 1014-1020)
- Farmstead at 1294 Hilton Hill (Anson) Road, Starks (SM#s 1022-1033)
- Barn at 40 Turmel Road, Livermore Falls (SM# 795)
- Bowman Airfield, River Road, Livermore Falls (SM# 719)
- Appalachian Trail, near Troutdale Road, Bald Mountain Twp. (SM# 66)

MHPC's determination was based on Section 106 of the National Historic Preservation Act and accompanying federal regulations defining adverse effect. Based on its determination, MHPC requested that the federal permitting agency, the U.S. Army Corps of Engineers enter into a memorandum of agreement with MHPC.

The Department finds the comments provided by MHPC informative, while recognizing they are focused on a separate federal review process. For those historic resources where the applicant's analysis and the assessment of MHPC are in agreement that the project will not have an adverse effect, the Department finds the project will not have an adverse effect on the preservation of these historic properties. For the remaining five historic resources, the federal process resulting in a determination of adverse effect by MHPC, under the federal definition of that term, does not mandate a conclusion that the impacts are unreasonable under the Site Law. Where MHPC makes such a determination, however, the Department finds closer scrutiny of the impacts is warranted.

With regard to the two farmsteads, the barn, and airfield the Department finds the impact of the project on these historic properties would be indirect. The structures and the airfield themselves would not be impacted, but the setting in which they are located would be affected. The Department finds, however, that this impact would not affect the preservation of these historic properties, nor would the impact be unreasonable. Factors the Department considered include that the project at each of these sites is being colocated with existing transmission lines and the long-standing presence of these existing lines in the setting of these historic properties. Research provided by the applicant shows a transmission line has been part of the barn's setting for nearly eighty years, with two transmission lines present for over 50 years. Similarly, the existing transmission line has been a part of the setting of two farmsteads since approximately 1930. With regard to the airfield, it was established in the 1960s, with hangers ranging in age from the 1960s to the 1990s. An initial transmission line was constructed in 1930, well before the establishment of the airfield, with a second line added in approximately 2012.

The crossing of the Appalachian Trail (AT) is discussed above as part of the Department's review of the scenic impacts of the project. In addition to being a scenic resource, the AT also is a historic resource. In evaluating the impact of the project under Chapter 375, § 11(C), the Department finds the history of the trail in this area of Troutdale Road important. The transmission line corridor, which is currently developed with a transmission line, predates the trail in the location of the present crossing. The corridor was developed with a transmission line in the 1950s; the AT was rerouted and crossed the corridor in its present location in the1980s. The project will increase the cleared width of the existing corridor and include taller poles, increasing visibility of transmission infrastructure within the setting of the AT. The Department finds, however, that this impact will not affect the preservation of the AT, nor will the impact of the colocated line within a pre-existing transmission line right of way be unreasonable. 41

⁴¹ CMP has stated it "has agreed with [Maine Appalachian Trail Club] that CMP will pay to re-locate the trail to an alignment farther to the southwest where the trail currently parallels the CMP corridor south of the Baker Stream Crossing" and that "CMP's long-term goal is to secure a permanent re-route acceptable to both MATC and [the National Park Service], and CMP is willing to commit the necessary funds to this end." (May 7, 2019, Letter from M. Manahan on Behalf of CMP to the Department regarding "NECEC – Preservation of Historic Sites.) While the Department does not find re-routing the AT is necessary to satisfy the permitting standards addressed in this Order, the Department acknowledges this commitment by CMP.

In sum, the Department finds that the proposed development will not have an adverse effect on the preservation of any historic sites either on or near the development site, provided the applicant:

• Implements the plans for site avoidance and treatments described in the final Phase I archaeological survey report.

9 BUFFER STRIPS

Natural buffer strips play an important role in protecting water quality and wildlife habitat. Buffer strips also provide screening that can serve to lessen the visual impact of incompatible or undesirable land uses. Pursuant to Chapter 375, § 9, an applicant must demonstrate that it has made adequate provision for buffer strips where appropriate. When evaluating whether an applicant has made adequate provision for buffers, the Department considers all relevant evidence, including evidence that:

- Water bodies within or adjacent to the development will be adequately protected from sedimentation and surface runoff by buffer strips;
- Buffer strips will provide adequate space for movement of wildlife between important habitats; and
- Buffer strips will shield adjacent uses from unsightly developments and lighting. (Ch. 375, § 9(B).)

A. Overview

The applicant submitted a Vegetation Clearing Plan (VCP) that describes the methods it proposed to be used to initially clear the ROW and a Vegetation Management Plan (VMP) that describes the methods it proposed to be used to maintain the vegetation in the ROW. These plans specify the types and heights of vegetation the applicant proposed to be maintained as buffers around various resources. To protect water bodies crossed by the corridor, the applicant initially proposed to maintain a 25-foot wide buffer strip adjacent to rivers, streams, and brooks where all woody vegetation would be removed from the wire zone, and proposed that outside the wire zone all capable species would be removed. In response to comments from both MDIFW and the Department, the applicant revised the VCP and the VMP to specify that it would maintain a 100-foot buffer around all coldwater fisheries streams, all perennial streams within Segment 1, all streams containing threatened or endangered species, and Outstanding River Segments and a 75foot buffer adjacent to all other rivers, streams, and brooks. In these buffers all capable woody vegetation in the wire zone would be cut during initial clearing. Outside the wire zone, non-capable species would be allowed to grow after initial clearing if it is determined the specimens would not grow into the conductor zone prior to the next scheduled maintenance. These proposed buffers, referred to as riparian filter areas in this Order, are described more fully in Appendix C.

The VCP and VMP contain additional provisions that buffer resources beyond river, streams, and brooks. For example, when terrain conditions permit capable vegetation will be permitted to grow within and adjacent to protected natural resources or critical habitats where maximum growing height can be expected to remain well below the conductor safety zone.

In addition, the applicant proposed vegetation management intended to protect certain habitat and to facilitate wildlife movement. Specifically, the applicant proposed to maintain full canopy height vegetation at the Gold Brook and Mountain Brook crossings for the protection of Roaring Brook Mayfly and Northern Spring Salamander. Within the Upper Kennebec River DWA, the applicant also proposed to maintain taller softwood stands to create eight deer travel corridors, and to retain full canopy height vegetation along both sides of the river to preserve two additional travel corridors.

The applicant proposed additional buffering to serve as screening to minimize the visual impacts of the project, including tapering vegetation in 2.2 miles of the corridor visible from Coburn Mountain and planting screening vegetation at the Fickett Road Substation and certain road crossings, such as along the Old Canada Road (Route 201) in Johnson Mountain Township and Moscow and at the Troutdale Road.

The applicant also proposed no herbicide use, mixing, or transfer within 100 feet of private wells or 200 feet of publics wells, identified by the applicant.

B. Department Analysis, Findings, and Conclusions

The Department has evaluated the applicant's proposal and the evidence related to buffers. With regard to the protection of waterbodies from sedimentation and surface runoff, the Department finds the project will be set back from great ponds, except for a short section of Segment 2 where the co-located corridor crosses Moxie Pond. The setbacks from great ponds (except Moxie Pond) serve as an adequate buffer. The Department further finds that the increased riparian filter areas (buffers) – 100 feet on all streams in Segment 1, and on all Outstanding River Segments, all streams containing threatened or endangered species, and on coldwater streams along the entire corridor; and 75 feet on all other crossings – will adequately protect rivers, streams, and brooks crossed by the project. In the area adjacent to Moxie Pond in Segment 2, the applicant must construct and maintain the project with a 100-foot riparian filter area identical to the riparian filter areas adjacent to coldwater fishery streams in Segment 1.

With regard to wildlife, the potential impact of the project on wildlife, wildlife movement, and habitat connectivity are evaluated in Section 7 of this Order. While the applicant proposed full canopy height vegetation at Gold and Mountain brooks, and adjacent to the Upper Kennebec River, along with eight additional deer travel corridors in

the Upper Kennebec River DWA, these measures, by themselves, are insufficient to protect wildlife and adequately provide for wildlife movement. This is discussed more fully in Section 7. As a condition of this Order, a total of 12 Wildlife Areas are required, all of which include taller vegetation across the entire width of the 150-foot wide corridor to facilitate wildlife movement. (See Appendix C.) In addition, outside the areas where taller vegetation is required the entire Segment 1 corridor must be maintained with tapered vegetation. This tapered vegetation reduces the scrub-shrub portion of the corridor from 150 to approximately 54 feet (the area under the wire zone), benefiting wildlife movement. Outside of Segment 1, the proposed transmission line will be colocated with or immediately adjacent to an existing cleared corridor, minimizing fragmentation and the impact to wildlife movement. The Department finds that with this required vegetation management and co-location, the buffer strips proposed and required by this Order will provide adequate space for movement of wildlife between important habitats.

With regard to screening, the visual impacts of the project are evaluated in Section 5, above. Tapering the vegetation for the Segment 1 corridor will minimize the visual impact of that portion of the corridor, particularly from elevated viewpoints. Taller vegetation within Wildlife Areas also will buffer the view of the corridor for those fishing or otherwise recreating on the streams crossed by the project. In addition, the applicant proposes plantings at both crossings of the Old Canada Road, the AT crossing at the Troutdale Road, and the Fickett Road Substation. The Department finds the required vegetation management, maintaining existing vegetation at the Merrill Road Converter Station, and the plantings proposed by the applicant will adequately shield adjacent uses from the project.

With regard to water quality and protection of wells, the proposed buffers are sufficient, provided they are adhered to by the applicant.

Overall, with the conditions imposed in this Order, the Department finds the applicant has made adequate provision for buffer strips, provided the applicant:

- Maintains taller vegetation and tapered vegetation within the corridor as outlined in Appendix C;
- Plants and maintains vegetated roadside buffers, and replaces any dead buffer
 plantings within one year of the vegetation dying, at the following locations: Old
 Canada Road (Route 201) crossings in Johnson Mountain Twp and Moscow,
 Troutdale Road crossing in Bald Mountain Twp, and on the south side of Fickett
 Road in conjunction with the Fickett Road Substation;
- In the area adjacent to Moxie Pond in Segment 2, the applicant must construct and maintain the project with a 100-foot riparian filter area identical to the riparian filter areas adjacent to coldwater fishery streams in Segment 1; and
- Provides a list of buffers surrounding private or public water supply wells to the Department prior to construction and adheres to the buffers during construction.

10. SOILS

As set forth in 38 M.R.S. § 484(4), an applicant must demonstrate that the proposed project will be built on soil types that are suitable to the nature of the development. An applicant also must demonstrate the proposed activity will not cause unreasonable erosion of soil or sediment. Pursuant to 38 M.R.S. § 484(9), any blasting that is required for the project must comply with the requirements of 38 M.R.S. § 490(Z).

To demonstrate the suitability of the soils, the applicant submitted a soil survey map and report and a geotechnical report describing the soils found within the NECEC project site. The applicant submitted a Class B soil survey and report for the Merrill Road Converter Station and the Fickett Road Substation. In addition, the applicant submitted a Class D soil survey and report for the transmission line portion of the project. These reports were prepared by a certified soil scientist and reviewed by the Department. The Department also reviewed a blasting plan submitted by the applicant that outlines the proposed procedures for removing ledge at the Merrill Road Converter Station and for installation of structures where necessary. If a rock crusher is utilized on site, the applicant must insure that the crusher is licensed by the Department's Bureau of Air Quality and is operated in accordance with that license.

The Department finds that, based on the soil and geotechnical reports and the blasting plan, the soils on the project site present no limitations to the proposed project that cannot be overcome through standard engineering practices. The Department further finds the proposed project will be built on soil types that are suitable to the nature of the undertaking and, for the reasons noted here and discussed below in Section 11, will not cause unreasonable erosion or of soil or sediment.

11. STORMWATER MANAGEMENT

The Site Law, in 38 M.R.S §484(4-A), requires an applicant to demonstrate that the proposed development meets the standards for stormwater management set forth in 38 M.R.S. § 420-D and the standard for erosion and sedimentation control in 38 M.R.S. § 420-C. Additionally, an applicant must demonstrate the proposed activity will not cause unreasonable erosion of soil or sediment. The proposed project includes approximately 19.27 acres of developed area, of which 12.55 acres is impervious area at the converter station and substations. The transmission line corridor is not developed area as defined in Chapter 500 because it is not mowed more than twice per year.

A. Basic Standards

(1) Erosion and Sedimentation Control

The applicant submitted an Erosion and Sedimentation Control Plan (Section 14 of its Site Law application) that is based on the performance standards contained in Appendix A of Chapter 500 and the Best Management Practices outlined in the Maine Erosion and Sediment Control BMPs, which were developed by the Department. This plan and plan sheets containing erosion control details were reviewed by, and revised in response to the

comments from, Department staff. Staff recommend the applicant perform a complete GIS analysis, including both soils and topographic data, on Segment 1 to determine the areas with high erosion risk. The Department commented that the high-risk areas must:

- Receive a higher frequency of environmental inspection as outlined in page 14-3 of the application;
- Have a dedicated Erosion and Sediment Control (ESC) maintenance crew;
- Have additional structural ESC measures, which can include multiple layers of sediment barriers, upgradient flow diversion structures, and temporary sediment basins, depending on the location; and
- Have an accelerated work schedule to the maximum extent practicable.

In response to these comments, on June 29, 2018, the applicant submitted a table that identifies areas along Segment 1 that meet the criteria for higher risk of erosion. The areas identified by the applicant have been incorporated into Appendix G. These areas must receive the additional erosion and sedimentation control measure described above.

In its review of the application amendment for a HDD under the Upper Kennebec River, the Department commented that prior to start of the drilling operation, the applicant should submit for review and approval, the location of the disposal area for the cuttings from the drilling operation.

Due to the length of the transmission line portion of the project, the number of segments involved, and the amount of material that must be removed for construction of the Merrill Road Converter Station, the applicant must retain the services of no fewer than one third-party inspector for each transmission line segment under construction at any one time, and one third-party inspector for the converter station. If CMP's contractors employ multiple crews working in multiple locations within a segment, the Department may require more third-party inspectors. Details of the erosion control requirements will be included on the final construction plans and the erosion control narrative will be included in the project specifications to be provided to the construction contractor. Prior to the start of construction, the applicant must conduct a pre-construction meeting to discuss the construction schedule and the erosion and sediment control plan with the appropriate parties. This meeting must be attended by the applicant's representative, Department staff, the design engineer, the contractor, and the third-party inspectors. The applicant must retain the services of the third-party inspectors in accordance with the Special Condition for Third Party Inspection Program, which is attached to this Order.

(2) Inspection and Maintenance

The applicant submitted a maintenance plan that addresses both short and long-term maintenance requirements. The maintenance plan is based on the standards contained in Appendix B of Chapter 500. This plan was reviewed by, and adequately revised in response to comments from, the Department.

(3) Housekeeping

Commented [A17]: CMP submitted revised design in its August 13, 2018 update to the Site Law and NRPA applications. That information should inform Appendix G.

The proposed project will comply with the performance standards outlined in Appendix C of Chapter 500.

(4) Summary

Based on the Department's review of the erosion and sedimentation control plan and the maintenance plan, the Department finds that the proposed project meets the Basic Standards contained in Chapter 500, § 4(B), provided the applicant:

- Retains no fewer than one third-party inspector for each transmission line segment under construction at any one time, and one third-party inspector for the Merrill Road Converter Station. The inspectors must be retained and work in accordance with the Special Condition for Third Party Inspection Program included with this Order.
- Conducts additional erosion control inspections, have dedicated crews, install
 additional erosion control structures, and have an accelerated work schedules, for
 the areas identified in Appendix G.
- Prior to start of the drilling operation under the Kennebec River, submits for review and approval, the location of the disposal area for the cuttings from the drilling operation.

B. General and Phosphorus Standards

The applicant's stormwater management plan includes general treatment measures that will mitigate for the increased frequency and duration of channel erosive flows due to runoff from smaller storms, provide for effective treatment of pollutants in stormwater, and mitigate potential temperature impacts. This mitigation will be achieved by using Best Management Practices (BMPs) that will control runoff from no less than 95% of the impervious area and no less than 80% of the developed area. The access road to the proposed project meets the definition of "a linear portion of a project" in Chapter 500 and the applicant is proposing to control runoff volume from no less than 75% of the impervious area and no less than 50% of the developed area.

(1) Merrill Road Converter Station

The Merrill Road Converter Station will result in 13.42 acres of new developed area, of which 8.11 acres are impervious. It lies within the watershed of the Androscoggin River. The applicant submitted a stormwater management plan based on the Basic, General, and Flooding standards contained in Chapter 500. As currently designed, the converter station pad is self-treating. The proposed stormwater management system for other impervious and developed areas consists of two grassed, underdrained soil filters.

(2) Fickett Road and Surowiec Substations

The Fickett Road Substation will result in 4.87 acres of developed area, of which 3.90 acres are impervious. The applicant submitted a stormwater management plan based on the Basic, Phosphorus, and Flooding standards contained in Chapter 500. The stormwater management system will consist of a self-treating pad for the substation and a grassed, underdrained soil filter. The Surowiec Substation upgrades will result in no new developed area and 0.01 acre of new impervious area within the existing yard. No additional stormwater management system is required for this small amount of new impervious area. Because both the Fickett Road Substation and the Surowiec Substation are located in the watershed of Runaround Pond, a lake most at risk from development, stormwater runoff from the project site will be treated to meet the phosphorus standard outlined in Chapter 500, § 4(D). The applicant's phosphorus control plan was developed using methodology developed by the Department and outlined in "Phosphorus Control in Lake Watersheds: A Technical Guide for Evaluating New Development." For the Fickett Road Substation, the Permitted Phosphorus Export is 0.51 pounds of phosphorus per year. The predicted phosphorus export for the project site based on the applicant's model is 0.45 pounds of phosphorus per year. For the Surowiec Substation, the Permitted Phosphorus Export is 2.19175 pounds of phosphorus per year. The current export is 0.4225 pounds per year and the proposed increase is 0.4275 pounds per year, for a total of 0.85 pounds of phosphorus per year from the site. The proposed stormwater treatment at both the Fickett Road Substation and the Surowiec Substation will be able to reduce the export of phosphorus in the stormwater runoff below the maximum permitted phosphorus export for the sites.

(3) Other Substations

Improvements at the other substations will not result in any increased developed or impervious area and stormwater treatment is not required.

(4) Summary

The stormwater management system proposed by the applicant was reviewed by the Department and revised by the applicant in response to these comments. After a final review, the Department finds that the proposed stormwater management system is designed in accordance with the General and the Phosphorus Standards contained in Chapter 500, § 4(C). The applicant must retain the stormwater design engineer to oversee the installation of the stormwater best management practices. At least once per year, or within 30 days of completion, the applicant must submit an update or as-built plans to the Department for review.

Based on the stormwater system's design, the Department finds that the applicant has made adequate provision to ensure that the proposed project will meet the General and the Phosphorus Standards contained in Chapter 500, § 4(C), provided the applicant:

• Complies with the reporting and inspection requirements summarized in Section 11(B)(4) of this Order.

C. Flooding Standard

The applicant is proposing to utilize a stormwater management system based on estimates of pre- and post-development stormwater runoff flows obtained using Hydrocad. Hydrocad is a stormwater modeling software that utilizes the methodologies outlined in Technical Releases #55 and #20, U.S.D.A., Soil Conservation Service, and retains stormwater from 24-hour storms of 2-, 10-, and 25-year frequency. The post-development peak flow from the substations will not exceed the pre-development peak flow from the site.

Based on the system's design and the Department's review, the Department finds the applicant has made adequate provision to ensure that the proposed project will meet the Flooding Standard contained in Chapter 500, § 4(F) for peak flow from the project site, and channel limits and runoff areas.

12. GROUNDWATER

Site Law, in 38 M.R.S.A. § 484(5), requires an applicant to demonstrate that the proposed development will not pose an unreasonable risk that a discharge to a significant groundwater aquifer will occur. Chapter 375, §§ 7 & 8 require an applicant to show that that a proposed development will not have an unreasonable adverse effect on groundwater quality or quantity.

The applicant does not propose any withdrawal from, or discharge to, the groundwater. The transmission line portion of the project traverses 30 significant sand and gravel aquifers. The proposed Fickett Road Substation and the Merrill Road Converter Station are not located in sole source aquifer areas or over significant sand and gravel aquifers. Existing substations affected by the proposed project include Crowley's Road, Coopers Mills, Larrabee Road, Maine Yankee, Raven Farm, and Surowiec substations. Larrabee Road Substation is the only substation positioned over a sand and gravel aquifer. Department staff reviewed the project and determined that if a Spill Prevention, Control, and Countermeasures (SPCC) Plan is required for the equipment to be installed at the Merrill Road Converter Station, it must be submitted for review prior to operation.

The Department finds that the proposed project will not pose an unreasonable risk that a discharge to a significant groundwater aquifer will occur. The Department further finds that the proposed project will not have an unreasonable adverse effect on ground water quality or quantity, provided the applicant:

• Submits an SPCC Plan for the Merrill Road Converter Station to the Department prior to operation, if such a plan is required by 40 CFR Part 112.

13. WATER SUPPLY

The Department evaluates the availability of adequate water supply pursuant to Chapter 375, § 18.

No wells are proposed for the new Merrill Road Converter Station or the new Fickett Road Substation. Coopers Mills, Larrabee Road, Raven Farm and Surowiec substations have existing wells. Water for the transmission line will be supplied by the existing wells at these substations. No common wells or public water supply wells are proposed to be used. Water may be necessary during construction for dust control. For dust control CMP proposes to use either municipal water or publicly available surface water sources, accessible from stable locations, such as bridges, roads or boat ramps, if necessary.

The Department finds that the applicant has made adequate provision for securing and maintaining a sufficient and healthful water supply.

14. WASTEWATER DISPOSAL

Pursuant to the Site Law, 38 M.R.S. § 484(6), an applicant must demonstrate that it has made adequate provision for wastewater disposal.

The proposed project will not generate any additional wastewater. Existing wastewater disposal systems at Coopers Mills, Larrabee Road, Raven Farm, and Surowiec substations will be utilized by the applicant.

The Department finds that the applicant has made adequate provisions for wastewater disposal.

15. SOLID WASTE

Pursuant to the Site Law, 38 M.R.S. § 484(6) and Chapter 375, § 16, an applicant must demonstrate that it has made adequate provision for solid waste disposal

The proposed project is anticipated to generate 50 cubic yards of food waste, plastics, and common trash, when completed, which will be hauled to a licensed disposal location by a licensed non-hazardous waste transporter. All general solid wastes from the proposed project will be disposed of at facilities pre-approved by CMP and the list of facilities will be submitted to the Department for review and approval prior to construction. Facilities operated by Casella Waste Systems, Inc., including the State-owned Juniper Ridge Landfill in Old Town, ME, have been pre-approved by CMP and have been demonstrated to have adequate capacity as approved by the Department. These facilities are currently in substantial compliance with the Maine Solid Waste Management Rules.

The proposed project will generate approximately 30,000 cubic yards of stumps and grubbings. Wood materials associated with clearing will be sold as marketable timber, chipped for biomass facilities, manufactured into erosion control mulch, and/or chipped and spread within the corridor. These materials are not proposed to be shipped to a landfill. Any excess soils removed as part of this project will be utilized on site or will be removed to other exempt or permitted facilities. Any wood that is chipped and spread on

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the corridor must be left in layers no more than two inches thick, as measured above the mineral soil surface.

The proposed project will generate approximately 153 cubic yards of construction debris and demolition debris, including wooden cable spools and pallets, wooden insulator crates, and concrete debris. Wooden cable spools, metals, concrete debris, and porcelain insulators will be recycled by Casella Waste Systems. Metals will be disposed of at Schnitzer Steel Industries, Inc. facilities in Auburn and Portland, Maine. All remaining construction and demolition debris will be disposed of at facilities pre-approved by CMP. Facilities operated by Casella Waste Systems, Inc. have been pre-approved by CMP and have been approved by the Department. They are currently in substantial compliance with the Maine Solid Waste Management Rules. If a contractor chooses a facility other than one operated by Casella Waste Systems or Schnitzer Steel Industries, the applicant must receive approval from the Department prior to material being taken to that facility.

Based on the evidence summarized above, the Department finds that the applicant has made adequate provision for solid waste disposal, provided the applicant:

• Receives approval from the Department prior to any material being taken to a facility other than Casella Waste Systems or Schnitzer Steel Industries.

16. FLOODING

Site Law, in 38 M.R.S. § 484(7), and NRPA, in 38 M.R.S. § 480-D(6), require an applicant to demonstrate that the proposed activity will not unreasonably cause or increase flooding

The transmission line portion of the proposed project will have 30 structures located within the 100-year flood plain of any river or stream, three in Segment 3, 22 in Segment 4, and five in Segment 5. There is limited additional impervious area associated with each structure. The placement of these structures is not expected to result in any increase in flooding. Portions of the Surowiec Substation and the Fickett Road Substation are also located in the 100-year flood plain. The substations will be designed and constructed at a final elevation such that the equipment will not be inundated during a 100-year flood event

The Department finds that the proposed project is unlikely to cause or increase flooding or cause an unreasonable flood hazard to any structure.

17. ALTERATION OF CLIMATE

The Department received extensive public comment, as well as written argument from Groups 3 and 4 and the Applicant, concerning whether and how potential greenhouse gas (GHG) emission reductions resulting from the project have regulatory significance under the applicable permitting standards. Some members of the public testified the project is urgently needed to reduce regional GHG

emissions, while others challenged whether such emission reductions would even occur, and argued any such reductions have not been adequately proven. Groups 3 and 4 also asserted that the Department's standards for evaluating adverse environmental effects under Site Law, as set forth in Chapter 375, require the Department to undertake an analysis of a proposed project's impact on global climate change. The relevant section of Chapter 375 reads in its entirety as follows:

2. No Unreasonable Alteration of Climate

- **A. Preamble**. The Department recognizes the potential of large-scale, heavy industrial facilities, such as power generating plants, to affect the climate in the vicinity of their location by causing changes in climatic characteristics such as rainfall, fog, and relative humidity patterns.
- **B.** Scope of Review. In determining whether the proposed development will cause an unreasonable alteration of climate, the Department shall consider all relevant evidence to that effect.
- **C. Submissions**. Applications for approval of large-scale, heavy industrial developments, such as power generating plants, shall include evidence that affirmatively demonstrates that there will be no unreasonable alteration of climate, including information such as the following, when appropriate:
 - (1) Evidence that the proposed development will not unreasonably alter the existing cloud cover, fog, or rainfall characteristics of the area.
- **D.** Terms and Conditions. The Department may, as a term or condition of approval, establish any reasonable requirement to ensure that the proposed development will not cause an unreasonable alteration of climate.

Chapter 375, § 2. Read in context, this provision is not directed at issues of global climate change, but instead is exclusively concerned with the potential for highly localized climate impacts that facilities such as powerplants could have on atmospheric conditions such as rainfall, fog, and humidity. Chapter 375, § 2(A) & (C)(1). The Department has consistently interpreted Chapter 375, § 2 in this manner, and has never before construed it as applying to issues of global climate change. Neither Site Law nor NRPA in their current form, and as applicable to this project, require an applicant to make any particular showing regarding a project's impact on global climate change. To the extent Chapter 375, § 2 has any applicability to this project, the Department finds the project will not cause any adverse environmental impact on climate, as that term is used in the regulation.

Although not relevant under Chapter 375, § 2, the issue of GHG emission reductions is material to the Department's review of this project because its stated purpose is to provide clean, renewable energy to the regional energy grid. The Department considers a

project's purpose in the context of evaluating whether the totality of its adverse environmental effects is reasonable. As described in detail above, construction and maintenance of the project will cause some adverse environmental effects on habitat, scenic character, and existing uses. Climate change, however, is the single greatest threat to Maine's natural environment. It is already negatively affecting brook trout habitat, and those impacts are projected to worsen. It also threatens forest habitat for iconic species such as moose, and for pine marten, an indicator species much discussed in the evidentiary hearing. Failure to take immediate action to mitigate the GHG emissions that are causing climate change will exacerbate these impacts. The Maine Public Utilities Commission (PUC), which has jurisdiction necessary to assess GHG emissions from the project in light of its impact on the electricity grid, concluded that, "the NECEC [project] will result in significant incremental hydroelectric generation from existing and new sources in Quebec and, therefore, will result in reductions in overall GHG emissions through corresponding reductions of fossil fuel generation (primarily natural gas) in the region."42" The Department defers to and accepts the PUC's finding on this issue, and weighs the NECEC project's reductions in GHG emissions against the project's other impacts in its reasonableness determination.

In doing so, the Department finds the adverse effects to be reasonable in light of the project purpose and its GHG benefits, provided the project is constructed in accordance with the terms and conditions of this Order.

18 MAINE LAND USE PLANNING COMMISSION CERTIFICATION

The LUPC reviewed the portion of the proposed NECEC project located in the unorganized or deorganized areas of the State. On January 8, 2020, the LUPC certified to the Department (SLC-9) that the project is an allowed use within the subdistricts in which it is proposed and that the project complies with all of the Commission's applicable land use standards, those not considered in the Department's review. The LUPC certification, including its conditions, is incorporated into and made part of this Order. A copy of the LUPC's certification is included in Appendix H.

BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S. §§ 480-A–480-JJ and Section 401 of the Federal Water Pollution Control Act:

- A. The proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational, or navigational uses, provided the applicant complies with the requirements in Section 5 and the corresponding conditions below.
- B. The proposed activity will not cause unreasonable erosion of soil or sediment, provided the applicant complies with the requirements in Section 11 and the corresponding conditions below.

⁴² Public Utilities Commission Examiner's Report (March 29, 2019), Docket No. 2017-00232 at 114.

- C. The proposed activity will not unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.
- D. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life, provided the applicant complies with the requirements in Section 7 and the corresponding conditions below.
- E. The proposed activity will not unreasonably interfere with the natural flow of any surface or subsurface waters.
- F. The proposed activity will not violate any state water quality law including those governing the classifications of the State's waters.
- G. The proposed activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties.
- H. The proposed activity is not on or adjacent to a sand dune.
- I. The proposed project is a crossing of five outstanding river segments identified in 38 M.R.S.§ 480-P, however, the applicant has demonstrated there are no practicable alternatives that would have less adverse effect upon the natural and recreational features of the river segments.

BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S. §§ 481–489-E:

- A. The applicant has provided adequate evidence of financial capacity and technical ability to develop the project in a manner consistent with state environmental standards, provided the applicant submits additional financial information as required in Section 2 and in the corresponding condition below.
- B. The applicant has made adequate provision for fitting the development harmoniously into the existing natural environment and the development will not adversely affect existing uses, scenic character, air quality, water quality or other natural resources in the municipality or in neighboring municipalities provided the applicant complies with the requirements in Sections 4, 5, 6, 7, 8, 9, 12, and 15 and the corresponding conditions below.
- C. The proposed development will be built on soil types which are suitable to the nature of the undertaking and will not cause unreasonable erosion of soil or sediment nor inhibit the natural transfer of soil. The applicant has made adequate provision to ensure blasting during construction of the project will be in compliance with 38 M.R.S. § 490—Z).

- D. The proposed development meets the standards for stormwater management in 38 M.R.S. § 420-D and the standard for erosion and sedimentation control in 38 M.R.S. § 420-C provided that the applicant complies with the requirements in Section 11 and the corresponding conditions below.
- E. The proposed development will not pose an unreasonable risk that a discharge to a significant groundwater aquifer will occur provided that the applicant complies with the requirements in Section 12 and the corresponding condition below.
- F. The applicant has made adequate provision of utilities, including water supplies, sewerage facilities and solid waste disposal required for the development and the development will not have an unreasonable adverse effect on the existing or proposed utilities in the municipality or area served by those services provided the applicant complies with the requirements in Section 15 and the corresponding condition below.
- F. The activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties nor create an unreasonable flood hazard to any structure.
- H. No proposed alternatives to the proposed location and character of the transmission line would lessen its impact on the environment or the risks it would engender to the public health or safety, without unreasonably increasing its cost.

THEREFORE, the Department APPROVES the application of CENTRAL MAINE POWER COMPANY for the New England Clean Energy Connect Project as described in Finding 1, SUBJECT TO THE FOLLOWING CONDITIONS and all applicable standards and regulations:

- 1. The Standard Conditions of Approval, a copy attached.
- 2. In addition to any specific erosion control measures described in this or previous orders, the applicant shall take all necessary actions to ensure that its activities or those of its agents do not result in noticeable erosion of soils or fugitive dust emissions on the site during the construction and operation of the project covered by this approval.
- 3. Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.
- 4. Prior to the start of construction, the applicant shall submit evidence that it has been granted a line of credit or a loan by a financial institution authorized to do business in this State, or evidence of any other form of financial assurance consistent with Department Rules, Chapter 373, § 2(B), to the Department for review and approval.
- 5. Prior to the start of construction, the applicant shall submit a copy of the lease that contains the signature of a duly authorized representative of the Bureau of Indian Affairs.

Commented [A19]: The next paragraph should be G.

Commented [A20]: See 38 M.R.S. § 487-A(4).

Commented [A21]: See comment, page 8.

- Prior to the start of construction, CMP shall establish an escrow account, secure an irrevocable letter or credit, or otherwise provide a financial guarantee acceptable to the Department, to fund \$1,875,000 of culvert replacements. Prior to commercial operation of the project, the applicant shall submit a plan to the Department for review and approval that establishes the locations of the culvert replacements and how the funds will be disbursed. The culverts to be replaced must be in the vicinity of Segments 1 or 2, must completely or partially block fish passage, must be replaced with crossings consistent with Stream Smart principles, and must be selected to provide the greatest possible habitat benefit. CMP shall document each culvert replacement, monitor those replacements for one year from the date of replacement, and submit a summary report to the Department for review within eighteen months of the date of the last replacement.
- 7.6. Prior to the start of construction, the applicant shall conserve the Basin Tract, Lower Enchanted Tract, and Grand Falls Tract, which together include 1,053.5 acres of land and 12.02 linear miles of stream.
- 8.7. Prior to the start of construction, the applicant shall conserve the Little Jimmy Pond Tract, Flagstaff Lake Tract, and Pooler Pond Tract, which together include 510.75 acres of wetland and 1,022.4 acres of land area.
- 9.8. Prior to the start of construction, the applicant shall conserve 717 acres of land within the Upper Kennebec River DWA.
- 10.9. Prior to the start of construction, the applicant shall contribute:
 - a. A total of \$883,802.14877,010.06 in In-Lieu-Fee payments to the Department for the Maine Natural Resource Conservation Program for impacts to SVPs (\$630,449.61623,657.53) and IWWHs (\$253,352.53), and
 - b. A total of \$649,771.95 to Maine Endangered and Nongame Fund for impacts to NSS and RBM habitat (\$469,771.95) and forest conversion in riparian buffers (\$180,000.00).
- 11.10. Prior to the start of construction, the applicant shall contribute \$1,234,526.82 to the Maine Natural Areas Conservation Fund for impacts to Goldie's Wood Fern and the Jack Pine Forest.
- 12.11. Prior the start of construction on each transmission line segment, the HDD under the Upper Kennebec River, the Merrill Road Converter Station, and the Fickett Road Substation, the applicant shall conduct a pre-construction meeting to discuss, among other topics, construction schedule, erosion and sedimentation control, and adherence to the conditions of this Order. This meeting shall be attended by the applicant's representative, Department staff, the design engineer, the contractor, and the third-party inspector for that portion of the project.
- 13.12. The applicant shall update its VCP and VMP to be consistent with the requirements of this Order, including but not limited to the vegetation management required in Appendix

- C, and submit the updated plans to the Department for review and approval prior to the start of construction (which includes clearing) within the corridor.
- 14.13. The applicant shall maintain taller vegetation within the Segment 1 corridor as outlined in Appendix C, including by:
 - a. Maintaining full canopy height vegetation in the locations identified in Table C-1,
 - b. Maintaining vegetation with a minimum height of 35 feet in the locations identified in Table C-1,
 - c. Maintaining deer travel corridors in the locations identified in Table C-1, and
 - d. Maintaining tapered vegetation along the entire Segment 1 corridor, except where full canopy height vegetation, vegetation with a minimum height of 35 feet, or taller vegetation managed for deer travel corridors is required.
- 15.14. The applicant shall leave any trees that have been cut during routine maintenance in areas where tapering or vegetation with a minimum height of 35 feet is required, unless doing so would violate the Slash Law or create a fire or safety hazard.
- 16.15. Any wood that is chipped and spread on the corridor shall be left in layers no more than two inches thick, as measured above the mineral soil surface.
- 17.16. The applicant shall maintain 100-foot riparian filter areas along all perennial streams in Segment 1, all coldwater fisheries streams in other segments as identified in Appendix E all streams containing threatened or endangered species, and all Outstanding River Segments; and maintain 75-foot riparian filter areas on all other streams.
- 18.17. In the area adjacent to Moxie Pond in Segment 2, the applicant shall construct and maintain the project with a 100-foot riparian filter area identical to the riparian filter areas adjacent to coldwater fishery streams in Segment 1.
- 19.18. The applicant shall provide a list of buffers surrounding private or public water supply wells to the Department prior to construction and adhere to the buffers during construction.
- 20.19. The applicant shall limit construction activities in mapped habitat for wood turtles to between October 15 and April 15 (prohibiting construction between April 16 and October 14) in any calendar year, unless it follows the measures described in its July 13, 2018
 Response to MDIFW March 15, 2018 Environmental Review Comments.
- 21.20. The applicant shall limit construction activities in mapped habitat for Rusty Black Birds to between June 1 and April 19 (prohibiting construction between April 20 and May 31) in any calendar year.
- 22.21. The applicant shall maintain 10-15-foot tall spruce/fir vegetation in the mapped Rusty Black Bird habitat.

- 23.22. The applicant shall complete a survey for Great Blue Heron colonies within or immediately adjacent to existing IWWH between April 20 and May 31, and prior to initial transmission line clearing; if any colonies are identified, the applicant shall consult with MDIFW and obtain approval from the Department prior to construction in the vicinity of any colony.
- 24.23. The applicant shall plant and maintain vegetated roadside buffers, and replace any dead buffer plantings with one year of the vegetation dying, at the following locations: Old Canada Road (Route 201) crossings in Johnson Mountain Twp and Moscow, Troutdale Road crossing in Bald Mountain Twp, and on the south side of Fickett Road in conjunction with the Fickett Road Substation.
- 25.24. The applicant shall mark the location of all natural resource buffers with flagging prior to the start of construction.
- 26.25. The applicant shall permanently mark on a map all natural resource buffers upon completion of construction.
- 27.26. The applicant shall mark all natural resource buffers with flagging prior to any maintenance activities.
- 28.27. The applicant shall retain no fewer than one third-party inspector for each transmission line segment under construction at any one time, and one third-party inspector for the Merrill Road Converter Station. The inspectors must be retained and work in accordance with the Special Condition for Third Party Inspection Program included with this Order.
- 29.28. Prior to start of the drilling operation under the Kennebec River, the applicant shall submit for review and approval, the location of the disposal area for the cuttings from the drilling operation.
- 30.29. Any new equipment the applicant installs at Merrill Road Converter Station, the Larrabee Road, Fickett Road, and Coopers Mills Road substations, shall meet the sound power limits listed in Appendix D, Table D-1 (incorporating the limits from the Site Law application, Tables 5-8, 5-11, 5-15, and 5-19).
- 31.30. Any new equipment the applicant installs at Raven Farm Substation shall meet the sound power limit listed in Appendix D, Table D-1 (incorporating the base option listed in the Table 6-1 of the Raven Farm Substation Sound Study).
- 32.31. The applicant shall install sound walls at the Coopers Mills Road Substation, as proposed, with the final design supported by additional acoustic modeling using vendor-supplied octave band sound power levels, and submit the final design and modeling results to the Department for review and approval prior to operation of the new equipment at the substation.

Commented [A22]: As noted above, we do not believe it is reasonable or necessary to mark natural resource buffers on the ground upon completion of construction, given the first and third bullets, which require flagging prior to construction and prior to maintenance. The VCP and VMP further require that CMP maintain a database, including maps and GIS shapefiles, of the buffers, restricted habitats, and sensitive areas and their locations relative to the nearest structure (pole) or road location.

- 33.32. The applicant shall install non-specular conductors within the viewshed of Coburn Mountain (between structures #3006-634 and #3006-616), Rock Pond (between structures #3006-731 and #3006-724), Moxie Stream (between structures #3006-542 and #3006-541), and the Appalachian Trail (between structures #3006-529 and #3006-458).
- 34.33. The applicant shall install shorter poles along Moxie Pond (structures #3006-529 and #3006-458).
- 35.34. The applicant shall conduct additional erosion control inspections, have dedicated crews, install additional erosion control structures, and have accelerated work schedules, for the areas identified in Appendix G.
- 36.35. The applicant shall retain the stormwater design engineer to oversee the installation of the stormwater best management practices. At least once per year, or within 30 days of completion, the applicant shall submit an update or as-built plans to the Department for review.
- 37.36. The applicant shall submit an SPCC Plan for the Merrill Road Converter Station to the Department prior to operation, if such a plan is required pursuant to 40 CFR Part 112.
- 38.37. The applicant shall receive approval from the Department prior to any material being taken to a facility other than Casella Waste Systems or Schnitzer Steel Industries.
- 39.38. The applicant shall implement the plans for site avoidance and treatments described in the final Phase I archaeological survey report.
- 40.39. Within two years of the date of this Order, the applicant shall develop a plan to conserve 40,00027,016 acres of land in the vicinity of Segment 1 and shall submit that plan for review and approval by the Department. Allowable conservation may include preservation or working forest conservation easements, requiring sustainable harvesting practices, focused on large habitat blocks. Any plan including the proposed use of a conservation easement must include a proposed holder. Within 5 years of the date of this Order, the applicant shall fully implement the approved conservation plan.

| THIS APPROVAL DOES NOT CONSTITUTE OR SUBS | TITUTE FOR ANY OTHER | _ |
|---|-----------------------|---------|
| REQUIRED STATE, FEDERAL OR LOCAL APPROVA | LS NOR DOES IT VERIFY | |
| COMPLIANCE WITH ANY APPLICABLE SHORELAN | D ZONING ORDINANCES | |
| | | |
| DONE AND DATED IN AUGUSTA. MAINE, THIS | DAY OF | , 2020. |

DEPARTMENT OF ENVIRONMENTAL PROTECTION

| BY: | |
|-----|----------------------------|
| | Gerald D Reid Commissioner |

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES.

JB/L27625ANBNCNDN/ATS#82334, 82335, 82336, 82337, 82338



Department of Environmental Protection SITE LOCATION OF DEVELOPMENT (SITE) STANDARD CONDITIONS

- A. Approval of Variations from Plans. The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation. Further subdivision of proposed lots by the applicant or future owners is specifically prohibited without prior approval of the Board, and the applicant shall include deed restrictions to that effect.
- **B.** Compliance with All Applicable Laws. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.
- C. Compliance with All Terms and Conditions of Approval. The applicant shall submit all reports and information requested by the Board or the Department demonstrating that the applicant has complied or will comply with all preconstruction terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.
- D. Advertising. Advertising relating to matters included in this application shall refer to this approval only if it notes that the approval has been granted WITH CONDITIONS, and indicates where copies of those conditions may be obtained.
- **E. Transfer of Development**. Unless otherwise provided in this approval, the applicant shall not sell, lease, assign or otherwise transfer the development or any portion thereof without prior written approval of the Board where the purpose or consequence of the transfer is to transfer any of the obligations of the developer as incorporated in this approval. Such approval shall be granted only if the applicant or transferee demonstrates to the Board that the transferee has the technical capacity and financial ability to comply with conditions of this approval and the proposals and plans contained in the application and supporting documents submitted by the applicant.
- **F. Time frame for approvals.** If the construction or operation of the activity is not begun within four years, this approval shall lapse and the applicant shall reapply to the Board for a new approval. The applicant may not begin construction or operation of the development until a new approval is granted. A reapplication for approval may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.
- **G. Approval Included in Contract Bids.** A copy of this approval must be included in or attached to all contract bid specifications for the development.
- **H. Approval Shown to Contractors**. Work done by a contractor pursuant to this approval shall not begin before the contractor has been shown by the developer a copy of this approval.

(2/81)/Revised December 27, 2011



Natural Resources Protection Act (NRPA) Standard Conditions

THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCES PROTECTION ACT, 38 M.R.S.A. § 480-A ET SEQ., UNLESS OTHERWISE SPECIFICALLY STATED IN THE PERMIT.

- A. <u>Approval of Variations From Plans.</u> The granting of this permit is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.
- B. <u>Compliance With All Applicable Laws.</u> The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.
- C. <u>Erosion Control.</u> The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during the construction and operation of the project covered by this Approval.
- D. <u>Compliance With Conditions</u>. Should the project be found, at any time, not to be in compliance with any of the Conditions of this Approval, or should the applicant construct or operate this development in any way other the specified in the Application or Supporting Documents, as modified by the Conditions of this Approval, then the terms of this Approval shall be considered to have been violated.
- E. <u>Time frame for approvals.</u> If construction or operation of the activity is not begun within four years, this permit shall lapse and the applicant shall reapply to the Board for a new permit. The applicant may not begin construction or operation of the activity until a new permit is granted. Reapplications for permits may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.
- F. <u>No Construction Equipment Below High Water.</u> No construction equipment used in the undertaking of an approved activity is allowed below the mean high water line unless otherwise specified by this permit.
- G. <u>Permit Included In Contract Bids.</u> A copy of this permit must be included in or attached to all contract bid specifications for the approved activity.
- H. Permit Shown To Contractor. Work done by a contractor pursuant to this permit shall not begin before the contractor has been shown by the applicant a copy of this permit.

Revised (4/92) DEP LW0428

STORMWATER STANDARD CONDITIONS

STRICT CONFORMANCE WITH THE STANDARD AND SPECIAL CONDITIONS OF THIS APPROVAL IS NECESSARY FOR THE PROJECT TO MEET THE STATUTORY CRITERIA FOR APPROVAL

Standard conditions of approval. Unless otherwise specifically stated in the approval, a department approval is subject to the following standard conditions pursuant to Chapter 500 Stormwater Management Law.

- (1) Approval of variations from plans. The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents must be reviewed and approved by the department prior to implementation. Any variation undertaken without approval of the department is in violation of 38 M.R.S.A. §420-D(8) and is subject to penalties under 38 M.R.S.A. §349.
- (2) Compliance with all terms and conditions of approval. The applicant shall submit all reports and information requested by the department demonstrating that the applicant has complied or will comply with all terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.
- (3) Advertising. Advertising relating to matters included in this application may not refer to this approval unless it notes that the approval has been granted WITH CONDITIONS, and indicates where copies of those conditions may be obtained.
- (4) Transfer of project. Unless otherwise provided in this approval, the applicant may not sell, lease, assign, or otherwise transfer the project or any portion thereof without written approval by the department where the purpose or consequence of the transfer is to transfer any of the obligations of the developer as incorporated in this approval. Such approval may only be granted if the applicant or transferee demonstrates to the department that the transferee agrees to comply with conditions of this approval and the proposals and plans contained in the application and supporting documents submitted by the applicant. Approval of a transfer of the permit must be applied for no later than two weeks after any transfer of property subject to the license.
- (5) Time frame for approvals. If the construction or operation of the activity is not begun within four years, this approval shall lapse and the applicant shall reapply to the department for a new approval. The applicant may not begin construction or operation of the project until a new approval is granted. A reapplication for approval may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.
- (6) Certification. Contracts must specify that "all work is to comply with the conditions of the Stormwater Permit." Work done by a contractor or subcontractor pursuant to this approval may not begin before the contractor and any subcontractors have been shown a copy of this approval with the conditions by the developer, and the owner and each contractor and subcontractor has certified, on a form provided by the department, that the approval and conditions have been

- received and read, and that the work will be carried out in accordance with the approval and conditions. Completed certification forms must be forwarded to the department.
- (7) Maintenance. The components of the stormwater management system must be adequately maintained to ensure that the system operates as designed, and as approved by the department.
- (8) Recertification requirement. Within three months of the expiration of each five-year interval from the date of issuance of the permit, the permittee shall certify the following to the department.
 - (a) All areas of the project site have been inspected for areas of erosion, and appropriate steps have been taken to permanently stabilize these areas.
 - (b) All aspects of the stormwater control system have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the facilities.
 - (c) The erosion and stormwater maintenance plan for the site is being implemented as written, or modifications to the plan have been submitted to and approved by the department, and the maintenance log is being maintained.
- (9) Severability. The invalidity or unenforceability of any provision, or part thereof, of this permit shall not affect the remainder of the provision or any other provisions. This permit shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

November 16, 2005 (revised December 27, 2011)

Special Condition for Third Party Inspection Program



THIRD-PARTY INSPECTION PROGRAM

1.0 THE PURPOSE OF THE THIRD-PARTY INSPECTION

As a condition of this permit, the Maine Department of Environmental Protection (MDEP) requires the permit applicant to retain the services of a third-party inspector to monitor compliance with MDEP permit conditions during construction. The objectives of this condition are as follows:

- 1) to ensure that all construction and stabilization activities comply with the permit conditions and the MDEP-approved drawings and specifications,
- 2) to ensure that field decisions regarding erosion control implementation, stormwater system installation, and natural resource protection are based on sound engineering and environmental considerations, and
- 3) to ensure communication between the contractor and MDEP regarding any changes to the development's erosion control plan, stormwater management plan, or final stabilization plan.

This document establishes the inspection program and outlines the responsibilities of the permit applicant, the MDEP, and the inspector.

2.0 SELECTING THE INSPECTOR

At least 30 days prior to starting any construction activity on the site, the applicant will submit the names of at least two inspector candidates to the MDEP. Each candidate must meet the minimum qualifications listed under section 3.0. The candidates may not be employees, partners, or contracted consultants involved with the permitting of the project or otherwise employed by the same company or agency except that the MDEP may accept subcontractors who worked for the project's primary consultant on some aspect of the project such as, but not limited to, completing wetland delineations, identifying significant wildlife habitats, or conducting geotechnical investigations, but who were not directly employed by the applicant, as Third Party inspectors on a case by case basis. The MDEP will have 15 days from receiving the names to select one of the candidates as the inspector or to reject both candidates. If the MDEP rejects both candidates, then the MDEP shall state the particular reasons for the rejections. In this case, the applicant may either dispute the rejection to the Director of the Bureau of Land Resources or start the selection process over by nominating two, new candidates.

3.0 THE INSPECTOR'S QUALIFICATIONS

Each inspector candidate nominated by the applicant shall have the following minimum qualifications:

- 1) a degree in an environmental science or civil engineering, or other demonstrated expertise,
- 2) a practical knowledge of erosion control practices and stormwater hydrology,
- 3) experience in management or supervision on large construction projects,
- the ability to understand and articulate permit conditions to contractors concerning erosion control or stormwater management,
- 5) the ability to clearly document activities being inspected,
- 6) appropriate facilities and, if necessary, support staff to carry out the duties and responsibilities set forth in section 6.0 in a timely manner, and
- 7) no ownership or financial interest in the development other than that created by being retained as the third-party inspector.

4.0 INITIATING THE INSPECTOR'S SERVICES

The applicant will not formally and finally engage for service any inspector under this permit condition prior to MDEP approval or waiver by omission under section 2.0. No clearing, grubbing, grading, filling, stockpiling, or other construction activity will take place on the development site until the applicant retains the MDEP-approved inspector for service.

5.0 TERMINATING THE INSPECTOR'S SERVICES

The applicant will not terminate the services of the MDEP-approved inspector at any time between commencing construction and completing final site stabilization without first getting written approval to do so from the MDEP.

6.0 THE INSPECTOR'S DUTIES AND RESPONSIBILITIES

The inspector's work shall consist of the duties and responsibilities outlined below.

- 1) Prior to construction, the inspector will become thoroughly familiar with the terms and conditions of the state-issued site permit, natural resources protection permit, or both.
- 2) Prior to construction, the inspector will become thoroughly familiar with the proposed construction schedule, including the timing for installing and removing erosion controls, the timing for constructing and stabilizing any basins or ponds, and the deadlines for completing stabilization of disturbed soils.
- 3) Prior to construction, the inspector will become thoroughly familiar with the project plans and specifications, including those for building detention basins, those for installing the erosion control measures to be used on the site, and those for temporarily or permanently stabilizing disturbed soils in a timely manner.
- 4) During construction, the inspector will monitor the contractor's installation and maintenance of the erosion control measures called for in the state permit(s) and any additional measures the inspector believes are necessary to prevent sediment discharge to off-site properties or natural resources. This direction will be based on the approved erosion control plan, field conditions at the time of construction, and the natural resources potentially impacted by construction activities.
- 5) During construction, the inspector will monitor the contractor's construction of the stormwater system, including the construction and stabilization of ditches, culverts, detention basins, water quality treatment measures, and storm sewers.
- During construction, the inspector will monitor the contractor's installation of any stream or wetland crossings.
- 7) During construction, the inspector will monitor the contractor's final stabilization of the project site.
- 8) During construction, the inspector will keep logs recording any rain storms at the site, the contractor's activities on the site, discussions with the contractor(s), and possible violations of the permit conditions.
- 9) During construction, the inspector will inspect the project site at least once a week and before and after any significant rain event. The inspector will photograph all protected natural resources both before and after construction and will photograph all areas under construction. All photographs will be identified with, at a minimum the date the photo was taken, the location and the name of the individual taking the photograph. Note: the frequency of these inspections as contained in this condition may be varied to best address particular project needs.
- 10) During construction, the inspector will prepare and submit weekly (or other frequency) inspection reports to the MDEP.

11) During construction, the inspector will notify the designated person at the MDEP immediately of any sediment-laden discharges to a protected natural resource or other significant issues such as the improper construction of a stormwater control structure or the use of construction plans not approved by the MDEP.

7.0 INSPECTION REPORTS

The inspector will submit weekly written reports (or at another designated frequency), including photographs of areas that are under construction, on a form provided by the Department to the designated person at the MDEP. Each report will be due at the MDEP by the Friday (or other designated day) following the inspection week (Monday through Sunday).

The weekly report will summarize construction activities and events on the site for the previous week as outlined below.

- 1) The report will state the name of the development, its permit number(s), and the start and end dates for the inspection week (Monday through Sunday).
- 2) The report will state the date(s) and time(s) when the inspector was on the site making inspections.
- 3) The report will state the date(s) and approximate duration(s) of any rainfall events on the site for the week.
- 4) The report will identify and describe any erosion problems that resulted in sediment leaving the property or sediment being discharged into a wetland, brook, stream, river, lake, or public storm sewer system. The report will describe the contractor's actions to repair any damage to other properties or natural resources, actions to eliminate the erosion source, and actions to prevent future sediment discharges from the area.
- 5) The report will list the buildings, roads, parking lots, detention basins, stream crossings or other features open to construction for the week, including those features or areas actively worked and those left unworked (dormant).
- 6) For each area open to construction, the report will list the date of initial soil disturbance for the area.
- 7) For each area open to construction, the report will note which areas were actively worked that week and which were left dormant for the week. For those areas actively worked, the report will briefly state the work performed in the area that week and the progress toward final stabilization of the area -- e.g. "grubbing in progress", "grubbing complete", "rough grading in progress", "rough grading complete", "finish grading in progress", "finish grading complete", "permanent seeding completed", "area fully stable and temporary erosion controls removed", etc.
- 8) For each area open to construction, the report will list the erosion and sedimentation control measures installed, maintained, or removed during the week.
- 9) For each erosion control measure in-place, the report will note the condition of the measure and any maintenance performed to bring it to standard.

Third Party Inspection Form

This report is prepared by a Third Party Inspector to meet the requirements of the Third Party Inspector Condition attached as a Special Condition to the Department Order that was issued for the project identified below. The information in this report/form is not intended to serve as a determination of whether the project is in compliance with the Department permit or other applicable Department laws and rules.

Only Department staff may make that determination.

| | TO: PM, Maine DEP (@maine.gov) |) | FRC | M: | | |
|---|--|--------------|----------------------|-----------|---|---------------------------------|
| | PROJECT NAME/ LOCATION: | | DEP | ·#: | | |
| | DATE OF INSPECTION: | | DAT | TE OF R | EPORT: | |
| | WEATHER: | | CON | NDITION | IS: | |
| _ | | | | | | |
| S | ITE CHARACTERISTICS: | 1 | | | | |
| | # ACRES OPEN: | # ACRES | ACTIVE: | | # ACRES INACTIV | E: |
| | LOCATION OF OPEN LAND: | LOCATIO | N OF ACTIVE L | AND: | LOCATION OF INA | ACTIVE LAND: |
| | OPEN SINCE: | OPEN SIN | ICE: | | OPEN SINCE: | |
| P | PROGRESS OF WORK: | | | | | |
| | INSPECTION OF: | | Satisfactory | | linor Deviation etive action required) | Unsatisfactory (include photos) |
| | STORMWATER CONTROL (VEGETATIVE & STRUCTURAL BMP'S) | | | | | |
| | EROSION & SEDIMENTATION ((TEMPORARY & PERMANENT BMP'S) | CONTROL | | | | |
| | OTHER: (PERMIT CONDITIONS, ENGINEERING DES. | IGN, ETC.) | | | | |
| | COMMENTS/CORRECTIVE ACTIONS TAKEN (attach additional sheets as necessary): Photos (must be labeled with date, photographer and location): | | | | | |
| | | <u> </u> | | | | |
| | Cc: Original and all copies were sent by email only. | | | | | |
| | | Original and | l all copies were so | ent by em | aıl only. | |
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Appendix A List of Municipal and County Governments

| Town | County | Senate District | House District | Congressional District |
|----------------------------|---------------------------------------|------------------------------|----------------------------|--------------------------|
| City of Auburn | Androscoggin County | Senate District 20 | House District 62 | Congressional District 2 |
| 60 Court Street | Commissioners' Office | Senator Eric L. Brakey | Rep. Gina M. Melaragno | Representative Bruce |
| Auburn, Maine 04210 | 2 Turner Street, Unit 2 | 146 Pleasant Street | 25 James Street, Apt. 3 | Poliquin |
| Phone (207) 333-6600 | Auburn, Maine 04210 | Auburn, ME 04210 | Auburn, Maine 04210 | 179 Lisbon Street |
| pcrichton@auburnmaine.gov | Phone (207) 753-2500, Ext | Phone (207) 406-0897 | Phone (207)740-8860 | Lewiston, ME 04240 |
| | 1801 | Eric.brakey@legislature.main | gina.melaragno@legislatur | Phone (207) 784-0768 |
| | lpost@androscoggincounty maine.gov | e.gov | <u>e.maine.gov</u> | |
| | | | House District 63 | |
| | | | Rep. Bruce A. Bickford | |
| | | | 64 Cameron Lane | |
| | | | Auburn, Maine 04210 | |
| | | | Cell Phone (207) 740-0328 | |
| | | | bruce.bickford@legislature | |
| | | | .maine.gov | |
| | | | House District 64 | |
| | | | Rep. Bettyann W. Sheats | |
| | | | 32 Waterview Drive | |
| | | | Auburn, Maine 04210 | |
| | | | Cell Phone (207)740-2613 | |
| | | | bettyann.sheats@legislatur | |
| | | | e.maine.gov | |
| City of Lewiston | Androscoggin County | Senate District 21 | House District 58 | 2 |
| 27 Pine Street | Commissioners' Office | Senator Nate Libby | Rep. James R. Handy | |
| Lewiston, Maine 4240-7204 | 2 Turner Street, Unit 2 | 44 Robinson Gardens | 9 Maplewood Road | |
| Phone (207) 513-3000 | Auburn, Maine 04210 | Lewiston, ME 04240 | Lewiston, Maine 04240 | |
| ebarrett@lewistonmaine.gov | Phone (207) 753-2500, Ext | Phone (207)713-8449 | Phone (207) 784-5595 | |
| | 1801 | nathan.libby@legislature.mai | jim.handy@legislature.mai | |
| | | <u>ne.gov</u> | <u>ne.gov</u> | |

| | lpost@androscoggincounty maine.gov | | House District 59 Rep. Roger Jason Fuller 36 Elliott Avenue Lewiston, ME 04240 Phone (207) 783-9091 roger.fuller@legislature.ma ine.gov House District 60 Rep. Jared F. Golden 3 Diamond Court Lewiston, ME 04240 Phone (207) 287-1430 jared.golden@legislature.m aine.gov House District 61 Rep. Heidi E. Brooks 1 Pleasant Street, #2 Lewiston, Maine 04240 Cell Phone (207) 740-5229 heidi.brooks@legislature.m aine.gov | |
|---|---|---|---|---|
| Town of Alna 1568 Alna Rd Alna, Maine 04535 PHONE: (207) 586-5313 mmaymcc@yahoo.com dcbaston@northatlanticenergy.co m | Lincoln County Commissioners Office 32 High Street, P.O. Box 249 Wiscasset, Maine 04578 Phone (207) 882-6311 ckipfer@lincounty.me | Senate District 13 Senator Dana Dow 30 Kalers Pond Road Waldoboro, Maine 04572 Phone (207) 832-4658 dana.dow@legislature.maine. | House District 87 Rep. Jeffery P. Hanley 52 Turner Drive Pittston, Maine 04345 Phone (207) 582-1524 Cell Phone (207) 458-9009 jeff.hanley@legislature.ma ine.gov | 1 |
| Town of Anson 5 Kennebec Street, PO Box 297 Anson, Maine 04911-0297 | Somerset County Commissioners Office 41 Court Street | Senate District 3 Senator Rod Whittemore PO Box 96 | House District 112 Rep. Thomas H. Skolfield 349 Phillips Road | 2 |

| Phone (207) 696-3979 Town of Caratunk Elizabeth Caruso - 1st Select PO Box 180 Caratunk, Maine 04925-0180 | Skowhegan, ME 04976 Phone (207) 474-9861 ddiblasi@SomersetCounty- ME.org Somerset County Commissioners Office 41 Court Street Skowhegan, ME 04976 | Skowhegan, Maine 04976 Phone (207) 474-6703 rodney.whittemore@legislatu re.maine.gov Senate District 3 Senator Rod Whittemore PO Box 96 Skowhegan, Maine 04976 | Weld, Maine 04285 Phone (207) 585-2638 thomas.skolfield@legislatu re.maine.gov House District 118 Rep. Chad Wayne Grignon 181 Fox Hill Road Athens, Maine 04912 | 2 |
|---|---|---|--|--|
| OFFICE PHONE: 672-3030 | Phone (207) 474-9861 ddiblasi@SomersetCounty- ME.org | Phone (207) 474-6703 rodney.whittemore@legislatu re.maine.gov | Phone (207) 654-2771 Cell Phone (207) 612-6499 chad.grignon@legislature. maine.gov | |
| Town of Chesterville 409 Dutch Gap Road Chesterville, Maine 04938 Phone (207) 778-2433 chesterville.me@gmail.com | Franklin County Commissioner's Office 140 Main Street, Suite 3 Farmington, Maine 04938 Phone (207) 778-6614 imagoon@franklincountyma ine.gov | Senate District 17 Senator Thomas Saviello 60 Applegate Lane Wilton, ME 042924 Phone (207) 287-1505 thomas.saviello@legislature. maine.gov | House District 114 Rep. Russell J. Black 123 Black Road Wilton, Maine 04294 Phone (207) 491-4667 russell.black@legislature. maine.gov | 2 |
| Town of Cumberland William R. Shane, Town Manager 290 Tuttle Road Cumberland, Maine 04021 Phone (207) 829-5559 | Cumberland County Commissioners Office James Gailey, County Manager 142 Federal Street Portland, ME 04101 Phone (207) 871-8380 gailey@cumberlandcounty.or g | Senate District 25 Senator Catherine Breen 15 Falmouth Ridges Drive Falmouth, Maine 04105 Phone (207) 329-6142 Cathy.breen@legislature.mai ne.gov | House District 45 Rep. Dale J. Denno 275 Main Street Cumberland Center, Maine 04021 Cell Phone (207) 400-1123 dale.denno@legislature.ma ine.gov | Senator Susan Collins 55 Lisbon Street Lewison, ME 04240 Phone (207) 784-6969 Senator Angus King 4 Gabriel Drive, Suite 3 Augusta, ME 04330 Phone (207) 622-8292 Phone (800) 432-1599 Representative Chellie Pingree 2Portland Fish Pier, Suite 304 Portland, ME 04101 Phone (207) 774-5019 Phone (888) 862-6500 |

| Town of Durham 630 Hallowell Road Durham, Maine 04222 Phone (207) 353-2561 | Androscoggin County Commissioners' Office 2 Turner Street, Unit 2 Auburn, Maine 04210 Phone (207) 753-2500, Ext 1801 lpost@androscoggincounty maine.gov | Senate District 22 Senator Garrett Mason PO Box 395 Lisbon Falls, Maine 04252 Phone (207) 557-1521 garret.mason@legislature.ma ine.gov | House District 46 Rep. Paul B. Chace 31 Colonial Drive Durham, ME 04222 Cell Phone (207)240-9300 paul.chace@legislature.mai ne.gov | 2 |
|---|---|--|---|---|
| Town of Embden 809 Embden Pond Road Embden, Maine 04958-3521 Phone (207) 566-5551 embden-clerk@roadrunner.com | Somerset County Commissioners Office 41 Court Street Skowhegan, ME 04976 Phone (207) 474-9861 ddiblasi@SomersetCounty- ME.org | Senate District 3 Senator Rod Whittemore PO Box 96 Skowhegan, Maine 04976 Phone (207) 474-6703 rodney.whittemore@legislatu re.maine.gov | House District 118 Rep. Chad Wayne Grignon 181 Fox Hill Road Athens, Maine 04912 Phone (207) 654-2771 Cell Phone (207) 612-6499 chad.grignon@legislature. maine.gov | 2 |
| Town of Farmington 153 Farmington Falls Road Farmington, Maine 04938 Phone (207) 778-5871 rdavis@farmington-maine.org | Franklin County Commissioner's Office 140 Main Street, Suite 3 Farmington, Maine 04938 Phone (207) 778-6614 jmagoon@franklincountyma ine.gov | Senate District 17 Senator Thomas Saviello 60 Applegate Lane Wilton, ME 042924 Phone (207) 287-1505 thomas.saviello@legislature. maine.gov | House District 113 Rep. Lance Evans Harvell 398 Knowlton Corner Road Farmington, Maine 04938 Phone (207) 491-8971 lance.harvell@legislature. maine.gov | 2 |
| Town of Greene 220 Main St, PO Box 510 Greene, Maine 04236-0510 Phone (207) 946-5146 tmgreene@fairpoint.net | Androscoggin County Commissioners' Office 2 Turner Street, Unit 2 Auburn, Maine 04210 Phone (207) 753-2500, Ext 1801 lpost@androscoggincounty maine.gov | Senate District 22 Senator Garrett Mason PO Box 395 Lisbon Falls, Maine 04252 Phone (207) 557-1521 garret.mason@legislature.ma ine.gov | House District 57 Rep. Stephen J. Wood PO Box 927 Sabattus, Maine 04280 Cell Phone (207) 740-3723 stephen.wood@legislature. maine.gov | 2 |
| Town of Industry 1033 Industry Road Industry, Maine 04938 Phone (207) 778-5050 | Franklin County Commissioner's Office 140 Main Street, Suite 3 Farmington, Maine 04938 Phone (207) 778-6614 jmagoon@franklincountyma ine.gov | Senate District 17 Senator Thomas Saviello 60 Applegate Lane Wilton, ME 042924 Phone (207) 287-1505 thomas.saviello@legislature. maine.gov | House District 114 Rep. Russell J. Black 123 Black Road Wilton, Maine 04294 Phone (207) 491-4667 russell.black@legislature. maine.gov | 2 |

| Town of Jay | Franklin County | Senate District 17 | House District 74 | 2 |
|------------------------------|---------------------------|------------------------------|-----------------------------|--------------|
| 340 Main Street | Commissioner's Office | Senator Thomas Saviello | Rep. Christina Riley | - |
| Jay, Maine 04239 | 140 Main Street, Suite 3 | 60 Applegate Lane | 437 Main Street | |
| Phone (207) 897-6785 | Farmington, Maine 04938 | Wilton, ME 042924 | Jay, Maine 04239 | |
| ioffice@jay-maine.org | Phone (207) 778-6614 | Phone (207) 287-1505 | Phone (207)897-2288 | |
| Joined & July Maine.org | imagoon@franklincountyma | thomas.saviello@legislature. | tina.riley@legislature.main | |
| | ine.gov | maine.gov | e.gov | |
| Town of Leeds | Androscoggin County | Senate District 22 | House District 75 | 2 |
| 8 Community Drive | Commissioners' Office | Senator Garrett Mason | Rep. Jeffrey L. Timberlake | - |
| Leeds, Maine 04263 | 2 Turner Street, Unit 2 | PO Box 395 | 284 Ricker Hill Road | |
| Phone (207) 524-5171 | Auburn, Maine 04210 | Lisbon Falls, Maine 04252 | Turner, Maine 07282 | |
| townofleeds@fairpoint.net | Phone (207) 753-2500, Ext | Phone (207) 557-1521 | Cell Phone (207)754-6000 | |
| townoneeds@fairpoint.net | 1801 | garret.mason@legislature.ma | ieffrey.timberlake@legislat | |
| | lpost@androscoggincounty | ine.gov | ure.maine.gov | |
| | maine.gov | ine.gov | ure.mame.gov | |
| Town of Livermore Falls | Androscoggin County | Senate District 18 | House District 74 | 2 |
| 2 Main Street | Commissioners' Office | Senator Lisa Keim | Rep. Christina Riley | ² |
| Livermore Falls, Maine 04254 | 2 Turner Street, Unit 2 | 1505 Main Street | 437 Main Street | |
| Phone (207) 897-3321 | Auburn, Maine 04210 | Dixfield, ME 04224 | Jay, Maine 04239 | |
| townoffice@lfme.org | Phone (207) 753-2500, Ext | Phone (207) 562-6023 | Phone (207)897-2288 | |
| townornce@mne.org | 1801 | Lisa.keim@legislature.maine | tina.rilev@legislature.main | |
| | lpost@androscoggincounty | | e.gov | |
| | maine.gov | <u>.gov</u> | <u>e.gov</u> | |
| Town of Moscow | Somerset County | Senate District 3 | House District 118 | 2 |
| 110 Canada Road | Commissioners Office | Senator Rod Whittemore | Rep. Chad Wayne Grignon | [- |
| Moscow, Maine 04920 | 41 Court Street | PO Box 96 | 181 Fox Hill Road | |
| Phone (207) 672-4834 | Skowhegan, ME 04976 | Skowhegan, Maine 04976 | Athens, Maine 04912 | |
| moscow@myfairpoint.net | Phone (207) 474-9861 | Phone (207) 474-6703 | Phone (207) 654-2771 | |
| moscow e myran pomenet | ddiblasi@SomersetCounty- | | Cell Phone (207) 612-6499 | |
| | ME.org | rodney.whittemore@legislatu | chad.grignon@legislature. | |
| | <u>IVIL.org</u> | re.maine.gov | maine.gov | |
| Town of New Gloucester | Cumberland County | Senate District 20 | House District 65 | 1 |
| 385 Intervale Road | Commissioners Office | Senator Eric L. Brakey | Rep. Ellie Espling | ^ |
| New Gloucester, Maine 04260 | James Gailey, County | 146 Pleasant Street | 12 Lewiston Rd | |
| Phone (207) 926-4126 | Manager | Auburn, ME 04210 | New Gloucester, Maine | |
| ccastonguay@newgloucester. | 142 Federal Street | Phone (207) 406-0897 | 04260 | |
| com | Portland, ME 04101 | Eric.brakey@legislature.main | Cell Phone (207) 891-8280 | |
| COM | Phone (207) 871-8380 | e.gov | ellie.espling@legislature.m | |
| | 1 Holic (207) 671-6360 | C.gov | aine.gov | |
| | | | ame.gov | |

| | gailey@cumberlandcounty.or | | | |
|---|--|--|---|---|
| Town of New Sharon | Franklin County | Senate District 17 | House District 113 | 2 |
| 11 School Lane, PO Box 7 | Commissioner's Office | Senator Thomas Saviello | Rep. Lance Evans Harvell | |
| New Sharon, Maine 04955-0007 | 140 Main Street, Suite 3 | 60 Applegate Lane | 398 Knowlton Corner | |
| Phone (207) 778-4046 townclerk@newsharon.maine.gov | Farmington, Maine 04938 | Wilton, ME 042924 | Road | |
| towncierk@newsnaron.maine.gov | Phone (207) 778-6614 imagoon@franklincountyma | Phone (207) 287-1505 thomas.saviello@legislature. | Farmington, Maine 04938 Phone (207) 491-8971 | |
| | ine.gov | maine.gov | lance.harvell@legislature. | |
| | me.gov | manie.gov | maine.gov | |
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| 429 Hallowell Road | Commissioners Office | Senator Brownie Carson | Rep. Paul B. Chace | |
| Pownal, Maine 04069 | James Gailey, County | PO Box 68 | 31 Colonial Drive | |
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| townofstarks@gmail.com | Phone (207) 474-9861 | Phone (207) 474-6703 | Phone (207) 585-2638 | |
| | ddiblasi@SomersetCounty- | Rodney.Whittemore@legislat | thomas.skolfield@legislatu | |
| | ME.org | ure.maine.gov | <u>re.maine.gov</u> | |
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| Whitefield, Maine 04353 | 32 High Street, P.O. Box | 30 Kalers Pond Road | 64 Whittier Drive | |
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| Haddow LLP | Coraca I . I caracterin, 25q. | , | Spenderen e priminganioni | | | |

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² These Intervenors are represented by Gerald F. Petruccelli, Esq., Petruccelli, Martin & Haddow LLP.

³ Maine Office of the Public Advocate is not an Intervenor with the LUPC but, as a governmental agency, may still participate in the LUPC's portion of the NECEC hearing in accordance with Chapter 5, section 5.16. The OPA is an Intervenor in the DEP's hearing.

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Appendix C Vegetation Management

This appendix describes the four types of vegetation management required along the Segment 1 corridor, which achieve:

- Full canopy height vegetation,
- Vegetation with a 35-foot minimum height,
- Deer travel corridors, and
- Tapered vegetation.

This appendix also describes riparian filter areas adjacent to rivers, streams, and brooks.

Full Canopy Height Vegetation

Full canopy height vegetation is required in three locations along the Segment 1 corridor. The locations, identified more specifically below in Table C-1, include the Gold Brook crossing (which is within Wildlife Area 4), the Mountain Brook crossing (Wildlife Area 6), and the Upper Kennebec River crossing (Wildlife Area 11).

In areas where full canopy height vegetation must be maintained, vegetation will be removed only in areas necessary to access pole locations and place the poles. (There are no pole locations in Wildlife Area 11.) This includes the area within the entire width of the 150-foot wide corridor. Access roads and structure preparation and installation areas will be cleared of all capable and non-capable species and maintained as scrub-shrub habitat to allow for post-construction maintenance, repair, and/or emergency access during operation of the line.

35-Foot Minimum Vegetation Height

In areas where 35-foot tall vegetation must be maintained, only areas necessary to access pole locations or install poles will be cleared during construction. Access roads and structure preparation and installation areas will be cleared of all capable and non-capable species and maintained as scrub-shrub habitat to allow for post-construction maintenance, repair, and/or emergency access during operation of the line. In other areas within the entire width of the corridor only trees taller than 35 feet, or trees that may grow taller than 35 feet prior to the next scheduled maintenance will be removed during construction. Vegetation maintenance within Segment 1 will be on a two- to three-year cycle and may not exceed a three-year cycle within any particular area within this segment without prior approval from the Department.

With regard to ongoing vegetation management, trees that exceed 35 feet or are anticipated to exceed this height before the next scheduled maintenance cycle will be selected and cut at ground level and will only be removed if leaving them will cause a violation of the Maine Slash Law or create a fire or safety hazard.

Deer Travel Corridors

Eight deer travel corridors must be managed as softwood stands to promote deer movement across the transmission line corridor during the winter months when snow depths have the potential to inhibit deer travel. These travel corridors are located on either side of the four structures identified in Table C-1 and will extend along the corridor, under the conductors, where conductor height allows for taller vegetation within the corridor. These deer travel corridors must be managed, designated, and labeled corridors 1 through 8, as softwood stands and allow for the maximum tree height that can practically be maintained without encroaching into the conductor safety zone (approximately 24 feet of clearance between a conductor and the top of vegetation) or into the necessary cleared area adjacent to structures. Tree heights will vary based on structure height, conductor sag, and topography, but must generally range from 25 to 35 feet.

Within designated deer travel corridors 1 through 8, during the initial vegetation clearing for construction all capable hardwood species will be cut and individual softwood specimens will be cut to heights necessary so that they do not intrude into the conductor safety zone and are not at risk of growing into the conductor safety zone prior to the next scheduled vegetation maintenance. On an ongoing basis, softwood specimens that are not intruding into the conductor safety zone and are not at risk of growing into the conductor safety zone prior to the next scheduled vegetation maintenance will be retained. Access roads and structure preparation and installation areas will be cleared of all capable and non-capable species and maintained as scrub-shrub habitat to allow for post-construction maintenance, repair, and/or emergency access during operation of the line.

Table C-1

| Area Name | From Structure | To Structure | Location | Min. Veg Height | Notes | Approximate Length (miles) 0.22 | |
|---|--|---|---|--|---|---------------------------------------|--|
| Wildlife Area 1 | 3006-800 | 3006-799 | Beattie Twp | 35' | Includes Number One Brook not visible from Beattie Pond | | |
| Wildlife Area 2 | 3006-771 | 3006-765 | Skinner Twp | 35' | Includes crossing of the South Branch of the Moose River (all of TNC 2) | 1.19 | |
| Wildlife Area 3 | 3006-758 | 3006-752 | Skinner Twp 35' Includes five perennial streams ar intermittent streams | | Includes five perennial streams and four intermittent streams | 1.25 | |
| Wildlife Area 4 | 4 3006-742 3006-731 Appleton Twp 35' (except full canopy height at Gold Brook crossing) Appleton Twp 35' (except full canopy height at Gold Brook crossing) Appleton Twp 35' (except full canopy height at Gold Brook crossing) Mayfly habitat adjacent to that crossing where full canopy height vegetation is required, as well as group of 5 unnamed streams; portions adjacent to Leuthold Preserve | | 2.18 | | | | |
| Wildlife Area 5 3006-708 3006-683 | | Hobbstown Twp T7 BKP WKR Bradstreet Twp | 35' | Includes area near Moose Pond and surrounding land owned by BPL, Whipple Brook crossing, areas adjacent to Leuthold Preserve, and unnamed stream crossing where topography may allow crossing without taller poles (structures 3006-708 to 3006-707) | 4.87 | | |
| Wildlife Area 6 | 3006-635 | 3006-633 | Johnson Mtn Twp | Full canopy height | Mountain Brook crossing, includes Roaring Brook Mayfly habitat | 0.38 | |
| Wildlife Area 7 | 3006-598 | 3006-597 | Johnson Mtn Twp | | | 0.23 | |
| Wildlife Area 8 | 3006-589 | vegetation likely can | | Unnamed stream crossing where 35-foot vegetation likely can be maintained without taller poles | 0.20 | | |
| Wildlife Area 9 | 3006-576 | 3006-563 | West Forks | * | | 2.21 | |
| Wildlife Area 10 3006-542 3006-541 Moxie Gor | | Moxie Gore | 35' | Moxie Stream crossing where 35-foot vegetation likely can be maintained without taller poles | 0.19 | | |

| Area Name | From Structure | To Structure | Location | Min. Veg Height | Notes | Approximate Length (miles) |
|------------------|----------------------------|-----------------|------------|--------------------|---|-------------------------------|
| Wildlife Area 11 | Eastern edge | Western | West Forks | Full canopy | Upper Kennebec River crossing; deer travel | 0.56 |
| | of clearing | edge of | Moxie Gore | height | corridors 9 and 10 | |
| | for the HDD | clearing for | | | | |
| | Termination | the HDD | | | | |
| | Station in | Termination | | | | |
| | West Forks | Station in | | | | |
| | | Moxie Gore | | | | |
| Wildlife Area 12 | | | | | | |
| | 3006- <mark>458</mark> 548 | | Moxie Gore | 25'-35' | Vegetation managed for deer travel in Upper Kennebec River DWA; corridors 7 and 8 | 0.23 |
| | 3006-543 | | Moxie Gore | 25'-35' | Vegetation managed for deer travel in Upper Kennebec River DWA; corridors 5 and 6 | 0.18 |
| | 3006-542 | | Moxie Gore | 25'-35' | Vegetation managed for deer travel in Upper Kennebec River DWA; corridors 3 and 4 | 0.09 |
| | 3006-541 | | Moxie Gore | 25'-35' | Vegetation managed for deer travel in Upper Kennebec River DWA; corridors 1 and 2 | 0.1 |

Total distance along the Segment 1 corridor with taller vegetation is approximately 14.08 mile

Commented [A23]: Incorrect number.

Tapered Vegetation

Tapered vegetation is required along the entire Segment 1 corridor, except where full canopy height vegetation, vegetation with a minimum height of 35 feet, or taller vegetation managed for deer travel corridors is required. In Wildlife Area 12 taller vegetation is required for deer travel corridors 1 through 8. Within this wildlife area, tapering is required along the transmission line corridor in the sections outside the deer travel corridors. For example, the section of the transmission line corridor between structures 3006-542 and 3006-543 that is not within a deer travel corridor must be tapered.

"Tapering" refers to a form of vegetation management along the transmission line corridor where increasingly taller vegetation is allowed to grow as the distance from the wire zone increases. Along Segment 1 where tapering is required, the transmission line includes two conductors running parallel to each other and separated by 24 feet. A shield wire runs over each conductor. The wire zone is the 54-foot wide area that runs along the center of the 150-foot wide corridor and includes the 24-foot wide area below and between the two conductors, plus 15 feet on each side of the set of conductors (15 ft. + 24 ft. + 15 ft. + 54 ft.).

In a tapered corridor, within this 54-foot wide wire zone all woody vegetation will be cut to ground level during construction. During maintenance of this portion of the corridor non-capable species are allowed to grow. (Capable species includes vegetation capable of growing tall enough to reach up, into the conductor safety zone). Within a tapered corridor, the result is that within the 54-foot wide wire zone vegetation that is approximately 10 feet tall regenerates so that the wire zone primarily consists of native, scrub-shrub habitat with non-capable species. (Without tapering, the corridor would be cleared and maintained as scrub-shrub habitat across the entire 150-foot width.)

In a tapered corridor, the area outside the wire zone will be selectively cut during construction to create a taper with vegetation approximately 15 feet tall near the wire zone and increasing to approximately 35 feet tall near the edge of the 150-foot wide corridor. The first taper includes the areas within 16 feet of either side of the wire zone, within which vegetation 15 feet tall and under, including capable species, will be maintained. The second taper includes the next 16 feet on either side of the corridor, within which taller vegetation up to 25 feet tall will be maintained. The third and final taper includes the next 16 feet on either side of the corridor, within which even taller vegetation up to 35 feet tall will be maintained.

As vegetation is maintained within a tapered corridor, any trees that exceed the height for the taper they are within or are anticipated to exceed the height before the next scheduled maintenance cycle, will be selected and cut at ground level. Vegetation maintenance within Segment 1 will be on a two- to three-year cycle and may not exceed a three-year cycle within any particular area within this segment without prior approval from the Department. Any trees that are cut will only be removed if leaving them will cause a violation of the Maine Slash Law or create a fire or safety hazard.

The overall result is that a cross section of a 150-foot wide tapered corridor breaks down into the following components:

16' 3rd taper + 16' 2nd taper + 16' 1st taper + 54' wire zone + 16' 1st taper + 16' 2nd taper + 16' 3rd taper = 150' wide corridor. The approximate maximum vegetation height of each taper is:

1st taper: 15-foot vegetation
2nd taper: 25-foot vegetation
3rd taper: 35-foot vegetation

Access roads and structure preparation and installation areas will be cleared of all capable and non-capable species and maintained as scrub-shrub habitat to allow for post-construction maintenance, repair, and/or emergency access during operation of the line. Soil disturbance and grading will be minimized through careful planning of temporary access ways. When the temporary access ways are removed, the disturbed areas will be restored to their pre-construction grade and allowed to revegetate. Except for the areas immediately around the base of each transmission line structure, the full width and length of the transmission corridor will remain vegetated following construction of the Project.

Riparian Filter Areas

Unless more restrictive requirements apply,⁴³ within 100 feet of all perennial streams in Segment 1, all coldwater fisheries streams in other segments as identified in Appendix E, all streams containing threatened or endangered species, and all Outstanding River Segments; and within 75 feet of all other streams, a riparian filter area will be maintained. Riparian filter areas will be established and maintained in the following manner:

- The boundary of each riparian filter area will have unique flagging installed to distinguish between the applicable 75-foot or 100-foot filter area prior to clearing. Flagging will be maintained throughout construction.
- Foliar herbicides will be prohibited within the riparian filter area,⁴⁴ and all
 refueling/maintenance of equipment will be excluded from the filter area unless it occurs
 on an existing paved road or if secondary containment is used with oversight from an
 environmental inspector.
- All stream crossings by heavy equipment will be performed through the installation of
 equipment spans with no in-stream disturbances. Streams will not be forded by heavy
 equipment.
- Initial tree clearing will be performed during frozen ground conditions whenever practicable, and if not practicable, the recommendations of the environmental inspector will be followed regarding the appropriate techniques to minimize disturbance, such as the use of selectively placed travel lanes within the riparian filter area. Transmission line structures will not be placed within the riparian filter area, unless specifically authorized by the Department and accompanied by a site-specific erosion control plan. No structures will be placed within 25 feet of any stream regardless of its classification.
- Within that portion of the appropriate riparian filter area that is within the wire zone (i.e., within 15 feet, horizontally, of any conductor), all woody vegetation over 10 feet in height, whether

Commented [A24]: See March 29, 2018 CMP Response to December 12, 2017 Department Additional Information Request 3. Sitespecific erosion control plans were to apply only to structures within 25 feet of streams, but that requirement no longer applies if no structures may be placed within 25 feet of any stream.

⁴³ More restrictive requirements include, but are not limited to, requirements to maintain taller vegetation within the corridor such as provided for in Appendix C, Table C-1.

⁴⁴ Additionally, no herbicide will be used in the Segment 1 corridor.

capable or non-capable, will be cut back to ground level and resulting slash will be managed in accordance with Maine's Slash Law. No other vegetation, other than dead or hazard trees, will be removed. Within the riparian filter area and outside of the wire zone, non-capable species may be allowed to exceed 10 feet in height unless it is determined that they may encroach into the conductor safety zone prior to the next maintenance cycle. Vegetation maintenance within Segment 1 will be on a two- to three-year cycle and must not exceed a three-year cycle within any particular area within this segment, without prior approval from the Department. Vegetation maintenance within other segments will be on an approximately four-year cycle.

- Removal of capable species, dead or hazard trees within the appropriate riparian filter area will typically be accomplished by hand-cutting. Use of mechanized harvesting equipment is allowed if supported by construction matting or during frozen conditions in a manner (i.e., use of travel lanes and reach-in techniques) that preserves non-capable vegetation less than 10 feet in height to the greatest extent practicable; Within within the wire zone, all woody vegetation may be cut to ground level.
- Any construction access roads that must cross streams or brooks must be designed, constructed, and maintained to minimize erosion and sedimentation.

Appendix D **Sound Level Requirements**

Table D-1 **New Equipment Sound Level Requirements**

| | Sound Level Requirement | Source |
|-------------------------------|------------------------------|---|
| errill Road Converter Station | | |
| Reactor/Valve Building (1) | 66 dBA (SPL) at 3 feet | Site Law Application, Table 5-8 |
| Transformers (4) | 90 dBA (SWL) per transformer | |
| Radiators (10) | 80 dBA (SWL) per radiator | |
| rrabee Road Substation | | |
| New Autotransformer (3) | 82 dBA (SPL) at 3 feet | Site Law Application, Table 5-1 |
| kett Road Substation | | - |
| Transformer (32) | 91 dBA (SWL) | Site Law Application, Table 5-1 |
| Air Core Reactor – D1 (3) | 74 dBA (SWL) | |
| Air Core Reactor – CA1 (3) | 64 dBA (SWL) | |
| Capacitor Bank (3) | 71 dBA (SWL) | |
| Dry Air Cooler (5) | 80 dBA (SWL) | |
| HVAC Fans (2) | 80 dBA (SWL) | |
| opers Mills Substation | | |
| Transformer (32) | 91 dBA (SWL) | Site Law Application, Table 5-1 |
| Air Core Reactor – D1 (3) | 74 dBA (SWL) | |
| Air Core Reactor – CA1 (3) | 64 dBA (SWL) | |
| Capacitor Bank (3) | 71 dBA (SWL) | |
| Dry Air Cooler (5) | 80 dBA (SWL) | |
| HVAC Fans (2) | 80 dBA (SWL) | |
| ven Farm Substation | | |
| Transformer | 75 dBA at 6 feet | Raven Farm Substation Sound Study (5/17/18), Table 6-1 |

SPL – Sound Pressure Level, averaged along acoustical envelope SWL – Sound Power Level

Appendix E Waterbody Crossing Table

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|-------------------------|-------------------|---|---|---|---|-----------------------------------|---|---|--|
| 1 | Beattie Twp | ISTR-01-02 | Trib. to West Branch Mill Brook | 2 | INT | N | Y | 439 | Y | 3 |
| 1 | Skinner Twp | ISTR-08-01 | Trib. to West Branch Moose River | 4 | INT | N | Y | 382 | Y | 20, 21 |
| 1 | Appleton Twp | WB-16-101 | Water body assoc. with trib. to Gold Brook | 30 | Open Water | N | Y | 131 | N | 37 |
| 1 | Bradstreet Twp | ISTR-24-01 | Trib. to Bitter Brook | 2 | INT | N | N/A | 435 | Y | 56 |
| 1 | Johnson Mountain Twp | ISTR-39-01 | Trib. to Cold Stream | 4 | INT | N | Y | 220 | N | 89 |
| 1 | Johnson Mountain Twp | ISTR-39-03 | Trib. to East Branch Salmon Stream | 4 | INT | N | N/A | 274 | N | 88 |
| 1 | Johnson Mountain Twp | ISTR-42-09 | Trib. to Tomhegan Stream | 5 | INT | N | Y | 133 | N | 94 |
| 1 | West Forks Plt | ISTR-45-02- 02 | Trib. to Tomhegan Stream | 3 | INT | N | Y | 317 | N | 100 |
| 1 | West Forks Plt | ISTR-46-05 | Trib. to Cold Stream | 4 | INT | N | Y | 43 | N | 103 |
| 1 | West Forks Plt | ISTR-48-02 | Trib. To Kennebec River | 3 | INT | N | N/A | 89 | N | 108, 109 |
| 1 | Moxie Gore | ISTR-49-01 | Trib. to Moxie Stream | 5 | INT | N | Y | 375 | N | 111 |
| 1 | Moxie Gore | ISTR-51-07 | Trib. to Moxie Stream | 2 | INT | N | N/A | 269 | N | 114 |
| 1 | Moxie Gore | ISTR-51-15 | Trib. to Moxie Stream | 1.5 | INT | N | N/A | 353 | N | 115 |

Commented [A25]: This table is inconsistent with Group 4's Exhibit 23-JR (the Waterbody Crossing Table that MDIFW revised in a handwritten markup and that the DEP posted on its website on February 4, 2019) and the waterbody crossing table provided with CMP's October 10, 2019 Merrill Strip Alternative filing (which removes PSTR-LT-01 due to the realignment of the Project).

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resour ce Map/Sh eet Number |
|---------|--------------------------------|----------------------|---------------------------------------|---|---|---|-----------------------------------|--|---|--|
| 1 | Moxie Gore | ISTR-51-16 | Trib. to Moxie Stream | 3 | INT | N | N/A | 320 | N | 1 1 5 |
| 1 | The Forks Plt | ISTR-52-07 | Trib. to Moxie Stream | 3 | INT | N | N/A | 394 | N | 1 1 6 |
| 1 | Moxie Gore/The Forks Plt | ISTR-52-08 | Trib. to Moxie Stream | 1 | INT | N | N/A | 227 | N | 1 1 6 |
| 1 | The Forks Plt | ISTR-52-12 | Trib. to Moxie Stream | 2 | INT | N | N/A | 258 | N | 116, 117 |
| 1 | Appleton Twp | ISTR-RR-11- 01 | Trib. to Bog Brook | 5 | INT | N | Y | 517 | N | 2 7 |
| 1 | Appleton Twp/Skinner Twp | ISTR-RR-11- 3-RR1 | Trib. to Bog Brook | 3 | INT | N | Y | 328 | N | 2 7 |
| 1 | Appleton Twp/Skinner Twp | ISTR-RR1-1 | Trib. to Bog Brook | 5 | INT | N | Y | 348 | N | 2 7 |
| 1 | Appleton Twp | ISTR-RR1-2 | Trib. to Bog Brook | 2 | INT | N | Y | 230 | N | 2 7 |
| 1 | Beattie Twp | PSTR-00-10 | Trib. to West Branch Mill Brook | 3 | PER | N | Y | 21 | N | 3 |
| 1 | Skinner Twp | PSTR-09-11 | South Branch Moose River | 46 | PER | N | Y | 524 | N | 2 |
| 1 | Appleton Twp | PSTR-11-07- RR1 | Trib. to Bog Brook | 6 | PER | N | Y | 378 | N | 2 7 |
| 1 | Appleton Twp | PSTR-11-08- RR1 | Trib. to Bog Brook | 4 | PER | N | Y | 353 | N | 2 7 |
| 1 | Appleton Twp | PSTR-15-06 | Gold Brook | 25 | PER | N | Y | 187 | N | 3 6 |
| 1 | Appleton Twp | PSTR-17R- 03 | Baker Stream | 12 | PER | N | Y | 159 | N | 3 9 |
| 1 | T5 R7 BKP WKR | PSTR-23-02 | Whipple Brook | 60 | PER | N | Y | 128 | N | 5 2 |
| 1 | Bradstreet Twp | PSTR-24-03 | Bitter Brook | 45 | PER | N | Y | 462 | N | 5 5 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|---------------------------------|------------|-----------------------------|---|---|---|-----------------------------------|---|---|--|
| 1 | Johnson Mountain Twp | PSTR-39-02 | Trib. to Cold Stream | 2 | PER | N | Y | 128 | N | 88, 89 |
| 1 | Appleton Twp | PSTR-RR1-3 | Trib. to Bog Brook | 4 | PER | N | Y | 389 | Y | 27 |
| 1 | West Forks Plt/Moxie Gore | PSTR-48-03 | Kennebec River | 300 | PER | N | Y | 399 | N | 109 |
| 1 | Moxie Gore | STRM-50-01 | Moxie Stream | 80 | PER | N | Y | 401 | N | 113 |
| 1 | Moxie Gore | ISTR-50-02 | Trib. to Moxie Stream | 1.5 | INT | N | Y | 37 | N | 113 |
| 1 | Moxie Gore | ISTR-51-01 | Trib. to Moxie Stream | 80 | INT | N | Y | 331 | N | 113 |
| 1 | Moxie Gore | ISTR-51-02 | Trib. to Moxie Stream | 5 | INT | N | Y | 279 | N | 113 |
| 1 | Moxie Gore | ISTR-51-03 | Trib. to Moxie Stream | 4 | INT | N | Y | 292 | N | 113 |
| 1 | Moxie Gore | ISTR-51-04 | Trib. to Moxie Stream | 2 | INT | N | Y | 325 | N | 113 |
| 1 | Moxie Gore | ISTR-51-05 | Trib. to Moxie Stream | 8 | INT | N | Y | 361 | N | 113 |
| 1 | Moxie Gore | ISTR-51-06 | Trib. to Moxie Stream | 3 | INT | N | Y | 383 | N | 113, 114 |
| 1 | Moxie Gore | ISTR-51-08 | Trib. to Moxie Stream | 1.5 | INT | N | Y | 244 | N | 114, 115 |
| 1 | Moxie Gore | ISTR-51-09 | Trib. to Moxie Stream | 3 | INT | N | Y | 267 | N | 114, 115 |
| 1 | Moxie Gore | ISTR-51-10 | Trib. to Moxie Stream | 6 | INT | N | Y | 312 | N | 114, 115 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|------------|------------|-----------------------------|---|--|---|-----------------------------------|---|---|--|
| 1 | Moxie Gore | ISTR-51-11 | Trib. to Moxie Stream | 4 | INT | N | Y | 307 | N | 114, 115 |
| 1 | Moxie Gore | ISTR-51-12 | Trib. to Moxie Stream | 3 | INT | N | Y | 522 | N | 114, 115 |
| 1 | Moxie Gore | ISTR-51-13 | Trib. to Moxie Stream | 6 | INT | N | Y | 333 | N | 115 |
| 1 | Moxie Gore | ISTR-51-14 | Trib. to Moxie Stream | 5 | INT | N | Y | 3 | N | 115 |
| 1 | Moxie Gore | ISTR-51-17 | Trib. to Moxie Stream | 2 | INT | N | Y | 235 | N | 115 |
| 1 | Moxie Gore | ISTR-51-18 | Trib. to Moxie Stream | 2 | INT | N | Y | 226 | N | 115 |
| 1 | Moxie Gore | ISTR-51-19 | Trib. to Moxie Stream | 2 | INT | N | Y | 251 | N | 115 |
| 1 | Moxie Gore | ISTR-51-20 | Trib. to Moxie Stream | 1.5 | INT | N | Y | 215 | N | 115 |
| 1 | Moxie Gore | ISTR-51-21 | Trib. to Moxie Stream | 3 | INT | N | Y | 416 | N | 115 |
| 1 | Moxie Gore | ISTR-52-01 | Trib. to Moxie Stream | 5 | INT | N | Y | 337 | N | 115, 116 |
| 1 | Moxie Gore | ISTR-52-02 | Trib. to Moxie Stream | 3 | INT | N | Y | 317 | N | 115, 116 |
| 1 | Moxie Gore | ISTR-52-03 | Trib. to Moxie Stream | 3 | INT | N | Y | 295 | N | 115, 116 |
| 1 | Moxie Gore | ISTR-52-04 | Trib. to Moxie Stream | 5 | INT | N | Y | 304 | N | 116 |
| 1 | Moxie Gore | ISTR-52-05 | Trib. to Moxie Stream | 5 | INT | N | Y | 299 | N | 116 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|---------------|------------|---------------------------------------|---|---|---|-----------------------------------|---|---|--|
| 1 | Moxie Gore | ISTR-52-06 | Trib. to Moxie Stream | 2 | INT | N | Y | 379 | N | 116 |
| 1 | The Forks Plt | ISTR-52-09 | Trib. to Moxie Stream | 2 | INT | N | Y | 192 | N | 116 |
| 1 | The Forks Plt | ISTR-52-10 | Trib. to Moxie Stream | 3 | INT | N | Y | 62 | N | 116, 117 |
| 1 | The Forks Plt | ISTR-52-11 | Trib. to Moxie Stream | 4 | INT | N | Y | 195 | N | 116, 117 |
| 1 | The Forks Plt | ISTR-52-13 | Trib. to Moxie Stream | 8 | INT | N | Y | 518 | N | 117 |
| 1 | The Forks Plt | ISTR-52-14 | Trib. to Moxie Stream | 6 | INT | N | Y | 419 | N | 117 |
| 1 | The Forks Plt | ISTR-52-15 | Trib. to Moxie Stream | 5 | INT | N | Y | 486 | N | 117 |
| 1 | The Forks Plt | ISTR-52-16 | Trib. to Moxie Stream | 2 | INT | N | Y | 288 | N | 117 |
| 1 | The Forks Plt | ISTR-52-17 | Trib. to Moxie Stream | 2 | INT | N | Y | 399 | N | 117 |
| 1 | Beattie Twp | ISTR-00-07 | Trib. to West Branch Mill Brook | 1 | INT | N | Y | 408 | N | 1 |
| 1 | Beattie Twp | ISTR-01-11 | Trib. to Mill Brook | 1 | INT | N | Y | 644 | N | 5 |
| 1 | Skinner Twp | ISTR-05-05 | Trib. to Smart Brook | 1 | INT | N | Y | 103 | N | 13 |
| 1 | Skinner Twp | ISTR-10-04 | Trib. to Bog Brook | 1 | INT | N | Y | 108 | N | 25 |
| 1 | Appleton Twp | ISTR-12-02 | Trib. to Bog Brook | 1 | INT | N | Y | 510 | N | 29 |
| 1 | Appleton Twp | ISTR-12-12 | Trib. to Bog Brook | 1 | INT | N | Y | 348 | N | 30 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|-------------------------|------------|---|---|---|---|-----------------------------------|---|---|--|
| 1 | Appleton Twp | ISTR-14-11 | Trib. to Gold Brook | 1 | INT | N | Y | 293 | N | 34 |
| 1 | Johnson Mountain Twp | ISTR-41-02 | Trib. to Tomhegan Stream | 1 | INT | N | Y | 484 | Y | 94 |
| 1 | Johnson Mountain Twp | ISTR-41-04 | Trib. to Cold Stream | 2 | PER | N | Y | 342 | N | 92, 93 |
| 1 | Beattie Twp | ISTR-01-12 | Trib. to Mill Brook | 1.5 | INT | N | Y | 668 | N | 5 |
| 1 | Beattie Twp | ISTR-02-09 | Trib. to Number One Brook | 1.5 | INT | N | Y | 464 | N | 7 |
| 1 | Skinner Twp | ISTR-05-09 | Trib. to Smart Brook | 1.5 | INT | N | Y | 99 | N | 12 |
| 1 | Skinner Twp | ISTR-06-04 | Trib. to Smart Brook | 1.5 | INT | N | Y | 52 | N | 16 |
| 1 | Appleton Twp | ISTR-12-09 | Trib. to Bog Brook | 1.5 | INT | N | Y | 368 | N | 28 |
| 1 | Appleton Twp | ISTR-12-11 | Trib. to Bog Brook | 1.5 | INT | N | Y | 321 | N | 30 |
| 1 | Appleton Twp | ISTR-14-37 | Trib. to Barrett Brook | 1.5 | INT | N | Y | 416 | N | 33 |
| 1 | Johnson Mountain Twp | ISTR-33-02 | Trib. to MountainBr ook | 1.5 | INT | N | N/A | 214 | N | 76 |
| 1 | Johnson Mountain Twp | ISTR-36-05 | Trib. to Salmon Stream | 1.5 | INT | N | N/A | 393 | N | 83 |
| 1 | Johnson Mountain Twp | ISTR-38-11 | Trib. to East Branch Salmon Stream | 1.5 | INT | N | N/A | 144 | N | 85, 86 |
| 1 | Johnson Mountain Twp | ISTR-38-13 | Trib. to East Branch Salmon Stream | 1.5 | INT | N | N/A | 206 | N | 85, 86 |
| 1 | Johnson Mountain Twp | ISTR-38-14 | Trib. to East Branch Salmon Stream | 1.5 | INT | N | N/A | 82 | N | 85, 86 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|-------------|------------|--|---|---|---|-----------------------------------|---|---|--|
| 1 | Beattie Twp | ISTR-02-13 | Trib. to Number One Brook | 2 | INT | N | Y | 115 | N | 7 |
| 1 | Skinner Twp | ISTR-05-03 | Trib. to Smart Brook | 2 | INT | N | Y | 40 | Y | 13 |
| 1 | Skinner Twp | ISTR-05-04 | Trib. to Smart Brook | 2 | INT | N | Y | 58 | N | 13 |
| 1 | Skinner Twp | ISTR-05-10 | Trib. to Smart Brook | 2 | INT | N | Y | 336 | N | 12 |
| 1 | Skinner Twp | ISTR-06-01 | Trib. to Smart Brook | 2 | INT | N | Y | 331 | N | 16 |
| 1 | Skinner Twp | ISTR-06-02 | Trib. to Smart Brook | 2 | INT | N | Y | 361 | N | 16 |
| 1 | Skinner Twp | ISTR-06-03 | Trib. to Smart Brook | 2 | INT | N | Y | 249 | N | 16 |
| 1 | Skinner Twp | ISTR-06-07 | Trib. to Smart Brook | 2 | INT | N | Y | 277 | Y | 15, 16 |
| 1 | Skinner Twp | ISTR-07-03 | Trib. to West Branch Moose River | 2 | INT | N | Y | 133 | N | 18 |
| 1 | Skinner Twp | ISTR-07-04 | Trib. to West Branch Moose River | 2 | INT | N | Y | 365 | N | 18 |
| 1 | Skinner Twp | ISTR-07-08 | Trib. to Hay Bog Brook | 2 | INT | N | N/A | 169 | N | 17 |
| 1 | Skinner Twp | ISTR-09-03 | Trib. to South Branch Moose River | 2 | INT | N | Y | 549 | N | 22 |
| 1 | Skinner Twp | ISTR-09-04 | Trib. to South Branch Moose River | 2 | INT | N | Y | 267 | N | 22 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|--------------|------------|--|---|--|---|-----------------------------------|---|---|--|
| 1 | Skinner Twp | ISTR-09-07 | Trib. to South Branch Moose River | 2 | INT | N | Y | 271 | N | 22, 23 |
| 1 | Skinner Twp | ISTR-09-08 | Trib. to South Branch Moose River | 2 | INT | N | Y | 235 | N | 23 |
| 1 | Skinner Twp | ISTR-09-09 | Trib. to South Branch Moose River | 2 | INT | N | Y | 183 | N | 22 |
| 1 | Skinner Twp | ISTR-10-09 | Trib. to Bog Brook | 2 | INT | N | Y | 60 | N | 25 |
| 1 | Appleton Twp | ISTR-12-01 | Trib. to Bog Brook | 2 | INT | N | Y | 451 | N | 29 |
| 1 | Appleton Twp | ISTR-12-05 | Trib. to Bog Brook | 2 | INT | N | Y | 380 | N | 29, 30 |
| 1 | Appleton Twp | ISTR-13-01 | Trib. to Barrett Brook | 2 | INT | N | Y | 166 | N | 32 |
| 1 | Appleton Twp | ISTR-13-02 | Trib. to Barrett Brook | 2 | INT | N | Y | 149 | N | 32 |
| 1 | Appleton Twp | ISTR-13-08 | Trib. to Barrett Brook | 2 | INT | N | Y | 485 | N | 31 |
| 1 | Appleton Twp | ISTR-13-10 | Trib. to Barrett Brook | 2 | INT | N | Y | 90 | N | 31 |
| 1 | Appleton Twp | ISTR-13-15 | Trib. to Bog Brook | 2 | INT | N | Y | 242 | Y | 30, 31 |
| 1 | Appleton Twp | ISTR-13-16 | Trib. to Bog Brook | 2 | INT | N | Y | 257 | N | 30, 31 |
| 1 | Appleton Twp | ISTR-14-03 | Trib. to Gold Brook | 2 | INT | N | Y | 205 | N | 34 |
| 1 | Appleton Twp | ISTR-14-04 | Trib. to Gold Brook | 2 | INT | N | Y | 170 | N | 34 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|--------------|------------|------------------------------|---|---|---|-----------------------------------|---|---|--|
| 1 | Appleton Twp | ISTR-14-05 | Trib. to Gold Brook | 2 | INT | N | Y | 284 | N | 34 |
| 1 | Appleton Twp | ISTR-14-08 | Trib. to Gold Brook | 2 | INT | N | Y | 194 | N | 34 |
| 1 | Appleton Twp | ISTR-14-09 | Trib. to Gold Brook | 2 | INT | N | Y | 173 | N | 34 |
| 1 | Appleton Twp | ISTR-14-10 | Trib. to Gold Brook | 2 | INT | N | Y | 120 | N | 34 |
| 1 | Appleton Twp | ISTR-14-23 | Trib. to Barrett Brook | 2 | INT | N | Y | 443 | N | 33 |
| 1 | Appleton Twp | ISTR-14-27 | Trib. to Barrett Brook | 2 | INT | N | Y | 339 | N | 33 |
| 1 | Appleton Twp | ISTR-14-45 | Trib. to Barrett Brook | 2 | INT | N | Y | 512 | N | 33 |
| 1 | Appleton Twp | ISTR-14-46 | Trib. to Barrett Brook | 2 | INT | N | Y | 639 | N | 33 |
| 1 | Appleton Twp | ISTR-14-51 | Trib. to Barrett Brook | 2 | INT | N | Y | 114 | N | 33 |
| 1 | Appleton Twp | ISTR-14-62 | Trib. to Barrett Brook | 2 | INT | N | Y | 206 | Y | 32 |
| 1 | Appleton Twp | ISTR-14-66 | Trib. to Barrett Brook | 2 | INT | N | Y | 512 | N | 32 |
| 1 | Appleton Twp | ISTR-15-02 | Trib. to Gold Brook | 2 | INT | N | Y | 178 | Y | 35 |
| 1 | Appleton Twp | ISTR-15-05 | Trib. to Gold Brook | 2 | INT | N | Y | 12 | N | 35 |
| 1 | Appleton Twp | ISTR-15-09 | Trib. to Gold Brook | 2 | INT | N | Y | 223 | N | 36 |
| 1 | Appleton Twp | ISTR-15-12 | Trib. to Gold Brook | 2 | INT | N | Y | 297 | N | 36 |
| 1 | Appleton Twp | ISTR-15-18 | Trib. to Gold Brook | 2 | INT | N | Y | 382 | N | 34 |
| 1 | Appleton Twp | ISTR-16-16 | Trib. to Gold Brook | 2 | INT | N | Y | 52 | N | 37 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|-------------------------|-------------------|---|---|--|---|-----------------------------------|---|---|--|
| 1 | Appleton Twp | ISTR-17-04 | Trib. To Rock Pond | 2 | INT | N | N/A | 424 | N | 40 |
| 1 | Appleton Twp | ISTR-17R-05 | Trib. To Rock Pond | 2 | INT | N | N/A | 554 | N | 40 |
| 1 | Parlin Pond Twp | ISTR-30-02 | Trib. to Piel Brook | 2 | INT | N | Y | 227 | N | 69 |
| 1 | Johnson Mountain Twp | ISTR-35-02 | Trib. to Salmon Stream | 2 | INT | N | N/A | 423 | N | 80 |
| 1 | Johnson Mountain Twp | ISTR-36-01 | Trib. to Salmon Stream | 2 | INT | N | N/A | 379 | N | 83 |
| 1 | Johnson Mountain Twp | ISTR-36-04 | Trib. to Salmon Stream | 2 | INT | N | N/A | 440 | N | 83 |
| 1 | Johnson Mountain Twp | ISTR-38-01 | Trib. to East Branch Salmon Stream | 2 | INT | N | N/A | 213 | N | 87 |
| 1 | Johnson Mountain Twp | ISTR-38-08 | Trib. to East Branch Salmon Stream | 2 | INT | N | N/A | 131 | N | 86 |
| 1 | Johnson Mountain Twp | ISTR-38-12 | Trib. to East Branch Salmon Stream | 2 | INT | N | N/A | 99 | N | 85, 86 |
| 1 | Johnson Mountain Twp | ISTR-41-04 | Trib. to Cold Stream | 2 | INT | N | Y | 140 | N | 92, 93 |
| 1 | Johnson Mountain Twp | ISTR-42-10 | Trib. to Tomhegan Stream | 2 | INT | N | Y | 124 | N | 94 |
| 1 | Appleton Twp | ISTR-RR-11- 03 | Trib. to Bog Brook | 2 | INT | N | Y | 343 | N | 27 |
| 1 | Appleton Twp | ISTR-RR-12- 01 | Trib. to Bog Brook | 2 | INT | N | Y | 174 | N | 27, 28 |
| 1 | Bradstreet Twp | ISTR-SR-29- 03 | Trib. To Fourmile Brook | 2 | INT | N | N/A | 174 | N | 66 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|-------------------------|-------------------|---|---|---|---|-----------------------------------|---|---|--|
| 1 | Appleton Twp | PSTR-14-28 | Trib. to Barrett Brook | 2 | PER | N | Y | 142 | Y | 33 |
| 1 | Appleton Twp | PSTR-14-34 | Trib. to Barrett Brook | 2 | PER | N | Y | 257 | N | 33 |
| 1 | Johnson Mountain Twp | PSTR-40-08 | Trib. to Cold Stream | 2 | PER | N | Y | 353 | N | 91 |
| 1 | Johnson Mountain Twp | PSTR-40-09 | Trib. to Cold Stream | 2 | PER | N | Y | 300 | N | 91 |
| 1 | Beattie Twp | ISTR-01-10 | Trib. to Mill Brook | 2.5 | INT | N | Y | 663 | N | 5 |
| 1 | Skinner Twp | ISTR-05-08 | Trib. to Smart Brook | 2.5 | INT | N | Y | 163 | N | 12 |
| 1 | Johnson Mountain Twp | ISTR-36-02 | Trib. to Salmon Stream | 2.5 | INT | N | N/A | 254 | Y | 82, 83 |
| 1 | Johnson Mountain Twp | ISTR-37-01 | Trib. to East Branch Salmon Stream | 2.5 | INT | N | N/A | 223 | N | 84 |
| 1 | Beattie Twp | ISTR-MS-02- 10 | Trib. to Number One Brook | 2.5 | INT | N | Y | 272 | N | 7 |
| 1 | Beattie Twp | PSTR-01-09 | Trib. To Mill Brook | 2.5 | PER | N | Y | 726 | N | 5 |
| 1 | Beattie Twp | ISTR-00-01 | Trib. to West Branch Mill Brook | 3 | INT | N | Y | 402 | N | 1 |
| 1 | Beattie Twp | ISTR-00-08 | Trib. to West Branch Mill Brook | 3 | INT | N | Y | 176 | N | 1 |
| 1 | Beattie Twp | ISTR-02-04 | Trib. to Number One Brook | 3 | INT | N | Y | 310 | N | 7 |
| 1 | Beattie Twp | ISTR-02-08 | Trib. to Number One Brook | 3 | INT | N | Y | 429 | N | 7 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|------------------------------------|------------|--|---|---|---|-----------------------------------|---|---|--|
| 1 | Skinner Twp | ISTR-05-06 | Trib. to Smart Brook | 3 | INT | N | Y | 328 | N | 12, 13 |
| 1 | Skinner Twp | ISTR-05-07 | Trib. to Smart Brook | 3 | INT | N | Y | 454 | N | 12, 13 |
| 1 | Skinner Twp | ISTR-06-05 | Trib. to Smart Brook | 3 | INT | N | Y | 152 | Y | 16 |
| 1 | Skinner Twp | ISTR-06-08 | Trib. to Smart Brook | 3 | INT | N | Y | 65 | N | 15 |
| 1 | Skinner Twp | ISTR-07-01 | Trib. to West Branch Moose River | 3 | INT | N | Y | 73 | N | 18, 19 |
| 1 | Skinner Twp | ISTR-07-07 | Trib. to Hay Bog Brook | 3 | INT | N | N/A | 417 | N | 17 |
| 1 | Skinner Twp | ISTR-09-10 | Trib. to South Branch Moose River | 3 | INT | N | Y | 376 | N | 21, 22 |
| 1 | Skinner Twp | ISTR-10-10 | Trib. to Bog Brook | 3 | INT | N | Y | 190 | N | 25 |
| 1 | Appleton Twp | ISTR-12-04 | Trib. to Bog Brook | 3 | INT | N | Y | 408 | N | 29, 30 |
| 1 | Appleton Twp | ISTR-14-06 | Trib. to Gold Brook | 3 | INT | N | Y | 287 | N | 34 |
| 1 | Appleton Twp | ISTR-14-67 | Trib. to Barrett Brook | 3 | INT | N | Y | 361 | Y | 32 |
| 1 | Appleton Twp | ISTR-15-10 | Trib. to Gold Brook | 3 | INT | N | Y | 257 | N | 36 |
| 1 | Appleton Twp | PSTR-16-01 | Trib. to Baker Stream | 25 | INT | N | Y | 285 | N | 37 |
| 1 | Appleton Twp | ISTR-17-02 | Trib. to Baker Stream | 3 | INT | N | N/A | 20 | Y | 39 |
| 1 | T5 R7 BKP WKR | ISTR-18-08 | Trib. to Fish Pond | 3 | INT | N | N/A | 429 | N | 41, 42 |
| 1 | T5 R7 BKP WKR/Hobbsto wn Twp | ISTR-18-11 | Trib. to Fish Pond | 3 | INT | N | N/A | 405 | N | 42 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|-------------------------|-------------------|---|---|---|---|-----------------------------------|---|---|--|
| 1 | Bradstreet Twp | ISTR-26-03 | Trib. to Horse Brook | 3 | INT | N | N/A | 60 | N | 60 |
| 1 | Bradstreet Twp | ISTR-26-04 | Trib. to Horse Brook | 3 | INT | N | N/A | 45 | N | 60 |
| 1 | Johnson Mountain Twp | ISTR-38-03 | Trib. to East Branch Salmon Stream | 3 | INT | N | N/A | 528 | N | 87 |
| 1 | Johnson Mountain Twp | ISTR-38-07 | East Branch Salmon Stream | 3 | INT | N | N/A | 115 | N | 86, 87 |
| 1 | Johnson Mountain Twp | ISTR-42-08 | Trib. to Tomhegan Stream | 3 | INT | N | Y | 221 | N | 94 |
| 1 | West Forks Plt | ISTR-44-08 | Tomhegan Stream | 3 | INT | N | Y | 231 | N | 100 |
| 1 | West Forks Plt | ISTR-45-04 | Trib. to Tomhegan Stream | 3 | INT | N | Y | 311 | N | 100, 101 |
| 1 | Beattie Twp | ISTR-MS-02- 08 | Trib. to Number One Brook | 3 | INT | N | Y | 359 | N | 7 |
| 1 | Beattie Twp | ISTR-MS-02- 09 | Trib. to Number One Brook | 3 | INT | N | Y | 359 | N | 7 |
| 1 | Skinner Twp | ISTR-RR-11- 04 | Trib. to Bog Brook | 3 | INT | N | Y | 8 | N | 26 |
| 1 | Beattie Twp | PSTR-00-06 | Trib. to West Branch Mill Brook | 3 | PER | N | Y | 398 | N | 1 |
| 1 | Appleton Twp | PSTR-16-10 | Trib. to Gold Brook | 3 | PER | N | Y | 313 | N | 37 |
| 1 | Appleton Twp | PSTR-16- 101 | Trib. to Gold Brook | 3 | PER | N | Y | 226 | N | 37 |
| 1 | T5 R7 BKP WKR | PSTR-18-15 | Trib. to Fish Pond | 3 | PER | N | Y | 198 | N | 41 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|-------------------------|-------------------|--|---|--|---|-----------------------------------|---|---|--|
| 1 | Hobbstown Twp | PSTR-20-01 | Trib. to Little Spencer Stream | 3 | PER | N | Y | 443 | N | 46 |
| 1 | T5 R7 BKP WKR | PSTR-23-01 | Trib. to Whipple Brook | 3 | PER | N | Y | 258 | N | 52 |
| 1 | Bradstreet Twp | PSTR-26-05 | Trib. to Horse Brook | 3 | PER | N | Y | 298 | N | 60 |
| 1 | West Forks Plt | PSTR-44-07 | Tomhegan Stream | 3 | PER | N | Y | 37 | N | 100 |
| 1 | Beattie Twp | ISTR-MS-02- 11 | Trib. to Number One Brook | 3.5 | INT | N | Y | 512 | N | 7 |
| 1 | Beattie Twp | ISTR-02-01 | Trib. to Number One Brook | 4 | INT | N | Y | 505 | N | 7 |
| 1 | Skinner Twp | ISTR-08-02 | Trib. to West Branch Moose River | 4 | INT | N | Y | 421 | N | 20, 21 |
| 1 | Skinner Twp | ISTR-09-05 | Trib. to South Branch Moose River | 4 | INT | N | Y | 199 | N | 22, 23 |
| 1 | Appleton Twp | ISTR-12-06 | Trib. to Bog Brook | 4 | INT | N | Y | 409 | N | 29, 30 |
| 1 | Appleton Twp | ISTR-14-01 | Trib. to Gold Brook | 4 | INT | N | Y | 328 | N | 34 |
| 1 | Appleton Twp | ISTR-16-04 | Trib. to Gold Brook | 4 | INT | N | Y | 465 | N | 37 |
| 1 | Appleton Twp | ISTR-16-05 | Trib. to Gold Brook | 4 | INT | N | Y | 182 | N | 37 |
| 1 | T5 R7 BKP WKR | ISTR-18-16 | Trib. to Fish Pond | 4 | INT | N | Y | 48 | N | 41 |
| 1 | Johnson Mountain Twp | PSTR-31-02 | Trib. to Piel Brook | 3 | INT | N | Y | 214 | N | 68, 69 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | | Width of Additional Corridor Clearing ⁸ (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|------------------------------------|---------------------|---|---|---|---|-----------------------------------|-----|--|---|--|
| 1 | Johnson Mountain Twp | ISTR-38-05 | Trib. to East Branch Salmon Stream | 4 | INT | N | N/A | 72 | 150 | Y | 86, 87 |
| 1 | Johnson Mountain Twp | ISTR-41-05 | Trib. to Cold Stream | 4 | INT | N | Y | 466 | 150 | N | 93 |
| 1 | Johnson Mountain Twp | ISTR-42-02 | Trib. to Tomhegan Stream | 4 | INT | N | Y | 279 | 150 | N | 96 |
| 1 | Johnson Mountain Twp | ISTR-42-13 | Trib. To Little Wilson Hill Pond | 4 | INT | N | N/A | 329 | 150 | Y | 94 |
| 1 | West Forks Plt | ISTR-45-02 | Trib. to Tomhegan Stream | 4 | INT | N | Y | 281 | 150 | N | 100 |
| 1 | Bradstreet Twp | ISTR-SRD1- 28-03 | Fourmile Brook | 4 | INT | N | N/A | 5 | 150 | Y | 63 |
| 1 | Skinner Twp | PSTR-05-02 | Smart Brook | 4 | PER | N | Y | 8 | 150 | N | 13 |
| 1 | Skinner Twp | PSTR-09-06 | Trib. to South Branch Moose River | 4 | PER | N | Y | 100 | 150 | N | 22, 23 |
| 1 | Appleton Twp | PSTR-14-30 | Trib. to Barrett Brook | 4 | PER | N | Y | 185 | 150 | N | 33 |
| 1 | Appleton Twp | PSTR-14-36 | Trib. to Barrett Brook | 4 | PER | N | Y | 329 | 150 | N | 33 |
| 1 | Appleton Twp | PSTR-14-68 | Trib. to Barrett Brook | 4 | PER | N | Y | 109 | 150 | Y | 32 |
| 1 | Appleton Twp | PSTR-15-04 | Trib. to Gold Brook | 4 | PER | N | Y | 93 | 150 | N | 35, 36 |
| 1 | Appleton Twp | PSTR-16-14 | Trib. to Gold Brook | 4 | PER | N | Y | 176 | 150 | N | 37 |
| 1 | T5 R7 BKP WKR/Hobbsto wn Twp | PSTR-18-06 | Trib. to Fish Pond | 4 | PER | N | Y | 527 | 150 | N | 42 |
| | | | | | | | | | | | |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|------------------------------------|-------------------|---|---|---|---|-----------------------------------|---|---|--|
| 1 | Johnson Mountain Twp | PSTR-38-02 | Trib. to East Branch Salmon Stream | 4 | PER | N | Y | 441 | N | 87 |
| 1 | Johnson Mountain Twp | PSTR-38-15 | Trib. to East Branch Salmon Stream | 4 | PER | N | Y | 146 | N | 85 |
| 1 | West Forks Plt | PSTR-44-09 | Tomhegan Stream | 4 | PER | N | Y | 440 | N | 100 |
| 1 | Bradstreet Twp | PSTR-SR-29- 05 | Trib. to Piel Brook | 4 | PER | N | Y | 213 | N | 66, 67 |
| 1 | Johnson Mountain Twp | ISTR-31-01 | Trib. to Piel Brook | 5 | INT | N | Y | 388 | N | 68 |
| 1 | Johnson Mountain Twp | ISTR-32-01 | Trib. to Piel Brook | 5 | INT | N | Y | 198 | N | 74 |
| 1 | Johnson Mountain Twp | ISTR-32-02 | Trib. to Piel Brook | 5 | INT | N | Y | 163 | N | 74 |
| 1 | Johnson Mountain Twp | ISTR-42-07 | Trib. to Tomhegan Stream | 5 | INT | N | Y | 177 | N | 94 |
| 1 | Johnson Mountain Twp | ISTR-EM-33- 01 | Trib. To Twomile Brook | 5 | INT | N | N/A | 170 | N | 75 |
| 1 | Johnson Mountain Twp | ISTR-EM-34- 03 | Trib. To Mountain | 5 | INT | N | N/A | 58 | N | 77 |
| 1 | Johnson Mountain Twp | ISTR-EM-34- 05 | Trib. To Mountain | 5 | INT | N | N/A | 142 | N | 77 |
| 1 | Appleton Twp | PSTR-14-24 | Trib. to Barrett Brook | 5 | PER | N | Y | 255 | Y | 33 |
| 1 | Appleton Twp | PSTR-14-47 | Trib. to Barrett Brook | 5 | PER | N | Y | 509 | N | 33 |
| 1 | T5 R7 BKP WKR/Hobbsto wn Twp | PSTR-18-05 | Trib. to Fish Pond | 5 | PER | N | Y | 421 | Y | 42 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|-------------------------|------------------|---|---|--|---|-----------------------------------|---|---|--|
| 1 | T5 R7 BKP WKR | PSTR-21-02 | Trib. to Little Spencer Stream | 5 | PER | N | Y | 454 | N | 48, 49 |
| 1 | T5 R7 BKP WKR | PSTR-21-2A | Trib. to Little Spencer Stream | 5 | PER | N | Y | 544 | N | 48, 49 |
| 1 | Johnson Mountain Twp | PSTR-40-07 | Trib. to Cold Stream | 5 | PER | N | Y | 268 | N | 91, 92 |
| 1 | West Forks Plt | PSTR-44-05 | Tomhegan Stream | 5 | PER | N | Y | 278 | N | 100 |
| 1 | West Forks Plt | PSTR-44-06 | Tomhegan Stream | 5 | PER | N | Y | 167 | N | 100 |
| 1 | West Forks Plt | PSTR-45-03 | Trib. to Tomhegan Stream | 5 | PER | N | Y | 7 | Y | 100 |
| 1 | Bradstreet Twp | PSTR-SRD1- 02 | Trib. to Piel Brook | 5 | PER | N | Y | 274 | N | 66 |
| 1 | West Forks Plt | PSTR-45-3 | Tomhegan Stream | 6 | PER | N | Y | 249 | N | 100 |
| 1 | Skinner Twp | PSTR-05-01 | Smart Brook | 6 | PER | N | N/A | 80 | N | 13 |
| 1 | Skinner Twp | PSTR-07-02 | Trib. to West Branch Moose River | 6 | PER | N | Y | 54 | N | 18 |
| 1 | Skinner Twp | PSTR-08-04 | Trib. to West Branch Moose River | 6 | PER | N | Y | 27 | Y | 20 |
| 1 | Appleton Twp | PSTR-11-07 | Trib. to Bog Brook | 6 | PER | N | Y | 583 | N | 27 |
| 1 | Appleton Twp | PSTR-14-49 | Trib. to Barrett Brook | 6 | PER | N | Y | 458 | N | 33 |
| 1 | Johnson Mountain Twp | PSTR-38-06 | Trib. to East Branch Salmon Stream | 6 | PER | N | Y | 8 | Y | 86, 87 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|-------------------------------------|---------------------|---|---|---|---|-----------------------------------|---|---|--|
| 1 | Johnson Mountain Twp | PSTR-38-10 | Trib. to East Branch Salmon Stream | 6 | PER | N | Y | 41 | N | 86 |
| 1 | Merrill Strip Twp/Beattie Twp | PSTR-LT-1 | Trib. to Number One Brook | 6 | PER | N | Y | 190 | Y | 10 |
| 1 | Appleton Twp | PSTR-14-33 | Trib. to Barrett Brook | 7 | PER | N | Y | 298 | N | 33 |
| 1 | Bradstreet Twp | ISTR-27-02 | Trib. To Fourmile Brook | 8 | INT | N | N/A | 233 | N | 61, 62 |
| 1 | T5 R7 BKP WKR | PSTR-18-14 | Trib. to Fish Pond | 8 | PER | N | Y | 123 | N | 41 |
| 1 | Johnson Mountain Twp | PSTR-31-06 | Trib. to Piel Brook | 8 | PER | N | Y | 100 | Y | 71 |
| 1 | Bradstreet Twp | PSTR-SRD1- 28-04 | Fourmile Brook | 8 | PER | N | Y | 17 | N | 63 |
| 1 | Johnson Mountain Twp | PSTR-EM- 34-01 | Mountain Brook | 9 | PER | N | Y | 31 | N | 76 |
| 1 | Appleton Twp | PSTR-12-07 | Trib. to Bog Brook | 10 | PER | N | Y | 264 | N | 28 |
| 1 | Appleton Twp | PSTR-16-07 | Trib. to Gold Brook | 10 | PER | N | Y | 178 | N | 37 |
| 1 | Bradstreet Twp | PSTR-26-01 | Trib. to Moose River | 10 | PER | N | Y | 326 | N | 59 |
| 1 | Johnson Mountain Twp | PSTR-31- SRD2-01 | Piel Brook | 0 | PER | N | Y | 239 | N | 70 |
| 1 | West Forks Plt | PSTR-45-01 | Trib. to Cold stream | 10 | PER | N | Y | 150 | N | 102 |
| 1 | West Forks Plt | PSTR-46-04 | Trib. To Kennebec River | 10 | PER | N | Y | 201 | N | 104 |
| 1 | Appleton Twp | PSTR-11-07- RR1 | Trib. to Bog Brook | 6 | PER | N | Y | 583 | N | 27 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|------------------------------------|---------------------|---|---|--|---|-----------------------------------|---|---|--|
| 1 | Johnson Mountain Twp | PSTR-SR-31- 01 | Piel Brook | 10 | PER | N | Y | 219 | N | 70 |
| 1 | Bradstreet Twp | PSTR-SRD1- 28-01 | Fourmile Brook | 10 | PER | N | Y | 6 | N | 63 |
| 1 | T5 R7 BKP WKR/Hobbsto wn Twp | PSTR-21-03 | Trib. to Little Spencer Stream | 12 | PER | N | Y | 221 | N | 48 |
| 1 | Bradstreet Twp | ISTR-30-01 | Piel Brook | 1 | PER | N | Y | 261 | N | |
| 1 | Johnson Mountain Twp | ISTR-35-02 | Trib. to Salmon Stream | 2 | PER | N | N/A | 524 | N | 80 |
| 1 | Appleton Twp | ISTR-15-07 | Gold Brook | 15 | INT | N | Y | 248 | N | 36 |
| 1 | Beattie Twp | PSTR-01-05 | Mill Brook | 15 | PER | N | Y | 612 | N | 4 |
| 1 | Skinner Twp | PSTR-11-01 | Trib. to Bog Brook | 15 | PER | N | Y | 125 | N | 26 |
| 1 | Appleton Twp | PSTR-17R- 04 | Baker Stream | 15 | PER | N | Y | 390 | N | 39 |
| 1 | West Forks Plt | PSTR-44-01 (TOB) | Tomhegan Stream | 15 | PER | N | Y | 414 | N | 100 |
| 1 | West Forks Plt | PSTR-44-01 EAST | Tomhegan Stream | 15 | PER | N | Y | 290 | N | 100 |
| 1 | West Forks Plt | PSTR-44-01 WEST | Tomhegan Stream | 15 | PER | N | Y | 301 | N | 99, 100 |
| 1 | West Forks Plt | PSTR-44-02 | Tomhegan Stream | 15 | PER | N | Y | 355 | N | 100 |
| 1 | West Forks Plt | PSTR-44-04 | Tomhegan Stream | 15 | PER | N | Y | 228 | N | 100 |
| 1 | Johnson Mountain Twp | PSTR-33-01 | Mountain Brook | 18 | PER | N | Y | 33 | N | 76 |
| 1 | Appleton Twp | PSTR-17-07 | Baker Stream | 20 | PER | N | Y | 354 | N | 39 |
| 1 | Appleton Twp | PSTR-16-01 | Gold Brook | 25 | PER | N | Y | 32 | N | 37 |
| 1 | T5 R7 BKP WKR/Hobbsto wn Twp | PSTR-21-04 | Little Spencer Stream | 25 | PER | N | Y | 358 | N | 48 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|-------------------------------|---------------------|--------------------------------|---|---|---|-----------------------------------|---|---|--|
| 1 | Johnson Mountain Twp | PSTR-40-06 | Cold Stream | 25 | PER | N | Y | 391 | N | 91 |
| 1 | Bradstreet Twp | PSTR-25-01 | Horse Brook | 30 | PER | N | Y | 119 | Y | 58 |
| 1 | Johnson Mountain Twp | PSTR-42-03 (TOB) | Trib. to Tomhegan Stream | 40 | PER | N | Y | 121 | N | 95 |
| 2 | Bald Mountain Twp T2 R3 | ISTR-60-08 | Trib. to Joes Hole | 2 | INT | N | N/A | 212 | N | 133 |
| 2 | Moscow | ISTR-71-101 | Trib. to Austin Stream | 1 | INT | N | N/A | 120 | N | 158 |
| 2 | Moscow | ISTR-72-101 | Trib. to Chase Stream | 3 | INT | N | N/A | 228 | N | 159, 160 |
| 2 | Moscow | ISTR-72-102 | Trib. to Chase Stream | 3 | INT | N | N/A | 405 | N | 159 |
| 2 | Moscow | ISTR-72-106 | Trib. to Chase Stream | 2 | INT | N | N/A | 209 | N | 160 |
| 2 | Moscow | ISTR-73-02 | Mink Brook | 1.5 | INT | N | Y | 416 | N | 161 |
| 2 | Moscow | ISTR-73-03 | Mink Brook | 2 | INT | N | Y | 574 | N | |
| 2 | Moscow | ISTR-73-05 | Trib. to Mink Brook | 2 | INT | N | Y | 15 | Y | 161, 162 |
| 2 | Moscow | ISTR-73-06 | Trib. to Mink Brook | 3 | INT | N | N/A | 20 | Y | 162 |
| 2 | Moscow | ISTR-73-07 | Mink Brook | 3 | INT | N | Y | 341 | N | |
| 2 | Moscow | ISTR-73-08 | Trib. to Austin Stream | 2 | INT | N | N/A | 461 | N | 163 |
| 2 | Bald Mountain Twp T2 R3 | POND-59-05 | Joes Hole | 100 | Open Water | N | Y | 118 | N | 131, 132 |
| 2 | Bald Mountain Twp T2 R3 | POND-60-01 | Joes Hole | 180 | Open Water | N | Y | 109 | N | 133, 134 |
| 2 | The Forks Plt | ISTR-54-01 | Trib. to Moxie Pond | 9 | PER | N | Y | 397 | N | 120 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|-------------------------------|-----------------|-------------------------------|---|---|---|-----------------------------------|---|---|--|
| 2 | Moscow | PSTR-71- 102 | Trib. to Austin Stream | 4 | PER | N | Y | 378 | N | 157 |
| 2 | Moscow | PSTR-72- 103 | Chase Stream | 30 | PER | N | Y | 1 | Y | 159, 160 |
| 2 | Moscow | PSTR-72- 104 | Trib. to Chase Stream | 3.5 | PER | N | Y | 40 | N | 159, 160 |
| 2 | Moscow | PSTR-72- 105 | Trib. to Chase Stream | 2 | PER | N | Y | 124 | N | 159, 160 |
| 2 | Moscow | ISTR-73-01 | Mink Brook | 2 | PER | N | Y | 139 | N | |
| 2 | Moscow | ISTR-73-04 | Trib. to Mink Brook | 2 | PER | N | Y | 21 | N | |
| 2 | Moscow | PSTR-74-01 | Trib. to Kennebec River | 2 | PER | N | Y | 172 | N | 164, 165 |
| 2 | Bald Mountain Twp T2 R3 | ISTR-61-05 | Trib. to Wild Brook | 1 | INT | N | N/A | 295 | N | 136 |
| 2 | The Forks Plt | ISTR-55-03 | Trib. to Moxie Pond | 1.5 | INT | N | N/A | 297 | N | 123 |
| 2 | Moscow | ESTR-66-12 | Trib. to Heald Stream | 2 | INT | N | N/A | 520 | N | 148, 149 |
| 2 | The Forks Plt | ISTR-53-01 | Trib. to Moxie Pond | 2 | INT | N | N/A | 59 | N | 119 |
| 2 | The Forks Plt | ISTR-55-02 | Trib. to Moxie Pond | 2 | INT | N | N/A | 274 | N | 123 |
| 2 | The Forks Plt | ISTR-56-03 | Trib. to Moxie Pond | 2 | INT | N | N/A | 442 | N | 125 |
| 2 | Bald Mountain Twp T2 R3 | ISTR-63-07 | Trib. to Wild Brook | 2 | INT | N | N/A | 467 | N | 141 |
| 2 | Bald Mountain Twp T2 R3 | PSTR-60-02 | Trib. to Baker Stream | 2 | PER | N | Y | 124 | Y | 135 |
| 2 | Bald Mountain Twp T2 R3 | ISTR-60-05 | Trib. to Joes Hole | 2.5 | INT | N | N/A | 119 | N | 134 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|-------------------------------|------------|-----------------------------------|---|---|---|-----------------------------------|---|---|--|
| 2 | Bald Mountain Twp T2 R3 | ISTR-63-05 | Trib. to Wild Brook | 2.5 | INT | N | N/A | 446 | N | 140 |
| 2 | Bald Mountain Twp T2 R3 | ISTR-64-03 | Trib. to Wild Brook | 2.5 | INT | N | N/A | 368 | N | 142, 143 |
| 2 | Moscow | ISTR-65-04 | Trib. to Little Heald Brook | 2.5 | INT | N | Y | 217 | N | 146 |
| 2 | Bald Mountain Twp T2 R3 | PSTR-60-07 | Trib. to Joes Hole | 2.5 | PER | N | Y | 314 | N | 133 |
| 2 | Moscow | PSTR-65-03 | Little Heald Stream | 2.5 | PER | N | Y | 136 | N | 146 |
| 2 | The Forks Plt | ISTR-54-02 | Trib. to Moxie Pond | 3 | INT | N | Y | 322 | N | 120 |
| 2 | Bald Mountain Twp T2 R3 | ISTR-62-01 | Trib. to Wild Brook | 3 | INT | N | N/A | 267 | N | 139 |
| 2 | Bald Mountain Twp T2 R3 | ISTR-62-02 | Trib. to Wild Brook | 3 | INT | N | N/A | 342 | N | 139 |
| 2 | Bald Mountain Twp T2 R3 | ISTR-62-03 | Trib. to Wild Brook | 3 | INT | N | N/A | 330 | N | 140 |
| 2 | Bald Mountain Twp T2 R3 | ISTR-63-08 | Trib. to Wild Brook | 3 | INT | N | N/A | 438 | N | 141 |
| 2 | Bald Mountain Twp T2 R3 | ISTR-63-09 | Trib. to Wild Brook | 3 | INT | N | N/A | 322 | N | 141 |
| 2 | Bald Mountain Twp T2 R3 | ISTR-64-05 | Trib. to Wild Brook | 3 | INT | N | N/A | 288 | N | 142 |
| 2 | Moscow | ISTR-66-05 | Heald Stream | 3 | INT | N | Y | 454 | N | 147 |
| 2 | Moscow | PSTR-65-01 | Trib. to Little Heald Brook | 3 | PER | N | Y | 119 | Y | 145 |
| 2 | Bald Mountain Twp T2 R3 | PSTR-61-08 | Trib. to Baker Stream | 3.5 | PER | N | Y | 191 | N | 136 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|-------------------------------|------------|------------------------------------|---|--|---|-----------------------------------|---|---|--|
| 2 | Moscow | ISTR-66-07 | Trib. to Heald Stream | 4 | INT | N | N/A | 238 | Y | 147 |
| 2 | Bald Mountain Twp T2 R3 | PSTR-60-01 | Trib. to Baker Stream | 4 | PER | N | Y | 161 | N | 135 |
| 2 | Bald Mountain Twp T2 R3 | PSTR-63-06 | Trib. to Wild Brook | 4 | PER | N | Y | 333 | N | 141 |
| 2 | Bald Mountain Twp T2 R3 | PSTR-63-11 | Trib. to Wild Brook | 4 | PER | N | Y | 283 | N | 142 |
| 2 | Bald Mountain Twp T2 R3 | PSTR-64-06 | Trib. to Wild Brook | 4 | PER | N | Y | 118 | Y | 143 |
| 2 | The Forks Plt | ISTR-57-02 | Trib. to Mosquito Stream | 5 | INT | N | Y | 532 | N | 127 |
| 2 | Moscow | ISTR-66-08 | Trib. to Heald Stream | 5 | INT | N | Y | 416 | N | 148 |
| 2 | Moscow | ISTR-66-09 | Trib. to Heald Stream | 5 | INT | N | Y | 3 | Y | 148 |
| 2 | Moscow | ISTR-66-10 | Trib. to Heald Stream | 5 | INT | N | Y | 5 | Y | 148, 149 |
| 2 | Bald Mountain Twp T2 R3 | PSTR-60-06 | Trib. to Joes Hole | 5 | PER | N | Y | 316 | N | 133 |
| 2 | Bald Mountain Twp T2 R3 | PSTR-61-01 | Wild Brook | 5 | PER | N | Y | 511 | Y | 137 |
| 2 | Bald Mountain Twp T2 R3 | PSTR-64-02 | Trib. to Wild Brook | 5 | PER | N | Y | 413 | N | 142, 143 |
| 2 | The Forks Plt | ISTR-55-01 | Trib. to Moxie Pond | 6 | INT | N | Y | 212 | N | 123 |
| 2 | Bald Mountain Twp T2 R3 | ISTR-59-02 | Trib. to Little Sandy Stream | 6 | INT | N | Y | 16 | Y | 131 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|-------------------------------|-------------|-------------------------------|---|--|---|-----------------------------------|---|---|--|
| 2 | Moscow | ISTR-66-06 | Trib. to Heald Stream | 6 | INT | N | Y | 258 | Y | 147 |
| 2 | Moscow | ISTR-67-01 | Trib. to Austin Stream | 6 | INT | N | Y | 120 | Y | 149 |
| 2 | Bald Mountain Twp T2 R3 | PSTR-63-10 | Trib. to Wild Brook | 6 | PER | N | Y | 215 | N | 142 |
| 2 | Moscow | ISTR-69-01 | Trib. to Austin Stream | 7 | INT | N | Y | 155 | N | 156, 157 |
| 2 | Bald Mountain Twp T2 R3 | PSTR-63-03 | Wild Brook | 7 | PER | N | Y | 380 | N | 140 |
| 2 | Bald Mountain Twp T2 R3 | PSTR-63-04 | Wild Brook | 7 | PER | N | Y | 284 | N | 140 |
| 2 | Moscow | ISTR-72-107 | Trib. to Chase Stream | 8 | INT | N | Y | 66 | Y | 160 |
| 2 | The Forks Plt | PSTR-57-01 | Mosquito Stream | 10 | PER | N | Y | 470 | N | 127 |
| 2 | Bald Mountain Twp T2 R3 | PSTR-59-01 | Little Sandy Stream | 15 | PER | N | Y | 107 | Y | 131 |
| 2 | Moscow | PSTR-66-02 | Heald Stream | 15 | PER | N | Y | 459 | N | 146, 147 |
| 2 | Moscow | PSTR-65-02 | Little Heald Brook | 25 | PER | N | Y | 82 | N | 146 |
| 3 | Industry | ISTR-101-01 | Trib. to Josiah Brook | 5 | INT | Y | Y | 272 | N | 223 |
| 3 | Industry | ISTR-101-02 | Trib. to Josiah Brook | 2 | INT | Y | N/A | 219 | N | 223 |
| 3 | Industry | ISTR-102-01 | Trib. to Josiah Brook | 8 | INT | Y | Y | 294 | N | 225 |
| 3 | Industry | ISTR-103-01 | Trib. to Goodrich Brook | 5 | INT | Y | Y | 349 | N | 229 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|------------|-------------|-------------------------------|---|--|---|-----------------------------------|---|---|--|
| 3 | Industry | ISTR-103-02 | Trib. to Goodrich Brook | 1.5 | INT | Y | N/A | 302 | N | 229 |
| 3 | Industry | ISTR-103-03 | Trib. to Goodrich Brook | 3 | INT | Y | N/A | 72 | N | 228, 229 |
| 3 | Industry | ISTR-103-04 | Trib. to Goodrich Brook | 3 | INT | Y | N/A | 102 | N | 228, 229 |
| 3 | Industry | ISTR-103-05 | Trib. to Goodrich Brook | 3 | INT | Y | N/A | 195 | N | 228 |
| 3 | Industry | ISTR-103-06 | Trib. to Goodrich Brook | 1.5 | INT | Y | N/A | 375 | N | 228 |
| 3 | Industry | ISTR-103-07 | Trib. to Goodrich Brook | 5 | INT | Y | Y | 330 | N | 228 |
| 3 | Industry | ISTR-103-08 | Trib. to Goodrich Brook | 4 | INT | Y | N/A | 209 | N | 227, 228 |
| 3 | Industry | ISTR-103-09 | Trib. to Goodrich Brook | 5 | INT | Y | Y | 274 | N | 227, 228 |
| 3 | Farmington | ISTR-107-01 | Trib. to Beales Brook | 1.5 | INT | Y | N/A | 299 | N | 238 |
| 3 | Farmington | ISTR-108-01 | Trib. to Cascade Brook | 3 | INT | Y | N/A | 200 | N | 240 |
| 3 | Farmington | ISTR-108-02 | Trib. to Cascade Brook | 2.5 | INT | Y | N/A | 246 | N | 240 |
| 3 | Farmington | ISTR-108-03 | Trib. to Cascade Brook | 1.5 | INT | Y | N/A | 275 | N | 240 |
| 3 | Farmington | ISTR-108-04 | Trib. to Cascade Brook | 1 | INT | Y | N/A | 196 | N | 239 |
| 3 | Farmington | ISTR-111-01 | Trib. to Wilson Stream | 2 | INT | Y | N/A | 162 | N | 246 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|--------------------|-------------|------------------------------------|---|---|---|-----------------------------------|---|---|--|
| 3 | Jay | ISTR-114-02 | Trib. to Wilson Stream | 3 | INT | Y | N/A | 107 | N | 253 |
| 3 | Chesterville | ISTR-114-03 | Trib. to Wilson Stream | 6 | INT | Y | Y | 349 | Y | 253 |
| 3 | Jay | ISTR-116-02 | Trib. To Sugar Brook | 8 | INT | Y | Y | 140 | Y | 256 |
| 3 | Jay | ISTR-117-01 | Trib. to Fuller Brook | 2 | INT | Y | N/A | 86 | Y | 259 |
| 3 | Livermore Falls | ISTR-127-01 | Trib. to Androscoggi n River | 10 | INT | N | N/A | 411 | Y | 280, 281 |
| 3 | Leeds | ISTR-132-02 | Trib. To Dead River | 3 | INT | N | N/A | 277 | N | 292 |
| 3 | Leeds | ISTR-135-04 | Trib. to Allen Stream | 4 | INT | N | N/A | 201 | N | 299 |
| 3 | Concord Twp | ISTR-75-03 | Trib. to Kennebec River | 4 | INT | N | N/A | 287 | Y | 167 |
| 3 | Concord Twp | ISTR-76-02 | Trib. to Kennebec River | 1 | INT | N | N/A | 251 | N | |
| 3 | Concord Twp | ISTR-76-03 | Trib. to Kennebec River | 20 | INT | N | Y | 536 | N | |
| 3 | Concord Twp | ISTR-76-04 | Trib. to Kennebec River | 2 | INT | N | N/A | 366 | N | |
| 3 | Concord Twp | ISTR-76-05 | Trib. to Kennebec River | 15 | INT | N | Y | 247 | N | |
| 3 | Concord Twp | ISTR-76-06 | Trib. to Kennebec River | 20 | INT | N | Y | 238 | N | |
| 3 | Concord Twp | ISTR-77-03 | Trib. to Kennebec River | 2.5 | INT | N | N/A | 228 | N | 171 |
| 3 | Concord Twp | ISTR-78-01 | Trib. To Mill Stream | 3 | INT | N | N/A | 204 | Y | 173 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|-------------|------------|-------------------------------|---|---|---|-----------------------------------|---|---|--|
| 3 | Concord Twp | ISTR-78-02 | Trib. To Mill Stream | 3 | INT | N | N/A | 254 | N | 173 |
| 3 | Concord Twp | ISTR-80-01 | Trib. to Kennebec River | 2 | INT | N | N/A | 480 | N | 177 |
| 3 | Concord Twp | ISTR-80-02 | Trib. to Kennebec River | 3 | INT | N | N/A | 267 | N | 176 |
| 3 | Concord Twp | ISTR-80-03 | Trib. to Kennebec River | 2 | INT | N | N/A | 93 | N | 176 |
| 3 | Concord Twp | ISTR-80-04 | Trib. to Kennebec River | 1.5 | INT | N | N/A | 468 | N | 177 |
| 3 | Concord Twp | ISTR-80-05 | Trib. to Kennebec River | 3 | INT | N | N/A | 247 | N | 177 |
| 3 | Concord Twp | ISTR-81-01 | Trib. to Kennebec River | 4 | INT | N | N/A | 256 | N | 178, 179 |
| 3 | Concord Twp | ISTR-81-02 | Trib. to Kennebec River | 4 | INT | N | N/A | 243 | N | 178, 179 |
| 3 | Embden | ISTR-82-01 | Trib. to Alder Brook | 5 | INT | N | Y | 330 | N | 182, 183 |
| 3 | Embden | ISTR-83-02 | Trib. to Alder Brook | 4 | INT | N | N/A | 429 | N | 184 |
| 3 | Embden | ISTR-83-05 | Trib. to Alder Brook | 3 | INT | N | Y | 327 | N | 184 |
| 3 | Embden | ISTR-83-06 | Trib. to Alder Brook | 2 | INT | N | Y | 281 | Y | 183, 184 |
| 3 | Embden | ISTR-84-01 | Trib. to Alder Brook | 4 | INT | N | N/A | 312 | N | 185 |
| 3 | Embden | ISTR-85-01 | Jackin Brook | 2 | INT | N | Y | 232 | N | 187 |
| 3 | Starks | ISTR-96-07 | Trib. to Pelton Brook | 3 | INT | Y | N/A | 374 | N | 213 |
| 3 | Starks | ISTR-96-08 | Trib. to Pelton Brook | 4 | INT | Y | N/A | 245 | N | 213 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|------------|-------------------|---------------------------------------|---|--|---|-----------------------------------|---|---|--|
| 3 | Starks | ISTR-96-09 | Trib. to Pelton Brook | 2 | INT | Y | N/A | 251 | N | 213 |
| 3 | Starks | ISTR-96-10 | Trib. to Pelton Brook | 5 | INT | Y | Y | 319 | N | 213 |
| 3 | Starks | ISTR-96-11 | Trib. to Pelton Brook | 2 | INT | Y | N/A | 335 | N | 213 |
| 3 | Starks | ISTR-96-12 | Trib. to Pelton Brook | 2 | INT | Y | N/A | 260 | N | 213 |
| 3 | Starks | ISTR-97-02 | Trib. to Pelton Brook | 100 | INT | Y | Y | 460 | N | 214, 215 |
| 3 | Starks | ISTR-97-03 | Trib. to Pelton Brook | 2.5 | INT | Y | N/A | 494 | N | 214, 215 |
| 3 | Starks | ISTR-97-04 | Trib. to Pelton Brook | 3 | INT | Y | N/A | 341 | N | 214, 215 |
| 3 | Starks | ISTR-97-06 | Trib. to Cold Pond/Hilton Brook | 4 | INT | Y | N/A | 533 | N | 216 |
| 3 | Starks | ISTR-97-07 | Trib. to Cold Pond/Hilton Brook | 2 | INT | Y | N/A | 562 | N | 216 |
| 3 | Starks | ISTR-98-01 | Trib. to Lemon Stream | 2 | INT | Y | N/A | 110 | N | 217, 218 |
| 3 | Starks | ISTR-99-01 | Trib. to Lemon Stream | 2 | INT | Y | Y | 193 | N | 219 |
| 3 | Lewiston | ISTR- PERRON-1 | Trib. to Stetson Brook | 0 | INT | N | N/A | 353 | N | 320 |
| 3 | Farmington | PSTR-112- 01 | Trib. to Wilson Stream | 2 | PER | Y | Y | 290 | N | 249 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|------------------------|-----------------|-------------------------------|---|--|---|-----------------------------------|---|---|--|
| 3 | Chesterville | PSTR-114- 01 | Trib. to Wilson Stream | 8 | PER | Y | Y | 352 | N | 253 |
| 3 | Chesterville | PSTR-114- 04 | Trib. to Wilson Stream | 1 | PER | Y | Y | 354 | N | 252 |
| 3 | Greene | PSTR-141- 01 | Trib. to Daggett Bog | 3 | PER | N | N/A | 92 | N | 312 |
| 3 | Moscow/ Concord Twp | ISTR-75-01 | Kennebec River | 3 | PER | N | Y | 218 | N | |
| 3 | Concord Twp | ISTR-75-02 | Trib. to Kennebec River | 2 | PER | N | Y | 206 | N | |
| 3 | Concord Twp | ISTR-76-01 | Trib. to Kennebec River | 0 | PER | N | Y | 192 | N | |
| 3 | Concord Twp | PSTR-77-01 | Trib. to Kennebec River | 30 | PER | N | Y | 209 | N | 171 |
| 3 | Concord Twp | PSTR-77-02 | Trib. to Kennebec River | 2 | PER | N | Y | 293 | N | 171 |
| 3 | Embden | PSTR-83-01 | Trib. to Alder Brook | 6 | PER | N | Y | 364 | Y | 184 |
| 3 | Embden | PSTR-83-03 | Alder Brook | 35 | PER | N | Y | 81 | Y | 183 |
| 3 | Embden | PSTR-83-04 | Alder Brook | 8 | PER | N | Y | 615 | N | 184 |
| 3 | Embden | PSTR-83-07 | Trib. to Alder Brook | 2.5 | PER | N | Y | 93 | N | 183 |
| 3 | Embden | PSTR-83-08 | Trib. to Alder Brook | 6 | PER | N | Y | 107 | N | 182, 183 |
| 3 | Anson | PSTR-89-01 | Jackin Brook | 4.5 | PER | N | Y | 348 | N | 196 |
| 3 | Anson | PSTR-90-02 | Carrabassett River | 400 | PER | N | Y | 193 | N | 199, 200 |
| 3 | Anson | PSTR-91-01 | Gilbert Brook | 190 | PER | Y | N/A | 242 | N | 201 |
| 3 | Starks | PSTR-96-01 | Trib. to Pelton Brook | 20 | PER | Y | Y | 340 | Y | 212 |
| 3 | Starks | PSTR-96-05 | Pelton Brook | 30 | PER | Y | Y | 300 | N | 213 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|----------|-----------------|---------------------------------------|---|--|---|-----------------------------------|---|---|--|
| 3 | Starks | PSTR-97-01 | Trib. to Pelton Brook | 85 | PER | Y | Y | 125 | Y | 214 |
| 3 | Starks | PSTR-97-05 | Trib. to Cold Pond/Hilton Brook | 20 | PER | Y | Y | 424 | N | 216 |
| 3 | Starks | ISTR-100-01 | Trib. To Meadow Brook | 2 | PER | Y | N/A | 499 | N | 220 |
| 3 | Starks | ISTR-100-02 | Trib. To Meadow Brook | 2 | INT | Y | N/A | 454 | N | 221 |
| 3 | Starks | ISTR-100-03 | Trib. To Meadow Brook | 1 | INT | Y | N/A | 310 | N | 221 |
| 3 | Industry | PSTR-101- 03 | Trib. to Josiah Brook | 6 | PER | Y | Y | 312 | N | 223 |
| 3 | Industry | ISTR-101-04 | Trib. to Josiah Brook | 4 | PER | Y | Y | 334 | N | 223 |
| 3 | Industry | PSTR-101- 05 | Josiah Brook | 3 | PER | Y | Y | 208 | Y | 224 |
| 3 | Industry | ISTR-101-06 | Trib. to Josiah Brook | 3 | INT | Y | N/A | 469 | Y | 224 |
| 3 | Industry | ISTR-102-01 | Trib. to Josiah Brook | 8 | PER | Y | Y | 216 | N | 225 |
| 3 | Industry | ISTR-102-02 | Trib. to Josiah Brook | 5 | INT | Y | Y | 270 | Y | 225 |
| 3 | Industry | ISTR-102-03 | Trib. to Goodrich Brook | 3 | UNK | Y | N/A | 367 | N | 227 |
| 3 | Industry | ISTR-103-10 | Trib. to Goodrich Brook | 4 | UNK | Y | N/A | 321 | N | 227 |
| 3 | Industry | PSTR-103- 11 | Trib. to Goodrich Brook | 7 | UNK | Y | Y | 349 | N | 228 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|------------|-----------------|-------------------------------|---|--|---|-----------------------------------|---|---|--|
| 3 | Industry | PSTR-103- 12 | Goodrich Brook | 15 | PER | Y | Y | 245 | N | 229 |
| 3 | Industry | PSTR-103- 13 | Trib. to Goodrich Brook | 7 | UNK | Y | Y | 104 | N | 229 |
| 3 | Industry | PSTR-103- 14 | Trib. to Goodrich Brook | 8 | UNK | Y | Y | 131 | N | 229 |
| 3 | Industry | ISTR-103-15 | Trib. to Goodrich Brook | 3 | UNK | Y | N/A | 38 | N | 227 |
| 3 | Industry | ISTR-103-16 | Trib. to Goodrich Brook | 5 | UNK | Y | Y | 362 | N | 227 |
| 3 | Industry | ISTR-104-02 | Trib. to Goodrich Brook | 4 | UNK | Y | N/A | 146 | N | 230 |
| 3 | Industry | PSTR-104- 04 | Trib. to Goodrich Brook | 6 | UNK | Y | Y | 135 | Y | 230 |
| 3 | New Sharon | PSTR-105- 01 | Muddy Brook | 40 | PER | Y | Y | 521 | N | 232 |
| 3 | Farmington | ISTR-107-01 | Trib. to Beales Brook | 1.5 | UNK | Y | N/A | 280 | N | 238 |
| 3 | Farmington | PSTR-107- 02 | Trib. to Beales Brook | 3.5 | UNK | Y | N/A | 116 | Y | 237 |
| 3 | Farmington | ISTR-107-03 | Trib. to Beales Brook | 1 | UNK | Y | N/A | 275 | N | 236, 237 |
| 3 | Farmington | PSTR-107- 04 | Beales Brook | 5 | PER | Y | Y | 335 | N | 236 |
| 3 | Farmington | ISTR-108-05 | Trib. to Cascade Brook | 1.5 | UNK | Y | N/A | 29 | N | 239 |
| 3 | Farmington | ISTR-108-06 | Trib. to Cascade Brook | 1.5 | UNK | Y | N/A | 317 | N | 239 |
| 3 | Farmington | ISTR-108-07 | Trib. to Cascade Brook | 4 | UNK | Y | N/A | 91 | N | 239, 240 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|--------------|-----------------|------------------------------|---|--|---|-----------------------------------|---|---|--|
| 3 | Farmington | ISTR-108-08 | Trib. to Cascade Brook | 1.5 | UNK | Y | N/A | 62 | N | 239 |
| 3 | Farmington | ISTR-108-09 | Trib. to Cascade Brook | 1 | UNK | Y | N/A | 404 | N | 239 |
| 3 | Farmington | ISTR-109-01 | Trib. to Cascade Brook | 3 | UNK | Y | N/A | 162 | N | 241 |
| 3 | Farmington | PSTR-109- 02 | Cascade Brook | 8 | PER | Y | N/A | 113 | N | 242 |
| 3 | Farmington | ISTR-109-03 | Trib. to Cascade Brook | 3 | UNK | Y | N/A | 386 | Y | 241 |
| 3 | Farmington | PSTR-110- | Sandy River | 70 | PER | Y | Y | 136 | N | 242, 243 |
| 3 | Farmington | ISTR-111-02 | Trib. to Wilson Stream | 3.5 | UNK | Y | Y | 240 | N | 246, 247 |
| 3 | Farmington | ISTR-111-03 | Trib. to Wilson Stream | 4 | UNK | Y | Y | 51 | N | 246 |
| 3 | Farmington | PSTR-112- 02 | Trib. to Wilson Stream | 6 | UNK | Y | Y | 77 | N | 247, 248 |
| 3 | Farmington | PSTR-112- 03 | Wilson Stream | 40 | UNK | Y | Y | 61 | N | 247 |
| 3 | Jay | PSTR-114- 01 | Trib. to Wilson Stream | 8 | UNK | Y | Y | 169 | Y | 253 |
| 3 | Chesterville | PSTR-114- 05 | Trib. to Wilson Stream | 25 | UNK | Y | Y | 243 | Y | 252 |
| 3 | Chesterville | ISTR-114-06 | Trib. to Wilson Stream | 5 | UNK | Y | Y | 391 | N | 252 |
| 3 | Chesterville | PSTR-114- 07 | Trib. to Wilson Stream | 5 | PER | Y | Y | 85 | Y | 252, 253 |
| 3 | Jay | ISTR-116-03 | Trib. to Sugar Brook | 2 | UNK | Y | N/A | 35 | Y | 256 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|--------|-----------------|-----------------------------------|---|--|---|-----------------------------------|---|---|--|
| 3 | Jay | PSTR-116- 04 | Sugar Brook | 3.5 | PER | Y | N/A | 302 | Y | 257 |
| 3 | Jay | PSTR-117- 02 | Trib. To Fuller Brook | 5 | UNK | Y | N/A | 98 | N | 258, 259 |
| 3 | Jay | ISTR-117-03 | Trib. To Fuller Brook | 4 | UNK | Y | N/A | 53 | N | 259 |
| 3 | Jay | PSTR-117- | Fuller Brook | 3 | PER | Y | N/A | 37 | N | 260 |
| 3 | Jay | PSTR-118- | Fuller Brook | 15 | PER | Y | N/A | 492 | N | 262 |
| 3 | Jay | PSTR-119- 01 | James Brook | 15 | PER | Y | N/A | 130 | Y | 263 |
| 3 | Embden | ISTR-85-01 | Trib. to Jackin Brook | 2 | UNK | N | Y | 175 | N | 187 |
| 3 | Anson | ISTR-89-03 | Trib. to Fahi Brook | 3.5 | INT | N | N/A | 328 | N | 196 |
| 3 | Anson | PSTR-90-01 | Trib. to Carrabassett River | 5.5 | UNK | N | Y | 373 | N | 198 |
| 3 | Anson | ISTR-90-04 | Trib. to Carrabassett River | 1.5 | UNK | Y | N/A | 165 | N | 200 |
| 3 | Anson | ISTR-92-01 | Trib. to Carrabassett River | 2 | INT | Y | N/A | 332 | N | 204 |
| 3 | Anson | ISTR-92-02 | Trib. to Carrabassett River | 1.5 | INT | Y | N/A | 307 | N | 204 |
| 3 | Anson | PSTR-92-03 | Gilman Brook | 20 | UNK | Y | Y | 305 | N | 205 |
| 3 | Anson | ISTR-92-05 | Trib. to Gilman Brook | 4.5 | UNK | Y | N/A | 365 | N | 205 |
| 3 | Anson | PSTR-93-01 | Getchell Brook | 15 | INT | Y | N/A | 59 | N | 207, 208 |
| 3 | Anson | ISTR-93-02 | Trib. to Getchell Brook | 4 | INT | Y | N/A | 162 | N | 208 |
| 3 | Anson | PSTR-93-03 | Trib. to Getchell Brook | 2 | UNK | Y | N/A | 413 | N | 208 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|--------------------|-------------|-------------------------------|---|--|---|-----------------------------------|---|---|--|
| 3 | Anson | ISTR-95-01 | Trib. to Kennebec River | 2.5 | INT | Y | N/A | 123 | N | 209, 210 |
| 3 | Anson | ISTR-95-02 | Trib. to Kennebec River | 6 | INT | Y | Y | 416 | N | 209, 210 |
| 3 | Anson | ISTR-95-03 | Trib. to Kennebec River | 1 | UNK | Y | N/A | 504 | N | 210 |
| 3 | Anson | ISTR-95-04 | Trib. to Kennebec River | 1 | UNK | Y | N/A | 412 | N | 210 |
| 3 | Starks | PSTR-95-05 | Trib. to Kennebec River | 2 | UNK | Y | N/A | 119 | N | 210 |
| 3 | Starks | PSTR-99-02 | Trib. to Lemon Stream | 6 | UNK | Y | Y | 43 | Y | 219 |
| 3 | Starks | ISTR-99-03 | Trib. to Lemon Stream | 1 | UNK | Y | Y | 128 | Y | 219 |
| 3 | Starks | ISTR-99-04 | Trib. to Lemon Stream | 3 | UNK | Y | Y | 125 | N | 219 |
| 3 | Starks | PSTR-99-05 | Lemon Stream | 55 | PER | Y | Y | 116 | N | 219, 220 |
| 3 | Starks | PSTR-99-06 | Trib. to Lemon Stream | 6 | UNK | Y | Y | 406 | N | 219 |
| 3 | Starks | ISTR-99-07 | Lemon Stream | 1 | UNK | Y | Y | 206 | N | 220 |
| 3 | Anson | WB-94-01 | Trib. to Getchell Brook | 85 | Open Water | Y | N/A | 299 | N | 208 |
| 3 | Anson | ISTR-88-01 | Trib. to Fahi Brook | 1 | INT | N | N/A | 444 | N | 196 |
| 3 | Industry | ISTR-104-01 | Trib. to Goodrich Brook | 2 | INT | Y | N/A | 426 | N | 229 |
| 3 | Livermore Falls | ISTR-123-03 | Trib. to Clay Brook | 4 | INT | N | N/A | 150 | N | 272 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|--------------------|-----------------|------------------------------------|---|--|---|-----------------------------------|---|---|--|
| 3 | Livermore Falls | ISTR-128-02 | Trib. to Androscoggi n River | 2 | INT | N | N/A | 196 | N | 283 |
| 3 | Livermore Falls | ISTR-128-03 | Trib. to Androscoggi n River | 2 | INT | N | N/A | 157 | N | 283 |
| 3 | Leeds | ISTR-135-02 | Trib. to Allen Stream | 2 | INT | N | N/A | 54 | N | 299 |
| 3 | Leeds | ISTR-135-03 | Trib. to Allen Stream | 2 | INT | N | N/A | 153 | N | 299, 300 |
| 3 | Greene | ISTR-139-03 | Trib. to Allen Pond | 2 | INT | N | N/A | 366 | N | 309 |
| 3 | Greene | ISTR-140-02 | Trib. to Allen Pond | 1.5 | INT | N | N/A | 228 | N | 309 |
| 3 | Greene | ISTR-140-07 | Trib. to Allen Pond | 2 | INT | N | N/A | 153 | N | 310, 311 |
| 3 | Lewiston | ISTR-145-02 | Trib. to Stetson Brook | 2 | INT | N | Y | 157 | N | 322 |
| 3 | Lewiston | ISTR-145-03 | Trib. to Stetson Brook | 8 | INT | N | N/A | 170 | N | 321 |
| 3 | Lewiston | ISTR-146-04 | Trib. to Stetson Brook | 2 | INT | N | Y | 482 | N | 323 |
| 3 | Starks | ISTR-96-03 | Trib. to Pelton Brook | 2 | INT | Y | N/A | 186 | N | 212 |
| 3 | Livermore Falls | PSTR-121- 03 | Trib. to Clay Brook | 2 | PER | N | N/A | 318 | N | 269 |
| 3 | Livermore Falls | PSTR-122- 04 | Trib. to Clay Brook | 2 | PER | N | N/A | 271 | N | 269, 270 |
| 3 | Livermore Falls | PSTR-122- 05 | Trib. to Clay Brook | 6 | PER | N | N/A | 295 | N | 269 |
| 3 | Livermore Falls | PSTR-122- 06 | Trib. to Clay Brook | 2 | PER | N | N/A | 250 | N | 269 |
| 3 | Livermore Falls | PSTR-125- 01 | Trib. to Androscoggi n River | 2 | PER | N | N/A | 303 | N | 276 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|--------------------|-----------------|------------------------------------|---|--|---|-----------------------------------|---|---|--|
| 3 | Leeds | PSTR-135- 01 | Trib. to Allen Stream | 2 | PER | N | N/A | 333 | N | 299 |
| 3 | Greene | PSTR-144- 02 | Trib. to Daggett Bog | 2 | PER | N | N/A | 76 | N | 319 |
| 3 | Livermore Falls | ISTR-125-06 | Trib. to Androscoggi n River | 2 | UNK | N | N/A | 244 | N | 277 |
| 3 | Livermore Falls | ISTR-126-06 | Trib. to Androscoggi n River | 2 | UNK | N | N/A | 422 | N | 279 |
| 3 | Leeds | ISTR-134-01 | Trib. to Allen Stream | 2 | UNK | N | N/A | 131 | N | 298 |
| 3 | Leeds | ISTR-134-02 | Trib. to Allen Stream | 2.5 | INT | N | N/A | 116 | N | 297 |
| 3 | Leeds | ISTR-134-03 | Trib. to Allen Stream | 2.5 | INT | N | N/A | 51 | N | 297 |
| 3 | Jay | ISTR-121-01 | Trib. to Clay Brook | 3 | INT | N | N/A | 227 | N | 268 |
| 3 | Livermore Falls | ISTR-123-02 | Trib. to Clay Brook | 3 | INT | N | N/A | 146 | N | 272 |
| 3 | Livermore Falls | ISTR-124-01 | Trib. to Androscoggi n River | 3 | INT | N | N/A | 279 | N | 274 |
| 3 | Livermore Falls | ISTR-124-02 | Trib. to Androscoggi n River | 3 | INT | N | N/A | 459 | N | 274 |
| 3 | Livermore Falls | ISTR-126-01 | Trib. to Androscoggi n River | 3 | INT | N | N/A | 297 | N | 279 |
| 3 | Livermore Falls | ISTR-127-03 | Trib. to Hunton Brook | 30 | INT | N | N/A | 539 | N | 282 |
| 3 | Leeds | ISTR-130-02 | Trib. to Androscoggi n River | 3 | INT | N | N/A | 58 | N | 287 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|------------------------|-----------------|------------------------------------|---|---|---|-----------------------------------|---|---|--|
| 3 | Leeds | ISTR-130-03 | Trib. to Androscoggi n River | 3 | INT | N | N/A | 330 | Y | 287, 288 |
| 3 | Leeds | ISTR-131-02 | Trib. To Dead River | 3 | INT | N | N/A | 142 | N | 291 |
| 3 | Leeds | ISTR-132-01 | Trib. To Dead River | 3 | INT | N | N/A | 190 | N | 292 |
| 3 | Greene | ISTR-138-03 | Trib. to Allen Stream | 3 | INT | N | N/A | 295 | N | 306 |
| 3 | Greene | ISTR-140-04 | Trib. to Allen Pond | 3 | INT | N | N/A | 215 | N | 309 |
| 3 | Greene | ISTR-140-05 | Trib. to Allen Pond | 3 | INT | N | N/A | 199 | N | 309 |
| 3 | Starks | ISTR-96-04 | Trib. to Pelton Brook | 3 | INT | Y | N/A | 524 | N | 212 |
| 3 | Jay/Livermore Falls | PSTR-121- 02 | Trib. to Clay Brook | 3 | PER | N | N/A | 138 | N | 268, 269 |
| 3 | Jay | PSTR-121- 04 | Trib. to Clay Brook | 3 | PER | N | N/A | 92 | N | 267, 268, 269 |
| 3 | Livermore Falls | PSTR-128- 01 | Trib. to Androscoggi n River | 3 | PER | N | N/A | 108 | Y | 282, 283 |
| 3 | Leeds | PSTR-133- 01 | Trib. to Allen Stream | 3 | PER | N | N/A | 113 | Y | 295 |
| 3 | Starks | PSTR-96-02 | Trib. to Pelton Brook | 3 | PER | Y | Y | 334 | N | 212 |
| 3 | Livermore Falls | ISTR-123-01 | Trib. to Clay Brook | 4 | INT | N | N/A | 110 | N | 272 |
| 3 | Livermore Falls | PSTR-125- 02 | Trib. to Androscoggi n River | 2 | INT | N | N/A | 295 | Y | 277 |
| 3 | Livermore Falls | ISTR-125-05 | Trib. to Androscoggi n River | 4 | INT | N | N/A | 319 | N | 277 |
| 3 | Leeds | ISTR-131-01 | Trib. to Dead River | 4 | INT | N | N/A | 15 | Y | 289 |
| 3 | Greene | ISTR-138-01 | Trib. to Allen Pond | 4 | INT | N | N/A | 24 | N | 307 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|--------------------|-----------------|------------------------------------|---|---|---|-----------------------------------|---|---|--|
| 3 | Greene | ISTR-138-02 | Trib. to Allen Pond | 4 | INT | N | N/A | 194 | N | 307 |
| 3 | Greene | ISTR-140-03 | Trib. to Allen Pond | 6 | INT | N | N/A | 174 | Y | 310 |
| 3 | Greene | ISTR-141-02 | Trib. to Daggett Bog | 4 | INT | N | N/A | 200 | N | 312 |
| 3 | Livermore Falls | PSTR-126- 02 | Trib. to Androscoggi n River | 4 | PER | N | N/A | 333 | N | 279 |
| 3 | Livermore Falls | PSTR-126- 05 | Trib. to Androscoggi n River | 4 | PER | N | N/A | 346 | N | 279 |
| 3 | Livermore Falls | PSTR-127- 02 | Trib. to Hunton Brook | 30 | PER | N | N/A | 426 | N | 281 |
| 3 | Greene | PSTR-139- 01 | Trib. to Allen Stream | 4 | PER | N | N/A | 351 | Y | 307 |
| 3 | Greene | PSTR-139- 02 | Trib. to Allen Stream | 4 | PER | N | N/A | 373 | N | 307 |
| 3 | Greene | PSTR-140- 06 | Trib to Allen Pond | 4 | PER | N | N/A | 354 | N | 310 |
| 3 | Greene | PSTR-140- 08 | Trib. to Allen Pond | 4 | PER | N | N/A | 139 | Y | 309 |
| 3 | Greene | PSTR-140- 09 | Trib. to Allen Pond | 4 | PER | N | N/A | 142 | N | 309 |
| 3 | Lewiston | PSTR-145- 01 | Trib. to Stetson Brook | 4 | PER | N | Y | 8 | Y | 321, 322 |
| 3 | Anson | PSTR-89-02 | Trib. to Fahi Brook | 5 | PER | N | N/A | 503 | N | 196 |
| 3 | Livermore Falls | PSTR-122- 02 | Trib. to Clay Brook | 5 | PER | N | N/A | 208 | N | 270 |
| 3 | Livermore Falls | PSTR-122- 03 | Clay Brook/Redw ater Brook | 5 | PER | N | N/A | 60 | N | 270, 271 |
| 3 | Livermore Falls | PSTR-126- 03 | Trib. to Androscoggi n River | 5 | PER | N | N/A | 141 | N | 280 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|--------------------|-----------------|------------------------------------|---|--|---|-----------------------------------|---|---|--|
| 3 | Lewiston | PSTR-146- 03 | Trib. to Androscoggi n River | 2 | PER | N | N/A | 419 | N | 323 |
| 3 | Lewiston | PSTR-146- 05 | Trib. to Androscoggi n River | 1 | PER | N | N/A | 35 | N | 323 |
| 3 | Starks | PSTR-96-06 | Pelton Brook | 5 | PER | Y | Y | 336 | N | 213 |
| 3 | Leeds | PSTR-136- 01 | Trib. to Androscoggi n River | 6 | PER | N | N/A | 194 | Y | 302 |
| 3 | Greene | PSTR-140- 01 | Allen Stream | 6 | PER | N | N/A | 323 | N | 310 |
| 3 | Greene | PSTR-143- 01 | Stetson Brook | 6 | PER | N | N/A | 26 | Y | 318 |
| 3 | Greene | PSTR-144- 01 | Trib. to Stetson Brook | 6 | PER | N | Y | 32 | Y | 318 |
| 3 | Livermore Falls | ISTR-126-04 | Trib. to Androscoggi n River | 3 | INT | N | N/A | 132 | Y | 280 |
| 3 | Leeds | ISTR-130-01 | Trib. to Dead River | 8 | INT | N | N/A | 296 | N | 289 |
| 3 | Leeds | PSTR-130- | Dead River | 60 | INT | N | N/A | 91 | N | 289 |
| 3 | Livermore Falls | PSTR-122- 01 | Trib. to Clay Brook | 5 | PER | N | N/A | 466 | N | 269, 270 |
| 3 | Livermore Falls | PSTR-122- 07 | Trib. to Clay Brook | 5 | PER | N | N/A | 311 | N | 270 |
| 3 | Greene | PSTR-143- 02 | Stetson Brook | 10 | PER | N | N/A | 210 | N | 318 |
| 3 | Livermore Falls | PSTR-125- 03 | Trib. to Androscoggi n River | 2 | PER | N | N/A | 42 | N | 277, 278 |
| 3 | Livermore Falls | PSTR-125- 04 | Trib. to Androscoggi n River | 4 | PER | N | N/A | 191 | N | 277, 278 |
| 3 | Livermore Falls | PSTR-129- 01 | Scott Brook | 20 | PER | N | N/A | 166 | N | 285, 286 |
| 3 | Livermore Falls | PSTR-127- 04 | Hunton Brook | 4 | PER | N | N/A | 106 | N | 281 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|----------|-----------------|------------------------------------|---|--|---|-----------------------------------|---|---|--|
| 4 | Lewiston | ISTR-153-01 | Trib. to Androscoggi n River | 3 | UNK | Y | N/A | 120 | N | 340 |
| 4 | Durham | ISTR-156-02 | Trib. to Androscoggi n River | 1 | INT | Y | N/A | 103 | N | 346 |
| 4 | Durham | ISTR-158-01 | Trib. to Libby Brook | 15 | INT | N | N/A | 143 | N | 351 |
| 4 | Durham | ISTR-158-02 | Trib. to Libby Brook | 2 | INT | N | N/A | 134 | N | 351 |
| 4 | Lewiston | ISTR-155-01 | Trib. to Androscoggi n River | 2 | INT | Y | N/A | 127 | N | 343 |
| 4 | Durham | ISTR-157-01 | Trib. to House Brook | 1.5 | INT | Y | N/A | 116 | Y | 348 |
| 4 | Pownal | ISTR-161-04 | Trib. to Runaround Brook | 6 | INT | N | N/A | 66 | N | |
| 4 | Auburn | PSTR-156- 01 | Trib. to Androscoggi n River | 2 | PER | Y | N/A | 211 | N | 345 |
| 4 | Auburn | PSTR-156- 03 | Trib. to Androscoggi n River | 1 | PER | Y | N/A | 91 | N | 346 |
| 4 | Auburn | PSTR-156- 04 | Trib. to Androscoggi n River | 2 | PER | Y | N/A | 165 | Y | 345 |
| 4 | Auburn | PSTR-156- 05 | Trib. to Androscoggi n River | 2 | PER | Y | N/A | 90 | N | 346 |
| 4 | Auburn | PSTR-156- 06 | Trib. to Androscoggi n River | 2 | PER | Y | N/A | 178 | N | 345 |
| 4 | Auburn | PSTR-156- 07 | Trib. to Androscoggi n River | 2 | PER | Y | N/A | 85 | N | 346 |
| 4 | Durham | PSTR-157- 02 | House Brook | 2 | PER | Y | N/A | 105 | Y | 348 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|---------------------|-----------------|--------------------------------|---|--|---|-----------------------------------|---|---|--|
| 4 | Lewiston | ISTR-150-02 | Trib. to No Name Brook | 3 | INT | Y | N/A | 197 | Y | 333 |
| 4 | Pownal | ISTR-161-02 | Trib. to Runaround Brook | 3 | INT | N | N/A | 117 | Y | 356 |
| 4 | Lewiston | PSTR-146- 01 | Trib. to Stetson Brook | 4 | PER | N | Y | 87 | N | 324 |
| 4 | Lewiston | PSTR-146- 02 | Trib. to Stetson Brook | 4 | PER | N | Y | 144 | N | 324 |
| 4 | Lewiston | PSTR-152- 01 | Trib. to No Name Brook | 3 | PER | Y | N/A | 58 | N | 337 |
| 4 | Lewiston | PSTR-147- 01 | Trib. to No Name Brook | 3.5 | PER | Y | N/A | 80 | Y | 326, 327 |
| 4 | Lewiston | PSTR-148- 01 | Trib. to No Name Pond | 3.5 | PER | Y | N/A | 87 | Y | 329 |
| 4 | Lewiston | ISTR-150-01 | Trib. to No Name Brook | 4 | INT | Y | N/A | 106 | Y | 332 |
| 4 | Lewiston | PSTR-148- 02 | Trib. to No Name Pond | 4.5 | PER | Y | N/A | 81 | Y | 329 |
| 4 | Pownal | PSTR-161- 01 | Runaround Brook | 5 | PER | N | N/A | 15 | N | 358 |
| 4 | Pownal | PSTR-161- 03 | Runaround Brook | 5 | PER | N | N/A | 472 | N | 358 |
| 4 | Auburn | PSTR-155- 02 | House Brook | 8 | PER | Y | N/A | 160 | N | 345 |
| 4 | Durham | PSTR-160- 01 | Runaround Brook | 9 | PER | N | N/A | 108 | Y | 355 |
| 4 | Durham | PSTR-160- 03 | Trib. to Runaround Brook | 12 | PER | N | N/A | 105 | N | 355 |
| 4 | Durham | PSTR-158- 03 | Libby Brook | 15 | PER | N | N/A | 47 | Y | 351, 352 |
| 4 | Lewiston | PSTR-151- 01 | No Name Brook | 25 | PER | Y | N/A | 83 | N | 334, 335 |
| 4 | Lewiston | PSTR-147- 02 | Stetson Brook | 50 | PER | N | Y | 86 | N | 325 |
| 4 | Lewiston | PSTR-149- 01 | No Name Brook | 50 | PER | Y | N/A | 90 | N | 330 |
| 4 | Auburn/ Lewiston | PSTR-155- 03 | Androscoggi n River | 645 | PER | Y | N/A | 104 | N | 344 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|------------|-----------------|---|---|---------------------------------------|---|-----------------------------------|---|---|--|
| 5 | Wiscasset | ISTR-183-01 | Trib. to Montsweag Brook | 2 | INT | Y | N/A | 140 | N | 370 |
| 5 | Wiscasset | ISTR-188-09 | Trib. to Back River/Monst weag Bay | 3 | INT | Y | N/A | 15,281 | N | 359 |
| 5 | Whitefield | PSTR-171- 01 | Trib. to Sheespcot River | 40 | PER | Y | Y | 355 | Y | 397 |
| 5 | Whitefield | PSTR-172- 02 | Trib. to Sheespcot River | 20 | PER | Y | Y | 101 | N | 395 |
| 5 | Whitefield | ISTR-166-01 | Trib. To Finn Brook | 2 | UNK | Y | N/A | 140 | N | 408 |
| 5 | Whitefield | PSTR-166- | Finn Brook | 5 | PER | Y | Y | 395 | Y | 408 |
| 5 | Whitefield | PSTR-168- 01 | East Branch Eastern River | 11 | PER | Y | N/A | 206 | N | 403 |
| 5 | Whitefield | PSTR-168- 02 | East Branch Eastern River | 3 | PER | Y | N/A | 58 | Y | 403 |
| 5 | Whitefield | PSTR-169- 01 | East Branch Eastern River | 5 | PER | Y | N/A | 149 | Y | 402 |
| 5 | Whitefield | ISTR-169-02 | Trib. to East Branch Eastern River | 2 | UNK | Y | N/A | 296 | N | 402 |
| 5 | Whitefield | ISTR-169-03 | Trib. to East Branch Eastern River | 2 | UNK | Y | N/A | 178 | Y | 402 |
| 5 | Whitefield | ISTR-169-04 | Trib. to East Branch Eastern River | 1 | UNK | Y | N/A | 136 | N | 402 |
| 5 | Whitefield | PSTR-170- 01 | East Branch Eastern River | 9 | PER | Y | N/A | 189 | Y | 399, 400 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|------------|-----------------|---|---|---|---|-----------------------------------|---|---|--|
| 5 | Whitefield | ISTR-170-02 | Trib. to East Branch Eastern River | 2 | INT | Y | N/A | 129 | N | 400 |
| 5 | Whitefield | PSTR-172- 01 | Trib. to Sheepscot River | 6 | PER | Y | Y | 226 | N | 394 |
| 5 | Whitefield | PSTR-172- 03 | Trib. to Sheepscot River | 2 | UNK | Y | N/A | 320 | N | 396 |
| 5 | Whitefield | ISTR-173-01 | Trib. to Sheepscot River | 3 | UNK | Y | N/A | 285 | Y | 392 |
| 5 | Whitefield | PSTR-174- 01 | Trib. to Sheepscot River | 6 | PER | Y | Y | 333 | Y | 391 |
| 5 | Whitefield | ISTR-174-02 | Trib. to Sheepscot River | 3 | UNK | Y | Y | 385 | Y | 391 |
| 5 | Whitefield | PSTR-174- 03 | Trib. to Sheepscot River | 7 | PER | Y | Y | 366 | Y | 389 |
| 5 | Whitefield | ISTR-174-04 | Trib. to Sheepscot River | 1 | UNK | Y | Y | 366 | N | 389 |
| 5 | Whitefield | ISTR-175-01 | Trib. to Sheepscot River | 1 | UNK | Y | N/A | 218 | Y | 388 |
| 5 | Whitefield | PSTR-175- 02 | Trib. to Sheepscot River | 3 | UNK | Y | Y | 201 | Y | 388 |
| 5 | Alna | PSTR-176- 01 | Trib. to Sheepscot River | 5 | INT | Y | Y | 209 | Y | 387 |
| 5 | Alna | PSTR-177- 01 | Trib. to Trout Brook | 25 | PER | Y | Y | 107 | N | 383 |
| 5 | Alna | PSTR-178- | Trout Brook | 8 | PER | Y | Y | 264 | N | 381, 382 |
| 5 | Alna | PSTR-178- | Trout Brook | 15 | PER | Y | Y | 133 | N | 381, 382 |
| 5 | Alna | PSTR-179- 02 | Trib. to Trout Brook | 6 | INT | Y | N/A | 119 | Y | 379, 380 |
| 5 | Alna | PSTR-179- 03 | Trib. to Trout Brook | 6 | PER | Y | Y | 198 | N | 379 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|-----------|-----------------|--------------------------------|---|--|---|-----------------------------------|---|---|--|
| 5 | Alna | ISTR-180-01 | Trib. to Trout Brook | 1 | INT | Y | N/A | 112 | N | 377 |
| 5 | Wiscasset | ISTR-181-01 | Trib. to Ward Brook | 3 | UNK | Y | N/A | 82 | Y | 374 |
| 5 | Wiscasset | ISTR-181-02 | Ward Brook | 2 | UNK | Y | N/A | 114 | Y | 374, 375 |
| 5 | Wiscasset | ISTR-182-01 | Trib. Ward Brook | 4 | UNK | Y | N/A | 247 | N | 373 |
| 5 | Wiscasset | PSTR-183- 02 | Trib. to Montsweag Brook | 0.5 | UNK | Y | N/A | 39 | Y | 370 |
| 5 | Wiscasset | ISTR-183-03 | Trib. to Montsweag Brook | 2 | UNK | Y | N/A | 94 | N | 370 |
| 5 | Wiscasset | ISTR-184-01 | Trib. to Montsweag Brook | 1.5 | INT | Y | N/A | 140 | N | 369 |
| 5 | Woolwich | ISTR-184-02 | Trib. to Montsweag Brook | 2.5 | UNK | Y | N/A | 318 | Y | 367 |
| 5 | Woolwich | ISTR-184-03 | Trib. To Montsweag Brook | 150 | UNK | Y | N/A | 113 | N | 367, 368 |
| 5 | Woolwich | ISTR-184-04 | Trib. to Montsweag Brook | 2.5 | UNK | Y | N/A | 209 | Y | 367, 368 |
| 5 | Wiscasset | ISTR-184-05 | Trib. to Montsweag Brook | 3 | UNK | Y | N/A | 253 | N | 369 |
| 5 | Wiscasset | ISTR-184-06 | Trib. to Montsweag Brook | 2 | UNK | Y | N/A | 195 | N | 369 |
| 5 | Wiscasset | ISTR-184-08 | Montsweag Brook | 25 | UNK | Y | N/A | 55 | Y | 369 |
| 5 | Wiscasset | ISTR-184-09 | Montsweag Brook | 30 | PER | Y | N/A | 45 | N | 368, 369 |
| 5 | Wiscasset | ISTR-184-10 | Montsweag Brook | 2.5 | PER | Y | N/A | 66 | N | 368 |
| 5 | Woolwich | ISTR-185-02 | Trib. to Montsweag Brook | 2.5 | UNK | Y | N/A | 28 | N | 366 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|-----------|-------------|-------------------------------------|---|--|---|-----------------------------------|---|---|--|
| 5 | Woolwich | ISTR-185-03 | Trib. to Montsweag Brook | 1 | UNK | Y | N/A | 23 | N | 366 |
| 5 | Woolwich | ISTR-185-04 | Trib. to Montsweag Brook | 1 | UNK | Y | N/A | 37 | N | 366 |
| 5 | Woolwich | ISTR-185-05 | Trib. to Montsweag Brook | 1 | UNK | Y | N/A | 62 | Y | 366 |
| 5 | Woolwich | ISTR-185-06 | Trib. to Montsweag Brook | 3 | UNK | Y | N/A | 312 | N | |
| 5 | Wiscasset | ISTR-186-02 | Trib. to Chewonki Creek | 1 | INT | Y | N/A | 4,335 | N | 364 |
| 5 | Wiscasset | ISTR-187-01 | Trib. to Chewonki Creek | 2.5 | INT | Y | N/A | 6,250 | N | 363 |
| 5 | Wiscasset | ISTR-187-02 | Trib. to Chewonki Creek | 1.5 | INT | Y | N/A | 6,262 | N | 363 |
| 5 | Wiscasset | ISTR-187-03 | Trib. to Chewonki Creek | 1.5 | INT | Y | N/A | 6,300 | N | 363 |
| 5 | Wiscasset | ISTR-187-05 | Trib. to Chewonki Creek | 1 | INT | Y | N/A | 6,728 | N | 362, 363 |
| 5 | Wiscasset | ISTR-187-07 | Trib. to Chewonki Creek | 1 | INT | Y | N/A | 7,099 | N | 362 |
| 5 | Wiscasset | ISTR-187-15 | Trib. to Back River/ Monstsweag Bay | 1 | INT | Y | N/A | 10,413 | N | 361 |
| 5 | Wiscasset | ISTR-187-16 | Trib. to Back River/ Monstsweag Bay | 1 | INT | Y | N/A | 10,248 | N | 361 |
| 5 | Wiscasset | ISTR-187-17 | Trib. to Back River/ Monstsweag Bay | 1 | INT | Y | N/A | 10,265 | N | 361 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|------------------------|-----------------|--|---|---|---|-----------------------------------|---|---|--|
| 5 | Wiscasset | ISTR-187-18 | Trib. to Back River/ Monstsweag Bay | 1 | INT | Y | N/A | 10,246 | N | 361 |
| 5 | Wiscasset | ISTR-187-22 | Trib. to Chewonki Creek | 1 | INT | Y | N/A | 7,549 | N | 362 |
| 5 | Wiscasset | ISTR-187-23 | Trib. to Back River/ Monstsweag Bay | 2.5 | INT | Y | N/A | 10,710 | N | 361 |
| 5 | Wiscasset | ISTR-188-05 | Trib. to Back River/ Monstsweag Bay | 1 | INT | Y | N/A | 11,591 | N | 360 |
| 5 | Wiscasset | ISTR-188-06 | Trib. to Back River/ Monstsweag Bay | 1 | INT | Y | N/A | 11,601 | N | 360 |
| 5 | Wiscasset | ISTR-186-03 | Trib. to Chewonki Creek | 1.5 | INT | Y | N/A | 3,628 | Y | 364 |
| 5 | Wiscasset | ISTR-186-04 | Trib. to Chewonki Creek | 1.5 | INT | Y | N/A | 3,810 | Y | 364 |
| 5 | Wiscasset/Wo olwich | ISTR-186-06 | Trib. to Montsweag Brook | 1.5 | INT | Y | N/A | 1,334 | N | 365 |
| 5 | Wiscasset | ISTR-187-13 | Trib. to Chewonki Creek | 2 | INT | Y | N/A | 7,645 | N | 362 |
| 5 | Wiscasset | ISTR-187-20 | Trib. to Chewonki Creek | 1.5 | INT | Y | N/A | 9,419 | N | 361 |
| 5 | Wiscasset | ISTR-187-21 | Trib. to Chewonki Creek | 1.5 | INT | Y | N/A | 9,380 | N | 361 |
| 5 | Wiscasset | PSTR-187- 19 | Trib. to Chewonki Creek | 1.5 | PER | Y | N/A | 9,386 | N | 361 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|-----------|-----------------|---|---|---|---|-----------------------------------|---|---|--|
| 5 | Wiscasset | PSTR-187- 24 | Trib. to Chewonki Creek | 1.5 | PER | Y | N/A | 8,911 | N | 361, 362 |
| 5 | Windsor | ISTR-162-03 | Trib. to West Branch Sheepscot River | 2 | INT | Y | N/A | 339 | N | 417 |
| 5 | Windsor | ISTR-162-04 | Trib. to West Branch Sheepscot River | 2 | INT | Y | N/A | 566 | N | 417 |
| 5 | Windsor | ISTR-162-05 | Trib. to West Branch Sheepscot River | 2 | INT | Y | N/A | 628 | N | 417 |
| 5 | Windsor | ISTR-162-08 | Trib. to West Branch Sheepscot River | 2 | INT | Y | N/A | 1,664 | N | |
| 5 | Wiscasset | ISTR-187-06 | Trib. to Chewonki Creek | 2 | INT | Y | N/A | 8,231 | N | 362 |
| 5 | Wiscasset | ISTR-187-08 | Trib. to Chewonki Creek | 2 | INT | Y | N/A | 7,599 | N | 362 |
| 5 | Wiscasset | ISTR-187-09 | Trib. to Chewonki Creek | 2 | INT | Y | N/A | 7,709 | N | 362 |
| 5 | Wiscasset | ISTR-187-10 | Trib. to Chewonki Creek | 2 | INT | Y | N/A | 7,607 | N | 362 |
| 5 | Wiscasset | ISTR-187-11 | Trib. to Chewonki Creek | 2 | INT | Y | N/A | 7,490 | N | 362 |
| 5 | Wiscasset | ISTR-187-12 | Trib. to Chewonki Creek | 2 | INT | Y | N/A | 7,409 | N | 362 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|-----------|-----------------|--|---|--|---|-----------------------------------|---|---|--|
| 5 | Wiscasset | ISTR-187-14 | Trib. to Chewonki Creek | 2 | INT | Y | N/A | 7,906 | N | 362 |
| 5 | Wiscasset | ISTR-188-02 | Trib. to Back River/ Monstsweag Bay | 2 | INT | Y | N/A | 14,492 | N | 359 |
| 5 | Wiscasset | ISTR-188-03 | Trib. to Back River/ Monstsweag Bay | 2 | INT | Y | N/A | 13,444 | N | 359, 360 |
| 5 | Wiscasset | ISTR-188-07 | Trib. to Back River/ Monstsweag Bay | 2 | INT | Y | N/A | 14,547 | N | 359 |
| 5 | Windsor | PSTR-162- 02 | Trib. to West Branch Sheepscot River | 2 | PER | Y | Y | 291 | N | 417 |
| 5 | Windsor | PSTR-162- 06 | Trib. to West Branch of Sheepscot River | 1.5 | PER | Y | Y | 1,595 | N | |
| 5 | Wiscasset | ISTR-186-05 | Trib. to Montsweag Brook | 1.5 | INT | Y | N/A | 2,386 | N | 364, 365 |
| 5 | Wiscasset | ISTR-186-07 | Trib. to Montsweag Brook | 3 | INT | Y | N/A | 2,193 | N | 365 |
| 5 | Wiscasset | ISTR-188-01 | Trib. to Back River/ Monstweag Bay | 3 | INT | Y | N/A | 15,388 | N | 359 |
| 5 | Wiscasset | ISTR-188-08 | Trib. to Back River/ Monstsweag Bay | 3 | INT | Y | N/A | 12,829 | N | 360 |
| 5 | Wiscasset | ISTR-186-01 | Trib. to Chewonki Creek | 4 | INT | Y | N/A | 5,614 | N | 363 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁶ | Brook Trout ⁷ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing ⁹ (Y/N) | Natural Resource Map/Sheet Number |
|---------|------------------------|-----------------|---|---|--|---|-----------------------------------|---|---|--|
| 5 | Wiscasset | PSTR-188- 04 | Trib. to Back River/ Monstsweag Bay | 1 | PER | Y | N/A | 12,450 | Y | 360 |
| 5 | Wiscasset | ISTR-187-04 | Trib. to Chewonki Creek | 5 | INT | Y | N/A | 6,112 | N | 363 |
| 5 | Windsor | PSTR-162- 01 | Trib. to West Branch Sheepscot River | 8 | PER | Y | Y | 265 | N | 417 |
| 5 | Windsor | PSTR-162- 09 | Trib. to West Branch Sheepscot River | 3 | PER | Y | Y | 158 | N | 416, 417 |
| 5 | Windsor | PSTR-162- 13 | Trib. to West Branch Sheepscot River | 1.5 | PER | Y | Y | 778 | N | 417 |
| 5 | Windsor | ISTR-162-07 | Trib. to West Branch Sheepscot River | 8 | INT | Y | N/A | 268 | N | 417 |
| 5 | Windsor | ISTR-162-14 | Trib. to West Branch Sheepscot River | 8 | INT | Y | N/A | 53 | N | 416 |
| 5 | Windsor | PSTR-163- 01 | Trib. to West Branch Sheepscot River | 40 | PER | Y | Y | 319 | N | 415 |
| 5 | Woolwich | PSTR-185- 01 | Trib. to Montsweag Brook | 9.5 | PER | Y | N/A | 559 | N | 365 |
| 5 | Wiscasset/Wo Olwich | PSTR-186- 08 | Montsweag Brook | 17.5 | PER | Y | N/A | 1,219 | N | 365 |

| Segment | Town | Feature ID | Stream Name ¹ | Ave. Stream Width (ft) ² | Stream Type (PER/ INT) ³ | Atlantic Salmon Habitat (Y/N) ⁴ | Brook Trout ⁵ (Y/N) | Nearest New Structure Location (ft) | Temp. Equip. Crossing (Y/N) | Natural Resource Map/Sheet Number |
|---------|---------|-----------------|---|---|---|---|-----------------------------------|--|--------------------------------------|--|
| 5 | Windsor | PSTR-162- 12 | Trib. to West Branch Sheepscot River | 40 | PER | Y | Y | 362 | N | 416 |
| 5 | Windsor | PSTR-163- 02 | West Branch Sheepscot River | 40 | PER | Y | Y | 51 | N | 414, 415, 416 |

Notes:

Stream name is based on USGS National Hydrography dataset.

Tributary names are based on a review, by the applicant of the watershed areas and drainage patterns.

Stream widths are based on field data collected by the applicant

- Stream widths are based on field data collected by the applicant
- Stream type is based on field work by the applicant.
- Atlantic Salmon habitat is based on Maine Office of GIS data catalog. Edition 2016-03-21.
- Brook trout habitat is based on information submitted by MDIFW on January 24, 2019

Appendix F Compensation Requirements

Table F-1: Summary of Compensation as Required by NRPA and/or USACE

Commented [A26]: Appendi x F is corrected to reflect the compensation requirements in CMP's October 10, 2019 Merrill Strip Alternative filing.

| Resource Type & Impact | Agency Requiring | Form of Compensation | Type and Amount of Compensation | |
|---|---------------------|-------------------------------|--|--|
| 47. <u>687-638</u> acres of Temporary Wetland Fill | USACE | Preservation & In-Lieu Fee | Preservation of 57.01 <u>56.97</u> acres of wetlands. | |
| | | | \$154, 535.04 <u>369.29</u> | |
| 105.548-252 acres of Permanent Cover Type Conversion of Forested Wetlands ¹ | USACE & MDEP | Preservation | Preservation of three parcels, | |
| 3.814 acres of Permanent Fill in Wetlands of Special Significance (WOSS) ² | & MIDEF | Preservation | (Little Jimmie Pond, Flagstaff Lake, and Pooler Pond tracts) 440.29 acres of wetlands. | |
| 0.307 acres of Permanent Fill in Wetland (Non-WOSS) | | | 440.29 acres of wettands. | |
| 0.743 acres of Permanent Wetland Fill in SVP Habitat | | | | |
| 3.895-678 acres of Permanent Forested Wetland Conversion in SVP Habitat | MDEP | In-Lieu Fee | | |
| 0. 720 - <u>719</u> acres of Permanent Upland Fill in SVP Habitat | | | \$6 30,449.61 23,657.53 | |
| 2 9.607 - <u>7.572</u> acres of Permanent Upland Conversion in SVP Habitat | | | | |
| Direct and Indirect Impact to USACE Jurisdictional Vernal Pools | USACE | In-Lieu Fee | \$2,0 24,875.37 <u>15,269.01</u> | |
| 0.003 acres of Permanent Wetland Fill in IWWH | | | \$253,352.53 | |
| 2.622 acres of Permanent Forested Wetland Conversion in IWWH | MDEP | In-Lieu Fee | | |
| 0.014 acres of Permanent Upland Fill in IWWH | | | | |
| 12.387 acres of Permanent Upland Conversion in IWWH | | | | |
| | In-Lieu Fee | | \$3,0 63,212.55 <u>46,648.37</u> | |
| | Land Preser | vation | 1022.4 acres of preservation containing 510.75 acres of wetland. | |

¹The USACE requires compensation for Permanent Cover Type Conversion of Forested Wetlands. The MDEP requires compensation for Permanent Cover Type Conversion of significant wildlife habitat. Compensation for wetlands within significant wildlife habitat, IWWH and SVPH, are not included within the Permanent Cover Type Conversion of Forested Wetlands calculation and are calculated separately within their respective categories. Cover type conversion within upland areas of IWWH and SVPH are compensated separately as well.

²Permanent fill in WOSS excludes fill in IWWH and SVPH, which are calculated separately, in their respective categories.

Table F-2: Summary of Compensation Resulting from Consultation with Resource Agencies

| Resource Type & Impact | Agency Requiring | Form of Compensation | Amount of Compensation | |
|---|---------------------|--|--|--|
| 9.229 acres of forested conversion in Unique Natural Communities | MNAP | Fee contribution to Maine Natural Areas Conservation Fund | \$1,224,526.82 | |
| Forested conversion to the Goldie's Wood Fern | MNAP | Funding for rare plant surveys to the Maine Natural Areas Conservation Fund | \$10,000 | |
| 26.416 acres of forest conversion in Roaring Brook Mayfly and Northern Spring Salamander Conservation Management Areas | MDIFW | Fee contribution to Maine Endangered and Nongame Wildlife Fund | \$469,771.95 | |
| 39.209 acres of forest conversion in the Upper Kennebec Deer Wintering Area | MDIFW | Preservation | Seven parcels, totaling 717 acres of land in the Upper Kennebec DWA | |
| Habitat and fisheries impacts, including 11.02 linear miles of forested conversion in ringrian buffers | MDEP & | Preservation | Three preservation parcels (Basin, Lower Enchanted, and Grand Falls tracts), totaling 1053.5 acres, containing 12.02 linear miles of stream | |
| conversion in riparian buffers | MDIFW | Fee contribution to Maine Endangered and Nongame Wildlife Fund | \$180,000 | |
| Impacts to Brook Trout and Coldwater Fisheries | MDEP | Funding for culvert replacements | \$1,875,000 | |
| Impact to Outstanding River Segments | MDEP | Preservation | Three preservation parcels, (Basin, Lower Enchanted, and Grand Falls tracts) offering 7.9 miles of frontage on the Dead River, an Outstanding River Segment | |
| Habitat fragmentation and impact to wildlife movement | MDEP | Conservation | Conservation of 40,00027,016 acres in the vicinity of Segment 1 | |
| | Total Addition | onal Monetary | \$3, 959,298.76 <u>759,298.76</u> | |
| | Total Addition | onal Land /Conservation | 4 1,770 28,786.5 Acres | |

Appendix G

Table of Areas Requiring Additional Erosion Control Measures

| Pol | le# | ESC Notes for the Section | | |
|----------|---------------------|--|--|--|
| From To | | | | |
| 3006 816 | 3006-801 | Mill Brook crossing (3006-280 to 3006-279). Valley bottom where runoff concentrates. | | |
| 3006 747 | 3006-732 | Upgradient runoff diversion will be necessary. | | |
| 3006 645 | 3006-634 | Steep slope to stream. Sediment basin can be necessary (3006-113 to 3006-112) | | |
| 3006-20 | 3006 617 | Frequently placed water bars and upgradient flow diversion can be satisfactory for this section. | | |

| <u>Transmission Line Spans</u> | | | | | | |
|--------------------------------|-----------------|---|-----------------|-----------------|--|--|
| Pol | <u>le #</u> | | Pole # | | | |
| <u>From</u> | <u>To</u> | | From | <u>To</u> | | |
| <u>3006-541</u> | <u>3006-542</u> | _ | <u>3006-633</u> | <u>3006-648</u> | | |
| <u>3006-547</u> | <u>3006-549</u> | | <u>3006-659</u> | <u>3006-664</u> | | |
| <u>3006-549</u> | <u>3006-555</u> | | <u>3006-674</u> | <u>3006-678</u> | | |
| <u>3006-556</u> | <u>3006-559</u> | | <u>3006-684</u> | <u>3006-685</u> | | |
| <u>3006-563</u> | <u>3006-564</u> | | <u>3006-697</u> | <u>3006-699</u> | | |
| <u>3006-570</u> | <u>3006-572</u> | | <u>3006-705</u> | <u>3006-706</u> | | |
| <u>3006-576</u> | <u>3006-577</u> | | <u>3006-706</u> | <u>3006-727</u> | | |
| <u>3006-579</u> | <u>3006-580</u> | | 3006-728 | <u>3006-747</u> | | |
| <u>3006-582</u> | <u>3006-589</u> | | 3006-748 | <u>3006-758</u> | | |
| 3006-594 | <u>3006-599</u> | | 3006-760 | 3006-764 | | |
| 3006-603 | <u>3006-604</u> | | <u>3006-765</u> | 3006-769 | | |
| <u>3006-606</u> | <u>3006-608</u> | | <u>3006-771</u> | <u>3006-788</u> | | |
| 3006-609 | <u>3006-613</u> | | 3006-793 | 3006-794 | | |
| 3006-616 | 3006-622 | | 3006-796 | 3006-797 | | |
| 3006-624 | 3006-626 | | 3006-799 | 3006-817 | | |

Commented [A27]: Appendi x G is incorrect, as preliminary design information was updated in August 2018. Transmission in August 2018. Transmission spans should reflect the pole numbering provided in CMP's August 13, 2018 New England Clean Energy Connect Project Update to NRPA and Site Law Applications. The table below contains the areas where contains the areas where topographic conditions (i.e., >22% slope) and highly erodible soil types on Segment 1 require a higher frequency of inspection (i.e., will require that CMP conduct additional erosion control inspections, have dedicated crews, install additional erosion control structures, and have an accelerated work schedules, per the ordered paragraphs in the draft Order).

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Appendix H Land Use Planning Commission Site Law Certification



DEP INFORMATION SHEET

Appealing a Department Licensing Decision

Dated: March 2012 Contact: (207) 287-2811

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's ("DEP") Commissioner: (1) in an administrative process before the Board of Environmental Protection ("Board"); or (2) in a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S.A. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S.A. § 480-HH(1)) or a general permit for a tidal energy demonstration project (38 M.R.S.A. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

This INFORMATION SHEET, in conjunction with a review of the statutory and regulatory provisions referred to herein, can help a person to understand his or her rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

The laws concerning the DEP's *Organization and Powers*, 38 M.R.S.A. §§ 341-D(4) & 346, the *Maine Administrative Procedure Act*, 5 M.R.S.A. § 11001, and the DEP's *Rules Concerning the Processing of Applications and Other Administrative Matters* ("Chapter 2"), 06-096 CMR 2 (April 1, 2003).

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written appeal within 30 days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days of the date on which the Commissioner's decision was filed with the Board will be rejected.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, c/o Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; faxes are acceptable for purposes of meeting the deadline when followed by the Board's receipt of mailed original documents within five (5) working days. Receipt on a particular day must be by 5:00 PM at DEP's offices in Augusta; materials received after 5:00 PM are not considered received until the following day. The person appealing a licensing decision must also send the DEP's Commissioner a copy of the appeal documents and if the person appealing is not the applicant in the license proceeding at issue the applicant must also be sent a copy of the appeal documents. All of the information listed in the next section must be submitted at the time the appeal is filed. Only the

extraordinary circumstances described at the end of that section will justify evidence not in the DEP's record at the time of decision being added to the record for consideration by the Board as part of an appeal.

WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

Appeal materials must contain the following information at the time submitted:

- 1. *Aggrieved Status*. The appeal must explain how the person filing the appeal has standing to maintain an appeal. This requires an explanation of how the person filing the appeal may suffer a particularized injury as a result of the Commissioner's decision.
- 2. The findings, conclusions or conditions objected to or believed to be in error. Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
- 3. *The basis of the objections or challenge.* If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
- 4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.
- 5. *All the matters to be contested*. The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.
- 6. *Request for hearing*. The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing on the appeal is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.
- 7. New or additional evidence to be offered. The Board may allow new or additional evidence, referred to as supplemental evidence, to be considered by the Board in an appeal only when the evidence is relevant and material and that the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process or that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2.

II. OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

- Be familiar with all relevant material in the DEP record. A license application file is public
 information, subject to any applicable statutory exceptions, made easily accessible by DEP.
 Upon request, the DEP will make the material available during normal working hours, provide
 space to review the file, and provide opportunity for photocopying materials. There is a charge
 for copies or copying services.
- 2. Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal. DEP staff will provide this information on request and answer questions regarding applicable requirements.
- 3. The filing of an appeal does not operate as a stay to any decision. If a license has been granted and it has been appealed the license normally remains in effect pending the processing of the appeal. A license holder may proceed with a project pending the outcome of an appeal but the license holder runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will formally acknowledge receipt of an appeal, including the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials accepted by the Board Chair as supplementary evidence, and any materials submitted in response to the appeal will be sent to Board members with a recommendation from DEP staff. Persons filing appeals and interested persons are notified in advance of the date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, a license holder, and interested persons of its decision. II.

JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court, see 38 M.R.S.A. § 346(1); 06-096 CMR 2; 5 M.R.S.A. § 11001; & M.R. Civ. P 80C. A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. Failure to file a timely appeal will result in the Board's or the Commissioner's decision becoming final.

An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S.A. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board's Executive Analyst at (207) 287-2452 or for judicial appeals contact the court clerk's office in which your appeal will be filed.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.